

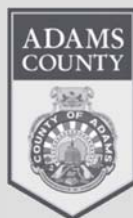


---

# 2019 - 2022 TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

---

ADAMS COUNTY MPO



Adams County Transportation  
Planning Organization (ACTPO)

October 1, 2018



# ABOUT THE 2019-2022 TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

## WHAT IS THE TIP?

The Transportation Improvement Program (TIP) proposes where projected transportation funding sources will be spent over the next four (4) years in all of Adams County. The Adams County Transportation Planning Organization (ACTPO) approves projects for the twenty (20) years; the TIP is simply the first four of those twenty years.

## WHAT TYPES OF PROJECTS ARE ON THE TIP?

The types of eligible projects include repaving projects, bridge rehabilitation projects, major interchange upgrades, intersection improvements, and new road alignments. The projects listed on the TIP have at least \$1 of public monies.

## WHO RECOMMENDS PROJECTS FOR THE TIP?

PennDOT and Adams County municipalities submit projects to ACTPO, who then approves, dismisses, or recommends other funding sources for each project. ACTPO is an organization consisting of representatives from PennDOT, the Adams County Commissioners, Rabbittransit, the Gettysburg Chamber of Commerce, the Adams County Industrial Development Authority (IDA), and multiple municipal representatives.

## WHERE DOES THE FUNDING COME FROM?

The Federal legislation for transportation (FAST Act) distributes formula-driven funding to each state. Much of this funding has restrictions on where in Adams County it can be used, or on what types of projects can be funded. Recently passed state transportation funding legislation (Act 89) also distributes a substantial amount of funds to each area of the Commonwealth. Local funding from municipalities, developers, or companies can be used to supplement the Federal and State funding sources.

## WHAT IS THE NEXT STEP?

The public should review the projects on the Highway and Transit TIPS and maps, available from the Adams County Office of Planning and Development in paper form or online at [www.adamscounty.us](http://www.adamscounty.us). Any comments about specific projects or general comments about the program can be sent to the Adams County Office of Planning and Development located at 670 Old Harrisburg Road, Suite 100, Gettysburg, PA 17325. ACTPO will address all comments received between May 16, 2018 and June 18, 2018. ACTPO will vote to approve the TIP on June 27, 2018. If approved, the TIP will be in effect October 1, 2018.

# TABLE OF CONTENTS

Glossary .....	3
Projects By Municipality .....	4
TIP Projects .....	6
TIP Line Items .....	46
Environmental Justice Summary.....	53
Environmental Justice Maps .....	57
Project Selection Process .....	63
Previously Implemented TIP Projects.....	64
MOU: STIP & TIP Modification Procedures.....	65
TIP Financial Charts.....	71
Public Transit Financial Capacity Plan.....	77
Self-Certification Resolution.....	81
Air Quality Resolution.....	83
APPENDIX A.....	85
• Air Quality Conformity Report	

# GLOSSARY

## FEDERAL FUNDING SOURCES:

- BOF– Bridge Off-System
- CAQ– Congestion Mitigation/Air Quality
- HSIP– Highway Safety Improvement Program
- NHPP– National Highway Performance Program
- STP– Surface Transportation Program
- SXF- Special Federal Earmarked Funds

## STATE FUNDING SOURCES:

- 183– State Bridge Funds for Local Bridges
- 185– State Bridge Funds for State Bridges
- 409- Maintenance Funds from Act 89
- 581– State Highway Funds

## PROJECT PHASES:

- P– Preliminary Engineering
- F– Final Design
- U– Utility
- ROW– Right of Way
- C– Construction

## PROJECT TYPE SYMBOLS:



Bridge



Roadway



Intersection



Interchange



Safety



Study

# TIP PROJECTS (FIRST FOUR YEARS)

The following chart lists the types of projects and locations of the projects on the 2019—2022 TIP.

Berwick Township		
	Bridge Replacement	York Road
Butler Township		
	Bridge Replacement	Old Carlisle Road
Conewago Township		
	New Road/Highway Construction	Eisenhower Drive
	Bridge Improvement	PA 116 (Hanover Road)
	Bridge Preservation	Centennial Road
Cumberland Township		
	Bridge Improvement	Fairfield Road
	Bridge Preservation	Mason Dixon Road
	Bridge Preservation	Taneytown Road
	Bridge Rehabilitation	Millerstown Road
	Bridge Preservation	US 15
	Bridge Improvement	PA 116 (Hanover Road)
Franklin Township		
	Bridge Replacement	Mummasburg Road
	Bridge Replacement	Chambersburg Road
Germany Township		
	Bridge Replacement	PA 94
	Bridge Improvement	Mengus Mill Road
	Bridge Replacement	PA 97 (South Queen St)
	Road Resurfacing	PA 97 (Baltimore Pike)
Hamilton Township		
	Bridge Replacement	York Road
	Intersection Improvement	Berlin Road/Pine Run Road
	Bridge Improvement	Pine Run Road
Hamiltonban Township		
	Bridge Preservation	Harbaugh Valley Road
	Bridge Replacement	Water St Bridge
Highland Township		
	Bridge Rehabilitation	Fairfield Road
Huntington Township		
	Bridge Replacement	Wiermans Mill Road
	Bridge Improvement	Idaville-York Springs Road

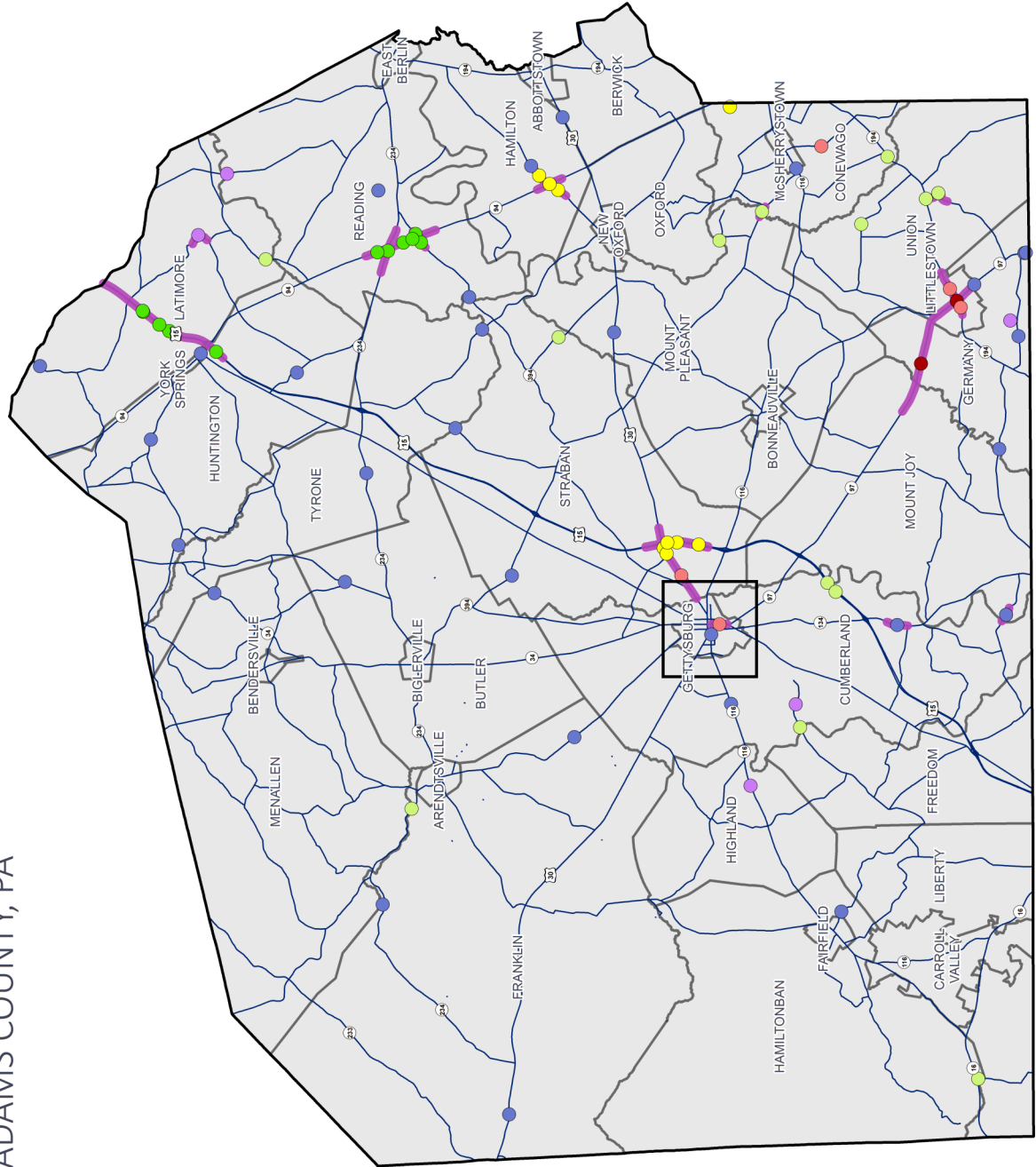
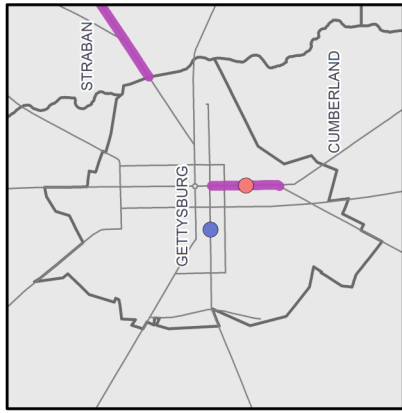
## TIP PROJECTS (FIRST FOUR YEARS) CONT'D

Latimore Township		
Bridge Improvements	Latimore Valley Road	
Study	US 15/Franklin Crossing	
Safety Improvements	US 15	
Liberty Township		
Bridge Preservation	Harbaugh Valley Road	
Littlestown Borough		
Bridge Improvement	PA 97 (South Queen St)	
Road Resurfacing	PA 97 (Baltimore Pike)	
McSherrystown Borough		
Bridge Improvement	PA 116 (Hanover Road)	
Menallen Township		
Bridge Replacement	Carlisle Road	
Mount Joy Township		
Bridge Preservation	Mason Dixon Road	
Road Resurfacing	PA 97 (Baltimore Pike)	
Mount Pleasant Township		
Bridge Preservation	Centennial Road	
Reading Township		
Intersection Improvement	East Berlin Road and Carlisle Pike	
Intersection Improvement	PA 94, PA 394, and Stoney Point Road	
Bridge Replacement	Stoney Point Road	
Straban Township		
Interchange Improvement	US 15 and US 30	
Bridge Improvement	PA 394 (Hunterstown-Hampton Road)	
Bridge Improvement	Oxford Road	
Bridge Improvement	Red Bridge Road	
Bridge Replacement	Shrivers Corner Road	
Tyrone Township		
Bridge Replacement	Heidlersburg Road	
Union Township		
Bridge Preservation	Bollinger Road	
Road Resurfacing	PA 97 (Baltimore Pike)	
York Springs Borough		
Bridge Improvement	State Street	

# 2019 - 2022 TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

## TIP PROJECT LOCATIONS

### ADAMS COUNTY, PA



#### Legend

##### Highway & Bridge Project Locations

##### Project Type

- 409 Expanded Maintenance
- Bridge Preservation - Federal
- Bridge Replacement
- Bridge Restoration
- Highway Reconstruction
- Highway Restoration
- Safety Improvement

— Highway Project Segments

— State Route

Municipal Boundary

Source: PennDOT, ACOPD





# PROJECT NAME: US 15/ 30 INTERCHANGE

MPMS ID: 58136

First Appearance on TIP: 05/09/2000



## PROJECT DETAILS

**Primary Improvement Type:** Interchange

**State Route #:** 0015

**Name:** US Route 15

**Length:** 4.12 miles

**Geographic Limits:** US 15 and US 30 Interchange in Straban Township

**Description:** Design and construction of new layout for US 15/30 Interchange

**Estimated Let Date:** 11/11/2021

**Estimated Year of Construction:** 2022

**Estimated Total Project Cost:** \$32,149.600



## FUNDING SOURCE

**Federal:** \$3,285,000 (NHPP), \$1,012,000 (HSIP); 2 4-Years: \$3,036, 000 (HSIP), \$6,855,000 (NHPP) **Local:**  
**State:**

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering							
Final Design		\$250			\$1,000		
Utility							
Right of Way							
Construction						\$3,297	\$9,891
<b>Subtotal</b>		\$250			\$1,000	\$3,297	\$9,891
Total FY 2017—2018	\$250						
Total FY 2019—2022	\$4,297						
Total FY 2023—2026	\$9,891						

# PROJECT NAME: EISENHOWER DRIVE EXTENSION

MPMS ID: 58137

First Appearance on TIP: 5/9/2000



## PROJECT DETAILS

**Primary Improvement Type:** New Road/Highway Reconstruction

**State Route #:** N/A

**Name:** Eisenhower Drive

**Length:** ~3.5 miles

**Geographic Limits:** Between SR 116 and PA 94 in Conewago Township

**Description:** Connect Eisenhower Drive from High Street to SR 116 in Conewago Township, PA

**Estimated Let Date:** 10/28/2021

**Estimated Year of Construction:** 2024

**Estimated Total Project Cost:** \$18,400,000



## FUNDING SOURCE

**Federal:**

**State:** \$7,993,000 (581); \$3,000,000 (581)

**Local:**

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering		\$750					
Final Design			\$486	\$1,430			
Utility					\$500		
Right of Way				\$691			
Construction					\$1,460	\$3,426	\$3,000
<b>Subtotal</b>		\$750	\$486	\$2,121	\$1,960	\$3,426	\$3,000
Total FY 2017—2018	\$1,702						
Total FY 2019—2022	\$7,993						
Total FY 2023—2026	\$3,000						

# PROJECT NAME: US 15 SAFETY IMPROVEMENTS

MPMS ID: 102333

First Appearance on TIP: 3/27/2014



## PROJECT DETAILS

Primary Improvement Type: Safety Improvements

State Route #: 0015

Name: US 15

Length: 6.68 Miles

Geographic Limits: US 15 from the Adams/York County Line to South Ridge Road in Latimore and Huntington Townships

Description: Safety Improvements: South Ridge Rd, North Ridge Rd, and County Line Rd. Lengthen the acceleration and deceleration lanes on US 15 on the north side of the US 15/PA 94 Interchange

Estimated Let Date: 6/20/2019

Estimated Year of Construction: 2019

Estimated Total Project Cost: \$2,641,200



## FUNDING SOURCE

Federal: \$2,744,000 (NHPP)

Local:

State:

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering							
Final Design							
Utility							
Right of Way							
Construction			\$2,000	\$744			
<b>Subtotal</b>			\$2,000	\$744			
Total FY 2017—2018							
Total FY 2019—2022	\$2,744						
Total FY 2023—2026							

# PROJECT NAME: US 15 BRIDGE PM #2

MPMS ID: 99727

First Appearance on TIP: 1/14/2014



## PROJECT DETAILS

**Primary Improvement Type:** Bridge Preservation

**State Route #:** 0015

**Name:** US Route 15

**Length:** N/A

**Geographic Limits:** US 15 Bridge over Tributary to Rock Creek in Cumberland Township

**Description:** Bridge preservation activities on US 15 Bridge over Tributary to Rock Creek

**Estimated Let Date:** 1/14/2021

**Estimated Year of Construction:** 2021

**Estimated Total Project Cost:** \$245,000



## FUNDING SOURCE

**Federal:**

**State:** \$450,000 (185)

**Local:**

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering			\$100				
Final Design							
Utility							
Right of Way							
Construction					\$350		
<b>Subtotal</b>			\$100		\$350		
Total FY 2017—2018							
Total FY 2019—2022	\$450						
Total FY 2023—2026							

# PROJECT NAME: US 15/FRANKLIN CROSSING STUDY

MPMS ID: 106669

First Appearance on TIP: 1/28/2016



## PROJECT DETAILS

Primary Improvement Type: Safety Improvement

State Route #: 0015

Name: US Route 15

Length: 4.64 miles

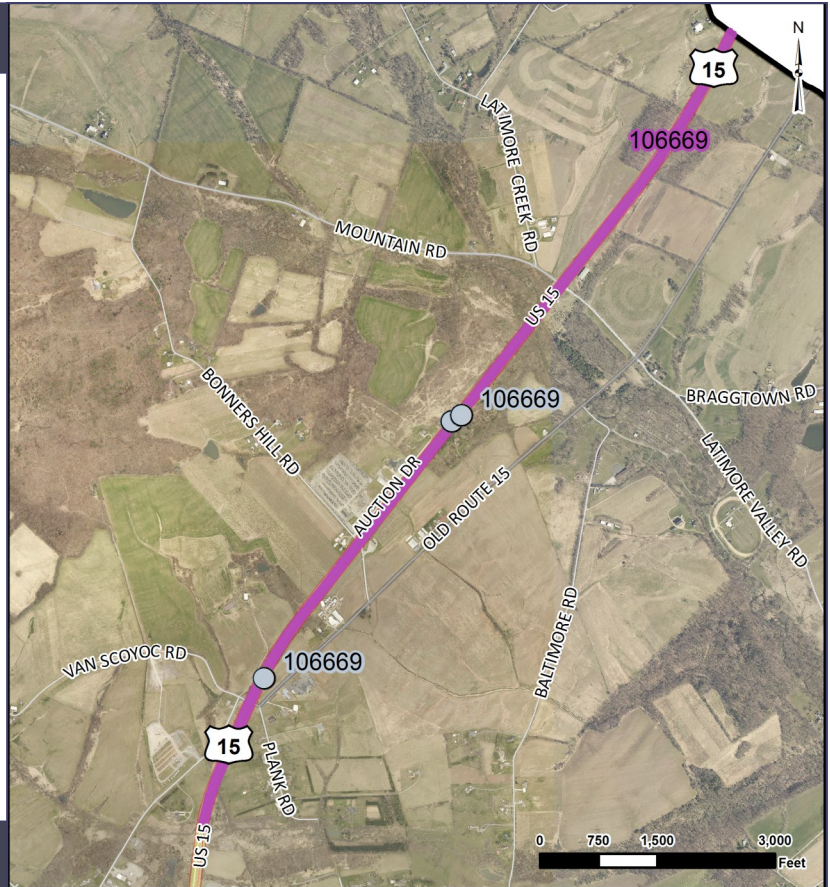
Geographic Limits: US 15 from County Line Road to PA 94 in Latimore Township

Description: Implement findings of the US 15/ Franklin Crossing Study from YAMPO TIP to coordinate with MPMS #95098 on the YAMPO TIP

Estimated Let Date: N/A

Estimated Year of Construction: N/A

Estimated Total Project Cost: \$6,600,000



## FUNDING SOURCE

Federal: \$800,000 (NHPP); 2nd Four Years \$800,000 (STP)

Local:

State:

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering			\$800				
Final Design							\$800
Utility							
Right of Way							
Construction							
<b>Subtotal</b>			\$800				\$800
Total FY 2017—2018							
Total FY 2019—2022	\$800						
Total FY 2023—2026	\$800						

# PROJECT NAME: CHAMBERSBURG ROAD BRIDGE

MPMS ID: 99781

First Appearance on TIP: 1/14/2014



## PROJECT DETAILS

**Primary Improvement Type:** Bridge Replacement

**State Route #:** 0030

**Name:** Chambersburg Road

**Length:** N/A

**Geographic Limits:** US 30 (Chambersburg Road) over Newman's Creek in Franklin Township

**Description:** Bridge replacement on US 30 (Chambersburg Road)

**Estimated Let Date:** 1/1/2025

**Estimated Year of Construction:** N/A

**Estimated Total Project Cost:** \$1,250,000



## FUNDING SOURCE

**Federal:**

**Local:**

**State:** \$281,000 (185); 2nd 4-years \$950,000 (185)

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering					\$281		
Final Design							
Utility							
Right of Way							
Construction							\$950
<b>Subtotal</b>					\$281		\$850
Total FY 2017—2018							
Total FY 2019—2022	\$281						
Total FY 2023—2026	\$950						

# PROJECT NAME: YORK ROAD BRIDGE

MPMS ID: 99784

First Appearance on TIP: 1/14/2014



## PROJECT DETAILS

**Primary Improvement Type:** Bridge Replacement

**State Route #:** 0030

**Name:** York Road

**Length:** N/A

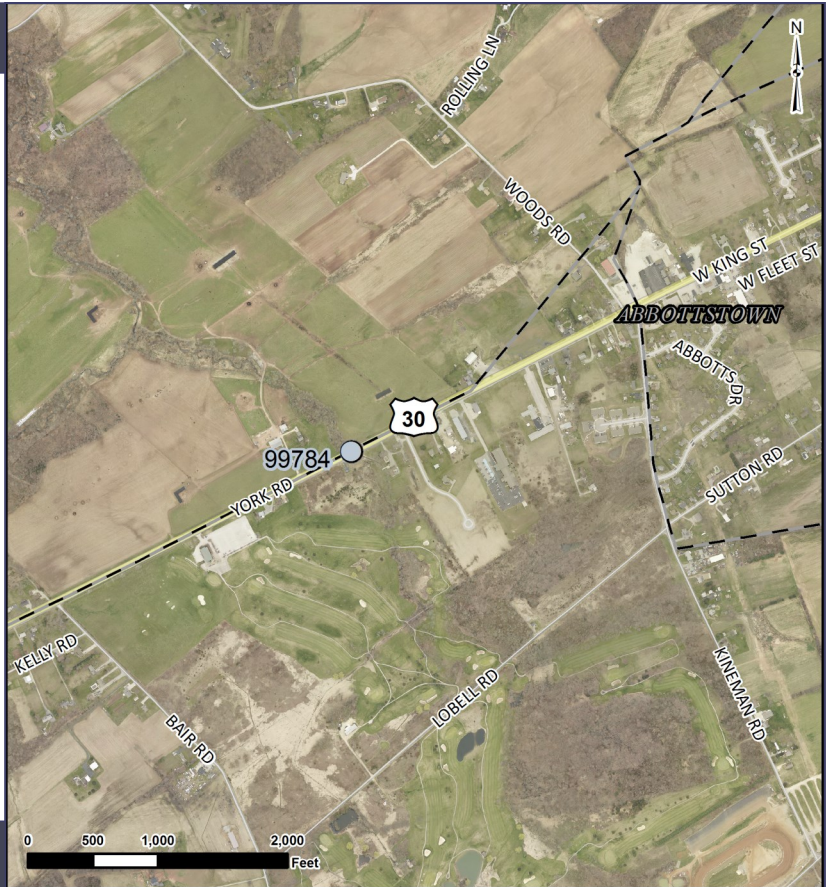
**Geographic Limits:** US 30 (York Road) over Pine Run in Hamilton and Berwick Townships

**Description:** Bridge Replacement on US 30 over Pine Run in Hamilton and Berwick Townships

**Estimated Let Date:** 1/1/2025

**Estimated Year of Construction:** 2026

**Estimated Total Project Cost:** \$850,000



## FUNDING SOURCE

**Federal:**

**State:** \$300,000 (185); 2nd 4-years \$550,000 (185)

**Local:**

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering					\$300		
Final Design							
Utility							
Right of Way							
Construction							\$550
<b>Subtotal</b>					\$300		\$550
Total FY 2017—2018							
Total FY 2019—2022	\$300						
Total FY 2023—2026	\$550						

# PROJECT NAME: CARLISLE ROAD BRIDGE 4

MPMS ID: 87433

First Appearance on TIP: 8/14/2009



## PROJECT DETAILS

Primary Improvement Type: Bridge Replacement

State Route #: 0034

Name: Carlisle Road

Length: N/A

Geographic Limits: PA 34 over Tributary to Opossum Creek in Menallen Township

Description: Bridge replacement on PA 34 (Carlisle Road) over Tributary to Opossum Creek in Menallen Township

Estimated Let Date: 5/3/2023

Estimated Year of Construction: 2023

Estimated Total Project Cost: \$460,000



## FUNDING SOURCE

Federal:

Local:

State: \$100,000 (581), \$168,000 (185); 2nd 4-years \$252,000 (581)

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering				\$100			
Final Design						\$100	
Utility						\$10	
Right of Way						\$10	
Construction						\$48	\$252
<b>Subtotal</b>				\$100		\$168	\$252
Total FY 2017—2018							
Total FY 2019—2022	\$268						
Total FY 2023—2026	\$252						



# PROJECT NAME: 94 & 394 INTERSECTION IMPROVEMENT

MPMS ID: 94894

First Appearance on TIP: 12/20/2011



## PROJECT DETAILS

**Primary Improvement Type:** Intersection Improvement

**State Route #:** 0094

**Name:** Carlisle Pike

**Length:** 1.67 miles

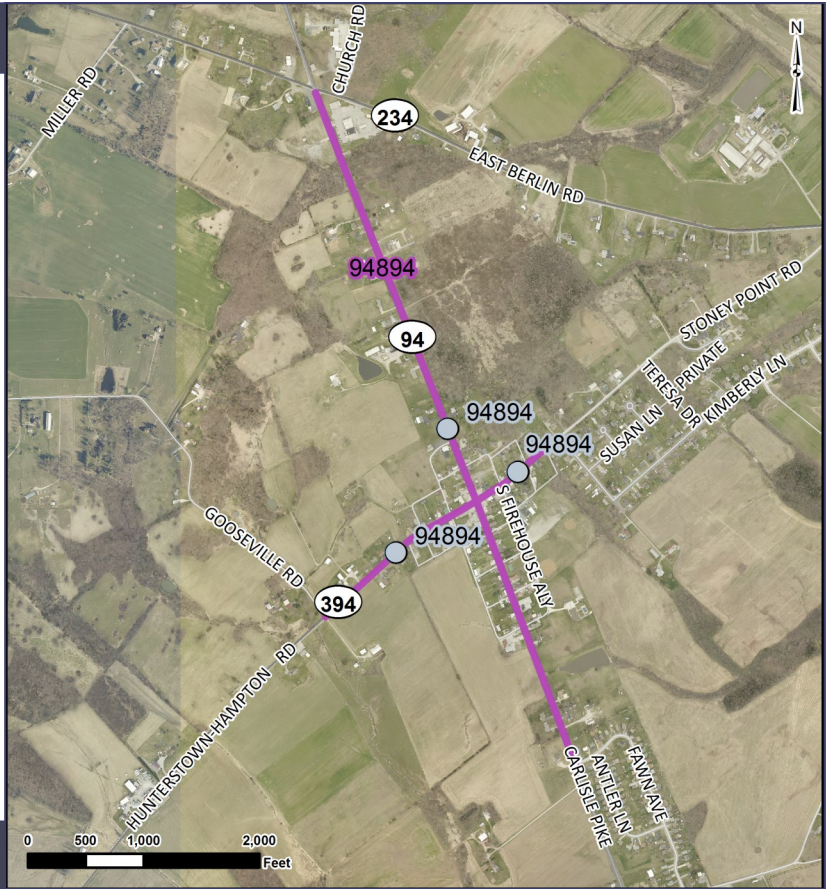
**Geographic Limits:** Intersection of PA 94, PA 394, and SR 1007 (Stoney Point Road) in Reading Township

**Description:** Intersection Improvements

**Estimated Let Date:** 10/18/2018

**Estimated Year of Construction:** 2018

**Estimated Total Project Cost:** \$2,876,050



## FUNDING SOURCE

**Federal:** \$1,680,000 (HSIP)

**Local:**

**State:**

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering							
Final Design	\$400						
Utility	\$200						
Right of Way		\$107					
Construction		\$750	\$993	\$687			
<b>Subtotal</b>	<b>\$600</b>	<b>\$857</b>	<b>\$993</b>	<b>\$687</b>			
Total FY 2017—2018	\$1,457						
Total FY 2019—2022	\$1,680						
Total FY 2023—2026							

# PROJECT NAME: PA 94 & 234 INTERSECTION IMPROVEMENT

MPMS ID: 94897

First Appearance on TIP: 12/20/2011



## PROJECT DETAILS

**Primary Improvement Type:** Intersection Improvement

**State Route #:** 0094

**Name:** Carlisle Pike

**Length:** 2.38 miles

**Geographic Limits:** Intersection of PA 94 (Carlisle Pike) and PA 234 (East Berlin Road) in Reading Township

**Description:** Add left turn lanes and protected phasing on PA 94 (Carlisle Pike)

**Estimated Let Date:** 2/13/2020

**Estimated Year of Construction:** 2020

**Estimated Total Project Cost:** \$2,610,000



## FUNDING SOURCE

**Federal:** \$1,222,525 (CAQ); \$737,475 (NHPP)

**Local:**

**State:**

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering							
Final Design							
Utility							
Right of Way							
Construction			\$603	\$1,357			
<b>Subtotal</b>			\$603	\$1,357			
Total FY 2017—2018							
Total FY 2019—2022	\$1,960						
Total FY 2023—2026							

# PROJECT NAME: PA 94 & BERLIN ROAD

MPMS ID: 78672

First Appearance on TIP: 8/24/2006



## PROJECT DETAILS

**Primary Improvement Type:** Intersection Improvements

**State Route #:** 0094

**Name:** Carlisle Pike

**Length:** 1.71 miles

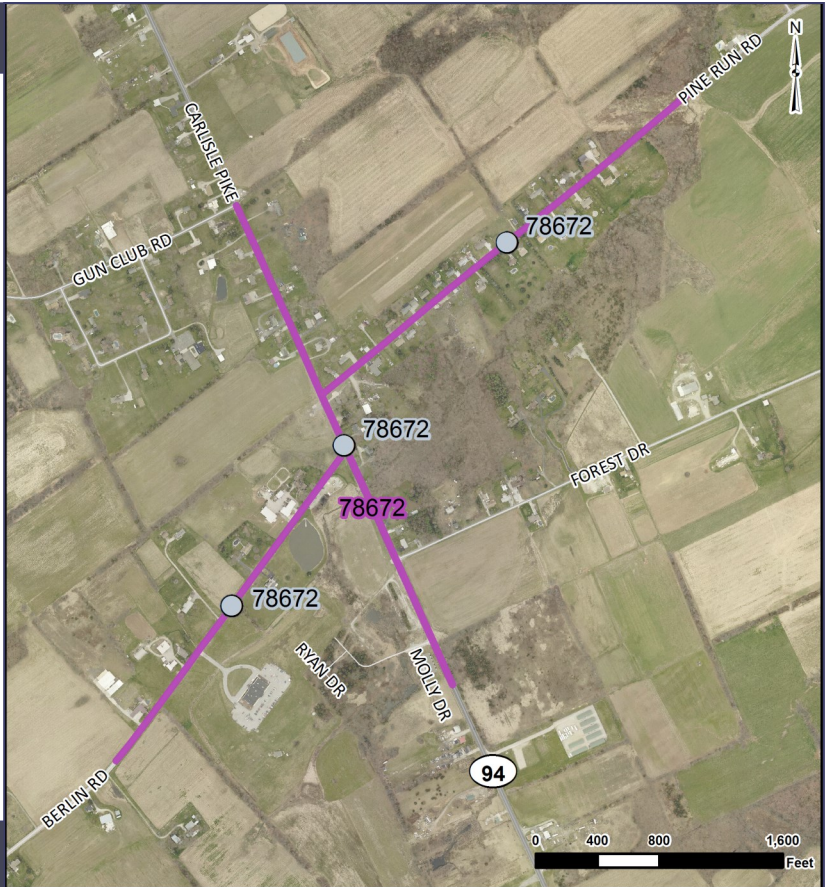
**Geographic Limits:** PA 94 (Carlisle Pike) and SR 1019 (Berlin Road) in Hamilton Township

**Description:** Intersection Improvements for PA 94 (Carlisle Pike) and SR 1019 (Berlin Road)

**Estimated Let Date:** N/A

**Estimated Year of Construction:** 2023

**Estimated Total Project Cost:** \$4,504,000



## FUNDING SOURCE

**Federal:** \$400,000 (STP)

**Local:**

**State:**

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering						\$400	
Final Design							
Utility							
Right of Way							
Construction							
<b>Subtotal</b>						\$400	
Total FY 2017—2018							
Total FY 2019—2022	\$400						
Total FY 2023—2026							

# PROJECT NAME: PINEY CREEK BRIDGE

MPMS ID: 99786

First Appearance on TIP: 1/14/2014



## PROJECT DETAILS

Primary Improvement Type: Bridge Replacement

State Route #: 0097

Name: South Queen Street

Length: N/A

Geographic Limits: PA 97 (South Queen Street) over Piney Creek in Germany Township and Littlestown Borough

Description: Bridge Replacement

Estimated Let Date: 11/14/2024

Estimated Year of Construction: 2025

Estimated Total Project Cost: \$850,001



## FUNDING SOURCE

Federal:

Local:

State: \$150,000 (581); 2nd 4-Years \$355,000 (581) \$850,000 (185)

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering					\$150		
Final Design							
Utility							
Right of Way							
Construction							\$1,205
<b>Subtotal</b>					\$150		\$1,205
Total FY 2017—2018							
Total FY 2019—2022	\$150						
Total FY 2023—2026	\$1,205						

# PROJECT NAME: PINEY CREEK BRIDGE 2

MPMS ID: 90692

First Appearance on TIP: 7/12/2010



## PROJECT DETAILS

**Primary Improvement Type:** Bridge Replacement

**State Route #:** 0097

**Name:** Baltimore Pike

**Length:** N/A

**Geographic Limits:** PA 97 (Baltimore Pike) over Tributary to Piney Creek in Germany Township

**Description:** Bridge Replacement of Piney Creek Bridge

**Estimated Let Date:** 5/18/2023

**Estimated Year of Construction:** 2023

**Estimated Total Project Cost:** \$370,000



## FUNDING SOURCE

**Federal:**

**State:** \$270,000 (185)

**Local:**

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering				\$100			
Final Design						\$150	
Utility						\$10	
Right of Way						\$10	
Construction							\$240
<b>Subtotal</b>				\$100		\$170	\$240
Total FY 2017—2018							
Total FY 2019—2022	\$270						
Total FY 2023—2026	\$240						

# PROJECT NAME: BALTIMORE PIKE RESURFACING 3

MPMS ID: 105336

First Appearance on TIP: 6/29/2015



## PROJECT DETAILS

**Primary Improvement Type:** Highway Restoration

**State Route #:** 0097

**Name:** Baltimore Pike

**Length:** 3.60

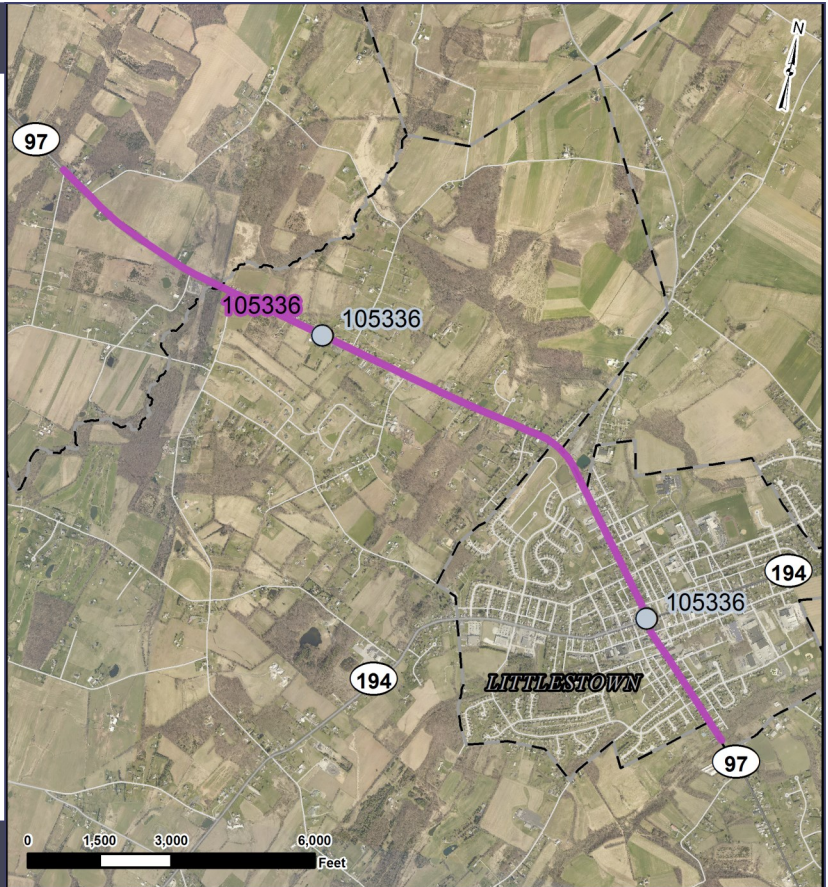
**Geographic Limits:** PA 97 from SR 2002 (White Hall Road) to Mud College Road through Germany, Mount Joy, and Union Townships, and Littlestown Borough

**Description:** Resurface, drainage, and guiderail installations on PA 97 (Baltimore Pike)

**Estimated Let Date:** 4/11/2019

**Estimated Year of Construction:** 2019

**Estimated Total Project Cost:** \$1,600,000



## FUNDING SOURCE

**Federal:** \$1,600,000 (STP)

**Local:**

**State:**

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering							
Final Design							
Utility							
Right of Way							
Construction			\$1,156	\$444			
<b>Subtotal</b>			\$1,156	\$444			
Total FY 2017—2018							
Total FY 2019—2022	\$1,600						
Total FY 2023—2026							

# PROJECT NAME: PLUM CREEK BRIDGE

MPMS ID: 99812

First Appearance on TIP: 1/15/2015



## PROJECT DETAILS

Primary Improvement Type: Bridge Maintenance

State Route #: 0116

Name: Hanover Road

Length: 0.01 miles

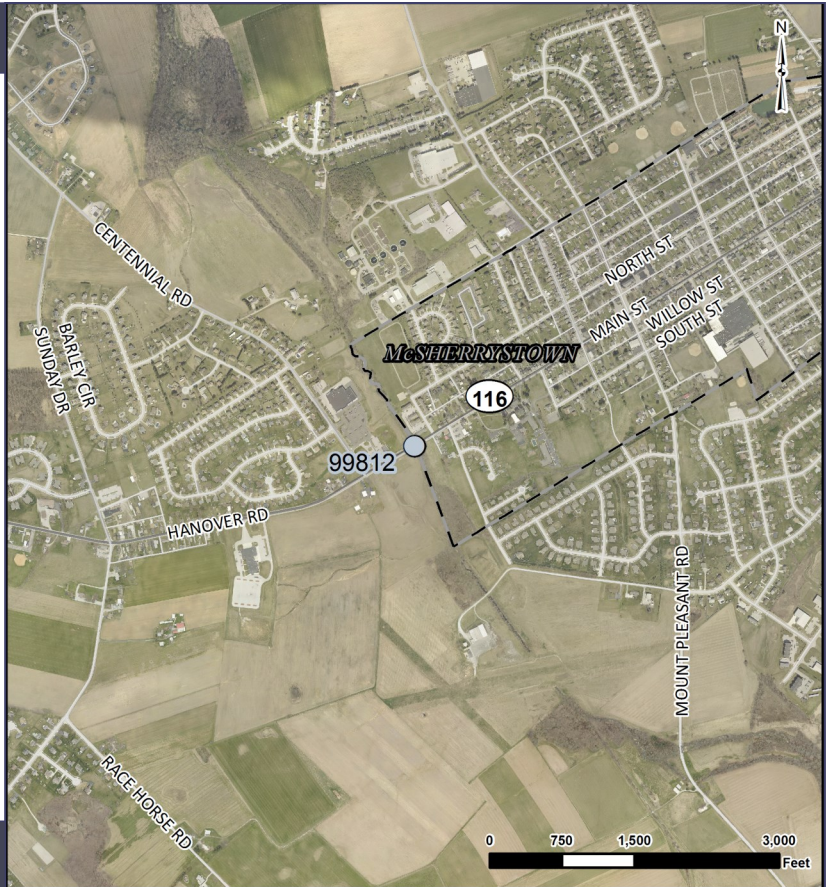
Geographic Limits: PA 116 (Hanover Road) in McSherrystown Borough and Conewago Township

Description: Bridge Improvement

Estimated Let Date: 12/12/2024

Estimated Year of Construction: 2025

Estimated Total Project Cost: \$1,600,000



## FUNDING SOURCE

Federal: \$250,000 (STP)

Local:

State: 2nd 4-Years \$1,600,000 (581)

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering					\$250		
Final Design							
Utility							
Right of Way							
Construction							\$1,600
<b>Subtotal</b>					\$250		\$1,600
Total FY 2017—2018							
Total FY 2019—2022	\$250						
Total FY 2023—2026	\$1,600						

# PROJECT NAME: PA 116 OVER TRIB TO MARSH CREEK

MPMS ID: 106665

First Appearance on TIP: 1/28/2016



## PROJECT DETAILS

**Primary Improvement Type:** Bridge Rehabilitation

**State Route #:** 0116

**Name:** Fairfield Road

**Length:** 0.01 miles

**Geographic Limits:** PA 116 (Fairfield Road) over Tributary to Marsh Creek in Highland Township

**Description:** Bridge Rehabilitation

**Estimated Let Date:** 5/9/2024

**Estimated Year of Construction:** 2024

**Estimated Total Project Cost:** \$525,000



## FUNDING SOURCE

**Federal:**

**State:** \$125,000 (185); 2nd 4-Years: \$400,000 (581)

**Local:**

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering				\$75			
Final Design						\$50	
Utility							
Right of Way							
Construction							\$400
<b>Subtotal</b>				\$75		\$50	\$400
Total FY 2017—2018							
Total FY 2019—2022	\$125						
Total FY 2023—2026	\$400						



# PROJECT NAME: PA116 OVER TRIB TO WILLOUGHBY RUN

MPMS ID: 106666

First Appearance on TIP: 1/28/2016



## PROJECT DETAILS

**Primary Improvement Type:** Bridge Maintenance

**State Route #:** 0116

**Name:** Fairfield Road

**Length:** N/A

**Geographic Limits:** PA 116 (Fairfield Road) over a Tributary to Willoughby Run in Cumberland Township

**Description:** Bridge Improvements

**Estimated Let Date:** 1/1/2023

**Estimated Year of Construction:** 2023

**Estimated Total Project Cost:** \$445,000



## FUNDING SOURCE

**Federal:**

**State:** \$195,000 (185); 2nd 4-Years: \$300,000 (581)

**Local:**

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering				\$75			
Final Design						\$50	
Utility						\$10	
Right of Way						\$10	
Construction							\$300
<b>Subtotal</b>				\$75		\$70	\$300
Total FY 2017—2018							
Total FY 2019—2022	\$145						
Total FY 2023—2026	\$300						

# PROJECT NAME: TANEYTOWN ROAD BRIDGE

MPMS ID: 99815

First Appearance on TIP: 1/15/2014



## PROJECT DETAILS

Primary Improvement Type: Bridge Maintenance

State Route #: 00134

Name: Taneytown Road

Length: 0.51 miles

Geographic Limits: PA 134 (Taneytown Road) over Plum Run in Cumberland Township

Description: Bridge Improvement

Estimated Let Date: 4/4/2024

Estimated Year of Construction: 2024

Estimated Total Project Cost: \$950,001



## FUNDING SOURCE

Federal: \$150,000 (STP)

Local:

State: 2nd 4-Years: \$950,000 (581)

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering					\$150		
Final Design							
Utility							
Right of Way							
Construction							\$950
<b>Subtotal</b>					\$150		\$950
Total FY 2017—2018							
Total FY 2019—2022	\$150						
Total FY 2023—2026	\$950						

# PROJECT NAME: HEIDLEBURG RD BRIDGE

MPMS ID: 87426

First Appearance on TIP: 8/14/2009



## PROJECT DETAILS

Primary Improvement Type: Bridge Maintenance

State Route #: 0234

Name: Heidlersburg Road

Length: N/A

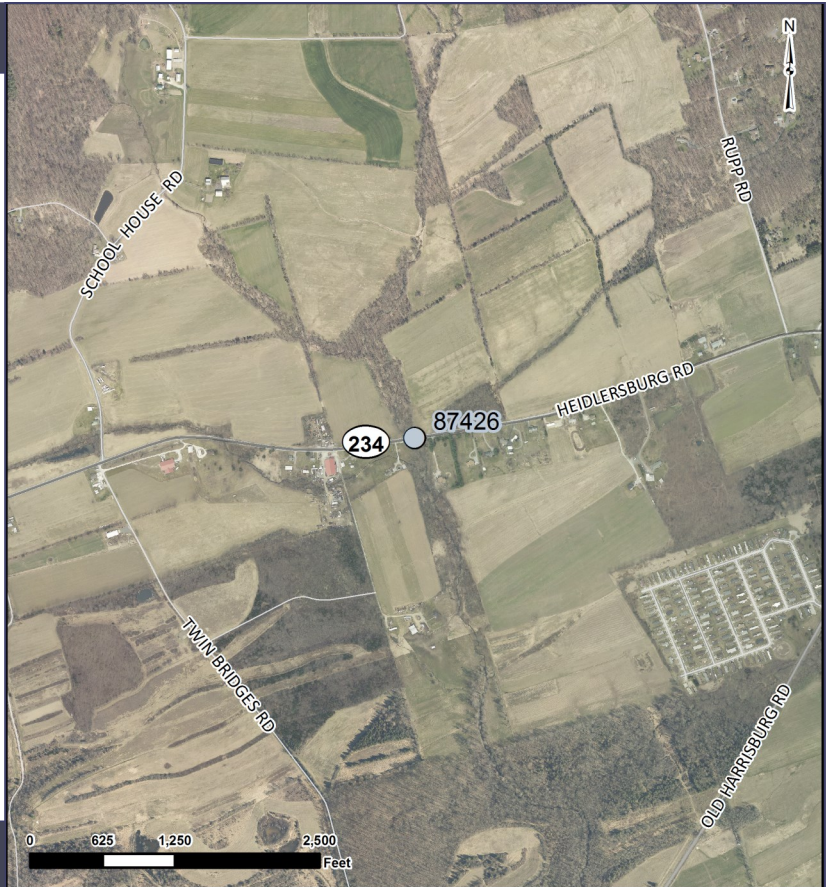
Geographic Limits: PA 234 (Heidlersburg Road) over Tributary to Conewago Creek in Tyrone Township

Description: Bridge Replacement

Estimated Let Date: 1/16/2020

Estimated Year of Construction: 2020

Estimated Total Project Cost: \$1,030,000



## FUNDING SOURCE

Federal:

State: \$550,000 (581)

Local:

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering	\$250						
Final Design		\$175					
Utility		\$10					
Right of Way		\$45					
Construction			\$550				
<b>Subtotal</b>	<b>\$250</b>	<b>\$230</b>	<b>\$550</b>				
Total FY 2017—2018	\$480						
Total FY 2019—2022	\$550						
Total FY 2023—2026							

# PROJECT NAME: PA 234 BRIDGE

MPMS ID: 90693

First Appearance on TIP: 7/12/2010



## PROJECT DETAILS

**Primary Improvement Type:** Bridge Maintenance

**State Route #:** 0234

**Name:** Buchanan Valley Road

**Length:** 0.01 miles

**Geographic Limits:** PA 234 over Conewago Creek in Franklin Township

**Description:** Bridge Replacement

**Estimated Let Date:** 1/16/2020

**Estimated Year of Construction:** 1/16/2020

**Estimated Total Project Cost:** \$1,705,751



## FUNDING SOURCE

**Federal:**

**State:** \$1,000,000 (185)

**Local:**

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering	\$426						
Final Design		\$200					
Utility		\$30					
Right of Way		\$50					
Construction			\$1,000				
<b>Subtotal</b>	<b>\$426</b>	<b>\$280</b>	<b>\$1,000</b>				
Total FY 2017—2018	\$706						
Total FY 2019—2022	\$1,000						
Total FY 2023—2026							

# PROJECT NAME: CONEWAGO CREEK BRIDGE

MPMS ID: 90698

First Appearance on TIP: 7/13/2010



## PROJECT DETAILS

Primary Improvement Type: Bridge Maintenance

State Route #: 0394

Name: Hunterstown-Hampton Road

Length: 0.02 miles

Geographic Limits: PA 394 over Conewago Creek in Straban Township

Description: Bridge Improvements

Estimated Let Date: 1/1/2025

Estimated Year of Construction: 2025

Estimated Total Project Cost: \$2,800,000



## FUNDING SOURCE

Federal: \$300,000 (BOF)

State: \$1,198,000 (185)

Local:

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering						\$300	
Final Design							
Utility							
Right of Way							
Construction							\$1,198
<b>Subtotal</b>						\$300	\$1,198
Total FY 2017—2018							
Total FY 2019—2022	\$300						
Total FY 2023—2026	\$1,198						

# PROJECT NAME: SHRIVERS CORNER BRIDGE

MPMS ID: 87672

First Appearance on TIP: 9/4/2009



## PROJECT DETAILS

**Primary Improvement Type:** Bridge Maintenance

**State Route #:** 0394

**Name:** Shrivvers Corner Road

**Length:** 0.01 Miles

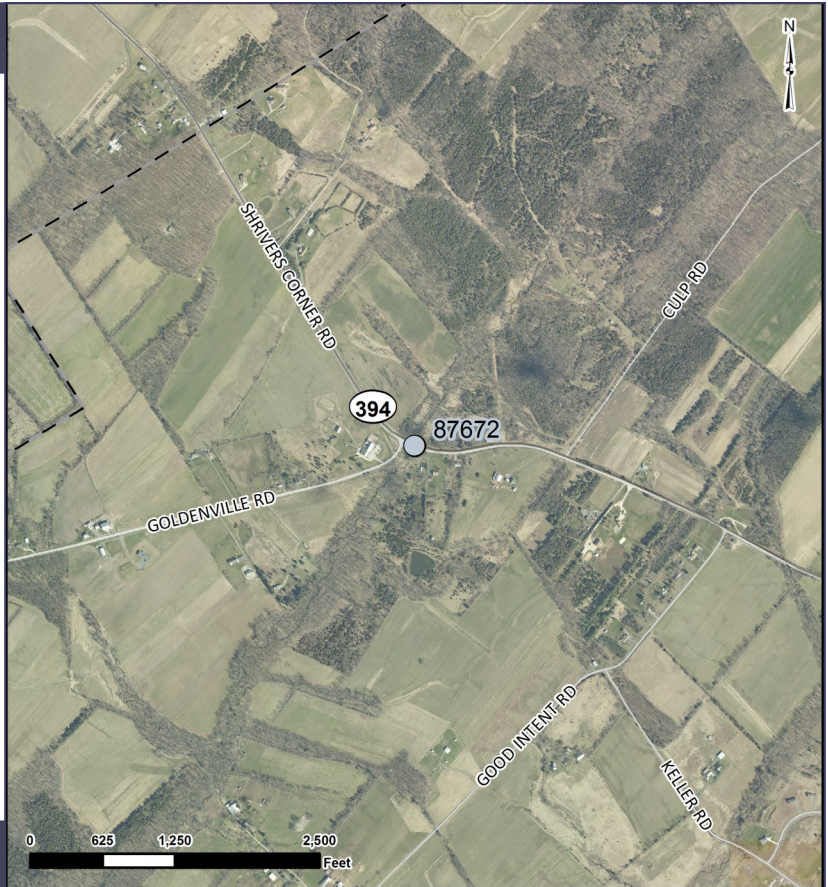
**Geographic Limits:** PA 394 (Shrivvers Corner Road) over Rock Creek in Straban Township

**Description:** Bridge Replacement

**Estimated Let Date:** 4/8/2021

**Estimated Year of Construction:** 2021

**Estimated Total Project Cost:** \$1,139,000



## FUNDING SOURCE

**Federal:** \$560,000 (BOF)

**Local:**

**State:** \$115,000 (581); \$140,000 (185)

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering		\$324					
Final Design				\$100			
Utility							
Right of Way				\$15			
Construction					\$700		
<b>Subtotal</b>		\$324		\$115	\$700		
Total FY 2017—2018	\$324						
Total FY 2019—2022	\$815						
Total FY 2023—2026							

# PROJECT NAME: LATIMORE VALLEY ROAD BRIDGE

MPMS ID: 73854

First Appearance on TIP: 6/14/2005



## PROJECT DETAILS

Primary Improvement Type: Bridge Maintenance

State Route #: 1005

Name: Latimore Valley Road

Length:

Geographic Limits: SR 1005 (Latimore Valley Road) over Bermudian Creek in Latimore Township

Description: Bridge Maintenance

Estimated Let Date: 8/22/2019

Estimated Year of Construction: 2020

Estimated Total Project Cost: \$1,330,000



## FUNDING SOURCE

Federal: \$631,000 (BOF); \$269,000 (STP)

Local:

State:

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering	\$200						
Final Design		\$180					
Utility							
Right of Way		\$50					
Construction			\$900				
<b>Subtotal</b>	<b>\$200</b>	<b>\$230</b>	<b>\$900</b>				
Total FY 2017—2018	\$430						
Total FY 2019—2022	\$900						
Total FY 2023—2026							

# PROJECT NAME: MUD RUN BRIDGE

MPMS ID: 78638

First Appearance on TIP: 8/24/2006



## PROJECT DETAILS

**Primary Improvement Type:** Bridge Rehabilitation

**State Route #:** 1007

**Name:** Stoney Point Road

**Length:** 0.04 Miles

**Geographic Limits:** SR 1007 (Stoney Point Road) over Mud Run in Reading Township

**Description:** Bridge Rehabilitation

**Estimated Let Date:** 11/29/2018

**Estimated Year of Construction:** 2019

**Estimated Total Project Cost:** \$1,007,200



## FUNDING SOURCE

**Federal:**

**State:** \$600,000 (581)

**Local:**

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering	\$150						
Final Design	\$47	\$165					
Utility		\$10					
Right of Way		\$35					
Construction			\$600				
Subtotal	\$197	\$210	\$600				
Total FY 2017—2018	\$407						
Total FY 2019—2022	\$600						
Total FY 2023—2026							



# PROJECT NAME: WIERMAN MILL BRIDGE

MPMS ID: 87431

First Appearance on TIP: 8/24/2006



## PROJECT DETAILS

Primary Improvement Type: Bridge Maintenance

State Route #: 1009

Name: Wiermans Mill Road

Length: N/A

Geographic Limits: SR 1009 (Wiermans Mill Road) over Tributary to Bermudian Creek in Huntington Township

Description: Bridge Replacement

Estimated Let Date: 2/11/2021

Estimated Year of Construction: 2021

Estimated Total Project Cost: \$995,000



## FUNDING SOURCE

Federal:

Local:

State: \$125,000 (185); \$600,000 (581)

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering		\$75					
Final Design				\$125			
Utility				\$15			
Right of Way				\$10			
Construction					\$575		
<b>Subtotal</b>		\$75		\$150	\$575		
Total FY 2017—2018	\$75						
Total FY 2019—2022	\$725						
Total FY 2023—2026							

# PROJECT NAME: CONEWAGO CREEK BRIDGE

MPMS ID: 78640

First Appearance on TIP: 8/24/2006



## PROJECT DETAILS

Primary Improvement Type: Bridge Improvement

State Route #: 1015

Name: Oxford Road

Length: 0.02 Miles

Geographic Limits: SR 1015 (Oxford Road) over Conewago Creek in Straban Township

Description: Bridge Improvement

Estimated Let Date: 3/17/2022

Estimated Year of Construction: 2022

Estimated Total Project Cost: \$3,078,000



## FUNDING SOURCE

Federal: \$1,251,734 (STP); 2nd 4-Years: \$1,748,266 (STP)

Local:

State: \$209,250 (185)

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering			\$209				
Final Design							
Utility							
Right of Way							
Construction						\$1,252	\$1,748
<b>Subtotal</b>			\$209			\$1,252	\$1,748
Total FY 2017—2018							
Total FY 2019—2022	\$1,461						
Total FY 2023—2026	\$1,748						

# PROJECT NAME: CONEWAGO CREEK BRIDGE 2

MPMS ID: 78642

First Appearance on TIP: 8/24/2006



## PROJECT DETAILS

Primary Improvement Type: Bridge Improvement

State Route #: 1017

Name: Red Bridge Road

Length: 0.04 Miles

Geographic Limits: SR 1017 (Red Bridge Road) over Conewago Creek in Straban Township

Description: Bridge Improvement

Estimated Let Date: 4/10/2025

Estimated Year of Construction: 2025

Estimated Total Project Cost: \$5,300,000



## FUNDING SOURCE

Federal:

Local:

State: \$250,000 (185); 2nd 4-Years: \$5,132,000 (581)

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering					\$250		
Final Design							
Utility							
Right of Way							
Construction							\$5,132
<b>Subtotal</b>					\$250		\$5,132
Total FY 2017—2018							
Total FY 2019—2022	\$250						
Total FY 2023—2026	\$5,132						

# PROJECT NAME: PINE RUN ROAD BRIDGE

MPMS ID: 90702

First Appearance on TIP: 7/13/ 2010



## PROJECT DETAILS

Primary Improvement Type: Bridge Improvement

State Route #: 1019

Name: Pine Run Road

Length: N/A

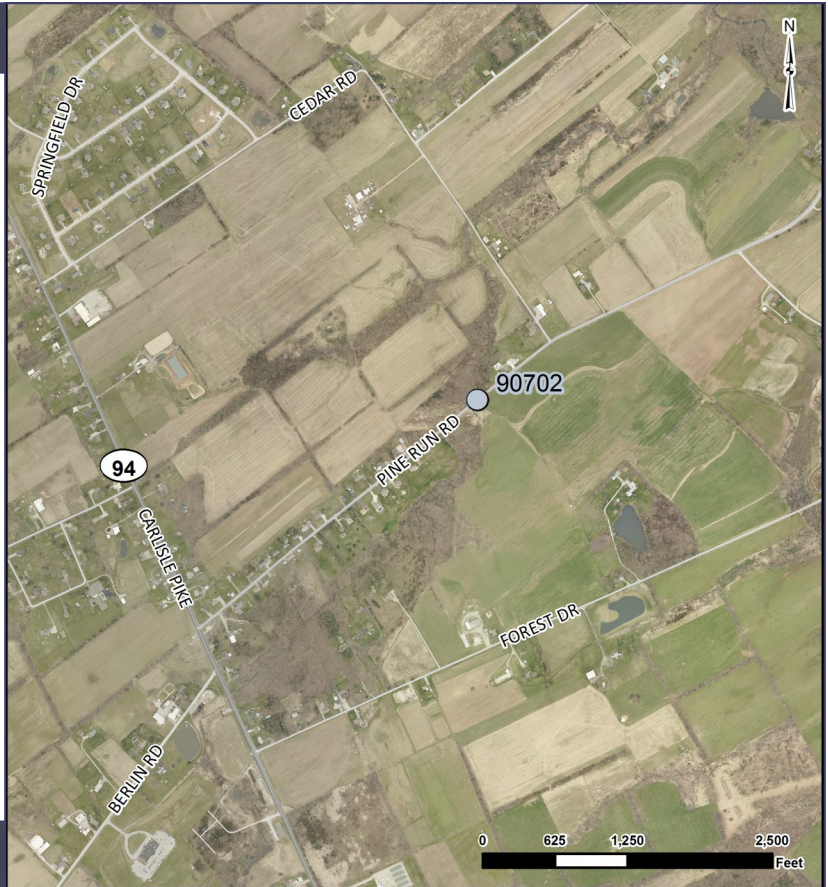
Geographic Limits: SR 1019 (Pine Run Road) over Tributary to Pine Run in Hamilton Township

Description: Bridge Improvement

Estimated Let Date: 1/1/2025

Estimated Year of Construction: 2025

Estimated Total Project Cost: \$550,000



## FUNDING SOURCE

Federal:

Local:

State: \$100,000 (185); 2nd 4-Years: \$2,200,000 (185)

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering						\$100	
Final Design							
Utility							
Right of Way							
Construction							\$2,200
<b>Subtotal</b>						\$100	\$2,200
Total FY 2017—2018							
Total FY 2019—2022	\$100						
Total FY 2023—2026	\$2,200						

# PROJECT NAME: BERMUDIAN CREEK BRIDGE

MPMS ID: 90707

First Appearance on TIP: 7/13/2010



## PROJECT DETAILS

**Primary Improvement Type:** Bridge Improvement

**State Route #:** 1020

**Name:** Idaville-York Springs Road

**Length:** N/A

**Geographic Limits:** SR 1020 (Idaville-York Springs Road) over Bermudian Creek in Huntington Township

**Description:** Bridge Improvement

**Estimated Let Date:** 1/1/2025

**Estimated Year of Construction:** 2025

**Estimated Total Project Cost:** \$500,000



## FUNDING SOURCE

**Federal:**

**State:** \$100,000 (185); 2nd 4-Years: \$400,000 (185)

**Local:**

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering						\$100	
Final Design							
Utility							
Right of Way							
Construction							\$400
<b>Subtotal</b>						\$100	\$400
Total FY 2017—2018							
Total FY 2019—2022	\$100						
Total FY 2023—2026	\$400						

# PROJECT NAME: CENTENNIAL ROAD BRIDGE PM

MPMS ID: 99743

First Appearance on TIP: 1/14/2014



## PROJECT DETAILS

**Primary Improvement Type:** Bridge Improvement

**State Route #:** 2006

**Name:** Centennial Road

**Length:** 0.28 Miles

**Geographic Limits:** SR 2006 (Centennial Road) over South Branch of Conewago Creek in Mt. Pleasant and Conewago Townships.

**Description:** Bridge Preservation

**Estimated Let Date:** 5/18/2023

**Estimated Year of Construction:** 2023

**Estimated Total Project Cost:** \$440,000



## FUNDING SOURCE

**Federal:**

**Local:**

**State:** \$100,000 (185); 2nd 4-Years: \$440,000 (185)

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering						\$100	
Final Design							
Utility							
Right of Way							
Construction							\$440
<b>Subtotal</b>						\$100	\$440
Total FY 2017—2018							
Total FY 2019—2022	\$100						
Total FY 2023—2026	\$440						

# PROJECT NAME: BOLLINGER ROAD BRIDGE PM

MPMS ID: 99756

First Appearance on TIP: 1/14/2014



## PROJECT DETAILS

Primary Improvement Type: Bridge Preservation

State Route #: 2027

Name: Bollinger Road

Length: 0.68 Miles

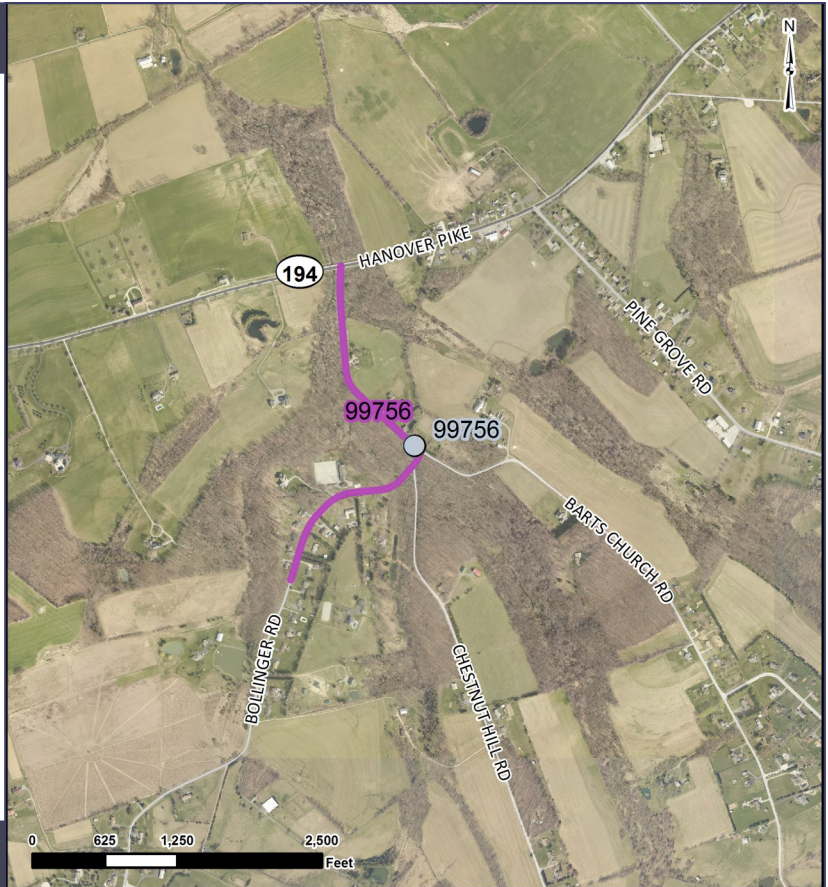
Geographic Limits: SR 2027 (Bollinger Road) over Tributary to Conewago Creek in Union Township

Description: Bridge Preservation

Estimated Let Date: 8/3/2023

Estimated Year of Construction: 2023

Estimated Total Project Cost: \$100,000



## FUNDING SOURCE

Federal:

State: \$75,000 (185)

Local:

FUNDING SUMMARY (IN THOUSANDS)							
Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering						\$75	
Final Design							
Utility							
Right of Way							
Construction							
<b>Subtotal</b>						<b>\$75</b>	
Total FY 2017—2018							
Total FY 2019—2022	\$75						
Total FY 2023—2026							

# PROJECT NAME: STATE STREET BRIDGE

MPMS ID: 87432

First Appearance on TIP: 8/14/2009



## PROJECT DETAILS

Primary Improvement Type: Bridge Improvement

State Route #: 3001

Name: State Street

Length: N/A

Geographic Limits: SR 3001 (State Street) over a Tributary to Bermudian Creek in York Springs Borough

Description: Bridge Improvement

Estimated Let Date: 3/9/2023

Estimated Year of Construction: 2023

Estimated Total Project Cost: \$362,001



## FUNDING SOURCE

Federal:

State: \$100,000 (185); 2nd 4-Years: \$500,000 (581)

Local:

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering						\$100	
Final Design							
Utility							
Right of Way							
Construction							\$500
<b>Subtotal</b>						\$100	\$500
Total FY 2017—2018							
Total FY 2019—2022	\$100						
Total FY 2023—2026	\$500						



# PROJECT NAME: ROCK CREEK BRIDGE

MPMS ID: 99832

First Appearance on TIP: 1/15/2014



## PROJECT DETAILS

**Primary Improvement Type:** Bridge Improvement

**State Route #:** 3002

**Name:** Mason Dixon Road

**Length:** 0.37 Miles

**Geographic Limits:** SR 3002 (Mason Dixon Road) over Rock Creek in Cumberland and Mount Joy Townships

**Description:** Bridge Replacement

**Estimated Let Date:** 9/16/2021

**Estimated Year of Construction:** 2022

**Estimated Total Project Cost:** \$2,065,000



## FUNDING SOURCE

**Federal:** \$631,000 (BOF), \$729,000 (STP)

**State:** \$125,000 (581), \$380,000 (185)

**Local:**

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering	\$200						
Final Design			\$125				
Utility			\$25				
Right of Way			\$15				
Construction				\$1,700			
<b>Subtotal</b>	<b>\$200</b>		<b>\$150</b>	<b>\$1,700</b>			
Total FY 2017—2018	\$200						
Total FY 2019—2022	\$1,850						
Total FY 2023—2026							

# PROJECT NAME: MILLERSTOWN ROAD BRIDGE

MPMS ID: 78662

First Appearance on TIP: 8/24/2006



## PROJECT DETAILS

**Primary Improvement Type:** Bridge Rehabilitation

**State Route #:** 3005

**Name:** Millerstown Road

**Length:** 0.04 Miles

**Geographic Limits:** SR 3005 (Millerstown Road) over Willoughby Run in Cumberland Township

**Description:** Bridge Rehabilitation

**Estimated Let Date:** 3/26/2020

**Estimated Year of Construction:** 2020

**Estimated Total Project Cost:** \$1,065,000



## FUNDING SOURCE

**Federal:**

**State:** \$626,00 (185); \$339,000 (581)

**Local:**

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering	\$100						
Final Design			\$60				
Utility			\$15				
Right of Way			\$15				
Construction				\$875			
<b>Subtotal</b>	<b>\$100</b>		<b>\$85</b>	<b>\$875</b>			
Total FY 2017—2018	\$100						
Total FY 2019—2022	\$980						
Total FY 2023—2026							

# PROJECT NAME: HARBAUGH VALLEY ROAD BRIDGE

MPMS ID: 99862

First Appearance on TIP: 1/15/2014



## PROJECT DETAILS

**Primary Improvement Type:** Bridge Preservation

**State Route #:** 3009

**Name:** Harbaugh Valley Road

**Length:** 0.01 Miles

**Geographic Limits:** SR 3009 Harbaugh Valley Road) over Miney Branch of Tom's Creek in Liberty and Hamiltonban Townships

**Description:** Bridge Preservation

**Estimated Let Date:** 1/1/2022

**Estimated Year of Construction:** 2022

**Estimated Total Project Cost:** \$325,000



## FUNDING SOURCE

**Federal:**

**State:** \$75,000 (185); 2nd 4-Years: \$250,000 (581)

**Local:**

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering						\$75	
Final Design							
Utility							
Right of Way							
Construction							\$250
<b>Subtotal</b>						\$75	\$250
Total FY 2017—2018							
Total FY 2019—2022	\$75						
Total FY 2023—2026	\$250						

# PROJECT NAME: WATER STREET BRIDGE

MPMS ID: 87430

First Appearance on TIP: 8/14/2009



## PROJECT DETAILS

Primary Improvement Type: Bridge Improvement

State Route #: 3010

Name: Water Street

Length: N/A

Geographic Limits: SR 3010 (Water Street) over Spring Run in Hamiltonban Township

Description: Bridge Replacement

Estimated Let Date: 11/29/2018

Estimated Year of Construction: 2019

Estimated Total Project Cost: \$1,060,550



## FUNDING SOURCE

Federal:

State: \$400,000 (581)

Local:

FUNDING SUMMARY (IN THOUSANDS)							
Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering	\$250						
Final Design		\$187					
Utility		\$35					
Right of Way		\$43					
Construction			\$400				
<b>Subtotal</b>	<b>\$250</b>	<b>\$265</b>	<b>\$400</b>				
Total FY 2017—2018	\$515						
Total FY 2019—2022	\$400						
Total FY 2023—2026							

# PROJECT NAME: MUMMASBURG ROAD BRIDGE

**MPMS ID: 87435**

**First Appearance on TIP: 8/14/2009**



## PROJECT DETAILS

**Primary Improvement Type:** Bridge Improvement

**State Route #:** 3017

**Name:** Mummasburg Road

**Length:** N/A

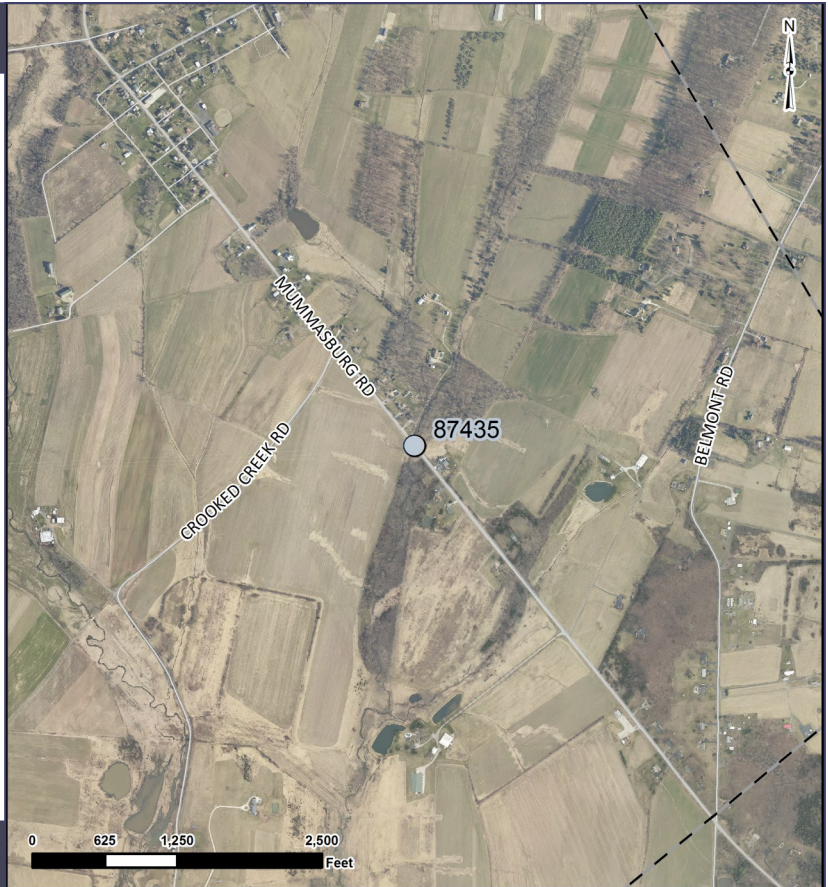
**Geographic Limits:** SR 3017 (Mummasburg Road) over Mud Run in Franklin Township

**Description:** Bridge Replacement

**Estimated Let Date:** 1/14/2021

**Estimated Year of Construction:** 2021

**Estimated Total Project Cost:** \$500,000



## FUNDING SOURCE

**Federal:**

**State:** \$75,000 (185), \$350,000 (581)

**Local:**

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering		\$75					
Final Design				\$50			
Utility				\$15			
Right of Way				\$10			
Construction					\$350		
<b>Subtotal</b>		\$75		\$75	\$350		
Total FY 2017—2018	\$75						
Total FY 2019—2022	\$425						
Total FY 2023—2026							

# PROJECT NAME: MENGUS MILL ROAD BRIDGE

MPMS ID: 18049

First Appearance on TIP: 1/21/1999



## PROJECT DETAILS

Primary Improvement Type: Bridge Improvement

State Route #: T-438

Name: Mengus Mill Road

Length: N/A

Geographic Limits: T-438 (Mengus Mill Road) over Piney Creek in Germany Township

Description: Bridge Improvement

Estimated Let Date: 2/13/2020

Estimated Year of Construction: 2020

Estimated Total Project Cost: \$1,873,000



## FUNDING SOURCE

Federal: \$980,000 (STP)

Local: \$61,250

State: \$183,750 (183)

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering	\$348						
Final Design			\$200				
Utility			\$50				
Right of Way			\$75				
Construction					\$900		
<b>Subtotal</b>	<b>\$348</b>		<b>\$325</b>		<b>\$900</b>		
Total FY 2017—2018	\$348						
Total FY 2019—2022	\$1,225						
Total FY 2023—2026							

# PROJECT NAME: STONEY POINT ROAD BRIDGE

MPMS ID: 18154

First Appearance on TIP: 1/21/1999



## PROJECT DETAILS

Primary Improvement Type: Bridge Improvement

State Route #: 7218

Name: Stony Point Road

Length: 0.01 Miles

Geographic Limits: Stony Point Road over Market Run in Reading Township

Description: Bridge Improvement

Estimated Let Date: 1/1/2024

Estimated Year of Construction: 2024

Estimated Total Project Cost: \$1,600,000



## FUNDING SOURCE

Federal: \$180,000 (STP), \$300,000 (BOF); 2nd 4-Years: \$800,000 (BOF)

Local: \$30,000; 2nd 4-Years: \$50,000

State: \$90,000 (183); 2nd 4-Years: \$150,000 (183)

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering				\$225			
Final Design						\$250	
Utility						\$50	
Right of Way						\$75	
Construction							\$1,000
<b>Subtotal</b>				\$225		\$375	\$1,000
Total FY 2017—2018							
Total FY 2019—2022	\$600						
Total FY 2023—2026	\$1,000						

# PROJECT NAME: BRIDGE RESERVE

**MPMS ID: 87792**

**First Appearance on TIP: N/A**



## PROJECT DETAILS

**Primary Improvement Type:** Reserve Line Item

**State Route #:** N/A

**Name:** N/A

**Length:** N/A

**Geographic Limits:** N/A

**Description:** Bridge Reserve

**Estimated Let Date:** N/A

**Estimated Year of Construction:** N/A

**Estimated Total Project Cost:** N/A

## FUNDING SOURCE

**Federal:** \$542,000 (BOF); 2nd 4-Years: \$1,033,000 (BOF)

**Local:**

**State:** \$156,000 (185); 2nd 4-Years: \$1,125 (185)

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering							
Final Design							
Utility							
Right of Way							
Construction			\$35	\$101	\$106	\$456	\$1,034
<b>Subtotal</b>			\$35	\$101	\$106	\$456	\$1,034
Total FY 2017—2018							
Total FY 2019—2022	\$698						
Total FY 2023—2026	\$1,034						



# PROJECT NAME: HIGHWAY RESERVE

**MPMS ID: 87793**

**First Appearance on TIP: N/A**

## PROJECT DETAILS

**Primary Improvement Type:** Reserve Line Item

**State Route #:** N/A

**Name:** N/A

**Length:** N/A

**Geographic Limits:** N/A

**Description:** Federal and State Highway Reserve Line Item for Adams County

**Estimated Let Date:** N/A

**Estimated Year of Construction:** N/A

**Estimated Total Project Cost:** N/A

## FUNDING SOURCE

**Federal:** \$1,290,525 (NHPP), \$896,350 (STP); 2nd 4-Years: \$2,927,734 (STP), \$2,285,000 (NHPP)

**Local:**

**State:**

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering							
Final Design							
Utility							
Right of Way							
Construction				\$1,168	\$1,019		\$5,213
<b>Subtotal</b>				\$1,168	\$1,019		\$5,213
Total FY 2017—2018							
Total FY 2019—2022	\$2,187						
Total FY 2023—2026	\$5,213						

# PROJECT NAME: DELIVERY/CONSULT ASSISTANCE

MPMS ID: 87807

First Appearance on TIP: N/A



## PROJECT DETAILS

Primary Improvement Type: Reserve Line Item

State Route #: N/A

Name: N/A

Length: N/A

Geographic Limits: N/A

Description: Reserve Line Item

Estimated Let Date: N/A

Estimated Year of Construction: N/A

Estimated Total Project Cost: N/A

## FUNDING SOURCE

Federal:

Local:

State: \$2,400,000 (581)

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering			\$400	\$400	\$400	\$400	
Final Design							
Utility							
Right of Way							
Construction			\$200	\$200	\$200	\$200	
<b>Subtotal</b>			\$600	\$600	\$600	\$600	
Total FY 2017—2018							
Total FY 2019—2022	\$2,400						
Total FY 2023—2026							

# PROJECT NAME: HSIP LINE ITEM

**MPMS ID: 87811**

**First Appearance on TIP: N/A**



## PROJECT DETAILS

**Primary Improvement Type:** Highway Safety Improvement Program

**State Route #:** N/A

**Name:** N/A

**Length:** N/A

**Geographic Limits:** N/A

**Description:** Reserve Line Item

**Estimated Let Date:** N/A

**Estimated Year of Construction:** N/A

**Estimated Total Project Cost:** N/A

## FUNDING SOURCE

**Federal:** \$1,337,000 (HSIP); 2nd 4-Years: \$1,012,001 (HSIP)

**Local:**

**State:**

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering							
Final Design							
Utility							
Right of Way							
Construction				\$325	\$1,012		\$1,012
<b>Subtotal</b>				\$325	\$1,012		\$1,012
Total FY 2017—2018							
Total FY 2019—2022	\$1,337						
Total FY 2023—2026	\$1,012						

# PROJECT NAME: DF BOX CULVERT LINE ITEM

**MPMS ID: 102142**

**First Appearance on TIP: N/A**

PROJECT DETAILS
<b>Primary Improvement Type:</b> Box Culvert Program
<b>State Route #:</b> N/A
<b>Name:</b> N/A
<b>Length:</b> N/A
<b>Geographic Limits:</b> N/A
<b>Description:</b> Box Culvert Program Line Item for Adams County
<b>Estimated Let Date:</b> N/A
<b>Estimated Year of Construction:</b> N/A
<b>Estimated Total Project Cost:</b> N/A
FUNDING SOURCE

**Federal:**

**Local:**

**State:** \$350,000 (581)

FUNDING SUMMARY (IN THOUSANDS)							
Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering							
Final Design							
Utility							
Right of Way							
Construction			\$225	\$125			
<b>Subtotal</b>			\$225	\$125			
Total FY 2017—2018							
Total FY 2019—2022	\$350						
Total FY 2023—2026							

# PROJECT NAME: ROAD SAFETY AUDIT LINE ITEM

**MPMS ID: 106555**

**First Appearance on TIP: N/A**



## PROJECT DETAILS

**Primary Improvement Type:** Reserve Line Item

**State Route #:** N/A

**Name:** N/A

**Length:** N/A

**Geographic Limits:** N/A

**Description:** Road Safety Audit Line Item for Adams County

**Estimated Let Date:** N/A

**Estimated Year of Construction:** N/A

**Estimated Total Project Cost:** N/A

## FUNDING SOURCE

**Federal:**

**Local:**

**State:** \$30,000 (581)

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering							
Final Design							
Utility							
Right of Way							
Construction			\$30				
<b>Subtotal</b>			\$30				
Total FY 2017—2018							
Total FY 2019—2022	\$30						
Total FY 2023—2026							

# PROJECT NAME: SRTP RIDESHARE PROGRAM

**MPMS ID: 82372**

**First Appearance on TIP: N/A**

## PROJECT DETAILS

**Primary Improvement Type:** Congestion Reduction/Resurfacing

**State Route #:** N/A

**Name:** N/A

**Length:** N/A

**Geographic Limits:** N/A

**Description:** Ridesharing and Vanpooling Programs, and Transit Coordination

**Estimated Let Date:** N/A

**Estimated Year of Construction:** N/A

**Estimated Total Project Cost:** N/A

## FUNDING SOURCE

**Federal:** \$123,916 (STP), \$121,475 (CAQ)

**Local:**

**State:**

## FUNDING SUMMARY (IN THOUSANDS)

Phase	2017	2018	2019	2020	2021	2022	2nd 4-Years
Prelim. Engineering			\$60	\$61	\$62	\$62	
Final Design							
Utility							
Right of Way							
Construction							
<b>Subtotal</b>			\$60	\$61	\$62	\$62	
Total FY 2017—2018							
Total FY 2019—2022	\$245						
Total FY 2023—2026							

# 2019 - 2022 TIP ENVIRONMENTAL JUSTICE SUMMARY

As part of the Transportation Improvement Program (TIP) adoption process, the Adams County Transportation Planning Organization (ACTPO) is required to analyze the impact that TIP projects will have on the surrounding environments. One aspect of this analysis is evaluating the benefits and burdens a project will have on the socio-economic population surrounding the project area.

## WHAT IS ENVIRONMENTAL JUSTICE?

Environmental Justice (EJ) refers to the implementation of Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which directs procedures to be put in place to identify and address any disproportionately high and adverse human health or environmental effects on minority and low-income population groups. The fundamental principles of EJ can be defined as:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority and low-income populations;
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process; and
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

## OUTREACH ACTIVITIES

In developing transportation plans and programming projects to address these environmental justice concerns, ACTPO seeks input from a variety of advocacy organizations and service providers that serve a wide variety of socio-economic populations in Adams County. Information on TIP projects are provided to the following organizations and providers for feedback on potential impacts on the socio-economic populations they serve. Including:

- Adams County Association for the Blind
- Adams County CareerLink
- Adams County Head Start
- Adams County Housing Authority
- Adams County Literacy Council
- Adams County Office for Aging
- The Brethren Home Community
- Center for Community Health Partnership
- East Berlin Area Community Center
- SpiriTrust Lutheran, the Village at Gettysburg
- Hart Center

- Lincoln Intermediate Unit #12
- Rural Opportunities
- SCCAP
- United Way of Adams County

Additionally, TIP information is provided to seven (7) Tribes and nations, as identified by consultation with PennDOT and FHWA, for feedback on potential impacts to sites and/or artifacts of concern. This Tribes and Nations include:

- Absentee-Shawnee Tribe of Oklahoma
- Delaware Nation
- Delaware Tribe
- Eastern Shawnee Tribe of Oklahoma
- Seneca-Cayuga Tribe of Oklahoma
- Shawnee Tribe
- St. Regis Mohawk Tribe

Multiple public meetings are held to receive comments related to TIP projects. These meetings are held at a facility that is handicap accessible. Finally, language translation services are available upon request.

## **BENEFITS AND BURDENS**

Projects on the 2019 TIP can be broken down into several categories; Maintenance, Bridges, Capacity, Safety, Bicycle/Pedestrian, and Intermodal. Each type of project will have a unique set of impacts and will affect individual populations differently.

**Maintenance projects**, in most cases, will cause the least amount of impact on the population. These projects typically involve highway resurfacing/repaving work on existing roadways. Impacts can include delayed travel time, delayed transit service, traffic detours, work zone noise and debris. However, these projects are shorter in duration and result in improvements to the functionality of the roadway network by providing smoother driving surfaces and new roadway markings that meet the newest DOT standards.

Most **bridge projects** fall into one of two categories, rehabilitation or replacement. Bridge rehabilitation projects can impact surrounding populations during construction through delayed travel time, delayed transit service, decreased air quality due to traffic delay, work zone noise and debris. Bridge replacement projects can have the same impacts. However, bridge replacement projects are more likely to involve traffic detours due to the bridge being closed to traffic during repairs. The benefits of these types of improvements include safer bridge structures, improved roadways, new roadway markings and new roadway signs.

**Capacity projects** typically involve the addition a new lanes to existing roadways, new roads to the existing network, or realignment of intersections or interchanges to provide additional or smoother traffic flows. These projects have a greater impact on the surrounding populations, in the form of right –of-way acquisitions. When planning capacity projects, special attention must be paid to the populations that will be impacted.



During construction impacts can include, longer construction durations, shifting travel patterns, delayed travel time, delayed transit services, work zone noise and debris. Once completed, impacts can include loss of property, increased traffic volumes, new travel patterns and decreased air quality. The benefits of these projects include decreased travel delay, improved transit service time, new roadway markings, new roadway signs, smoother driving surfaces, and, in certain cases, improved quality of life for all residents along previously congested roadways.

The many different types of **safety projects** can result in a variety of impacts and benefits. Safety projects include, but are not limited to, new traffic signals, improved signal timing, new roadway markings, additional turning lanes, roundabouts and roadway reconstruction. Impacts can include loss of property, delayed travel time, delayed transit service, decreased access, shifting travel patterns, work zone noise and debris. The benefits of these projects can include safer travel, smoother roadways, safer turning movements, new roadway markings and updated roadway signs.

## SUMMARY

The burdens of most transportation projects are limited to the duration of construction of the project. However, in some instances there can be negative economic impacts on businesses in the area surrounding the project. At the same time, these projects can also lead to greater economic opportunities. The breadth of impact depends on the type and scope of a particular project.

In reviewing the projects on the draft 2019-2022 Adams County TIP, the majority of projects will have a minimal impact on persons in identified population groups. The most common impacts to these groups are those associated with temporary construction activities. There are a small number of projects that, due to their size and scope, will impact all residents and businesses in the surrounding area. However, the end result in these larger-impact projects will be improved access and traffic flow and increased safety.

### ACTPO'S DATA FOR EJ ANALYSIS OF THE DRAFT TIP

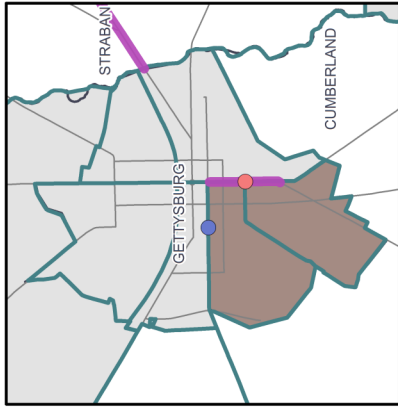
ACTPO analyzes demographic data from the American Community Survey (ACS) produced by the US Census Bureau. The 2016 ACS 5-year estimates were used to help identify locations of demographic groups which may be underrepresented in the planning process or disproportionately impacted by planning decisions. The four (4) categories currently identified include: Limited English Speaking households; Households in Poverty; Minorities, or people who identify as a race other than "White Alone" and people who are Hispanic; and Elderly Residents, 75 Years and Older. This data is available as five-year estimates for the Census Block Groups in Adams County.

While this data provides a glimpse into the locations of potentially underrepresented and disadvantaged populations, it does not detail the effects of any TIP project on a specific environmental justice population. Furthermore, ACTPO recognizes that this data does not take into account several important characteristics of transportation including the type of project, the total number of projects in an area, the level of disturbance, and the timeline of each individual project. In an effort to more effectively and efficiently evaluate the benefits and burdens of the transportation network and transportation projects for environmental justice and other

disadvantaged populations, PennDOT Planning Partners in District 8, including ACTPO, have contracted with the Voorhees Transportation Center at Rutgers University to develop an evaluation process to address project benefits and burdens. The project is expected to be completed in 2018, with the intent to use the resulting process during the development of the 2021-2024 Transportation Improvement Program.

POTENTIAL ENVIRONMENTAL JUSTICE AREAS

MINORITY POPULATIONS



Legend

Highway & Bridge Project Locations

Project Type

- 409 Expanded Maintenance
- Bridge Preservation - Federal
- Bridge Replacement
- Bridge Restoration
- Highway Reconstruction
- Highway Restoration
- Safety Improvement
- Highway Project Segments

State Route

- Municipal Boundary

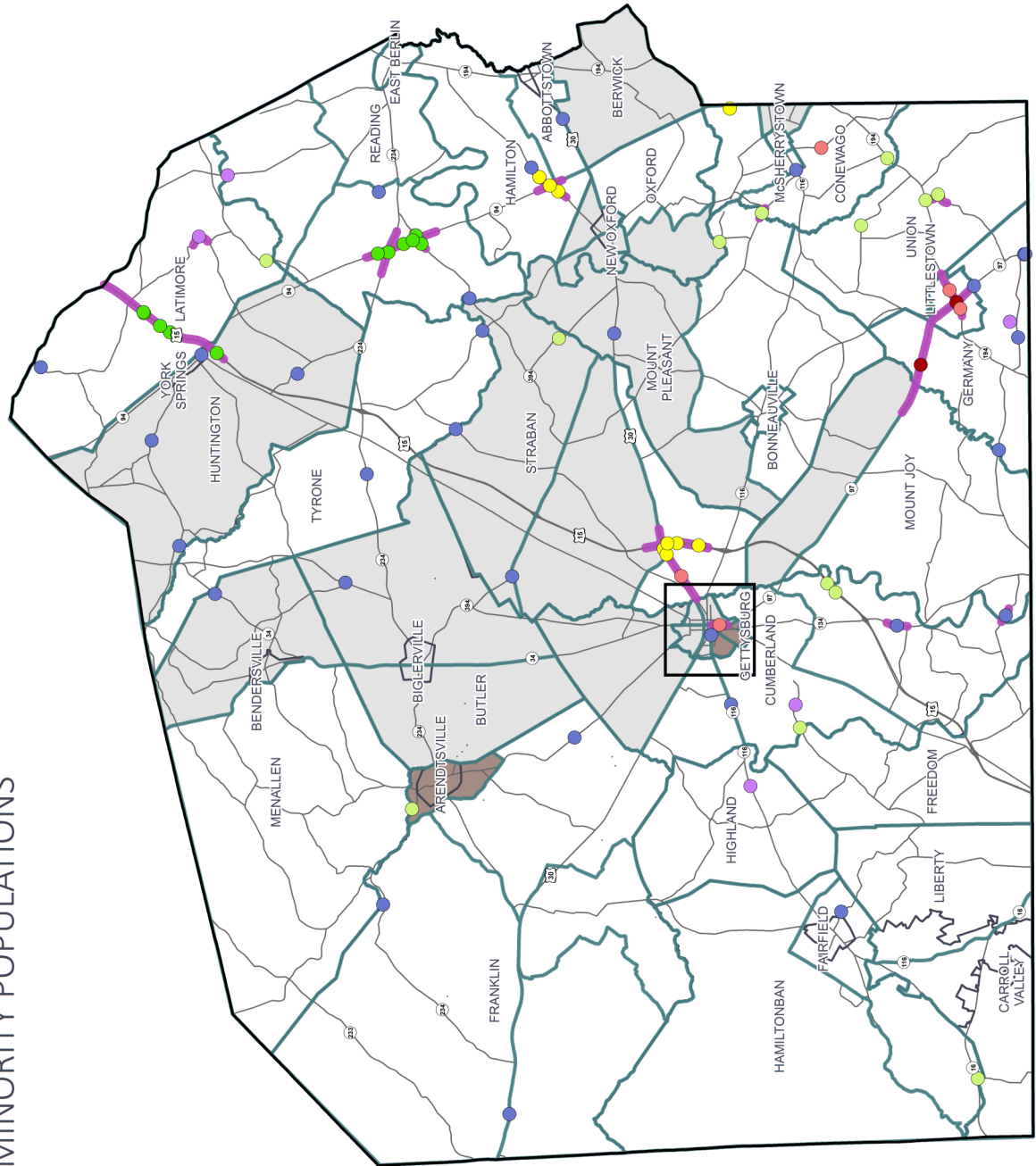
Census Geography

- Block Group Boundary

Minority Populations (non-white, non-hispanic)

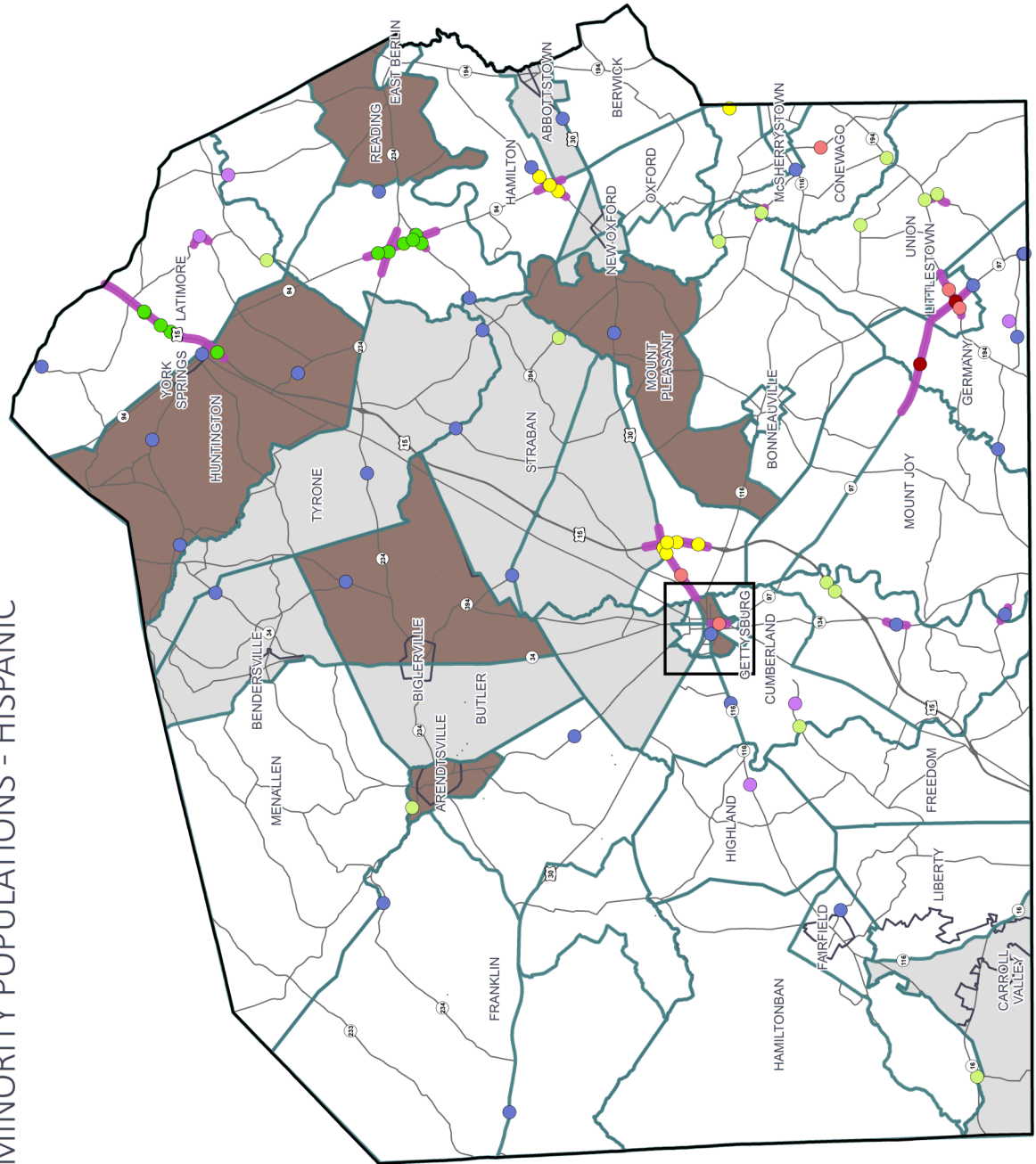
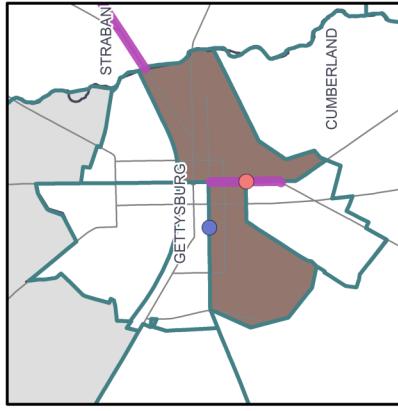
- Below County Threshold of 5.7%
- Minority Areas of Concentration (5.7% - 18%)
- Minority Areas of Higher Concentration (18% - 32%)

Source: PennDOT, ACPDP, US Census Bureau ACS 2016 Est.



POTENTIAL ENVIRONMENTAL JUSTICE AREAS

MINORITY POPULATIONS - HISPANIC



Legend

Highway & Bridge Project Locations

- Project Type
- 409 Expanded Maintenance
  - Bridge Preservation - Federal
  - Bridge Replacement
  - Bridge Restoration
  - Highway Reconstruction
  - Highway Restoration
  - Safety Improvement
  - Highway Project Segments

Census Geography

- Block Group Boundary
- Municipal Boundary
- State Route

Hispanic Residents

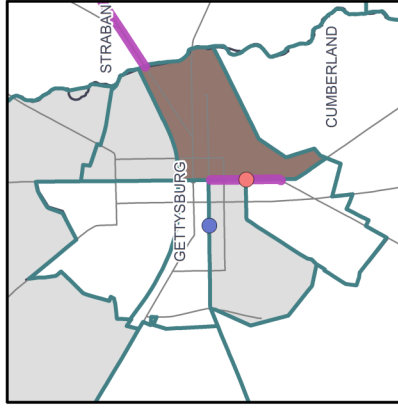
- Below The County Threshold of 6.6%
- Hispanic Areas of Concentration (6.7% - 17.2%)
- Hispanic Areas of Higher Concentration (17.3% - 27.8%)

Source: PennDOT, ACPDP, US Census Bureau ACS 2016 Est.



POTENTIAL ENVIRONMENTAL JUSTICE AREAS

LIMITED ENGLISH PROFICIENCY (LEP)



Legend

Highway & Bridge Project Locations

Project Type

- 409 Expanded Maintenance
- Bridge Preservation - Federal
- Bridge Replacement
- Bridge Restoration
- Highway Reconstruction
- Highway Restoration
- Safety Improvement
- Highway Project Segments

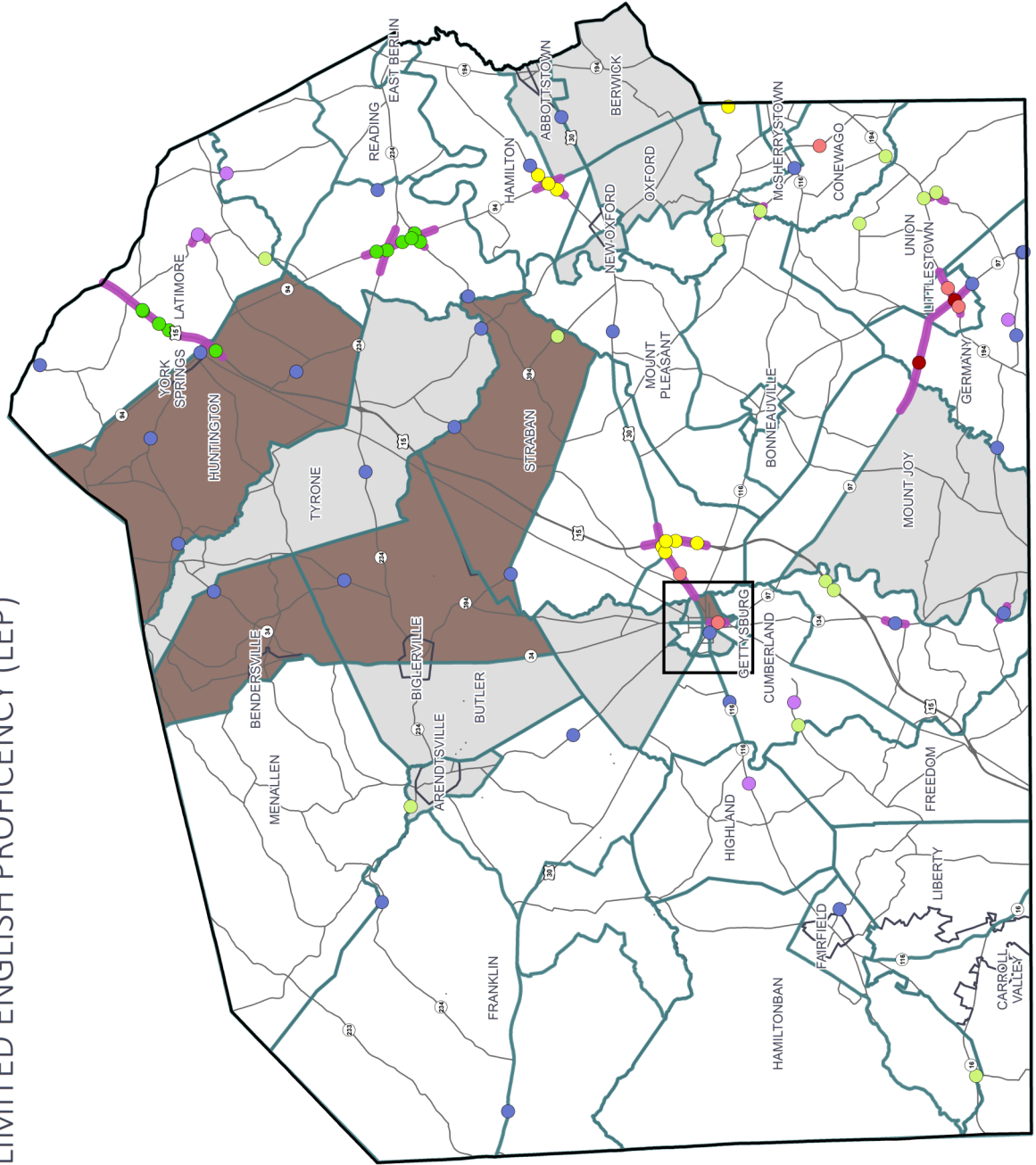
Census Geography

- Block Group Boundary
- Municipal Boundary
- State Route

Limited English Speaking Households

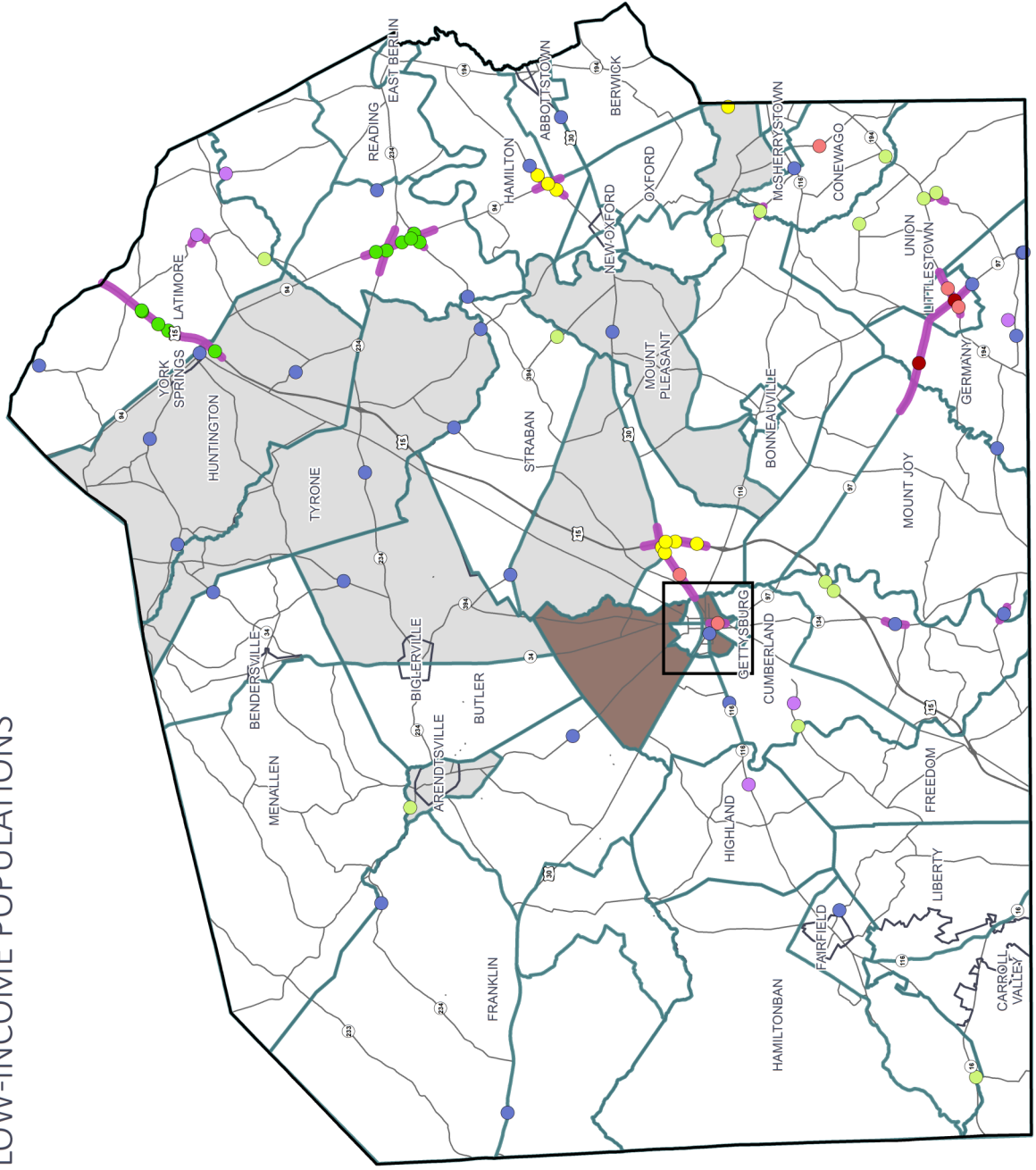
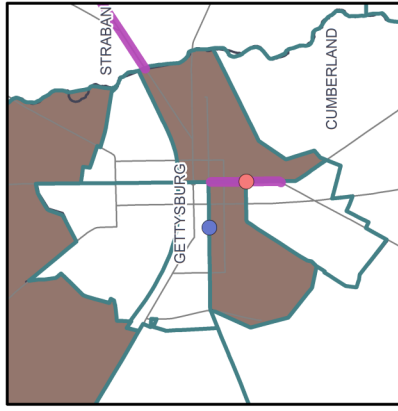
- Below the County threshold of 1.4%
- LEP Areas of Concentration (1.5% - 4.9%)
- LEP Areas of Higher Concentration (5% - 8.4%)

Source: PennDOT, ACOPI, US Census Bureau ACS 2016 Est.



# 2019 - 2022 TIP: ADAMS COUNTY, PENNSYLVANIA

## POTENTIAL ENVIRONMENTAL JUSTICE AREAS LOW-INCOME POPULATIONS



### Legend

#### Highway & Bridge Project Locations

- Project Type
- 409 Expanded Maintenance
  - Bridge Preservation - Federal
  - Bridge Replacement
  - Bridge Restoration
  - Highway Reconstruction
  - Highway Restoration
  - Safety Improvement
  - Highway Project Segments

#### Census Geography

- Block Group Boundary
- Municipal Boundary
- State Route

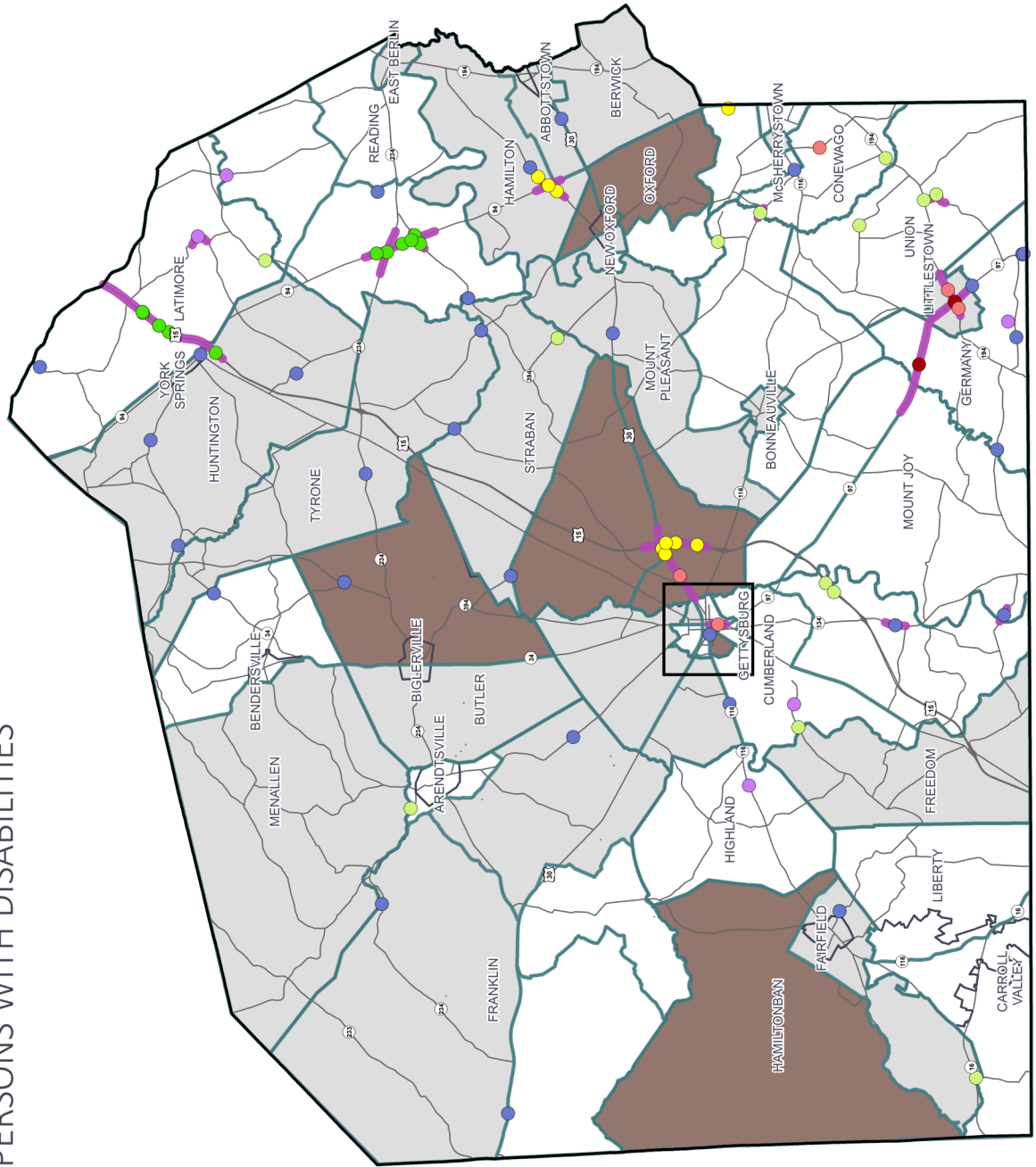
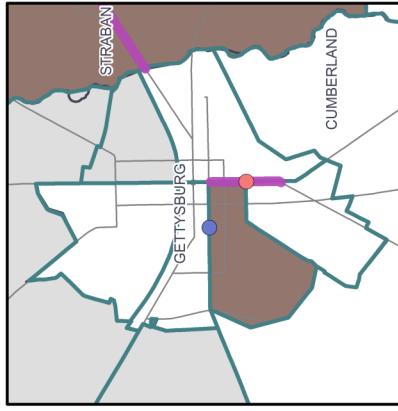
#### Percentage of Households in Poverty

- Below the County Threshold of 7.9%
- Low-income Areas of Concentration (7.9% - 13.8%)
- Low-income Areas of Higher Concentration (13.9% - 19.6%)

Source: PennDOT, ACOPOD, US Census Bureau ACS 2016 Est.



POTENTIAL ENVIRONMENTAL JUSTICE AREAS  
PERSONS WITH DISABILITIES



Legend

Highway & Bridge Project Locations

- Project Type
- 409 Expanded Maintenance
  - Bridge Preservation - Federal
  - Bridge Replacement
  - Bridge Restoration
  - Highway Reconstruction
  - Highway Restoration
  - Safety Improvement
  - Highway Project Segments

Census Geography

- Block Group Boundary
- Municipal Boundary
- State Route

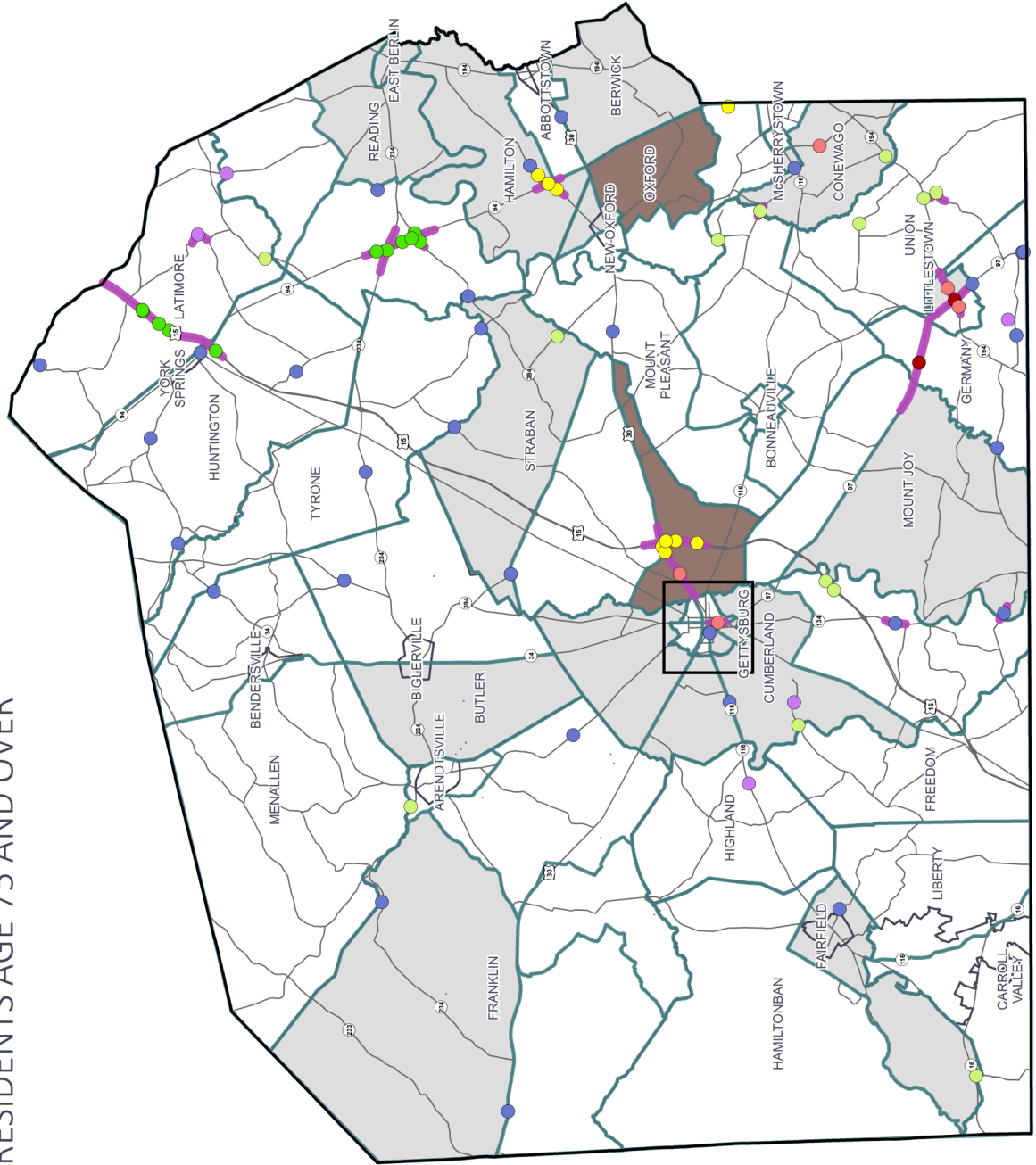
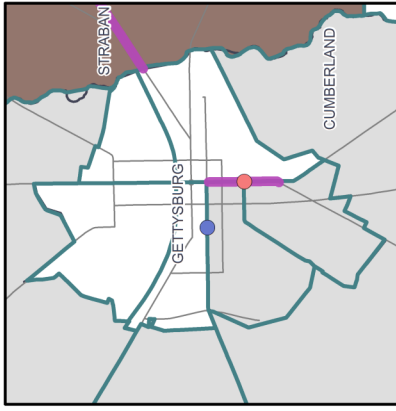
Perc\_Disab

- Below County Threshold of 26.9%
- Disability Areas of Concentration (27% - 34.5%)
- Disability Areas of Higher Concentration (34.6% - 42.2%)

Source: PennDOT, ACOPOD, US Census Bureau ACS 2016 Est.



POTENTIAL ENVIRONMENTAL JUSTICE AREAS  
RESIDENTS AGE 75 AND OVER



Legend

Highway & Bridge Project Locations

Project Type

- 409 Expanded Maintenance
- Bridge Preservation - Federal
- Bridge Replacement
- Bridge Restoration
- Highway Reconstruction
- Highway Restoration
- Safety Improvement
- Highway Project Segments

Census Geography

- Block Group Boundary
- Municipal Boundary
- State Route

Elderly Populations

- Below County Threshold of 8%
- Elderly Areas of Concentration (8.1% - 19.4%)
- Elderly Areas of Higher Concentration (19.5% - 30.7%)

Source: PennDOT, ACOPLD, US Census Bureau ACS 2016 Est.





# 2019 ADAMS COUNTY TRANSPORTATION IMPROVEMENT PROGRAM (TIP) PROJECT SELECTION PROCESS

The 2019 TIP update includes one (1) new highway and fifteen (15) new bridge projects that are not currently listed on the 2017 TIP. The following process was designed in the 2012 Long Range Transportation Plan (LRTP) to assist the Adams County Transportation Planning Organization (ACTPO) in selecting transportation projects. The process was not intended to be the sole input into the selection process. The final decision on project selection rests with the ACTPO Board.

## HIGHWAY PROJECTS

**Maintenance Projects**– These projects were selected by the PennDOT District 8-0 staff:

1. PA 94 and Berlin Road

**Bridge Projects**– The bridge projects involving PennDOT-owned and maintained structures were identified by the PennDOT District 8-0 staff. The bridge projects involving County or Municipality-owned and maintained structures were identified by the ranking system approved by the ACTPO Board:

1. US 15 Bridge PM 2
2. Chambersburg Road Bridge
3. York Road Bridge
4. Piney Creek Bridge
5. Plum Creek Bridge
6. Conewago Creek Bridge (MPMS #90698)
7. Conewago Creek Bridge (MPMS #78640)
8. Conewago Creek Bridge 2
9. Pine Run Road Bridge
10. Bermudian Creek Bridge
11. Centennial Road Bridge PM
12. Bollinger Road Bridge PM
13. State Street Bridge
14. Harbaugh Valley Road Bridge
15. Stoney Point Road Bridge

## PROJECTS IMPLEMENTED FROM THE 2017 TIP

Below is a list of the projects from the 2017-2020 TIP that were implemented during the TIP cycle and will not be carried over to the 2019-2022 TIP. These projects span the category list including Highway Maintenance, Bridge, At-grade Railroad Crossings, and Bicycle and Pedestrian Projects.

1. Abbottstown Pike Resurfacing– Completed
2. Arendtsville Road Resurfacing– Completed
3. US 30 Resurfacing #4– Active Construction
4. Baltimore Pike Resurfacing– Let 8/10/2017– Expected Completion– 10/24/2018
5. SR 234 and 3001 Improvements- Let 5/10/2018– Expected Completion– 7/18/2019
6. US 15 Resurfacing– Let 6/20/2019– Expected Completion– 12/30/2021
7. Carlisle Pike Resurfacing– Let 9/13/ 2018
8. Carlisle Road Resurfacing– Completed
9. US 15 Bridge over Rock Creek– Completed
10. US 15 Bridge over Marsh Creek– Completed
11. US 15 Bridge Preventative Maintenance– Completed
12. US 15 Bridge over PA 116– Completed
13. Fairfield Road Bridge 2- Let 8/9/2018– Expected Completion– 12/5/2019
14. US 15 Bridge over CSX RR– Completed
15. Trib to Marsh Creek Bridge-
16. Water Street Bridge- Let 11/29/2018– Expected Completion– 10/21/2019
17. Old Carlisle Road Bridge- Expected Completion– 11/2/2018
18. Shippensburg Road Bridge– Expected Completion– 12/10/2018
19. US 15/94 Study- Study beginning in 2020, not on 2019 TIP
20. PA 116 Road Safety Audit– Active Study
21. Gettysburg Area Trail System (Inner Loop)- Phase Completed

# MEMORANDUM OF UNDERSTANDING

## Pennsylvania's Statewide Procedures for 2019-2022

### Statewide Transportation Improvement Program and Transportation Improvement Program Revisions

#### PURPOSE

This Memorandum of Understanding (MOU) between the Pennsylvania Department of Transportation (PennDOT), Federal Highway Administration (FHWA), and Federal Transit Administration (FTA) establishes procedures to be used in the Commonwealth of Pennsylvania for processing revisions to the 2019-2022 Statewide Transportation Improvement Program (STIP). The STIP is the aggregation of the Metropolitan Planning Organization (MPO) and Rural Planning Organization (RPO) Transportation Improvement Programs (TIPs), including the Interstate Management (IM) Program and other statewide managed programs (Statewide Programs).

#### WHAT IS A STATEWIDE TRANSPORTATION IMPROVEMENT PROGRAM (STIP) AND A TRANSPORTATION IMPROVEMENT PROGRAM (TIP)?

The STIP is the official transportation improvement program document mandated by federal statute (23 CFR § 450.218) and recognized by FHWA and FTA. The STIP includes a list of projects to be implemented over a four-year period as well as all supporting documentation by federal statute. The STIP includes regional TIPs developed by the Planning Partners (MPOs and RPOs) and Statewide Programs developed by PennDOT. Statewide Programs are coordinated initiatives, projects or funds that are managed by PennDOT's Central Office on a statewide basis. Examples of Statewide Programs include but are not limited to the Secretary of Transportation's SPIKE, the Rapid Bridge Replacement (RBR) Project developed via a Public Private Partnership (P3), Highway Safety Improvement Program (HSIP) set-a-side, Highway-Rail Grade Crossing Safety (RRX), Surface Transportation Block Grant Program set-a-side (TAP) funds, Green-Light-Go (GLG), Automated Red Light Enforcement (ARLE), Multi-modal (MTF), Recreational (Rec) Trails, and Keystone Corridor projects. The Interstate Management Program will remain its own individual program and includes prioritized statewide interstate projects. The Commonwealth's Twelve Year Program (TYP), required by state law, includes the STIP/TIPs in first four-year period.

#### HOW AND WHEN IS A STIP/TIP DEVELOPED?

For more information on the development of the STIP/TIP, see *Pennsylvania's 2019 Transportation Program General and Procedural Guidance* dated July 31, 2017 (attached).

#### STIP/TIP ADMINISTRATION

FHWA and FTA will only authorize projects and approve grants for projects that are programmed in the current approved STIP. If a Planning Partner, transit agency, or PennDOT wishes to proceed with a federally fund-

ed project not programmed on the STIP/TIP, a revision must be made.

The federal statewide and metropolitan planning regulations contained in 23 CFR § 450 govern the provisions for revisions of the STIP and individual MPO TIPs. The intent of this federal regulation is to acknowledge the relative significance, importance, and/or complexity of individual programming actions. If necessary, 23 CFR § 450.328 permits the use of alternative procedures by the cooperating parties to effectively manage actions encountered during a given TIP cycle. Cooperating parties include PennDOT, MPOs, RPOs, FHWA, FTA, and transit agencies. Any alternative procedures must be agreed upon, and documented in the TIP.

STIP/TIP revisions must be consistent with PennDOT's Transportation Investment Plan priorities, Pennsylvania's Long Range Transportation Plan (LRTP), and the Planning Partner's LRTP. In addition, STIP/TIP revisions must support Pennsylvania's Transportation Performance Measures and Targets as well as the PennDOT's Connects policy. Pennsylvania's Transportation Investment Plan is PennDOT's ongoing assessments, target settings, and re-evaluations of data associated with the STIP/TIP investment decisions, ensuring that each dollar invested is being directed to meet strategic decisions, and that enhances the overall performance of the Commonwealth's transportation system. The Investment Plan establishes regional targets which were set with a continued focus on maintaining assets with the following priorities: Bridges on the National Highway System (NHS), Roadway conditions on the NHS, Bridges on the balance of the system, and Roadway conditions on the balance of the system.

STIP/TIP revisions must correspond to the adopted provisions of the Planning Partner's Public Participation Plans (PPP). A PPP is a documented broad-based public involvement process that describes how the Planning Partner will involve and engage the public in the transportation planning process to ensure that comments, concerns, or issues of the public and interested parties are identified and addressed in the development of transportation plans and programs. A reasonable opportunity for public review and comment shall be provided for significant revisions to the STIP/TIP.

If a revision adds a project, deletes a project, or impacts the schedule or scope of work of an air quality significant project in a nonattainment or maintenance area, a new air quality conformity determination will be required if deemed appropriate by the PennDOT Air Quality Interagency Consultation Group (ICG). If a new conformity determination is deemed necessary, an amendment to the region's LRTP shall also be developed and approved by the MPO/RPO. The modified conformity determination would then be based on the amended LRTP conformity analysis and public involvement procedures consistent with the region's PPP shall be required.

A LRTP lapse occurs when a Planning Partner has not updated their LRTP in accordance with the cycles defined in the federal planning regulations [23 CFR § 450.324 (c)]. If a Planning Partner's LRTP lapses because the LRTP has not been updated in accordance with the planning cycle defined in the federal planning regulations, then the provisions of this MOU will not be utilized for that Planning Partner. During a LRTP lapse, all STIP/TIP revisions within that MPO/RPO, where the LRTP lapse occurred, will be treated as an amendment and require federal approval. There will be no administrative modifications for that MPO/RPO until that Planning Partner's LRTP is in compliance with the federal planning regulation.

If a STIP/TIP revision occurs based on FHWA August Redistribution that adds, advances, or adjusts federal funding for a project, ACTPO will be notified of the Administrative Modification by PennDOT.

## REVISIONS – AMENDMENTS AND ADMINISTRATIVE MODIFICATIONS

In accordance with the federal transportation planning regulations [23 CFR § 450], revisions to the STIP/TIP will be handled as an *Amendment* or an *Administrative Modification* based on agreed upon procedures detailed below.

An **Amendment** is a revision that adds a new project, deletes an existing project, or involves a major change to an existing project included in a STIP/TIP that:

Affects air quality conformity regardless of the cost of the project or the funding source;

Adds a new project, deletes a project that utilizes federal funds, or federalizes a project that previously was 100% state and/or locally funded. A new project is a project that is not programmed in the current STIP/TIP, and does not have previous obligations from a prior STIP/TIP. Federally-funded Statewide Program projects are excluded from this provision;

Adds a new phase(s) to an existing project, deletes a project phase(s), increases or decreases a project phase(s) that utilizes federal funds where the modification exceeds the threshold established in this Memorandum of Understanding;

Involves a change in the scope of work to a project(s) that would:

- Result in an air quality conformity reevaluation
- Result in a revised total project estimate that exceeds the thresholds established between PennDOT and ACTPO (not to exceed any federally-funded threshold contained in this MOU)
- Results in a change in the scope of work on any federally-funded project that is significant enough to essentially constitute a new project
- During a Planning Partner LRTP lapse, all STIP/TIP revisions within that planning region will be treated as amendments and the below administrative modifications will not be utilized (or be in effect).

Approval by the ACTPO is required for **Amendments**. ACTPO must then request PennDOT Central Office approval using the e-STIP process. A Fiscal Constraint Chart (FCC) must be provided that depicts the transfer of funds from one source to another, demonstrating fiscal constraint. The FCC summarizes the before, requested adjustments, after changes, and detailed comments explaining the reason for the adjustment(s), and provides any PMC materials that may have been prepared, along with an updated TIP. PennDOT's Central Office will review, approve, and forward to the appropriate federal agency for review and approval, with a courtesy copy to the other federal agency. An eSTIP submission shall include:

- Fiscal Constraint Chart with remarks
- Pdf copy of the TIP

Supporting materials to explain the reasoning, cause, and/or justification for the amendment revision, as needed, such as PMC items.

The initial submission and approval process of the federally-funded Statewide Program or increases/decreases exceeding the thresholds above will be considered an amendment (subsequent placement of these individual projects or line items on respective planning partner TIPs will be considered an administrative modification). In

the case of Statewide Programs, including the IM Program and other federally-funded statewide programs, approval by PennDOT's Program Management Committee (PMC) and FHWA is required.

An **Administrative Modification** is a minor revision to a STIP/TIP that:

- Shifts federally-funded projects, a federally-funded project phase(s), or federal funds to existing federally-funded projects or a federally-funded project phase(s) in the approved STIP/TIP and must maintain year-to-year STIP/TIP fiscal constraint requirements;
- Adds a project from a funding initiative or line item that utilizes 100 percent state or non-federal funding; or regional TIP placement of the federally-funded Statewide Program;
- Adds a project for emergency repairs to roadways or bridges, except those involving substantial, functional, location, or capacity changes;
- Draws down or returns funding from an existing STIP/TIP reserve line item and does not exceed the threshold established in the MOU between PennDOT and the Planning Partner. A reserve line item holds funds that are not dedicated to a specific project(s) and may be used to cover cost increases or add an additional project phase(s) to an existing project;

Adds federal or state capital funds from low-bid savings, de-obligations, release of encumbrances, or savings on programmed phases to another programmed project phase or line item but does not exceed the above thresholds.

**Administrative Modifications** do not affect air quality conformity nor involve a significant change in the scope of work to a project(s) that would trigger an air quality conformity re-evaluation; does not add a new federally-funded project or delete a federally-funded project; does not exceed the threshold established in the MOU between PennDOT and the Planning Partner, or the threshold established by this MOU (as detailed in the Amendment Section); and does not result in a change in scope, on any federally-funded project that is significant enough to essentially constitute a new project. A change in scope is a substantial alteration to the original intent or function of a programmed project.

**Administrative Modifications do not require federal approval.** PennDOT and the Planning Partner will work cooperatively to address and respond to any FHWA and/or FTA comment(s). FHWA and FTA reserve the right to question any administrative action that is not consistent with federal regulations or with this MOU where federal funds are being utilized.

All revisions, amendments, and administrative modifications shall be identified, numbered, and grouped as one action on a FCC demonstrating both project and program fiscal constraint. The identified grouping of projects (the entire revision action) will require review and/or approval by the Cooperating Parties. In the case that a project phase is pushed out of the TIP period, the Planning Partner will demonstrate, through an FCC, fiscal balance of the subject project phase on the second period of the respective Planning Partner's LRTP.

## TRANSIT STATEWIDE MANAGED FUNDS

Projects funded by FTA programs and delivered via Governor's apportionment are selected by PennDOT pursuant to the Pennsylvania State Management Plan approved by the FTA. These projects should be programmed within the TIP of the urbanized area where the project is located.

## **FUNDING THRESHOLD FOR AMENDMENTS AND ADMINISTRATIVE MODIFICATIONS**

The threshold for ACTPO processing a STIP/TIP modification as an amendment is \$1 million.

## **FINANCIAL CONSTRAINT**

Demonstration that STIP/TIP fiscal constraint is maintained takes place through a FCC. Real time versions of the STIP/TIP are available to FHWA and FTA through PennDOT's Multimodal Project Management System (MPMS).

All revisions must maintain year-to-year fiscal constraint [23 CFR § 450.326 (g), (j) & (k)] for each of the four years of the STIP/TIP. All revisions shall account for year of expenditure, and maintain the estimated total cost of the project or project phase within the time-period [i.e., fiscal year(s)] contemplated for completion of the project, which may extend beyond the four years of the STIP/TIP. The arbitrary reduction of the overall cost of a project, or project phase(s), shall not be utilized for the advancement of another project.

## **STIP/TIP FINANCIAL REPORTING**

At the end of each quarter, PennDOT will provide each Planning Partner with a STIP/TIP Financial report of actual federal obligations and state encumbrances for highway/bridge and transit programs in their region. At the end of the federal fiscal year (FFY), the PennDOT Progress Report can be used by the Planning Partners as the basis for compiling information to meet the federal annual listing of obligated project requirement [23 CFR § 450.334]. The STIP/TIP Financial Report provided to FHWA and FTA will also include the FHWA Planning Performance Measure – “percent of STIP/TIP projects advanced per year” on a Statewide and Planning Partner basis. A summary report detailing this information will be provided no later than 30 days after the end of a FFY.

## **STIP/TIP TRANSPORTATION PERFORMANCE MANAGEMENT**

In accordance with 23 CFR § 450.326 (c), PennDOT and ACTPO will ensure STIP/TIP revisions promote progress toward achievement of performance targets

## **MPO/RPO TIP REVISION PROCEDURES**

As each Planning Partner's TIP is adopted, their respective MOU between PennDOT and the Planning Partner will be included with the TIP documentation. The MOU will clarify how the Planning Partner will address all TIP revisions. In all cases, individual Planning Partner revision procedures will be developed under the guidance umbrella of this document. If a Planning Partner elects to set more stringent procedures, then FHWA and FTA will adhere to those more restrictive procedures.

This document will serve as the basis for PennDOT when addressing federally-funded Statewide Program TIP revisions.

This Memorandum of Understanding will begin October 1, 2018, and remain in effect until September 30, 2020, unless revised or terminated. Furthermore, it is agreed that this MOU will be reaffirmed every two years.

**STIP/TIP Transportation Performance Management**

In accordance with 23 CFR § 450.326 (c), PennDOT and ACTPO will ensure STIP/TIP revisions promote progress toward achievement of performance targets


**MPO/RPO TIP Revision Procedures**

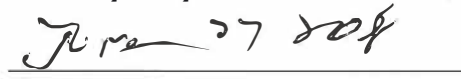
As each Planning Partner’s TIP is adopted, their respective MOU between PennDOT and the Planning Partner will be included with the TIP documentation. The MOU will clarify how the Planning Partner will address all TIP revisions. **In all cases, individual Planning Partner revision procedures will be developed under the guidance umbrella of this document.** If a Planning Partner elects to set more stringent procedures, then FHWA and FTA will adhere to those more restrictive procedures.

This document will serve as the basis for PennDOT when addressing federally-funded Statewide Program TIP revisions.

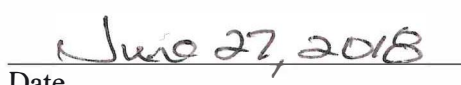
This Memorandum of Understanding will begin October 1, 2018, and remain in effect until September 30, 2020, unless revised or terminated. Furthermore, it is agreed that this MOU will be reaffirmed every two years.

We, the undersigned hereby agree to the above procedures and principles.

  
\_\_\_\_\_  
Robert Gordon  
ACTPO Chair

  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
David Bolton  
ACTPO Vice-Chair

  
\_\_\_\_\_  
Date

\_\_\_\_\_  
Mr. Larry S. Shifflet, Director  
Center for Program Development and  
Management  
Pennsylvania Department of Transportation

\_\_\_\_\_  
Date



(TIP) FINANCIAL CHARTS





County	S.R.	Sec.	Project	Project Title	Ph	Area	FFY 2019 Costs					FFY 2020 Costs					FFY 2021 Costs					FFY 2022 Costs					^Milestones							
							Fed.	Federal	St.	State	Local	Total	Fed.	Federal	St.	State	Local	Total	Fed.	Federal	St.	State	Local	Total	Fed.	Federal		St.	State	Local	Total			
Adams	30	0	99784	York Road Bridge	P	BRDG													185	300,000			300,000											
Adams	34	046	87433	Carlisle Road Bridge 4	P	BRDG							581	100,000		100,000																		
Adams	34	046	87433	Carlisle Road Bridge 4	F	BRDG																		185	100,000			100,000						
Adams	34	046	87433	Carlisle Road Bridge 4	U	BRDG																		185	10,000			10,000						
Adams	34	046	87433	Carlisle Road Bridge 4	R	BRDG																		185	10,000			10,000						
Adams	34	046	87433	Carlisle Road Bridge 4	C	BRDG																		185	48,000			48,000	05/03/2023	E				
Adams	94	025	94894	94 & 394 Intersection Imp	C	SAMI	HSIP	993,000					993,000																	10/18/2018	E			
Adams	94	025	94894	94 & 394 Intersection Imp	C	SAMI								HSIP	687,000		687,000														10/18/2018	E		
Adams	94	026	94897	94 & 234 Intersection Imp	+C	SAMI	CAQ	602,565					602,565																		02/13/2020	E		
Adams	94	026	94897	94 & 234 Intersection Imp	+C	SAMI								CAQ	619,960		619,960															02/13/2020	E	
Adams	94	026	94897	94 & 234 Intersection Imp	+C	SAMI								NHPP	737,475		737,475															02/13/2020	E	
Adams	94	029	78672	PA 94 and Berlin Road	+P	HCON																	STP	400,000							400,000			
Adams	97	0	99786	Piney Creek Bridge	P	BRDG													581	150,000			150,000											
Adams	97	010	90692	Piney Creek Bridge 2	P	BRDG									185	100,000		100,000																
Adams	97	010	90692	Piney Creek Bridge 2	F	BRDG																		185	150,000			150,000						
Adams	97	010	90692	Piney Creek Bridge 2	U	BRDG																		185	10,000			10,000						
Adams	97	010	90692	Piney Creek Bridge 2	R	BRDG																		185	10,000			10,000						
Adams	97	011	105336	Baltimore Pike Rsf 3	C	HRST	STP	1,156,000					1,156,000																		04/11/2019	E		
Adams	97	011	105336	Baltimore Pike Rsf 3	C	HRST								STP	444,000		444,000															04/11/2019	E	
Adams	116	0	99812	Plum Creek Bridge	+P	BRDG												STP	250,000			250,000												
Adams	116	043	106665	PA 116 over Trib Marsh Crk	P	BRDG									185	75,000		75,000																
Adams	116	043	106665	PA 116 over Trib Marsh Crk	F	BRDG																		185	50,000			50,000						
Adams	116	044	106666	PA 116/Trib Willoughby Run	P	BRDG									185	75,000		75,000																
Adams	116	044	106666	PA 116/Trib Willoughby Run	F	BRDG																		185	50,000			50,000						
Adams	116	044	106666	PA 116/Trib Willoughby Run	U	BRDG																		185	10,000			10,000						
Adams	116	044	106666	PA 116/Trib Willoughby Run	R	BRDG																		185	10,000			10,000						
Adams	134	0	99815	Taneytown Road Bridge	+P	BRDG												STP	150,000			150,000												
Adams	234	022	87426	Heildersburg Bridge-C	C	BRDG			581	550,000			550,000																			01/16/2020	E	
Adams	234	023	90693	PA 234 Bridge-C	C	BRDG			185	1,000,000			1,000,000																				01/16/2020	E
Adams	394	0	90698	Conewago Creek Bridge	P	BRDG																		185	300,000			300,000						
Adams	394	009	87672	Shrivers Corner Bridge	F	BRDG									581	100,000		100,000																
Adams	394	009	87672	Shrivers Corner Bridge	R	BRDG									581	15,000		15,000																
Adams	394	009	87672	Shrivers Corner Bridge	C	BRDG												BOF	560,000	185	140,000		700,000									04/08/2021	E	
Adams	1005	009	73854	Latimore Valley Road Brg-C	+C	BRDG	BOF	631,000					631,000																			08/22/2019	E	
Adams	1005	009	73854	Latimore Valley Road Brg-C	+C	BRDG	STP	269,000					269,000																				08/22/2019	E
Adams	1007	016	78638	Mud Run Bridge-C	C	BRDG			581	600,000			600,000																				11/29/2018	E
Adams	1009	012	87431	Wierman Mill Bridge	F	BRDG									185	125,000		125,000																
Adams	1009	012	87431	Wierman Mill Bridge	U	BRDG									581	15,000		15,000																

County	S.R.	Sec.	Project	Project Title	Ph	Area	FFY 2019 Costs					FFY 2020 Costs					FFY 2021 Costs					FFY 2022 Costs					^Milestones										
							Fed.	Federal	St.	State	Local	Total	Fed.	Federal	St.	State	Local	Total	Fed.	Federal	St.	State	Local	Total	Fed.	Federal		St.	State	Local	Total						
Adams	1009	012	87431	Wierman Mill Bridge	R	BRDG								581	10,000		10,000																				
Adams	1009	012	87431	Wierman Mill Bridge	C	BRDG														581	575,000		575,000													02/11/2021 E	
Adams	1015	000	78640	Conewago Creek Bridge	P	BRDG			185	209,250							209,250																				
Adams	1015	000	78640	Conewago Creek Bridge	C	BRDG																		STP	1,251,734											1,251,734	03/17/2022 E
Adams	1017	0	78642	Conewago Creek Brdg2	P	BRDG														185	250,000		250,000														
Adams	1019	0	90702	Pine Run Road bridge	P	BRDG																				185	100,000										
Adams	1020	0	90707	Bermudian Creek Bridge	P	BRDG																				185	100,000										
Adams	2006	0	99743	Centenial Road Bridge PM	P	BRDG																				185	100,000										
Adams	2027	0	99756	Bollinger Road Bridge PM	P	BRDG																				185	75,000										
Adams	3001	0	87432	State Street Bridge	P	BRDG																				185	100,000										
Adams	3002	016	99832	Rock Creek Bridge	F	BRDG			581	125,000							125,000																				
Adams	3002	016	99832	Rock Creek Bridge	U	BRDG			185	25,000							25,000																				
Adams	3002	016	99832	Rock Creek Bridge	R	BRDG			185	15,000							15,000																				
Adams	3002	016	99832	Rock Creek Bridge	C	BRDG								BOF	631,000	185	340,000																				09/16/2021 E
Adams	3002	016	99832	Rock Creek Bridge	C	BRDG								STP	729,000																						09/16/2021 E
Adams	3005	011	78662	Millerstown Road Bridge	F	BRDG			185	60,000							60,000																				
Adams	3005	011	78662	Millerstown Road Bridge	U	BRDG			581	15,000							15,000																				
Adams	3005	011	78662	Millerstown Road Bridge	R	BRDG			581	15,000							15,000																				
Adams	3005	011	78662	Millerstown Road Bridge	C	BRDG										185	566,000																				03/26/2020 E
Adams	3005	011	78662	Millerstown Road Bridge	C	BRDG									581	309,000																					03/26/2020 E
Adams	3009	0	99862	Harbaugh Valley Road Brdg	P	BRDG																				185	75,000									75,000	
Adams	3010	011	87430	Water Street Bridge-C	C	BRDG			581	400,000							400,000																			11/29/2018 E	
Adams	3017	028	87435	Mummasburg Road Bridge	F	BRDG									185	50,000																					
Adams	3017	028	87435	Mummasburg Road Bridge	U	BRDG									185	15,000																					
Adams	3017	028	87435	Mummasburg Road Bridge	R	BRDG									185	10,000																					
Adams	3017	028	87435	Mummasburg Road Bridge	C	BRDG															581	350,000		350,000													01/14/2021 E
Adams	7207	BRG	18049	Mengus Mill Rd Bridge	F	BRDG	STP	160,000	183	30,000	10,000	200,000																									
Adams	7207	BRG	18049	Mengus Mill Rd Bridge	U	BRDG	STP	40,000	183	7,500	2,500	50,000																									
Adams	7207	BRG	18049	Mengus Mill Rd Bridge	R	BRDG	STP	60,000	183	11,250	3,750	75,000																									
Adams	7207	BRG	18049	Mengus Mill Rd Bridge	C	BRDG														STP	720,000	183	135,000	45,000	900,000											02/13/2020 E	
Adams	7218	BRG	18154	Stoney Point Road Bridge	P	BRDG								STP	180,000	183	33,750	11,250	225,000																		
Adams	7218	BRG	18154	Stoney Point Road Bridge	F	BRDG																				BOF	200,000	183	37,500	12,500	250,000						
Adams	7218	BRG	18154	Stoney Point Road Bridge	U	BRDG																				BOF	40,000	183	7,500	2,500	50,000						
Adams	7218	BRG	18154	Stoney Point Road Bridge	R	BRDG																				BOF	60,000	183	11,250	3,750	75,000						
<b>Totals for: Adams</b>								8,215,000		4,504,000	16,250	12,735,250			6,361,000	4,851,000	11,250	11,223,250			5,679,000	5,091,000	45,000	10,815,000		5,677,000	5,480,000	18,750	11,175,750					45,949,250			
<b>Overall Totals:</b>								8,215,000		4,504,000	16,250	12,735,250			6,361,000	4,851,000	11,250	11,223,250			5,679,000	5,091,000	45,000	10,815,000		5,677,000	5,480,000	18,750	11,175,750					45,949,250			





# Central Pennsylvania Transportation Authority

## FINANCIAL CAPACITY PROGRAM

April 2018



## Central Pennsylvania Transportation Authority

### FINANCIAL CAPACITY PROGRAM

#### Introduction

This assessment is in accordance with the FTA C. 7008.1A and the Year of Expenditure requirement. The purpose of the Financial Capacity Policy is for transit grantees to demonstrate that they make capital investments based on the current and projected capability to maintain and operate current assets, and to determine the ability to operate and maintain the new assets on the same basis, providing at least the same level of service, for at least one replacement cycle of such assets. The program maintains two basic aspects: (1) demonstrate the general financial condition of the Central Pennsylvania Transportation Authority (CPTA); and (2) the communicate CPTA's sound financial planning efforts.

#### Assessment Requirements/Components

Planning and Project Development- Unified Planning Work Program. Transportation planning activities, such as database development and the development of analytical revenue and cost forecasting techniques needed to assess financial capacity, must be included in the urbanized area's Unified Planning Work Program of the Metropolitan Planning Organization. In addition, when the State and metropolitan planning organizations certify that the planning process is being carried out in accordance with Federal requirements, they must describe the region's public involvement process for balancing the cost of approved plans and programs with current and projected revenues.

Projected Cash Flow Statement – This is a multi-year projection, back five years (actual) and forward twenty years (CPTA forecasts a 12 year projection based on the EUL of the vehicles) of revenues and expenses (and related items such as depreciation) relating to the grantee as an organization. It identifies expected revenues and expenses for each year, incorporating and highlighting the effects of a planned capital project or program of projects.

Financial Condition – This includes historical trends and current experience in the financial ability of the grantee to operate and maintain its transit system at present levels of service. The information supporting the assessment of the financial condition of the grantee is usually provided in audited financial statements and other financial reports. Financial condition is reflected in working capital levels, cash balances, capital reserves, the presence and status of depreciation accounts, debt levels, trends in transit costs as compared to available revenues, and trends in other relevant economic indicators. Satisfactory financial condition means that the grantee can pay its current costs from existing revenues.

Financial Capability – This refers to the stability and reliability of revenue sources needed to meet future annual capital and operating and maintenance costs. Assessments of financial capability shall cover the greater of the period equivalent to one replacement cycle of the basic system; the retirement of any debt issued to finance the capital project; or 20 years. Financial capability considers the nature of funds pledged to support operating costs and capital replacement programs (12 years for CPTA), as well as forecasted changes in fare and non-fare reve-



Capital costs include both replacement and rehabilitation of existing equipment and facilities as well as new investments. Operating and maintenance costs include those for the present system, as well as increases due to capital investment and service expansion.

Satisfactory financial capability means the grantee's ability to meet its expansion costs in addition to its existing operations from projected revenues.

Program Management and Compliance - Regular grant monitoring will emphasize whether the findings and self-certifications of financial capacity made at the grant approval stage retain their validity. The Triennial Reviews will be the instrument used for monitoring.

## **FINANCIAL CAPACITY ASSESSMENT**

### **1) Financial Condition**

#### **Historical Trends and Current Conditions-**

For Fiscal Year 2017, rabbittransit's total operating expenditures were \$24,149,560. Approximately, 34.6% of the total operating expenditures were used to operate paratransit in a ten county service area. This was generated through a combination of non-fixed route (all demand response) and ADA paratransit services operating expenditures.

Since 2015, the cost of fuel, tires, and parts has decreased by 6% while all other expenses increased by 36.9%. Despite these rising costs, rabbittransit boasts one of the lowest operating expenses per vehicle hour. rabbittransit's FY 2013 average cost per hour for all services was \$64.66, in FY 2017 it was \$89.80.

Ridership for FY 2016 was good considering the state of the economy. 70.1% percent of the fixed route riders have no other means of transportation. Additionally, 62.5% of the riders earn an average income of \$23,000\* or less per year and uses the bus for work purposes, up from 61% in 2014. Based on this information, rabbittransit has concluded that the majority of its passengers are excessively volatile to fare increases.

A significant factor affecting paratransit service is the trip length and onboard time. In FY 2017 the average shared ride trip length was 12.57 miles per trip and the average on-board time is 39 minutes. rabbittransit believes that there are two factors creating the increase in trip distances; the first is urban sprawl and the second is the fundamental changes in senior citizen needs for transportation.

rabbittransit is projecting FY 2018 expenses to be at \$14,606,840 for York, Hanover and Gettysburg fixed route service, system wide expenses are projected to be \$28,686,143. With the passing of Pennsylvania ACT 44 in 2007, rabbittransit experienced a 50% increase in state funding, an additional 2.8% is being provided in FY 2017 and has remained steady since.

*\*FY2017 fixed route ridership survey, the maximum margin of error with a sample of 596 is +/-4.0% at the 95% level of confidence.*

## Hourly Cost Comparison

	2017
	2018 (projected)
Fixed Route York	\$89.90
	\$92.50
Fixed Route Hanover	\$71.70
	\$74.25
Paratransit	\$49.65
	\$52.80

### Financial Projections-

rabbitransit's financial capacity analysis is an eleven year combined operating and capital needs projection. The factors determining the outcomes are based on current and historical information. For Fiscal Year 2017 Operating and Capital plan the inflation factors were 3% and 5% respectfully. The analysis demonstrates that rabbitransit can continue to operate at FY 2017 service levels through FY 2023.

rabbitransit works closely with the State and Federal Transportation Departments and other groups of interests when developing projections. The Central Pennsylvania Transportation Authority Board of Director's are aware of how public transportation in the Commonwealth of Pennsylvania is funded. It is the policy of the Board of Directors to have service levels that can be supported by funding levels. When funding levels fall short of needs, service levels and fares are adjusted accordingly.

### 2) Financial Capability

Local match funds from Adams County are a concern for CPTA. Service levels will be adjusted based on the ability to match operating and to maintain a state of good repair with rolling stock.

#### Capital-

Funding remains a concern at the state level. With the loss of discretionary funding based on Congress ban on earmarks and the loss of FTA discretion grants, the capital burden falls back on the state. The FAST ACT provides an understanding of the future, the ACT does financially put transit on solid ground. ACT 89 provides a good foundation for a capital program, but Federal funds need to continue at historic level with the possibility of growth.

#### Operating-

With the implementation of PA ACT 44, and recently ACT 89, state operating funds are steady. MAP 21 addressed the 200,000 population issue, allowing systems with 100 or less buses in peak service to utilize a percentage of the 5307 funds for operating.

# ADAMS COUNTY TRANSPORTATION PLANNING ORGANIZATION

**RESOLUTION OF THE** Adams County Transportation Planning Organization (ACTPO) to certify that the metropolitan transportation planning process is being carried out in accordance with all applicable federal requirements and that the local process to enhance the participation of the general public, including the transportation disadvantaged, has been followed in developing the Transportation Improvement Program (TIP) and the Long Range Transportation Plan (LRTP).

**WHEREAS**, 23 CFR Part 450.334 specifies that, concurrent with submittal of the proposed TIP to the Federal Highway Administration and the Federal Transit Administration as part of the Statewide TIP (STIP) approval, Metropolitan Planning Organizations (MPOs) shall certify that the metropolitan transportation planning process is being carried out in accordance with all applicable requirements; and

**WHEREAS**, Sections 134 and 135 of Title 23 USC, 49 USC 5303-5304, and 23 CFR Part 450 set forth the national policy that the MPO designated for each urbanized area is to carry out a continuing, cooperative, and comprehensive multimodal transportation planning process, including the development of a TIP and LRTP, and establish policies and procedures for MPOs to conduct the metropolitan planning process; and

**WHEREAS**, the TIP continues to be financially constrained as required by 23 CFR Part 450.324 and the FTA policy on the documentation of financial capacity, published in FTA Circular 7008.1A; and  
**WHEREAS**, the requirements of Sections 174 and 176(c) and (d) of the Clean Air Act, as amended (42 USC 7504, 7506(c) and (d)) and 40 CFR Part 93 have been met for non-attainment and maintenance areas; and

**WHEREAS**, the requirements of Title VI of the Civil Rights Act of 1964 as amended (42 USC 2000d-1) and 49 CFR Part 21; 49 USC 5332, prohibiting discrimination on the basis of race, color, creed, national origin, sex or age in employment or business opportunity ; The Older Americans Act, as amended (42 USC 6101), prohibiting discrimination on the basis of age in programs or activities receiving federal financial assistance; 23 USC Section 324, prohibiting discrimination based on gender; Section 504 of the Rehabilitation Act of 1973 (29 USC 794), the American Disabilities Act of 1990 (42 USC 12101 et seq.), and 49 CFR Parts 27, 37, and 38, regarding discrimination against individuals with disabilities have been met; and

**WHEREAS**, the requirements of Section 1101(b) of MAP-21 (Public Law 109-59) and 49 CFR Part 26 regarding the involvement of disadvantaged or minority business enterprises in FHWA funded planning projects and FTA funded projects have been met; and

**WHEREAS**, the provisions of 23 CFR part 230, regarding the implementation of an equal employment opportunity program on federal and federal-aid highway construction contracts have been addressed; and

**WHEREAS**, the requirements of Executive Order 12898 (Federal Order to Address Environmental Justice in Minority Populations and Low Income Populations) have been met; and

**WHEREAS**, the provision of 49 CFR part 20 prohibiting recipients of federal funds from using those funds for lobbying purposes has been met; and

**NOW, THEREFORE, BE IT RESOLVED** that the [Organization], the MPO for the [Name] Transportation Management Area (TMA) certifies that its metropolitan transportation planning process is being carried out in accordance with all applicable provisions of federal law and certifies that the local process to enhance the participation of the general public, including the transportation disadvantaged, has been followed in developing the region's plans and programs, including the FFY 2017-2020 TIP.

I, [Bob Gordon], **HEREBY CERTIFY** that I am [Chairman] of the [Adams County Transportation Planning Organization]: that the foregoing resolution was adopted, in accordance with the By-Laws, by the Members of said Commission at a meeting duly called and held on the 27th day of June 2018, and that said resolution is now in full force and effect.

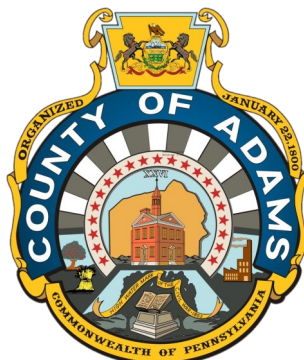
**IN TESTIMONY WHEREOF** I hereto subscribe my name as Chairman, ACTPO



Robert Gordon, Chair



David Bolton, Vice-Chair



**AIR QUALITY RESOLUTION FOR THE  
ADAMS COUNTY TRANSPORTATION PLANNING ORGANIZATION**

Conformity of the Long Range Transportation Plan and Transportation Improvement Program (TIP) in Accordance with the Clean Air Act Amendments of 1990.

**WHEREAS**, the Congress of the United States enacted the Clean Air Act Amendments of 1990 which was signed into law and became effective on November 15, 1990, hereafter referred to as “the CAAA”; and,

**WHEREAS**, the United States Environmental Protection Agency (EPA), under the authority of the CAAA, has defined the geographic boundaries for areas that have been found to be in nonattainment with the National Ambient Air Quality Standards (NAAQS) for ozone, carbon monoxide and particulate matter; and,

**WHEREAS** effective July 15, 2004, the ACTPO MPO Area was designated by EPA as a nonattainment area under the 1997 8-hour ozone NAAQS; and,

**WHEREAS**, on January 14, 2008, the ACTPO MPO Area has been re-designated under the 1997 8-hour ozone standard as an attainment (maintenance) area by EPA with motor vehicle emissions budgets (MVEBs) established in the State Implementation Plan (SIP) maintenance plan; and,

**WHEREAS**, on April 6, 2015, EPA revoked the 1997 8-hour ozone NAAQS for all purposes and established anti-backsliding requirements for areas that remain designated nonattainment for the revoked NAAQS; and,

**WHEREAS**, the U.S. Court of Appeals for the D.C. Circuit issued a decision in *South Coast Air Quality Management District v. EPA* on February 16, 2018 addressing air quality requirements for former 1997 ozone areas, and this region was maintenance for the 1997 ozone standard at the time the 1997 ozone revocation in 2015; and,

**WHEREAS**, the transportation plans and programs are required to conform to the purposes of the State Implementation Plan and Sections 174 and 176 (c and d) of the CAAA (42 U.S.C. 7504, 7506 (c and d)); and,

**WHEREAS**, the Adams County Transportation Planning Organization, the Metropolitan Planning Organization for Adams County, Pennsylvania, is responsible for the development of transportation plans and programs in accordance with Section 134 of Title 23, which requires coordination and public participation with the State DOT; and,

**WHEREAS**, the final conformity rule (and subsequent amendments) requires that the Adams County Transportation Planning Organization determines that the transportation plans and programs conform with the CAAA requirements by meeting the criteria described in the final guidelines; and,

**NOW, THEREFORE BE IT RESOLVED THAT** the Adams County Transportation Planning Organization has found that the Long Range Transportation Plan and the Transportation Improvement Program (TIP) contribute to the achievement and maintenance of the ambient air quality standards; and,

**NOW, THEREFORE BE IT FURTHER RESOLVED THAT** the Adams County Transportation Planning Organization finds that the Long Range Transportation Plan and the Transportation Improvement Program (TIP) are consistent with the final conformity rule and subsequent amendments.

I hereby certify that this Resolution was adopted by ACTPO on June 27, 2018

ATTEST:

  
ACTPO Chair  
Robert Gordon

  
ACTPO Vice-Chair  
David Bolton



APPENDIX A:  
AIR QUALITY CONFORMITY REPORT





# Air Quality Conformity Analysis Report

Adams County MPO 2019-2022 TIP and Long Range Transportation Plan

## National Ambient Air Quality Standards (NAAQS) Addressed:

- 1997 8-Hour Ozone (Maintenance)

## Prepared By:

Adams County Transportation Planning Organization (ACTPO)  
and  
Pennsylvania Department of Transportation

---

**Public Review:** May 17 – June 18, 2018

**Public Meeting:** June 13, 2018

**MPO Approval:** June 27, 2018

---

May 2018 (DRAFT)



### Table of Contents

Report Date:.....	1
Overview .....	1
Background on Transportation Conformity .....	1
Report Contents.....	2
National Ambient Air Quality Standard Designations.....	2
Interagency Consultation.....	3
Analysis Methodology and Data .....	4
Key MOVES Input Data .....	6
Analysis Process Details .....	12
Conformity Analysis Results.....	18
Conformity Determination.....	20
Resources.....	21
Highway Vehicle Emissions Analysis Glossary .....	22

### Table of Exhibits

Exhibit 1: Summary of Attachments .....	2
Exhibit 2: Local Data Inputs Used for Conformity Runs.....	5
Exhibit 3: Emission Calculation Process .....	6
Exhibit 4: MOVES Source Types and HPMS Vehicle Groups .....	9
Exhibit 5: PPSUITE Speed/Emission Estimation Procedure.....	14
Exhibit 6: Emission Factor vs. Speed Variances (VOC, NOx, and PM <sub>2.5</sub> ).....	15
Exhibit 7: MOVES Run Specification File Parameter Settings .....	17
Exhibit 8: 8-Hour Ozone Motor Vehicle Emission budgets.....	18
Exhibit 9: Transportation Conformity Analysis Years.....	19
Exhibit 10: Ozone Emission Analysis Results and Conformity Test.....	19

### Summary of Attachments

- Attachment A:** Project List
- Attachment B:** Detailed Emission Results
- Attachment C:** Sample MOVES Input Files



## Overview

This report provides an analysis of the air quality implications of the Adams County Metropolitan Planning Organization (MPO) 2019-2022 Transportation Improvement Program (TIP) and Long Range Transportation Plan (LRTP). The analysis demonstrates transportation conformity under the 1997 8-hour ozone National Ambient Air Quality Standard (NAAQS). The air quality conformity analysis reflects an assessment of the regionally significant, non-exempt transportation projects included in the TIP and LRTP.

This document ensures that the findings meet all current criteria established by the U.S. Environmental Protection Agency (EPA) for the applicable NAAQS. A conformity determination has been completed to provide a regional forecast of emissions based on planned air quality significant projects and the latest available planning assumptions.

## Background on Transportation Conformity

Transportation conformity is a way to ensure that federal funding and approval are awarded to transportation activities that are consistent with air quality goals. Under the Clean Air Act (CAA), transportation and air quality modeling procedures must be coordinated to ensure that the TIP and the LRTP are consistent with the area's applicable State Implementation Plan (SIP). The SIP is a federally approved and enforceable plan by which each area identifies how it will attain and/or maintain the health-related primary and welfare-related secondary NAAQS.

In order to receive transportation funding and approvals from the Federal Highway Administration (FHWA) or the Federal Transit Administration (FTA), state and local transportation agencies must demonstrate that the plans, programs, or projects meet the transportation conformity requirements of the CAA as set forth in the transportation conformity rule. Under the transportation conformity rule, transportation plans are expected to conform to the applicable SIP in nonattainment or maintenance areas. The integration of transportation and air quality planning is intended to ensure that transportation plans, programs, and projects will not:

- Cause or contribute to any new violation of any applicable NAAQS.
- Increase the frequency or severity of any existing violation of any applicable NAAQS.
- Delay timely attainment of any applicable NAAQS, any required interim emissions reductions, or other NAAQS milestones.

The transportation conformity determination includes an assessment of future highway emissions for defined analysis years. Emissions are estimated using the latest available planning assumptions and available analytical tools, including EPA's latest approved on-highway mobile sources emissions model, the Motor Vehicle Emission Simulator (MOVES). The conformity determination provides a tabulation of the analysis results for applicable precursor pollutants, showing that the required conformity test was met for each analysis year.

## Report Contents

This document includes a summary of the methodology and data assumptions used for the conformity analysis. As shown in **Exhibit 1**, attachments containing additional detail have been provided with the document. In addition, modeling input and output files have been reviewed by EPA Region III and the Pennsylvania Department of Environmental Protection (DEP).

### EXHIBIT 1: SUMMARY OF ATTACHMENTS

Attachment	Title	Description
<b>A</b>	Project List	Provides a list of regionally significant highway projects for the TIP and LRTP.
<b>B</b>	Detailed Emission Results	Provides a detailed summary of emissions by roadway type.
<b>C</b>	MOVES Sample Run Specification	Provides example MOVES data importer (XML) and run specification (MRS) files.

## National Ambient Air Quality Standard Designations

The CAA requires the EPA to set NAAQS for pollutants considered harmful to public health and the environment. A nonattainment area is any area that does not meet the primary or secondary NAAQS. Once a nonattainment area meets the standards and additional redesignation requirements in the CAA [Section 107(d)(3)(E)], EPA will designate the area as a maintenance area.

The Adams County MPO region (Adams County) is currently designated as part of the *York, PA* maintenance area under the 1997 8-hour ozone NAAQS. The region is in attainment of the 2008 8-hour ozone, 2006 24-hour PM<sub>2.5</sub> and 2012 annual PM<sub>2.5</sub> NAAQS. Transportation conformity requires nonattainment and maintenance areas to demonstrate that all future transportation projects will not prevent an area from reaching its air quality attainment goals.

Ozone is formed by chemical reactions occurring under specific atmospheric conditions. Precursor pollutants that contribute to the formation of ozone include volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>), both of which are components of vehicle exhaust. VOCs may also be produced through the evaporation of vehicle fuel, as well as by displacement of vapors in the gas tank during refueling. By controlling VOC and NO<sub>x</sub> emissions, ozone formation can be mitigated. Both precursor pollutants are analyzed in the transportation conformity process.

### **1997 and 2008 8-hour Ozone NAAQS**

The EPA published the 1997 8-hour ozone NAAQS on July, 18, 1997 (62 FR 38856), with an effective date of September 16, 1997. An area was in nonattainment of the 1997 8-hour ozone NAAQS if the 3-year average of the individual fourth highest air quality monitor readings, averaged over 8 hours throughout the day, exceeded the NAAQS of 0.08 parts per million (ppm). On May 21, 2013, the EPA published a rule

revoking the 1997 8-hour ozone NAAQS, for the purposes of transportation conformity, effective one year after the effective date of the 2008 8-hour ozone NAAQS area designations (77 FR 30160).

The EPA published the 2008 8-hour ozone NAAQS on March 27, 2008 (73 FR 16436), with an effective date of May 27, 2008. EPA revised the ozone NAAQS by strengthening the standard to 0.075 ppm. Thus, an area is in nonattainment of the 2008 8-hour ozone NAAQS if the 3-year average of the individual fourth highest air quality monitor readings, averaged over 8 hours throughout the day, exceeds the NAAQS of 0.075 ppm. Adams County was designated as an attainment area under the 2008 8-hour ozone NAAQS, effective July 20, 2012 (77 FR 30088).

On February 16, 2018 the D.C. Circuit reached a decision in *South Coast Air Quality Management District v. EPA*, Case No. 15-1115. In that decision, the court vacated major portions of the final rule that established procedures for transitioning from the 1997 ozone NAAQS to the stricter 2008 ozone NAAQS. While the implications of this ruling are being decided, this conformity determination addresses transportation conformity to the 1997 8-hour ozone NAAQS.

### **2015 8-hour Ozone NAAQS**

In October 2015, based on its review of the air quality criteria for ozone and related photochemical oxidants, the EPA revised the primary and secondary NAAQS for ozone to provide requisite protection of public health and welfare, respectively (80 FR 65292). The EPA revised the levels of both standards to 0.070 ppm, and retained their indicators, forms (fourth-highest daily maximum, averaged across three consecutive years) and averaging times (eight hours). Under the Clean Air Act, the EPA administrator is required to make all attainment designations within two years after a final rule revising the NAAQS is published. However, the deadline for EPA to issue designations for the 2015 NAAQS for ozone passed on October 1, 2017. Once designations are final, transportation conformity would be required within 12 months for any areas designated nonattainment under the standard. Adams County is expected to be in attainment of the 2015 8-hour ozone NAAQS.

## **Interagency Consultation**

As required by the federal transportation conformity rule, the conformity process includes a significant level of cooperative interaction among federal, state, and local agencies. For this air quality conformity analysis, interagency consultation was conducted as required by the Pennsylvania Conformity SIP. This included conference call(s) or meeting(s) of the Pennsylvania Transportation-Air Quality Work Group (including the Pennsylvania Department of Transportation (PennDOT), DEP, EPA, FHWA, FTA and representatives from larger MPOs within the state).

Meeting and conference calls were conducted on October 4, 2017; January 25, 2018 and April 11, 2018 to review all input planning assumptions, methodologies and analysis years.

## Analysis Methodology and Data

This transportation conformity analysis was conducted using EPA's MOVES model. MOVES is an upgrade to EPA's modeling tools and replaces MOBILE6.2 as the official model for estimating emissions from highway vehicles for SIP emission inventories and transportation conformity (75 FR 9411), effective March 2, 2010. MOVES2014a has been used for this conformity determination and is the latest approved model version for SIP and transportation conformity purposes (79 FR 60343).

Planning assumptions are updated following EPA and FHWA joint guidance (EPA420-B-08-901) that clarifies the implementation of the latest planning assumption requirements in 40 CFR 92.110. This analysis utilizes the latest available traffic, vehicle fleet and environmental data to estimate regional highway emissions. Pennsylvania updates state-level planning assumptions on a 3-year cycle and this information is integrated into the conformity analyses. The analysis methodology and data inputs for this analysis were developed through interagency consultation and used available EPA guidance documents that included:

- *Policy Guidance on the Use of MOVES2014 for State Implementation Plan Development, Transportation Conformity, and Other Purposes*, US EPA Office of Air and Radiation, EPA-420-B-14-008, July 2014.
- *MOVES2014 and MOVES2014a Technical Guidance: Using MOVES to Prepare Emission Inventories in State Implementation Plans and Transportation Conformity*. US EPA Office of Air and Radiation, and Office of Transportation and Air Quality, EPA-420-B-15-093, November 2015.
- *MOVES2014a User Guide*, US EPA Office of Transportation and Air Quality, EPA-420-B-15-095, November 2015.

A mix of local and national default (internal to MOVES) data is used in the analysis. As illustrated in **Exhibit 2**, local data has been used for data items that have a significant impact on emissions, including: vehicle miles of travel (VMT), vehicle population, congested speeds, and vehicle type mix, as well as environmental and fuel assumptions. Local data inputs to the analysis process reflect the latest available planning assumptions using information obtained from PennDOT, DEP and other local/national sources.

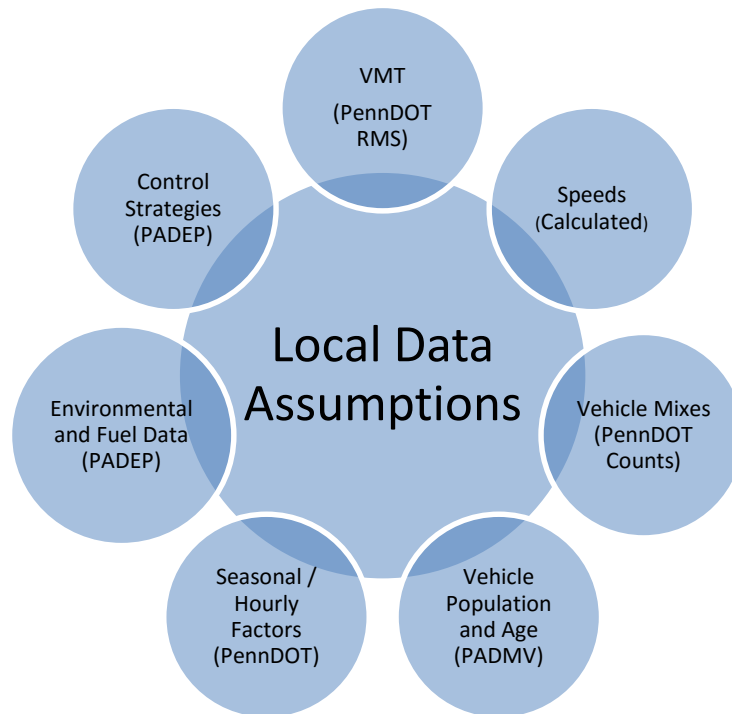
The methodology used for this analysis is consistent with the methodology used to develop SIP inventories. This includes the use of the traffic data from PennDOT's Roadway Management System (RMS) and custom post-processing software (PPSUITE) to calculate hourly speeds and prepare key traffic input files to the MOVES emission model.

PPSUITE consists of a set of programs that perform the following functions:

- Analyzes highway operating conditions.
- Calculates highway speeds.
- Compiles VMT and vehicle type mix data.
- Prepares MOVES runs and processes MOVES outputs.



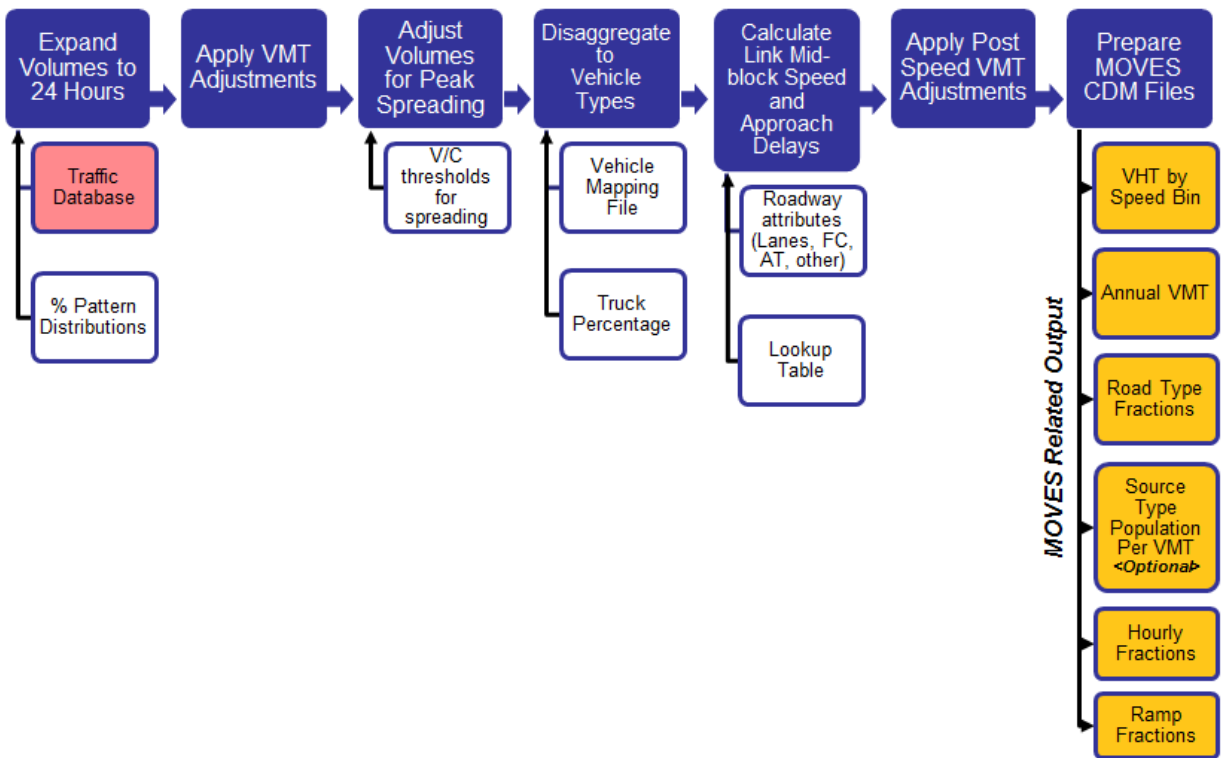
**EXHIBIT 2: LOCAL DATA INPUTS USED FOR CONFORMITY RUNS**



PPSUITE is a widely used and accepted tool for estimating speeds and processing emissions rates. The PPSUITE tool has been used for developing on-highway mobile source inventories in SIP revisions, control strategy analyses, and conformity analyses in other states. The software was developed to utilize accepted transportation engineering methodologies. The PPSUITE process is integral to producing traffic-related input files to the MOVES emission model. **Exhibit 3** summarizes the key functions of PPSUITE within the emission calculation process. Other MOVES input files are prepared externally to the PPSUITE software, including vehicle population, vehicle age, environmental and fuel input files.

The CENTRAL software is also used in this analysis. CENTRAL is a menu-driven software platform that executes the PPSUITE and MOVES processes in batch mode. The CENTRAL software allows users to execute runs for a variety of input options and integrates custom MySQL steps into the process. CENTRAL provides important quality control and assurance steps, including file naming and storage automation.

EXHIBIT 3: EMISSION CALCULATION PROCESS



### Key MOVES Input Data

A large number of inputs to MOVES are needed to fully account for the numerous vehicle and environmental parameters that affect emissions. These inputs include traffic flow characteristics, vehicle descriptions, fuel parameters, I/M program parameters and environmental variables. MOVES includes a default national database of meteorology, vehicle fleet, vehicle activity, fuel and emission control program data for every county; EPA, however, cannot certify that the default data is the most current or best available information for any specific area. As a result, local data, where available, is recommended for use when conducting a regional conformity analysis. A mix of local and default data is used for this analysis. These data items are discussed in the following sections.

### Roadway Data

The roadway data inputs to emissions calculations for this conformity analysis are based on information from the RMS database maintained by PennDOT's Bureau of Planning and Research (BPR). PennDOT obtains this information from periodic visual and electronic traffic counts. RMS data is dynamic, since it is continually reviewed and updated from new traffic counts and field visits conducted by PennDOT. Information on roadways included in the USDOT National Highway System is reviewed, at minimum, on an annual basis, while information on other roadways is reviewed at least biennially. On a triennial basis,

a current “snapshot” of the RMS database is taken and downloaded to provide an updated record of the Commonwealth’s highway system for estimating emissions. The RMS database contains all state highways, including the Pennsylvania Turnpike, divided into segments approximately 0.5 miles in length. These segments are usually divided at important intersections or locations where there is a change in the physical characteristics of the roadway (e.g. the number of lanes changes). There are approximately 82,000 state highway segments across all 67 Pennsylvania counties. The following information is extracted from RMS for emission calculations:

- Lanes.
- Distances.
- Volumes representing Average Annual Daily Traffic (AADT).
- Truck percentages.
- PennDOT urban/rural classifications.
- PennDOT functional class codes.
- Number of signals (based on linkage to PennDOT’s Geographic Information System (GIS) signal location data).

RMS volumes and distances are used in calculating highway VMT totals for each county. As discussed in the next section, adjustments are needed to convert the volumes to an average summer weekday, winter weekday, and monthly day (including weekends and weekdays), as applicable to the pollutant/precursor being analyzed. In addition, the traffic volumes must be forecast to support future years. Lane values and traffic signals are important inputs for determining the congestion and speeds for individual highway segments. Truck percentages are used in the speed determination process in order to split volumes to individual vehicle types used by MOVES software. Road segments are classified not only by function, but also by whether it is located in an urban, small urban or rural area. The PennDOT urban/rural (UR) and functional classes (FC) designations are important indicators of the type and function of each roadway segment. These variables provide valuable insights into other characteristics not contained in the RMS data, which are used for speed and emission calculations.

VMT forecast growth rates are based on PennDOT’s VMT forecasting system, as documented in the report “*Statistical Evaluation of Projected Traffic Growth, Traffic Growth Forecasting System: Final Report, March 14, 2005*”. The PennDOT forecasting system includes the development of VMT forecasts and growth rates for four functional classifications in each Pennsylvania county: urban interstate, urban non-interstate, rural interstate, and rural non-interstate. The forecasts use statistical relationships based on historic Highway Performance Monitoring System (HPMS) VMT trends and future county socioeconomic projections based on the 2014 Woods and Poole Economics, Inc. State Profile (<http://www.woodsandpoole.com/>). The statistical models incorporate historical VMT trends, socioeconomic data (households, mean household income), and a relative measure of transportation capacity (lane miles per capita). PennDOT’s BPR maintains and updates these growth rates on a periodic basis based on new demographic projections and updated information on HPMS VMT. The results of the updated VMT forecasts have been shared with the participants in the Pennsylvania Transportation-Air Quality Working Group.

### Other Supporting Traffic Data

Other traffic data is used to adjust and disaggregate traffic volumes. Key sources used in these processes include the following:

- *Highway Performance Monitoring System (HPMS VMT):* According to EPA guidance, baseline inventory VMT computed from the RMS must be adjusted to be consistent with HPMS VMT totals. The VMT contained in the HPMS reports are considered to represent average annual daily traffic (AADT), an average of all days in the year, including weekends and holidays. Adjustment factors are calculated for the 2014 analysis year. These factors are used to adjust roadway data VMT to be consistent with the reported HPMS totals, and are applied to all county and facility group combinations within the region. These adjustments are important to account for local roadway VMT not represented within the RMS.
- *Seasonal Factors:* The traffic volumes estimated from the RMS are adjusted to summer or average monthly conditions (as needed for annual processing), using seasonal adjustment factors prepared by PennDOT's BPR in their annual traffic data report published on the BPR website (<http://www.dot.state.pa.us/> Search: Research and Planning). The seasonal factors are also used to develop MOVES daily and monthly VMT fraction files, allowing MOVES to determine the portion of annual VMT that occurs in each month of the year.
- *Hourly Patterns:* Speeds and emissions vary considerably depending on the time of day. In order to produce accurate emission estimates, it is important to estimate the pattern by which roadway volume varies by breaking the data down into hourly increments. Pattern data is in the form of a percentage of the daily volumes for each hour. Distributions are provided for all the counties within the region and by each facility type grouping. The hourly pattern data has been developed from 24-hour vehicle count data compiled by PennDOT's BPR, using the process identified in PennDOT's annual traffic data report. The same factors are also used to develop the MOVES hourly fraction file.

### Vehicle Class

Emission rates within MOVES also vary significantly by vehicle type. MOVES produces emission rates for thirteen MOVES vehicle source input types. VMT, however, is input to MOVES by six HPMS vehicle groups (note that passenger cars and light trucks are grouped for input to MOVES2014). **Exhibit 4** summarizes the distinction between each classification scheme.

**EXHIBIT 4: MOVES SOURCE TYPES AND HPMS VEHICLE GROUPS**

SOURCE TYPES		HPMS Class Groups	
11	Motorcycle	10	Motorcycle
21	Passenger Car	25	Passenger Car
31	Passenger Truck	25	Passenger/Light Truck
32	Light Commercial Truck	40	Buses
41	Intercity Bus	50	Single Unit Trucks
42	Transit Bus	60	Combination Trucks
43	School bus		
51	Refuse Truck		
52	Single Unit Short-haul Truck		
53	Single Unit Long-haul Truck		
54	Motor Home		
61	Combination Short-haul Truck		
62	Combination Long-haul Truck		

The emissions estimation process includes a method to disaggregate the traffic volumes to the thirteen source types and then to recombine the estimates to the six HPMS vehicle classes. Vehicle type pattern data is used by PPSUITE to distribute the hourly roadway segment volumes among the thirteen MOVES source types. Similar to the 24-hour pattern data, this data contains percentage splits to each source type for every hour of the day. The vehicle type pattern data is developed from several sources of information:

- PennDOT truck percentages from the RMS database.
- Hourly distributions for trucks and total traffic compiled by PennDOT’s BPR.
- Transit data from PennDOT and the National Transit Database Transit Profiles (<https://www.ntdprogram.gov>).
- School bus registration data from PennDOT’s Bureau of Motor Vehicles Registration Database.

Vehicle type percentages are also input into the capacity analysis section of PPSUITE to adjust the speeds in response to truck volume. Larger trucks take up more roadway space compared to an equal number of cars and light trucks, which is accounted for in the speed estimation process by adjusting capacity using information from the Transportation Research Board’s fifth edition of the *Highway Capacity Manual*. (<http://hcm.trb.org/>).

**Vehicle Ages**

Vehicle age distributions are input to MOVES for each of the thirteen source types. These distributions reflect the percentage of the vehicle fleet falling under each vehicle model year (MY), to a maximum age of 31 years. The vehicle age distributions were prepared from the most recently available registration download from PennDOT’s Bureau of Motor Vehicles Registration Database. Due to data limitations, information for light duty vehicles (including source types 11, 21, 31 and 32) was used as local data for

MOVES inputs, while heavy-duty vehicles (including source types 41, 42, 43, 51, 52, 53, 54, 61, and 62) used the internal MOVES national default data. The registration data download is based on MOBILE6.2 vehicle categories. The data was converted to source types using the EPA convertor spreadsheets provided with the MOVES emission model.

### **Vehicle Population**

The vehicle population information, including the number and age of vehicles, impacts forecasted start and evaporative emissions within MOVES. Similar to vehicle ages, MOVES requires vehicle populations for each of the thirteen source type categories. County vehicle registration data was used to estimate vehicle population for light-duty vehicles, transit buses, and school buses. Other heavy-duty vehicle population values were based on VMT for each source type using the vehicle mix and pattern data discussed previously. PPSUITE automatically applies MOVES default ratios of VMT and source type population (e.g. the number of miles per vehicle by source type) to the local VMT estimates to produce vehicle population.

For the preparation of source type population for other required conformity analysis years, base values were adjusted using forecast population and household data for the area. Growth rates were limited so as to not exceed the VMT growth assumptions.

### **Meteorology Data**

Average monthly minimum temperatures, maximum temperatures, and humidity values are consistent with the regional State Implementation Plan (SIP) modeling conducted by DEP. The data was obtained from WeatherBank, Inc. EPA's MOBILE6.2-MOVES meteorological data convertor spreadsheet (<http://www.epa.gov/oms/models/moves/tools.htm>) was used to prepare the hourly temperature inputs needed for the MOVES model, based on the available data.

### **Fuel Parameters**

The MOVES default fuel formulation and fuel supply data were reviewed and updated based on available local volumetric fuel property information. The gasohol market penetration and Reid Vapor Pressure (RVP) values were updated, but MOVES default data was used for the remaining parameters. Key assumptions include:

- 10.0 RVP used for summer months [Local data].
- 10% ethanol used throughout the year [MOVES defaults].

### **I/M Program Parameters**

The inspection maintenance (I/M) program inputs to the MOVES model are based on previous and current programs within each county (all PA I/M programs are based on county boundaries). All analysis years include Pennsylvania's statewide I/M program. The default I/M program parameters included in MOVES were examined for each county and necessary changes were made to the default parameters to match the actual local program.

The I/M program requirements vary by region (five regions) and include on-board diagnostics (OBD) technology that uses the vehicle's computer for model years 1996 and newer to identify potential engine and exhaust system problems that could affect emissions. The program, named PAOBDII, is implemented by region as follows:

- *Philadelphia Region* - Bucks, Chester, Delaware, Montgomery and Philadelphia Counties  
[Includes tailpipe exhaust testing using ASM2015 or equipment for pre-1996 vehicles up to 25 years old]
- *Pittsburgh Region* - Allegheny, Beaver, Washington and Westmoreland Counties.  
[Includes tailpipe exhaust testing using PA 97 equipment for pre-1996 vehicles up to 25 years old]
- *South Central and Lehigh Valley Region* - Berks, Cumberland, Dauphin, Lancaster, Lebanon, Lehigh, Northampton and York Counties.  
[Gas cap and visual inspection only]
- *North Region* - Blair, Cambria, Centre, Erie, Lackawanna, Luzerne, Lycoming, and Mercer Counties.  
[Gas cap and visual inspection only]
- *Other 42 Counties* – Includes the remaining 42 counties not included above.  
[Visual inspection only]

#### **Other Vehicle Technology and Control Strategy Data**

Current federal vehicle emissions control and fuel programs are incorporated into the MOVES software. These include the National Program standards covering vehicles MY2012-MY2016. Modifications of default emission rates are required to reflect the early implementation of the National Low Emission Vehicle (NLEV) Program in Pennsylvania. To reflect these impacts, EPA has released instructions and input files that can be used to model these impacts.

The Pennsylvania Clean Vehicles (PCV) Program, adopted in 1998, incorporated the California Low Emission Vehicle Regulations (CA LEV II) by reference. The PCV Program allowed automakers to comply with the NLEV program as an alternative to this Pennsylvania program until MY2006. Beginning with MY2008, all "new" passenger cars and light-duty trucks with a gross vehicle weight rating (GVWR) of 8,500 pounds or less sold/leased and titled in Pennsylvania must be certified by the California Air Resources Board (CARB) or be certified for sale in all 50 states. For this program, a "new" vehicle is a qualified vehicle with an odometer reading less than 7,500 miles. DEP and PennDOT both work with the public, including manufacturers, vehicle dealers and consumers, to ensure that vehicles sold and purchased in Pennsylvania or vehicles purchased from other states by Pennsylvania residents comply with the requirements of the PCV Program, in order to be titled in Pennsylvania. Additionally, PennDOT ensures that paperwork for title and registration includes proof of CARB- or 50-state emission certification or that the vehicle owner qualifies for an exemption to the requirements, as listed on PennDOT's MV-9 form and in the PCV Program regulation. When necessary, information from PennDOT's title and registration process may be used to audit vehicle title transactions to determine program compliance.

The impacts of this program are modeled for all analysis years beyond 2008 using the same instructions and tools downloaded for the early NLEV analysis. EPA provided input files to reflect state programs

similar to the CAL LEV II program. Modifications to those files were made to reflect a 2008 program start date for Pennsylvania.

### Analysis Process Details

The previous sections have summarized the input data used for computing speeds and emission rates for this conformity analysis. This section explains how PPSUITE and MOVES use that input data to produce emission estimates. **Exhibit 5** provides a more detailed overview of the PPSUITE analysis procedure using the available traffic data information described in the previous sections.

### VMT Preparation

Producing an emissions inventory with PPSUITE requires a process of disaggregation and aggregation. Data is available and used on a very detailed scale – individual roadway segments for each of the 24 hours of the day. This data needs to be processed individually to determine the distribution of vehicle hours of travel (VHT) by speed and then aggregated by vehicle class to determine the input VMT to the MOVES emission model. Key steps in the preparation of VMT include:

- *Assemble VMT* - The RMS database contains the roadway segments, distances and travel volumes needed to estimate VMT. PPSUITE processes each segment by simply multiplying the assigned travel volume by the distance to obtain VMT.
- *Apply Seasonal Adjustments* – PPSUITE adjusts the traffic volumes to the appropriate analysis season. These traffic volumes are assembled by PPSUITE and extrapolated over the course of a year to produce the annual VMT file input to MOVES.
- *Disaggregate to Hours* - After seasonal adjustments are applied, the traffic volumes are distributed to each hour of the day. This allows for more accurate speed calculations (effects of congested hours) and allows PPSUITE to prepare the hourly VMT and speeds for input to MOVES.
- *Peak Spreading* - After distributing the daily volumes to each hour of the day, PPSUITE identifies hours that are unreasonably congested. For those hours, PPSUITE then spreads a portion of the volume to other hours within the same peak period, thereby approximating the “peak spreading” that normally occurs in such over-capacity conditions. This process also helps prevent hours with unreasonably congested speeds from disproportionately impacting emission calculations.
- *Disaggregation to Vehicle Types* - EPA requires VMT estimates to be prepared by the six HPMS vehicle groups, reflecting specific local characteristics. As described in the previous section, the hourly volumes are disaggregated into thirteen MOVES source types based on data from PennDOT and NTD, in combination with MOVES defaults. The thirteen MOVES source types are then recombined into six HPMS vehicle classes.
- *Apply HPMS VMT Adjustments* - Volumes must also be adjusted to account for differences with the HPMS VMT totals, as described in previous sections. VMT adjustment factors are provided as inputs to PPSUITE and are applied to each of the roadway segment volumes. VMT adjustment factors are also applied to runs for future years.



- *Apply VMT Growth Adjustments* - Volumes must also be adjusted to estimate future year VMT. VMT growth factors are provided as inputs to PPSUITE, and are applied to each of the roadway segment volumes. The VMT growth factors were developed from the PennDOT BPR Growth Rate forecasting system.

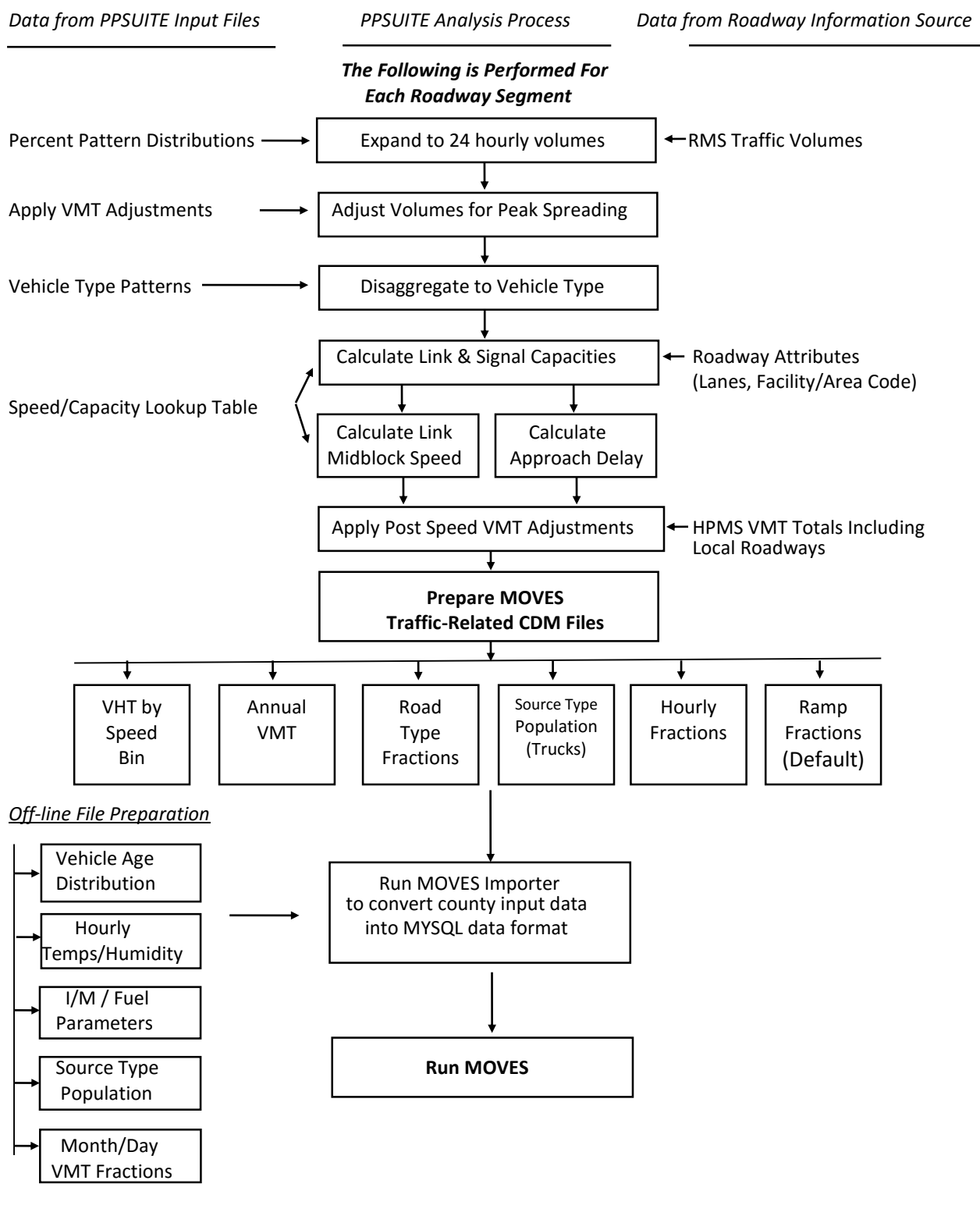
### **Speed Estimation**

Emissions for many pollutants (including VOC and NO<sub>x</sub>) vary significantly with travel speed. VOC emissions generally decrease as speed increases, while NO<sub>x</sub> emissions decrease at low speeds and increase at higher speeds, as illustrated in **Exhibit 6**. Because emissions are so sensitive to speed changes, EPA recommends special attention be given to developing reasonable and consistent speed estimates. EPA also recommends that VMT be disaggregated into subsets that have roughly equal speeds, with separate emission factors for each subset. At a minimum, speeds should be estimated separately by road type.

The computational framework used for this analysis meets and exceeds the recommendation above relating to speed estimates. Speeds are individually calculated for each roadway segment and hour. Rather than accumulating the roadway segments into a particular road type and calculating an average speed, each individual link hourly speed is represented in the MOVES vehicle hours of travel (VHT) by a speed bin file. This MOVES input file allows the specification of a distribution of hourly speeds. For example, if 5% of a county's arterial VHT operates at 5 mph during the AM peak hour and the remaining 95% operates at 65 mph, this can be represented in the MOVES speed input file. For the roadway vehicle emissions calculations, speed distributions are input to MOVES by road type and source type for each hour of the day.

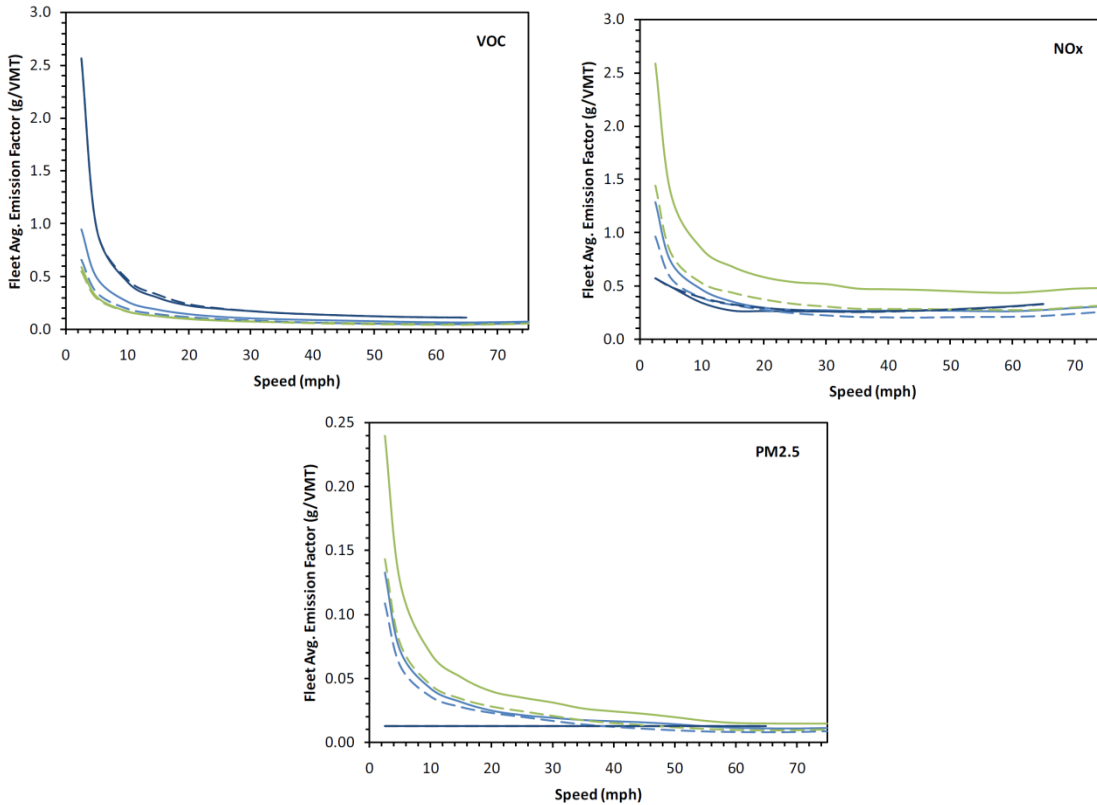
To calculate speeds, PPSUITE first obtains initial capacities (i.e., how much volume the roadway can serve before heavy congestion) and free-flow speeds (speeds assuming no congestion) from a speed/capacity lookup table. As described previously, this data contains default roadway information indexed by the area and facility type codes. For areas with known characteristics, values can be directly coded to the database and the speed/capacity default values can be overridden. For most areas where known information is unavailable, the speed/capacity lookup tables provide valuable default information regarding speeds, capacities, signal characteristics, and other capacity adjustment information used for calculating congested delays and speeds. The result of this process is an estimated average travel time for each hour of the day for each highway segment. The average travel time multiplied by traffic volume produces vehicle hours of travel (VHT).

**EXHIBIT 5: PPSUITE SPEED/EMISSION ESTIMATION PROCEDURE**



**EXHIBIT 6: EMISSION FACTOR VS. SPEED VARIANCES (VOC, NOx, AND PM<sub>2.5</sub>)**

— MOVES Urban Restricted    — MOVES Rural Restricted    — MOBILE Freeway  
- - MOVES Urban Unrestricted    - - MOVES Rural Unrestricted    - - MOBILE Arterial



Source: Figure 3 from *Implications of the MOVES2010 Model on Mobile Source Emission Estimates*, Air & Waste Management Association, July 2010.

**Developing the MOVES Traffic Input Files**

The PPSUITE software is responsible for producing the following MOVES input files during any analysis run:

- VMT by HPMS vehicle class.
- VHT by speed bin.
- Road type distributions.
- Hourly VMT fractions.
- Ramp fractions.

These files are text formatted files with a \*.csv extension. The files are provided as inputs within the MOVES County Data Manager (CDM) and are described below:

- **VMT Input File:** VMT is the primary traffic input affecting emission results. The roadway segment distances and traffic volumes are used to prepare estimates of VMT. PPSUITE performs these calculations and outputs the MOVES annual VMT input file to the County Data Manager (CDM). The annual VMT is computed by multiplying the RMS adjusted VMT by 365 days (366 days in a leap year).
- **VHT by Speed Bin File:** As described in the previous section, the PPSUITE software prepares the MOVES VHT by speed bin file, which summarizes the distribution of speeds across all links into each of the 16 MOVES speed bins for each hour of the day by road type. This robust process is consistent with the methods and recommendations provided in EPA's technical guidance for the MOVES2014 model (<http://www.epa.gov/otaq/models/moves/>) and ensures that MOVES emission rates are used to the fullest extent.
- **Road Type Distributions:** Within MOVES, typical drive cycles and associated operating conditions vary by roadway type. MOVES defines five different roadway types as follows:
  - 1 Off-Network.
  - 2 Rural Restricted Access.
  - 3 Rural Unrestricted Access.
  - 4 Urban Restricted Access.
  - 5 Urban Unrestricted Access.

For this analysis, the MOVES road type distribution file is automatically generated by PPSUITE using defined equivalencies. The off-network road type includes emissions from vehicle starts, extended idling, and evaporative emissions. Off-network activity in MOVES is primarily determined by the Source Type Population input.

- **Ramp Fractions:** Since ramps are not directly represented within the RMS database, the assumption is that 8% of total Freeway VHT is Ramp VHT, consistent with EPA's technical guidance.

## MOVES Runs

After computing speeds and aggregating VMT and VHT, PPSUITE prepares traffic-related inputs needed to run EPA's MOVES software. Additional required MOVES inputs are prepared externally from the processing software and include temperatures, I/M program parameters, fuel characteristics, vehicle fleet age distributions, and source type population. The MOVES county importer is run in batch mode. This program converts all data files into the MySQL format used by the MOVES model. At that point, a MOVES run specification file (\*.mrs) is created which specifies options and key data locations for the run. The MOVES run is then executed in batch mode. A summary of key MOVES run specification settings is shown in **Exhibit 7**. MOVES can be executed using either an inventory or rate-based approach. For this analysis, MOVES is applied using the *inventory-based* approach. Using this approach, actual VMT and population are provided as inputs to the model; MOVES is responsible for producing the total emissions for the region.

**EXHIBIT 7: MOVES RUN SPECIFICATION FILE PARAMETER SETTINGS**

Parameter	Setting
<b>MOVES Version</b>	MOVES2014a
<b>MOVES Default Database Version</b>	MOVESDB20161117
<b>Scale</b>	COUNTY
<b>Analysis Mode</b>	Inventory
<b>Time Span</b>	<b>July Weekday Runs:</b> July month, Weekday, 24 hours
<b>Time Aggregation</b>	Hour
<b>Geographic Selection</b>	County [FIPS]
<b>Vehicle Selection</b>	All source types Gasoline, Diesel, CNG, E85
<b>Road Type</b>	All road types including off-network
<b>Pollutants and Processes</b>	NO <sub>x</sub> , VOC
<b>Database selection</b>	Early NLEV database PA-Specific CAL LEV program database
<b>General Output</b>	Units: Emission = grams; Distance = miles; Time = hours; Energy = Million BTU
<b>Output Emissions</b>	Time = Hour, Emissions by Process ID, Source Type and Road Type

## Conformity Analysis Results

A transportation conformity analysis of the current TIP and LRTP has been completed for Adams County. The analyses were performed according to the requirements of the Federal transportation conformity rule at 40 CFR Part 93, Subpart A. The analyses utilized the methodologies, assumptions and data as presented in previous sections. Interagency consultation has been used to determine applicable emission models, analysis years and emission tests.

### Emission Tests

A SIP maintenance plan for the *York, PA* nonattainment area was approved on January 14, 2008 (73 FR 2163) under the 1997 8-hour ozone NAAQS. The SIP established MVEBs for the region. Separate MVEBs for Adams County were subsequently approved by EPA on August 13, 2009 (74 FR 40747). The ozone conformity analysis has been conducted to evaluate emissions in comparison to the applicable ozone MVEBs as summarized in **Exhibit 8**.

**EXHIBIT 8: 8-HOUR OZONE MOTOR VEHICLE EMISSION BUDGETS**

County / Pollutant	2009 Budget (tons/day)	2018 Budget (tons/day)
VOC	3.84	2.34
NO <sub>x</sub>	4.87	2.54

### Analysis Years

Section 93.119(g) of the Federal Transportation Conformity Regulations requires that emissions analyses be conducted for specific analysis years as follows:

- The last year of the LRTP's forecast period.
- The attainment year of the standard if within timeframe of TIP and LRTP.
- An intermediate year or years such that if there are two years in which analysis is performed, the two analysis years are no more than ten years apart.

All analysis years were determined through the interagency consultation process. **Exhibit 9** provides the analysis years used for this conformity analysis.

**EXHIBIT 9: TRANSPORTATION CONFORMITY ANALYSIS YEARS**

Analysis Year	Description
2022	Interim Year – <i>Last Year of TIP</i>
2025	Budget Year
2035	Interim Year
2040	Last Year of LRTP

**Regionally Significant Highway Projects**

For the purposes of conformity analysis, highway networks are created for each analysis year. For the horizon years, regionally significant projects from the LRTP were coded onto the networks. Detailed assessments were only performed for those new projects which may have a significant effect on emissions in accordance with 40 CFR Parts 51 and 93. Only those projects which would increase capacity or significantly impact vehicular speeds were considered. Projects such as bridge replacements and roadway restoration projects, which constitute the majority of the TIP and LRTP list, have been excluded from consideration since they are considered exempt under 40 CFR 93.126-127. A list of highway projects is shown in **Attachment A**.

**Analysis Results**

An emissions analysis has been completed for the 1997 8-hour ozone NAAQS. **Exhibit 10** summarizes the Adams County ozone emission results for a summer weekday in each analysis year. All years are lower than the applicable conformity budgets established in the regional maintenance plan for the 1997 ozone NAAQS. A detailed emission summary is also provided in **Attachment B**. Example MOVES importer (XML) and run specification (MRS) files are provided in **Attachment C**.

**EXHIBIT 10: OZONE EMISSION ANALYSIS RESULTS AND CONFORMITY TEST**  
(Summer Weekday)

Pollutant	2018 BUDGET (tons/day)	2022 (tons/day)	2025 (tons/day)	2035 (tons/day)	2040 (tons/day)
VOC	<b>2.34</b>	1.45	1.15	0.70	0.64
NO <sub>x</sub>	<b>2.54</b>	2.01	1.44	0.74	0.72
Conformity Result		<b>Pass</b>	<b>Pass</b>	<b>Pass</b>	<b>Pass</b>

## Conformity Determination

### Financial Constraint

The planning regulations, Sections 450.322(b)(11) and 450.324(e), require the transportation plan to be financially constrained while the existing transportation system is being adequately operated and maintained. Only projects for which construction and operating funds are reasonably expected to be available are included. The MPO, in conjunction with PennDOT, FHWA and FTA, has developed an estimate of the cost to maintain and operate existing roads, bridges and transit systems in the MPO region and have compared the cost with the estimated revenues and maintenance needs of the new roads over the same period. The TIP and LRTP have been determined to be financially constrained.

### Public Participation

The TIP and LRTP have undergone the public participation requirements as well as the comment and response requirements according to the procedures established in compliance with 23 CFR part 450, MPO's Public Participation Plan, and Pennsylvania's Conformity SIP. The draft document was made available for a 30-day public review and comment period, which included a public meeting.

### Conformity Statement

The conformity rule requires that the TIP and LRTP conform to the applicable SIP(s) and be adopted by the MPO/RPO before any federal agency may approve, accept, or fund projects. Conformity is determined by applying criteria outlined in the transportation conformity regulations to the analysis.

The TIP and LRTP for the Adams County MPO area is found to conform to the applicable air quality SIP(s) or EPA conformity requirements. This finding of conformity positively reflects on the efforts of the MPO and its partners in meeting the regional air quality goals, while maintaining and building an effective transportation system.



## Resources

### MOVES Model

Modeling Page within EPA's Office of Mobile Sources Website contains a downloadable model, MOVES users guide and other information. See (<http://www.epa.gov/omswww/models.htm>)

*Policy Guidance on the Use of MOVES2014 for State Implementation Plan Development, Transportation Conformity, and Other Purposes*, US EPA Office of Air and Radiation, EPA-420-B-14-008, July 2014.

*MOVES2014 and MOVES2014a Technical Guidance: Using MOVES to Prepare Emission Inventories in State Implementation Plans and Transportation Conformity*. US EPA Office of Air and Radiation, and Office of Transportation and Air Quality, EPA-420-B-15-093, November 2015.

*MOVES2014a User Guide*, US EPA Office of Transportation and Air Quality, EPA-420-B-15-095, November 2015.

### Traffic Engineering

*Highway Capacity Manual, fifth edition (HCM2010)*, Transportation Research Board, presents current knowledge and techniques for analyzing the transportation system.

*Traffic Data Collection and Factor Development Report, 2014 Data*, Pennsylvania Department of Transportation, Bureau of Planning and Research.

## Highway Vehicle Emissions Analysis Glossary

**AADT:** Average Annual Daily Traffic, average of ALL days.

**CAA:** Clean Air Act as amended.

**CARB:** California Air Resources Board.

**CFR:** Code of Federal Regulations.

**County Data Manager (CDM):** User interface developed to simplify importing specific local data for a single county or a user-defined custom domain without requiring direct interaction with the underlying MySQL database in the MOVES emission model.

**DEP:** Department of Environmental Protection.

**Emission rate or factor:** Expresses the amount of pollution emitted per unit of activity. For highway vehicles, this is usually expressed in grams of pollutant emitted per mile driven.

**EPA:** Environmental Protection Agency.

**FC:** Functional code. Applied to road segments to identify their type (freeway, local, etc.).

**FHWA:** Federal Highway Administration.

**FR:** Federal Register.

**FTA:** Federal Transit Administration.

**Growth factor:** Factor used to convert volumes to future years.

**HPMS:** Highway Performance Monitoring System.

**I/M:** Vehicle emissions inspection/maintenance programs are required in certain areas of the country. The programs ensure that vehicle emission controls are in good working order throughout the life of the vehicle. The programs require vehicles to be tested for emissions. Most vehicles that do not pass must be repaired.

**LRTP:** Long Range Transportation Plan

**MOVES:** Motor Vehicle Emission Simulator. The latest model EPA has developed to estimate emissions from highway vehicles.

**MVEB:** motor vehicle emissions budget.

**NAAQS:** National Ambient Air Quality Standard.

**Pattern data:** Extrapolations of traffic patterns (such as how traffic volume on road segment types varies by time of day, or what kinds of vehicles tend to use a road segment type) from segments with observed data to similar segments.

**PPSUITE:** Post-Processor for Air Quality. A set of programs that estimate speeds and prepares MOVES inputs and processes MOVES outputs.

**Road Type:** Functional code, applied in data management to road segments to identify their type (rural/urban highways, rural/urban arterials, etc.).

**RMS:** Roadway Management System.

**SIP:** State Implementation Plan.

**Source Type:** One of thirteen vehicle types used in MOVES modeling.

**VHT:** Vehicle hours traveled.

**VMT:** Vehicle miles traveled. In modeling terms, it is the simulated traffic volumes multiplied by link length.

**VOC:** volatile organic compound emissions.

**ATTACHMENT A**  
**Project List**

The following TIP/LRTP air quality significant highway project is included in this analysis.

Adams County FY2019 TIP			Completion year
<b>58136 (TIP)</b>	US-15/US-30 Interchange	Improve interchange at US Route 15 & US Route 30 in Straban Township, Adams County.	2024
<b>58137 (TIP)</b>	Eisenhower Drive Extension	Connect Eisenhower Drive from High Street to Route 116 in Conewago Township, Adams County.	2023
<b>94894 (TIP)</b>	94 & 394 Intersection Improvements	Intersection improvement to the intersection of PA 94, PA 394, and State Route 1007 (Stoney Point Road) in Reading Township, Adams County.	2020

**ATTACHMENT B**  
**Detailed Emission Results**

### Detailed Emission Results for Ozone Analysis

#### Adams County Ozone Daily Emission Summary 2022 FFY19 Conformity (By Road Type)

County	Road Type	Summer Daily VMT	Speed (mph)	Emissions (Tons/Day)	
				VOC	NOx
Adams	Off-Network	N/A	N/A	1.1	0.56
	Rural Restricted	0	N/A	0.0	0.00
	Rural UnRestricted	1,867,255	37.0	0.2	0.82
	Urban Restricted	580,490	60.0	0.1	0.37
	Urban UnRestricted	665,487	36.1	0.1	0.26
	<i>Subtotal</i>	<i>3,113,232</i>		<i>1.45</i>	<i>2.01</i>
Off-Model Project Emission Benefits				0.00	0.00
<b>Region Total</b>		<b>3,113,232</b>	<b>(Kg/Day)</b>	<b>1.45</b>	<b>2.01</b>
				<b>1,312</b>	<b>1,822</b>

#### Adams County Ozone Daily Emission Summary 2022 FFY19 Conformity (By Source Type)

County	Source Type	Summer Daily VMT	Emissions (Tons/Day)	
			VOC	NOx
Adams	Motorcycle	19,428	0.1	0.01
	Passenger Car	1,529,210	0.4	0.24
	Passenger Truck	997,319	0.7	0.67
	Light Commercial Truck	252,715	0.2	0.18
	Intercity Bus	524	0.0	0.00
	Transit Bus	5,697	0.0	0.02
	School Bus	3,261	0.0	0.01
	Refuse Truck	5,170	0.0	0.01
	Single Unit Short-haul Truck	107,190	0.0	0.13
	Single Unit Long-haul Truck	5,876	0.0	0.01
	Motor Home	4,085	0.0	0.01
	Combination Short-haul Truck	41,384	0.0	0.11
	Combination Long-haul Truck	141,373	0.0	0.61
	<i>Subtotal</i>	<i>3,113,232</i>	<i>1.45</i>	<i>2.01</i>
Off-Model Project Emission Benefits			0.00	0.00
<b>Region Total</b>		<b>3,113,232</b>	<b>1.45</b>	<b>2.01</b>
		<b>(Kg/Day)</b>	<b>1,312</b>	<b>1,822</b>

**Adams County Ozone Daily Emission Summary**  
**2022 FFY19 Conformity (By Emission Process)**

County	Emission Process	Emissions (Tons/Day)	
		VOC	NOx
Adams	Running Exhaust	0.21	1.44
	Start Exhaust	0.60	0.49
	Brakewear	0.00	0.00
	Tirewear	0.00	0.00
	Evap Permeation	0.12	0.00
	Evap Fuel Vapor Venting	0.28	0.00
	Evap Fuel Leaks	0.21	0.00
	Crankcase Running Exhaust	0.00	0.00
	Crankcase Start Exhaust	0.01	0.00
	Crankcase Extended Idle Exhaust	0.00	0.00
	Extended Idle Exhaust	0.02	0.08
	Auxiliary Power Exhaust	0.00	0.00
	<i>Subtotal</i>	<i>1.45</i>	<i>2.01</i>
Off-Model Project Emission Benefits		0.00	0.00
<b>Region Total</b>		<b>1.45</b>	<b>2.01</b>
	<b>(Kg/Day)</b>	<b>1,312</b>	<b>1,822</b>

**Adams County Ozone Daily Emission Summary**  
**2025 FFY19 Conformity (By Road Type)**

County	Road Type	Summer Daily VMT	Speed (mph)	Emissions (Tons/Day)	
				VOC	NOx
Adams	Off-Network	N/A	N/A	0.9	0.44
	Rural Restricted	0	N/A	0.0	0.00
	Rural UnRestricted	1,873,374	37.0	0.1	0.56
	Urban Restricted	564,406	60.0	0.0	0.26
	Urban UnRestricted	645,110	36.4	0.0	0.17
	<i>Subtotal</i>	<i>3,082,890</i>		<i>1.15</i>	<i>1.44</i>
Off-Model Project Emission Benefits				0.00	0.00
<b>Region Total</b>		<b>3,082,890</b>		<b>1.15</b>	<b>1.44</b>
		<b>(Kg/Day)</b>		<b>1,042</b>	<b>1,302</b>



**Adams County Ozone Daily Emission Summary**  
**2025 FFY19 Conformity (By Source Type)**

County	Source Type	Summer Daily VMT	Emissions (Tons/Day)	
			VOC	NOx
Adams	Motorcycle	19,246	0.1	0.01
	Passenger Car	1,514,872	0.4	0.18
	Passenger Truck	987,948	0.5	0.44
	Light Commercial Truck	250,359	0.1	0.12
	Intercity Bus	501	0.0	0.00
	Transit Bus	5,654	0.0	0.01
	School Bus	3,203	0.0	0.01
	Refuse Truck	5,097	0.0	0.01
	Single Unit Short-haul Truck	105,789	0.0	0.10
	Single Unit Long-haul Truck	5,811	0.0	0.01
	Motor Home	4,032	0.0	0.01
	Combination Short-haul Truck	40,889	0.0	0.08
	Combination Long-haul Truck	139,488	0.0	0.46
<i>Subtotal</i>		<i>3,082,890</i>	<i>1.15</i>	<i>1.44</i>
Off-Model Project Emission Benefits			0.00	0.00
<b>Region Total</b>		<b>3,082,890</b> <b>(Kg/Day)</b>	<b>1.15</b> <b>1,042</b>	<b>1.44</b> <b>1,302</b>

**Adams County Ozone Daily Emission Summary**  
**2025 FFY19 Conformity (By Emission Process)**

County	Emission Process	Emissions (Tons/Day)	
		VOC	NOx
Adams	Running Exhaust	0.14	0.99
	Start Exhaust	0.45	0.37
	Brakewear	0.00	0.00
	Tirewear	0.00	0.00
	Evap Permeation	0.09	0.00
	Evap Fuel Vapor Venting	0.23	0.00
	Evap Fuel Leaks	0.21	0.00
	Crankcase Running Exhaust	0.00	0.00
	Crankcase Start Exhaust	0.01	0.00
	Crankcase Extended Idle Exhaust	0.00	0.00
	Extended Idle Exhaust	0.02	0.08
	Auxiliary Power Exhaust	0.00	0.00
	<i>Subtotal</i>		<i>1.15</i>
Off-Model Project Emission Benefits		0.00	0.00
<b>Region Total</b>		<b>1.15</b> <b>(Kg/Day)</b>	<b>1.44</b> <b>1,302</b>

**Adams County Ozone Daily Emission Summary  
2035 FFY19 Conformity (By Road Type)**

County	Road Type	Summer Daily VMT	Speed (mph)	Emissions (Tons/Day)	
				VOC	NOx
Adams	Off-Network	N/A	N/A	0.6	0.23
	Rural Restricted	0	N/A	0.0	0.00
	Rural UnRestricted	2,050,782	36.8	0.1	0.27
	Urban Restricted	661,483	60.0	0.0	0.14
	Urban UnRestricted	756,007	35.3	0.0	0.09
	<i>Subtotal</i>	<i>3,468,271</i>		<i>0.70</i>	<i>0.74</i>
Off-Model Project Emission Benefits				0.00	0.00
<b>Region Total</b>		<b>3,468,271</b>	<b>(Kg/Day)</b>	<b>0.70</b>	<b>0.74</b>
				<b>634</b>	<b>668</b>

**Adams County Ozone Daily Emission Summary  
2035 FFY19 Conformity (By Source Type)**

County	Source Type	Summer Daily VMT	Emissions (Tons/Day)	
			VOC	NOx
Adams	Motorcycle	21,637	0.1	0.01
	Passenger Car	1,703,033	0.2	0.10
	Passenger Truck	1,110,662	0.3	0.15
	Light Commercial Truck	281,440	0.1	0.04
	Intercity Bus	569	0.0	0.00
	Transit Bus	6,462	0.0	0.01
	School Bus	3,546	0.0	0.00
	Refuse Truck	5,785	0.0	0.01
	Single Unit Short-haul Truck	119,765	0.0	0.07
	Single Unit Long-haul Truck	6,576	0.0	0.00
	Motor Home	4,567	0.0	0.00
	Combination Short-haul Truck	46,257	0.0	0.06
	Combination Long-haul Truck	157,972	0.0	0.28
	<i>Subtotal</i>	<i>3,468,271</i>	<i>0.70</i>	<i>0.74</i>
Off-Model Project Emission Benefits			0.00	0.00
<b>Region Total</b>		<b>3,468,271</b>	<b>0.70</b>	<b>0.74</b>
		<b>(Kg/Day)</b>	<b>634</b>	<b>668</b>

### Adams County Ozone Daily Emission Summary 2035 FFY19 Conformity (By Emission Process)

County	Emission Process	Emissions (Tons/Day)	
		VOC	NOx
Adams	Running Exhaust	0.06	0.50
	Start Exhaust	0.19	0.16
	Brakewear	0.00	0.00
	Tirewear	0.00	0.00
	Evap Permeation	0.04	0.00
	Evap Fuel Vapor Venting	0.18	0.00
	Evap Fuel Leaks	0.22	0.00
	Crankcase Running Exhaust	0.00	0.00
	Crankcase Start Exhaust	0.00	0.00
	Crankcase Extended Idle Exhaust	0.00	0.00
	Extended Idle Exhaust	0.01	0.07
	Auxiliary Power Exhaust	0.00	0.00
	<i>Subtotal</i>	<i>0.70</i>	<i>0.74</i>
Off-Model Project Emission Benefits		0.00	0.00
<b>Region Total</b>		<b>0.70</b>	<b>0.74</b>
	<b>(Kg/Day)</b>	<b>634</b>	<b>668</b>

### Adams County Ozone Daily Emission Summary 2040 FFY19 Conformity (By Road Type)

County	Road Type	Summer Daily VMT	Speed (mph)	Emissions (Tons/Day)	
				VOC	NOx
Adams	Off-Network	N/A	N/A	0.5	0.21
	Rural Restricted	0	N/A	0.0	0.00
	Rural UnRestricted	2,245,278	36.5	0.1	0.26
	Urban Restricted	775,292	59.9	0.0	0.15
	Urban UnRestricted	886,077	33.6	0.0	0.09
	<i>Subtotal</i>	<i>3,906,647</i>			<i>0.64</i>
Off-Model Project Emission Benefits				0.00	0.00
<b>Region Total</b>		<b>3,906,647</b>		<b>0.64</b>	<b>0.72</b>
		<b>(Kg/Day)</b>		<b>583</b>	<b>650</b>

**Adams County Ozone Daily Emission Summary**  
**2040 FFY19 Conformity (By Source Type)**

County	Source Type	Summer Daily VMT	Emissions (Tons/Day)	
			VOC	NOx
Adams	Motorcycle	24,361	0.1	0.02
	Passenger Car	1,917,454	0.2	0.09
	Passenger Truck	1,250,495	0.3	0.11
	Light Commercial Truck	316,886	0.1	0.03
	Intercity Bus	679	0.0	0.00
	Transit Bus	7,304	0.0	0.01
	School Bus	3,981	0.0	0.00
	Refuse Truck	6,555	0.0	0.01
	Single Unit Short-haul Truck	135,434	0.0	0.08
	Single Unit Long-haul Truck	7,410	0.0	0.00
	Motor Home	5,162	0.0	0.00
	Combination Short-haul Truck	52,296	0.0	0.06
	Combination Long-haul Truck	178,629	0.0	0.30
	<i>Subtotal</i>	<i>3,906,647</i>	<i>0.64</i>	<i>0.72</i>
Off-Model Project Emission Benefits		0.00	0.00	
<b>Region Total</b>		<b>3,906,647</b> <b>(Kg/Day)</b>	<b>0.64</b> <b>583</b>	<b>0.72</b> <b>650</b>

**Adams County Ozone Daily Emission Summary**  
**2040 FFY19 Conformity (By Emission Process)**

County	Emission Process	Emissions (Tons/Day)	
		VOC	NOx
Adams	Running Exhaust	0.06	0.50
	Start Exhaust	0.15	0.13
	Brakewear	0.00	0.00
	Tirewear	0.00	0.00
	Evap Permeation	0.03	0.00
	Evap Fuel Vapor Venting	0.17	0.00
	Evap Fuel Leaks	0.22	0.00
	Crankcase Running Exhaust	0.00	0.00
	Crankcase Start Exhaust	0.00	0.00
	Crankcase Extended Idle Exhaust	0.00	0.00
	Extended Idle Exhaust	0.01	0.08
	Auxiliary Power Exhaust	0.00	0.00
	<i>Subtotal</i>	<i>0.64</i>	<i>0.72</i>
	Off-Model Project Emission Benefits		0.00
<b>Region Total</b>		<b>0.64</b> <b>583</b>	<b>0.72</b> <b>650</b>

**ATTACHMENT C**

**Sample MOVES Data Importer (XML) Input File  
and  
Run Specification (MRS) Input File**

**(Sample for 2025 July Weekday)**

**MOVES County Data Manager Importer File – 2025 July Weekday Run (MOVESIMPORTER.XML)**

```
<moves>
  <importer mode="county" >
    <filters>
    <geographicselections>
      <geographicselection type="COUNTY" key="42001" description="PENNSYLVANIA - Adams County"/>
    </geographicselections>
    <timespan>
      <year key="2025"/>
      <month id="07"/>
      <day id="2"/>
      <day id="5"/>
      <beginhour id="1"/>
      <endhour id="24"/>
      <aggregateBy key="Hour"/>
    </timespan>
    <onroadvehicleselections>
      <onroadvehicleselection fueltypeid="2" fueltypedesc="Diesel Fuel" sourcetypeid="62" sourcetyponame="Combination Long-haul Truck"/>
      <onroadvehicleselection fueltypeid="2" fueltypedesc="Diesel Fuel" sourcetypeid="61" sourcetyponame="Combination Short-haul Truck"/>
      <onroadvehicleselection fueltypeid="2" fueltypedesc="Diesel Fuel" sourcetypeid="41" sourcetyponame="Intercity Bus"/>
      <onroadvehicleselection fueltypeid="2" fueltypedesc="Diesel Fuel" sourcetypeid="32" sourcetyponame="Light Commercial Truck"/>
      <onroadvehicleselection fueltypeid="2" fueltypedesc="Diesel Fuel" sourcetypeid="54" sourcetyponame="Motor Home"/>
      <onroadvehicleselection fueltypeid="2" fueltypedesc="Diesel Fuel" sourcetypeid="11" sourcetyponame="Motorcycle"/>
      <onroadvehicleselection fueltypeid="2" fueltypedesc="Diesel Fuel" sourcetypeid="21" sourcetyponame="Passenger Car"/>
      <onroadvehicleselection fueltypeid="2" fueltypedesc="Diesel Fuel" sourcetypeid="31" sourcetyponame="Passenger Truck"/>
      <onroadvehicleselection fueltypeid="2" fueltypedesc="Diesel Fuel" sourcetypeid="51" sourcetyponame="Refuse Truck"/>
      <onroadvehicleselection fueltypeid="2" fueltypedesc="Diesel Fuel" sourcetypeid="43" sourcetyponame="School Bus"/>
      <onroadvehicleselection fueltypeid="2" fueltypedesc="Diesel Fuel" sourcetypeid="53" sourcetyponame="Single Unit Long-haul Truck"/>
      <onroadvehicleselection fueltypeid="2" fueltypedesc="Diesel Fuel" sourcetypeid="52" sourcetyponame="Single Unit Short-haul Truck"/>
      <onroadvehicleselection fueltypeid="2" fueltypedesc="Diesel Fuel" sourcetypeid="42" sourcetyponame="Transit Bus"/>
      <onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="62" sourcetyponame="Combination Long-haul Truck"/>
      <onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="61" sourcetyponame="Combination Short-haul Truck"/>
      <onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="41" sourcetyponame="Intercity Bus"/>
      <onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="32" sourcetyponame="Light Commercial Truck"/>
      <onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="54" sourcetyponame="Motor Home"/>
      <onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="11" sourcetyponame="Motorcycle"/>
      <onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="21" sourcetyponame="Passenger Car"/>
      <onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="31" sourcetyponame="Passenger Truck"/>
      <onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="51" sourcetyponame="Refuse Truck"/>
      <onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="43" sourcetyponame="School Bus"/>
      <onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="53" sourcetyponame="Single Unit Long-haul Truck"/>
      <onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="52" sourcetyponame="Single Unit Short-haul Truck"/>
      <onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="42" sourcetyponame="Transit Bus"/>
      <onroadvehicleselection fueltypeid="3" fueltypedesc="Compressed Natural Gas (CNG)" sourcetypeid="62" sourcetyponame="Combination Long-haul Truck"/>
      <onroadvehicleselection fueltypeid="3" fueltypedesc="Compressed Natural Gas (CNG)" sourcetypeid="61" sourcetyponame="Combination Short-haul Truck"/>
      <onroadvehicleselection fueltypeid="3" fueltypedesc="Compressed Natural Gas (CNG)" sourcetypeid="41" sourcetyponame="Intercity Bus"/>
      <onroadvehicleselection fueltypeid="3" fueltypedesc="Compressed Natural Gas (CNG)" sourcetypeid="32" sourcetyponame="Light Commercial Truck"/>
      <onroadvehicleselection fueltypeid="3" fueltypedesc="Compressed Natural Gas (CNG)" sourcetypeid="54" sourcetyponame="Motor Home"/>
      <onroadvehicleselection fueltypeid="3" fueltypedesc="Compressed Natural Gas (CNG)" sourcetypeid="11" sourcetyponame="Motorcycle"/>
      <onroadvehicleselection fueltypeid="3" fueltypedesc="Compressed Natural Gas (CNG)" sourcetypeid="21" sourcetyponame="Passenger Car"/>
      <onroadvehicleselection fueltypeid="3" fueltypedesc="Compressed Natural Gas (CNG)" sourcetypeid="31" sourcetyponame="Passenger Truck"/>
    </onroadvehicleselections>
  </importer >
</moves>
```

```

sourcetypername="Passenger Truck"/>
  <onroadvehicleselection fueltypeid="3" fueltypedesc="Compressed Natural Gas (CNG)" sourcetypeid="51" sourcetypername="Refuse
Truck"/>
  <onroadvehicleselection fueltypeid="3" fueltypedesc="Compressed Natural Gas (CNG)" sourcetypeid="43" sourcetypername="School
Bus"/>
  <onroadvehicleselection fueltypeid="3" fueltypedesc="Compressed Natural Gas (CNG)" sourcetypeid="53" sourcetypername="Single
Unit Long-haul Truck"/>
  <onroadvehicleselection fueltypeid="3" fueltypedesc="Compressed Natural Gas (CNG)" sourcetypeid="52" sourcetypername="Single
Unit Short-haul Truck"/>
  <onroadvehicleselection fueltypeid="3" fueltypedesc="Compressed Natural Gas (CNG)" sourcetypeid="42" sourcetypername="Transit
Bus"/>
  <onroadvehicleselection fueltypeid="5" fueltypedesc="Ethanol (E-85)" sourcetypeid="62" sourcetypername="Combination Long-haul
Truck"/>
  <onroadvehicleselection fueltypeid="5" fueltypedesc="Ethanol (E-85)" sourcetypeid="61" sourcetypername="Combination Short-haul
Truck"/>
  <onroadvehicleselection fueltypeid="5" fueltypedesc="Ethanol (E-85)" sourcetypeid="41" sourcetypername="Intercity Bus"/>
  <onroadvehicleselection fueltypeid="5" fueltypedesc="Ethanol (E-85)" sourcetypeid="32" sourcetypername="Light Commercial
Truck"/>
  <onroadvehicleselection fueltypeid="5" fueltypedesc="Ethanol (E-85)" sourcetypeid="54" sourcetypername="Motor Home"/>
  <onroadvehicleselection fueltypeid="5" fueltypedesc="Ethanol (E-85)" sourcetypeid="11" sourcetypername="Motorcycle"/>
  <onroadvehicleselection fueltypeid="5" fueltypedesc="Ethanol (E-85)" sourcetypeid="21" sourcetypername="Passenger Car"/>
  <onroadvehicleselection fueltypeid="5" fueltypedesc="Ethanol (E-85)" sourcetypeid="31" sourcetypername="Passenger Truck"/>
  <onroadvehicleselection fueltypeid="5" fueltypedesc="Ethanol (E-85)" sourcetypeid="51" sourcetypername="Refuse Truck"/>
  <onroadvehicleselection fueltypeid="5" fueltypedesc="Ethanol (E-85)" sourcetypeid="43" sourcetypername="School Bus"/>
  <onroadvehicleselection fueltypeid="5" fueltypedesc="Ethanol (E-85)" sourcetypeid="53" sourcetypername="Single Unit Long-haul
Truck"/>
  <onroadvehicleselection fueltypeid="5" fueltypedesc="Ethanol (E-85)" sourcetypeid="52" sourcetypername="Single Unit Short-haul
Truck"/>
  <onroadvehicleselection fueltypeid="5" fueltypedesc="Ethanol (E-85)" sourcetypeid="42" sourcetypername="Transit Bus"/>
</onroadvehicleselections>
</offroadvehicleselections>
</offroadvehicleselections>
</offroadvehiclesccs>
</offroadvehiclesccs>
<roadtypes>
  <roadtype roadtypeid="1" roadtypename="Off-Network"/>
  <roadtype roadtypeid="2" roadtypename="Rural Restricted Access"/>
  <roadtype roadtypeid="3" roadtypename="Rural Unrestricted Access"/>
  <roadtype roadtypeid="4" roadtypename="Urban Restricted Access"/>
  <roadtype roadtypeid="5" roadtypename="Urban Unrestricted Access"/>
</roadtypes>
</filters>
<databaseselection servername="localhost" databasename="42001_2025_07_05_JulWkdT_mi"/>
<agedistribution>
  <description><![CDATA[]]></description>
  <parts>
    <sourceTypeAgeDistribution>
<filename>C:\PAMOVES14a\MOVESInputs\AgeDistribution\MOVES2014\14Reg_RepCty\2025\42035_2025_SourceTypeAgeDistribution.csv</fil
ename>
    </sourceTypeAgeDistribution>
  </parts>
</agedistribution>

<avgspeeddistribution>
  <description><![CDATA[]]></description>
  <parts>
    <avgSpeedDistribution>
      <filename>C:\PAMOVES14a\Out\Adam\42001_2025_07_05_JulWkdT\CDM\avgSpeedDistribution.csv</filename>
    </avgSpeedDistribution>
  </parts>
</avgspeeddistribution>

<imcoverage>
  <description><![CDATA[]]></description>

```

```

    <parts>
      <imcoverage>
        <filename>C:\PAMOVES14a\MOVESInputs\IM\MOVES2014a\42000_2025_IMCoverage.csv</filename>
      </imcoverage>
    </parts>
  </imcoverage>
<fuel>
  <description><![CDATA[]]></description>
  <parts>
    <FuelSupply>
      <filename>C:\PAMOVES14a\MOVESInputs\Fuel\MOVES2014a\42000_fuelsupply_2002_2050_14a.csv</filename>
    </FuelSupply>
    <FuelFormulation>
      <filename>C:\PAMOVES14a\MOVESInputs\Fuel\MOVES2014a\42000_FuelFormulation_14a.csv</filename>
    </FuelFormulation>
    <FuelUsageFraction>
      <filename>C:\PAMOVES14a\MOVESInputs\Fuel\MOVES2014a\MOVESDefaults\42000_FuelUsageFraction_14a.csv</filename>
    </FuelUsageFraction>
    <AVFT>
      <filename></filename>
    </AVFT>
  </parts>
</fuel>
  <zonemonthhour>
    <description><![CDATA[]]></description>
    <parts>
      <zoneMonthHour>
        <filename>C:\PAMOVES14a\MOVESInputs\Meteorology\2008\42001_2008_met.csv</filename>
      </zoneMonthHour>
    </parts>
  </zonemonthhour>
  <roadtypedistribution>
    <description><![CDATA[]]></description>
    <parts>
      <roadTypeDistribution>
        <filename>C:\PAMOVES14a\Out\Adam\42001_2025_07_05_JulWkdT\CDM\roadTypeDistribution.csv</filename>
      </roadTypeDistribution>
    </parts>
  </roadtypedistribution>
  <sourcetypepopulation>
    <description><![CDATA[]]></description>
    <parts>
      <sourceTypeYear>
        <filename>C:\PAMOVES14a\Out\Adam\42001_2025_07_05_JulWkdT\CDM\SourceTypePopulation.csv</filename>
      </sourceTypeYear>
    </parts>
  </sourcetypepopulation>
  <rampfraction>
    <description><![CDATA[]]></description>
    <parts>
      <roadType>
        <filename>C:\PAMOVES14a\MOVESInputs\RampFraction\rampfraction_defaults.csv</filename>
      </roadType>
    </parts>
  </rampfraction>
  <vehicletypevmt>
    <description><![CDATA[]]></description>
    <parts>
      <hpmsVTypeYear>
        <filename>C:\PAMOVES14a\Out\Adam\42001_2025_07_05_JulWkdT\CDM\hpmsVTypeYear.csv</filename>
      </hpmsVTypeYear>
      <monthvmtfraction>
        <filename>C:\PAMOVES14a\MOVESInputs\MonthDayHourFractions\2014_MonthFraction\42001_2014_MonthVMTFraction.csv</filename>
      </monthvmtfraction>
    </parts>
  </vehicletypevmt>
</filename>C:\PAMOVES14a\MOVESInputs\MonthDayHourFractions\2014_MonthFraction\42001_2014_MonthVMTFraction.csv</filename>
</monthvmtfraction>

```



```

        <dayvmfraction>
<filename>C:\PAMOVES14a\MOVESInputs\MonthDayHourFractions\2014_DayFraction\42001_2014_dayvmfraction.csv</filename>
        </dayvmfraction>
        <hourvmfraction>
        <filename>C:\PAMOVES14a\Out\Adam\42001_2025_07_05_JulWkdT\CDM\hourvmfraction.csv</filename>
        </hourvmfraction>
    </parts>
</vehicletypevmt>
<starts>
    <description><![CDATA[]]></description>
    <parts>
        <startsPerDay>
<filename></filename>
        </startsPerDay>
        <startsHourFraction>
<filename></filename>
        </startsHourFraction>
        <startsSourceTypeFraction>
<filename></filename>
        </startsSourceTypeFraction>
        <startsMonthAdjust>
<filename></filename>
        </startsMonthAdjust>
        <importStartsOpModeDistribution>
<filename></filename>
        </importStartsOpModeDistribution>
        <Starts>
<filename></filename>
        </Starts>
    </parts>
</starts>
<hotelling>
    <description><![CDATA[]]></description>
    <parts>
        <hotellingActivityDistribution>
<filename>C:\PAMOVES14a\MOVESInputs\Hotelling_Hours\42000_Hotelling.txt</filename>
        </hotellingActivityDistribution>
        <hotellingHours>
<filename>C:\PAMOVES14a\MOVESInputs\Hotelling_Hours\2025\42001_2025_HotellingHours.txt</filename>
        </hotellingHours>
    </parts>
</hotelling>
<onroadretrofit>
    <description><![CDATA[]]></description>
    <parts>
        <onRoadRetrofit>
            <filename></filename>
        </onRoadRetrofit>
    </parts>
</onroadretrofit>
<generic>
    <description><![CDATA[]]></description>
    <parts>
        <anytable>
            <tablename>regioncounty</tablename>
        </anytable>
    </parts>
</generic>
    </importer>
</moves>

```

**MOVES Run Specification File – 2025 July Weekday Run (MOVESRUN.MRS)**

```
<runspec version="MOVES2014a-20151201">
<description><![CDATA[MOVES2014A RunSpec Created by CENTRAL4 Scenario: ADAM 2025 JULWKD JulWkdT Emission Inventory with user's
data]]></description>
  <models>
    <model value="ONROAD"/>
  </models>
<modelscale value="INV"/>
  <modeldomain value="SINGLE"/>
  <geographicselections>
    <geographicselection type="COUNTY" key="42001" description="PENNSYLVANIA - Adams County"/>
  </geographicselections>
  <timespan>
    <year key="2025"/>
  <month id="07"/>
  <day id="5"/>
    <beginhour id="1"/>
    <endhour id="24"/>
  <aggregateBy key="Hour"/>
  </timespan>
  <onroadvehicleselections>
    <onroadvehicleselection fueltypeid="3" fueltypedesc="Compressed Natural Gas (CNG)" sourcetypeid="11" sourcetyponame="Motorcycle"/>
    <onroadvehicleselection fueltypeid="3" fueltypedesc="Compressed Natural Gas (CNG)" sourcetypeid="21" sourcetyponame="Passenger Car"/>
    <onroadvehicleselection fueltypeid="3" fueltypedesc="Compressed Natural Gas (CNG)" sourcetypeid="31" sourcetyponame="Passenger
Truck"/>
    <onroadvehicleselection fueltypeid="3" fueltypedesc="Compressed Natural Gas (CNG)" sourcetypeid="32" sourcetyponame="Light Commercial
Truck"/>
    <onroadvehicleselection fueltypeid="2" fueltypedesc="Diesel Fuel" sourcetypeid="11" sourcetyponame="Motorcycle"/>
    <onroadvehicleselection fueltypeid="2" fueltypedesc="Diesel Fuel" sourcetypeid="21" sourcetyponame="Passenger Car"/>
    <onroadvehicleselection fueltypeid="2" fueltypedesc="Diesel Fuel" sourcetypeid="31" sourcetyponame="Passenger Truck"/>
    <onroadvehicleselection fueltypeid="2" fueltypedesc="Diesel Fuel" sourcetypeid="32" sourcetyponame="Light Commercial Truck"/>
    <onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="11" sourcetyponame="Motorcycle"/>
    <onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="21" sourcetyponame="Passenger Car"/>
    <onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="31" sourcetyponame="Passenger Truck"/>
    <onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="32" sourcetyponame="Light Commercial Truck"/>
    <onroadvehicleselection fueltypeid="5" fueltypedesc="Ethanol (E-85)" sourcetypeid="11" sourcetyponame="Motorcycle"/>
    <onroadvehicleselection fueltypeid="5" fueltypedesc="Ethanol (E-85)" sourcetypeid="21" sourcetyponame="Passenger Car"/>
    <onroadvehicleselection fueltypeid="5" fueltypedesc="Ethanol (E-85)" sourcetypeid="31" sourcetyponame="Passenger Truck"/>
    <onroadvehicleselection fueltypeid="5" fueltypedesc="Ethanol (E-85)" sourcetypeid="32" sourcetyponame="Light Commercial Truck"/>
    <onroadvehicleselection fueltypeid="3" fueltypedesc="Compressed Natural Gas (CNG)" sourcetypeid="41" sourcetyponame="Intercity Bus"/>
    <onroadvehicleselection fueltypeid="3" fueltypedesc="Compressed Natural Gas (CNG)" sourcetypeid="42" sourcetyponame="Transit Bus"/>
    <onroadvehicleselection fueltypeid="3" fueltypedesc="Compressed Natural Gas (CNG)" sourcetypeid="43" sourcetyponame="School Bus"/>
    <onroadvehicleselection fueltypeid="2" fueltypedesc="Diesel Fuel" sourcetypeid="41" sourcetyponame="Intercity Bus"/>
    <onroadvehicleselection fueltypeid="2" fueltypedesc="Diesel Fuel" sourcetypeid="42" sourcetyponame="Transit Bus"/>
    <onroadvehicleselection fueltypeid="2" fueltypedesc="Diesel Fuel" sourcetypeid="43" sourcetyponame="School Bus"/>
    <onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="41" sourcetyponame="Intercity Bus"/>
    <onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="42" sourcetyponame="Transit Bus"/>
    <onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="43" sourcetyponame="School Bus"/>
    <onroadvehicleselection fueltypeid="5" fueltypedesc="Ethanol (E-85)" sourcetypeid="41" sourcetyponame="Intercity Bus"/>
    <onroadvehicleselection fueltypeid="5" fueltypedesc="Ethanol (E-85)" sourcetypeid="42" sourcetyponame="Transit Bus"/>
    <onroadvehicleselection fueltypeid="5" fueltypedesc="Ethanol (E-85)" sourcetypeid="43" sourcetyponame="School Bus"/>
    <onroadvehicleselection fueltypeid="3" fueltypedesc="Compressed Natural Gas (CNG)" sourcetypeid="51" sourcetyponame="Refuse Truck"/>
    <onroadvehicleselection fueltypeid="3" fueltypedesc="Compressed Natural Gas (CNG)" sourcetypeid="52" sourcetyponame="Single Unit Short-
haul Truck"/>
    <onroadvehicleselection fueltypeid="3" fueltypedesc="Compressed Natural Gas (CNG)" sourcetypeid="53" sourcetyponame="Single Unit Long-
haul Truck"/>
    <onroadvehicleselection fueltypeid="3" fueltypedesc="Compressed Natural Gas (CNG)" sourcetypeid="54" sourcetyponame="Motor Home"/>
    <onroadvehicleselection fueltypeid="3" fueltypedesc="Compressed Natural Gas (CNG)" sourcetypeid="61" sourcetyponame="Combination
Short-haul Truck"/>
    <onroadvehicleselection fueltypeid="3" fueltypedesc="Compressed Natural Gas (CNG)" sourcetypeid="62" sourcetyponame="Combination
Long-haul Truck"/>
    <onroadvehicleselection fueltypeid="2" fueltypedesc="Diesel Fuel" sourcetypeid="51" sourcetyponame="Refuse Truck"/>
    <onroadvehicleselection fueltypeid="2" fueltypedesc="Diesel Fuel" sourcetypeid="52" sourcetyponame="Single Unit Short-haul Truck"/>
```

```

<onroadvehicleselection fueltypeid="2" fueltypedesc="Diesel Fuel" sourcetypeid="53" sourcetyname="Single Unit Long-haul Truck"/>
<onroadvehicleselection fueltypeid="2" fueltypedesc="Diesel Fuel" sourcetypeid="54" sourcetyname="Motor Home"/>
<onroadvehicleselection fueltypeid="2" fueltypedesc="Diesel Fuel" sourcetypeid="61" sourcetyname="Combination Short-haul Truck"/>
<onroadvehicleselection fueltypeid="2" fueltypedesc="Diesel Fuel" sourcetypeid="62" sourcetyname="Combination Long-haul Truck"/>
<onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="51" sourcetyname="Refuse Truck"/>
<onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="52" sourcetyname="Single Unit Short-haul Truck"/>
<onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="53" sourcetyname="Single Unit Long-haul Truck"/>
<onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="54" sourcetyname="Motor Home"/>
<onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="61" sourcetyname="Combination Short-haul Truck"/>
<onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="62" sourcetyname="Combination Long-haul Truck"/>
<onroadvehicleselection fueltypeid="5" fueltypedesc="Ethanol (E-85)" sourcetypeid="51" sourcetyname="Refuse Truck"/>
<onroadvehicleselection fueltypeid="5" fueltypedesc="Ethanol (E-85)" sourcetypeid="52" sourcetyname="Single Unit Short-haul Truck"/>
<onroadvehicleselection fueltypeid="5" fueltypedesc="Ethanol (E-85)" sourcetypeid="53" sourcetyname="Single Unit Long-haul Truck"/>
<onroadvehicleselection fueltypeid="5" fueltypedesc="Ethanol (E-85)" sourcetypeid="54" sourcetyname="Motor Home"/>
<onroadvehicleselection fueltypeid="5" fueltypedesc="Ethanol (E-85)" sourcetypeid="61" sourcetyname="Combination Short-haul Truck"/>
<onroadvehicleselection fueltypeid="5" fueltypedesc="Ethanol (E-85)" sourcetypeid="62" sourcetyname="Combination Long-haul Truck"/>
</onroadvehicleselections>
<offroadvehicleselections>
</offroadvehicleselections>
<offroadvehiclesccs>
</offroadvehiclesccs>
<roadtypes separateramps="false">
  <roadtype roadtypeid="1" roadtyname="Off-Network" modelCombination="M1"/>
  <roadtype roadtypeid="2" roadtyname="Rural Restricted Access" modelCombination="M1"/>
  <roadtype roadtypeid="3" roadtyname="Rural Unrestricted Access" modelCombination="M1"/>
  <roadtype roadtypeid="4" roadtyname="Urban Restricted Access" modelCombination="M1"/>
  <roadtype roadtypeid="5" roadtyname="Urban Unrestricted Access" modelCombination="M1"/>
</roadtypes>
<pollutantprocessassociations>
<pollutantprocessassociation pollutantkey="3" pollutantname="Oxides of Nitrogen" processkey="1" processname="Running Exhaust"/>
<pollutantprocessassociation pollutantkey="3" pollutantname="Oxides of Nitrogen" processkey="2" processname="Start Exhaust"/>
<pollutantprocessassociation pollutantkey="3" pollutantname="Oxides of Nitrogen" processkey="15" processname="Crankcase Running Exhaust"/>
<pollutantprocessassociation pollutantkey="3" pollutantname="Oxides of Nitrogen" processkey="16" processname="Crankcase Start Exhaust"/>
<pollutantprocessassociation pollutantkey="3" pollutantname="Oxides of Nitrogen" processkey="17" processname="Crankcase Extended Idle Exhaust"/>
<pollutantprocessassociation pollutantkey="3" pollutantname="Oxides of Nitrogen" processkey="90" processname="Extended Idle Exhaust"/>
<pollutantprocessassociation pollutantkey="3" pollutantname="Oxides of Nitrogen (NOx)" processkey="91" processname="Auxiliary Power Exhaust"/>
<pollutantprocessassociation pollutantkey="79" pollutantname="Non-Methane Hydrocarbons" processkey="1" processname="Running Exhaust"/>
<pollutantprocessassociation pollutantkey="79" pollutantname="Non-Methane Hydrocarbons" processkey="2" processname="Start Exhaust"/>
<pollutantprocessassociation pollutantkey="79" pollutantname="Non-Methane Hydrocarbons" processkey="12" processname="Evap Fuel Vapor Venting"/>
<pollutantprocessassociation pollutantkey="79" pollutantname="Non-Methane Hydrocarbons" processkey="13" processname="Evap Fuel Leaks"/>
<pollutantprocessassociation pollutantkey="79" pollutantname="Non-Methane Hydrocarbons" processkey="15" processname="Crankcase Running Exhaust"/>
<pollutantprocessassociation pollutantkey="79" pollutantname="Non-Methane Hydrocarbons" processkey="16" processname="Crankcase Start Exhaust"/>
<pollutantprocessassociation pollutantkey="79" pollutantname="Non-Methane Hydrocarbons" processkey="17" processname="Crankcase Extended Idle Exhaust"/>
<pollutantprocessassociation pollutantkey="79" pollutantname="Non-Methane Hydrocarbons" processkey="90" processname="Extended Idle Exhaust"/>
<pollutantprocessassociation pollutantkey="1" pollutantname="Total Gaseous Hydrocarbons" processkey="1" processname="Running Exhaust"/>
<pollutantprocessassociation pollutantkey="1" pollutantname="Total Gaseous Hydrocarbons" processkey="2" processname="Start Exhaust"/>
<pollutantprocessassociation pollutantkey="1" pollutantname="Total Gaseous Hydrocarbons" processkey="12" processname="Evap Fuel Vapor Venting"/>
<pollutantprocessassociation pollutantkey="1" pollutantname="Total Gaseous Hydrocarbons" processkey="13" processname="Evap Fuel Leaks"/>
<pollutantprocessassociation pollutantkey="1" pollutantname="Total Gaseous Hydrocarbons" processkey="15" processname="Crankcase Running Exhaust"/>

```

```
<pollutantprocessassociation pollutantkey="1" pollutantname="Total Gaseous Hydrocarbons" processkey="16" processname="Crankcase Start Exhaust"/>
<pollutantprocessassociation pollutantkey="1" pollutantname="Total Gaseous Hydrocarbons" processkey="17" processname="Crankcase Extended Idle Exhaust"/>
<pollutantprocessassociation pollutantkey="1" pollutantname="Total Gaseous Hydrocarbons" processkey="90" processname="Extended Idle Exhaust"/>
<pollutantprocessassociation pollutantkey="87" pollutantname="Volatile Organic Compounds" processkey="1" processname="Running Exhaust"/>
<pollutantprocessassociation pollutantkey="87" pollutantname="Volatile Organic Compounds" processkey="2" processname="Start Exhaust"/>
<pollutantprocessassociation pollutantkey="87" pollutantname="Volatile Organic Compounds" processkey="12" processname="Evap Fuel Vapor Venting"/>
<pollutantprocessassociation pollutantkey="87" pollutantname="Volatile Organic Compounds" processkey="13" processname="Evap Fuel Leaks"/>
<pollutantprocessassociation pollutantkey="87" pollutantname="Volatile Organic Compounds" processkey="15" processname="Crankcase Running Exhaust"/>
<pollutantprocessassociation pollutantkey="87" pollutantname="Volatile Organic Compounds" processkey="16" processname="Crankcase Start Exhaust"/>
<pollutantprocessassociation pollutantkey="87" pollutantname="Volatile Organic Compounds" processkey="17" processname="Crankcase Extended Idle Exhaust"/>
<pollutantprocessassociation pollutantkey="87" pollutantname="Volatile Organic Compounds" processkey="90" processname="Extended Idle Exhaust"/>
<pollutantprocessassociation pollutantkey="79" pollutantname="Non-Methane Hydrocarbons" processkey="91" processname="Auxiliary Power Exhaust"/>
<pollutantprocessassociation pollutantkey="1" pollutantname="Total Gaseous Hydrocarbons" processkey="91" processname="Auxiliary Power Exhaust"/>
<pollutantprocessassociation pollutantkey="87" pollutantname="Volatile Organic Compounds" processkey="91" processname="Auxiliary Power Exhaust"/>
<pollutantprocessassociation pollutantkey="79" pollutantname="Non-Methane Hydrocarbons" processkey="11" processname="Evap Permeation"/>
<pollutantprocessassociation pollutantkey="1" pollutantname="Total Gaseous Hydrocarbons" processkey="11" processname="Evap Permeation"/>
<pollutantprocessassociation pollutantkey="87" pollutantname="Volatile Organic Compounds" processkey="11" processname="Evap Permeation"/>
  </pollutantprocessassociations>
  <databaseselections>
    <databaseselection servername="localhost" databasename="MOVES2014_early_NLEV" description=""/>
    <databaseselection servername="localhost" databasename="MOVES2014_calevii08" description=""/>
  </databaseselections>
  <inputdatabase servername="" databasename="" description=""/>
  <uncertaintyparameters uncertaintymodeenabled="false" numberofrunspersimulation="0" numberofsimulations="0"/>
<geographicoutputdetail description="COUNTY"/>
  <outputemissionsbreakdownselection>
    <modelyear selected="false"/>
    <fueltype selected="false"/>
    <fuelsubtype selected="false"/>
    <emissionprocess selected="true"/>
      <onroadoffroad selected="true"/>
    <roadtype selected="true"/>
    <sourceusetype selected="true"/>
      <movesvehicletype selected="false"/>
    <onroadsc selected="false"/>
      <offroadsc selected="false"/>
      <estimateuncertainty selected="false" numberofiterations="2" keepSampledData="false" keepiterations="false"/>
      <sector selected="false"/>
      <engtechid selected="false"/>
      <hpclass selected="false"/>
    </outputemissionsbreakdownselection>
    <outputdatabase servername="localhost" databasename="42001_2025_07_05_JulWkdT_mo" description=""/>
  <outputtimestep value="Hour"/>
  <outputvmtdata value="true"/>
  <outputsho value="true"/>
  <outputsh value="true"/>
  <outputshp value="true"/>
  <outputshidling value="true"/>
```

```
<outputstarts value="true"/>
<outputpopulation value="true"/>
<scaleinputdatabase servername="localhost" databasename="42001_2025_07_05_JulWkdT_mi" description=""/>
<pmsize value="0"/>
<outputfactors>
  <timefactors selected="true" units="Hours"/>
  <distancefactors selected="false" units="Miles"/>
  <massfactors selected="false" units="Grams" energyunits="Million BTU"/>
</outputfactors>
<savedata>
</savedata>
<donotexecute>
</donotexecute>
<generatordatabase shouldsave="false" servername="" databasename="" description=""/>
  <donotperformfinalaggregation selected="false"/>
<lookuptableflags scenarioid="" truncateoutput="false" truncateactivity="false"/>
  <internalcontrolstrategies>
<internalcontrolstrategy
classname="gov.epa.otaq.moves.master.implementation.ghg.internalcontrolstrategies.rateofprogress.RateOfProgressStrategy"><![CDATA[
useParameters      No
]]></internalcontrolstrategy>
</internalcontrolstrategies>
</runspec>
```



**APPENDIX B:**  
**ADAMS MPO SAFETY PERFORMANCE PLAN**





### Adams County Metropolitan Planning Organization (MPO) Performance Targets:

Federal safety performance measures were implemented in 2016. PennDOT established Statewide Targets in August 2017. On January 31, 2018, the Adams MPO adopted supporting Pennsylvania's Statewide Safety Performance Measure Targets. The following shows the CY 2018 Statewide Targets established based on 2% reduction of five-year average (2014-2018) and aggregated supporting regional Adams MPO Targets:

Safety Performance Measure	Baseline (2012-2016)	Statewide Target (2014-2018)	Adams MPO Target (2014-2018)
Number of fatalities	1,220.2	1,177.6	12.8
Rate of fatalities per 100 million VMT	1.220	1.161	1.433
Number of serious injuries	3,434.0	3,799.8	34.0
Rate of serious injuries per 100 million VMT	3.433	3.746	3.805
Number of non-motorized fatalities and non-motorized serious injuries	602.4	654.4	3.5

### Progress Towards Target Achievement and Reporting:

PennDOT and the MPOs and RPOs will ensure regional TIPs, the STIP and Long Range Transportation Plans (LRTPs) are developed and managed to support progress toward target achievement.

The 2019 Statewide Transportation Improvement Program (STIP) and individual Transportation Improvement Programs (TIPs) were developed to ensure progress toward achievement of the state targets.

The following has helped to ensure planned HSIP projects in the STIP will help to achieve a significant reduction of traffic fatalities and serious injuries on all public roads:

- Implementing the strategies in the 2017 Strategic Highway Safety Plan (SHSP) through a data driven safety analysis, and the utilization of low-cost safety improvements system-wide support achieving these reductions.
- In January of 2017 the HSIP funding site was opened in SharePoint. The HSIP funding site provides a single point of communication for all HSIP project eligibility and funding requests. Project applications are reviewed through an approval workflow involving District and Central Office safety and planning staff.
- Projects are being planned and completed that were associated with the Intersection Safety Implementation Plan (ISIP), Roadway Departure Safety Implementation Plan (RDIP), and the Speed Management Action Plan (SMAP).
- Pennsylvania started using the PA Regionalized Safety Performance Functions (SPFs) developed for a statewide network screening of about 20,000 locations. These new evaluations will use the Highway Safety Manual (HSM)'s analysis method of Excess Expected Average Crash Frequency with Empirical Bayes (EB) adjustments also known as Potential for Safety Improvement (PSI). This method will use the calculated expected crashes for a location and subtract the Predicted crashes for that same location to produce an excess (or PSI) value. PennDOT's [HSM Analysis Tool](#)

018

was created so the Pennsylvania regionalized SPFs can be utilized for location specific safety analysis.

Statewide (\$35M set aside):

Pennsylvania sets aside \$35 million per FFY of HSIP funds to utilize to advance projects Statewide that are evaluated and ranked based on Benefit/Cost analysis, HSM analysis, fatal and injury crashes, application of systematic improvements, improvements on local roads and deliverability.

In May 2017 PennDOT Districts and Planning Partners were notified of the solicitation for FFY 2019 HSIP Set Aside Program. A data-driven safety analysis in the form of Benefit/Cost (B/C) analysis or Highway Safety Manual (HSM) analysis was strongly recommended. For the first time, evaluation criteria were weighted allowing each project to be scored and ranked. Evaluation criteria included B/C analysis, HSM analysis, fatal and injury crashes, application of systematic improvements, improvement on local roads, and deliverability. The HSIP Set Aside continues to place an emphasis on project delivery, with 80 of the applications submitted anticipated to let within the timeframe indicated in the solicitation for candidate projects. Carryover projects previously approved were continued. New projects that meet eligibility requirements, were selected based on evaluation criteria scoring, and demonstrate a significant potential safety return for the cost, within the current available funding. Projects approved for set aside funding will remain on the HSIP SharePoint funding site as candidate applications to be considered as regional or set aside program funds become available. The HSIP set aside projects will be continually monitored to maximize funding and project delivery. As set aside funding becomes available, additional eligible candidate projects will be advanced to maximize use of HSIP funding statewide.

Adams MPO

The Adams MPO FFY 2019-2022 TIP includes road safety improvement projects that are intended to improve the performance of the roadway system relative to the five federal safety performance measures.

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

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

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

<b>Project</b>	<b>Improvement Focus</b>
US 15/US 30 Interchange Improvements	Serious Injury Crashes
PA 94/PA 394 Intersection Improvements	Serious Injury Crashes

When collaborating to set annual targets PennDOT will provide feedback on how the Pennsylvania as well as individual MPO/RPO regions are doing on progress towards target achievement.

PennDOT will continue to include information on Safety Targets and progress towards meeting targets as part of annual Safety submissions to NHTSA and FHWA. It is expected that FHWA will determine if Pennsylvania has met or made significant progress toward meeting their 2014-2018 HSIP targets in December of 2019. Four of the five measures will need to be met or significantly improved upon. FHWA will utilize 2012-2016 data as a base line period for assessing significant progress. FHWA will report their findings to PennDOT by March 2020.