



# GATEWAY

On Call. On Time. On Target.

C-18997-0014

February 2019

## Transportation Capital Improvements Plan

South Fayette Township  
Allegheny County, Pennsylvania

**PREPARED FOR**

South Fayette Township  
515 Millers Run Road  
Morgan, PA 15064  
412.221.8700 PHONE

**SUBMITTED BY**

Michael J. Haberman, P.E., PTOE  
The Gateway Engineers, Inc.  
100 McMorris Drive  
Pittsburgh, PA 15205  
412.921.4030 PHONE  
412.921.9960 FAX

[www.gatewayengineers.com](http://www.gatewayengineers.com)  
mhaberman@gatewayengineers.com



A FULL-SERVICE CIVIL ENGINEERING FIRM

PENNSYLVANIA ACT 209  
TRANSPORTATION IMPACT FEE STUDY

## Table of Contents

<b>1.0 INTRODUCTION.....</b>	<b>1</b>
<b><i>1.1 Process .....</i></b>	<b><i>1</i></b>
<b><i>1.2 Funding Sources and Schedule.....</i></b>	<b><i>1</i></b>
<b>2.0 TRANSPORTATION SERVICE AREAS .....</b>	<b>1</b>
<b><i>2.1 South Transportation Service Area .....</i></b>	<b><i>2</i></b>
<b><i>2.2 North Transportation Service Area .....</i></b>	<b><i>2</i></b>
<b>3.0 PLANNED ROADWAY IMPROVEMENTS .....</b>	<b>3</b>
<b>4.0 EXISTING TRANSPORTATION CAPITAL IMPROVEMENTS PROGRAM.....</b>	<b>3</b>
<b>5.0 FUTURE PASS-THROUGH TRANSPORTATION CAPITAL IMPROVEMENTS PROGRAM .....</b>	<b>5</b>
<b>6.0 FUTURE DEVELOPMENT TRANSPORTATION CAPITAL IMPROVEMENTS PROGRAM .....</b>	<b>7</b>
<b>7.0 IMPROVEMENT SUMMARY .....</b>	<b>9</b>

## List of Tables

<b>Table 1 – South TSA Study Intersections</b>
<b>Table 2 – North TSA Study Intersections</b>
<b>Table 3 – Existing Transportation Capital Improvement Program: South TSA</b>
<b>Table 4 – Existing Transportation Capital Improvement Program: North TSA</b>
<b>Table 5 – Future Pass-Through Transportation Capital Improvement Program: South TSA</b>
<b>Table 6 – Future Pass-Through Transportation Capital Improvement Program: North TSA</b>
<b>Table 7 – Future Development Transportation Capital Improvement Program: South TSA</b>
<b>Table 8 – Future Development Transportation Capital Improvement Program: North TSA</b>
<b>Table 9 – Transportation Capital Improvement Summary</b>
<b>Table 10 – Transportation Impact Fee</b>



## **1.0 INTRODUCTION**

Pennsylvania Act 209 was signed into law effective December 19, 1990. It amends the Pennsylvania Municipalities Code (Act 247 of 1968, as amended in February 2005) to permit municipalities to assess transportation impact fees on new development within their boundaries provided that they have adopted a municipal transportation impact fee ordinance in accordance with the procedures set forth in the Act. This update of the *Transportation Capital Improvements Plan (TCIP)* has been prepared in accordance with the requirements set forth in Pennsylvania Act 209 on behalf of South Fayette Township, Allegheny County, Pennsylvania and serves as an update to the TCIP prepared by McMahon Transportation Engineers and Planners in 2011.

### ***1.1 Process***

This update of the TCIP has been conducted in the same manner and processes as the 2011 TCIP. The remainder of the report provides the revised results of analyses utilizing more current information.

### ***1.2 Funding Sources and Schedule***

Act 209 required that the funding necessary to improve the existing and pass-through deficiencies be exclusive of the funding generated through the assessment of the traffic impact fees for development. In addition, no more than 50% of the total project costs associated with an improvement to correct future deficiencies to the State highway system can be offset through the collection of the traffic impact fees. The remaining funds must be collected through a combination of Federal, State, local, or other private funding sources.

## **2.0 TRANSPORTATION SERVICE AREAS**

Act 209 requires the establishment of specific study boundaries, or TSA's, for evaluation and application of transportation impact fees. By law, each TSA is required to be completely contiguous, and is limited to a maximum size of seven (7) square miles. Moreover, traffic impact fees for each TSA are applicable only to development located within that respective service area, and therefore, development traffic from one service area is considered pass-through traffic within the other service areas. Further explanation of pass-through and development traffic will be provided in subsequent sections.

As illustrated in **Figure 1**, the TIFAC has established two (2) TSA's within South Fayette Township in accordance with the requirements of Act 209, which cover a portion of the Township, exclusive of dedicated open space / park areas. Each of the TSA's measures equal to or less than the maximum seven (7) square miles required by Act 209 legislation.

## 2.1 South Transportation Service Area

As illustrated in **Figure 1**, the south TSA generally includes the area of the Township south of Millers Run Road from the east side of the Township through Route 50, then south of Route 50 to the western Township line. The area includes the following eight (8) study intersections, which are listed in **Table 1**.

**Table 1 – South TSA Study Intersections**

Reference Number	Intersection	Existing Traffic Control
1	Boyce Road (SR 3006) & Mayview Road (SR 3005)	Signalized
2	Washington Pike (SR 3003) & Boyce Road (SR 3006)	Unsignalized
3	Washington Pike (SR 3003) & Alpine Road	Unsignalized
4	Washington Pike (SR 3003) & Twin Ponds Lane	Signalized
5	SR 0050 & Hickory Grade Road	Signalized
6	Hickory Grade Road & Old Pond Road	Unsignalized
7	SR 0050 & Millers Run Road	Signalized
8	SR 0050 & Alpine Road / National Hill Road	Unsignalized

## 2.2 North Transportation Service Area

As illustrated in **Figure 1**, the north TSA generally includes the area of the Township along and north of Millers Run Road from the east side of the Township through Route 50, along Route 50 to the western Township line. The area includes the following eight (8) study intersections, which are listed in **Table 2**.

**Table 2 – North TSA Study Intersections**

Reference Number	Intersection	Existing Traffic Control
9	SR 0050 & Millers Run Road (SR 0978) / Parks Road	Signalized
10	Millers Run Road (SR 0978) & Battle Ridge Road (SR 0978)	Unsignalized
11	Millers Run Road (SR 3026) & Old Oakdale Road	Unsignalized
12	Millers Run Road (SR 3026) & Presto-Sygan Road (SR 3028)	Unsignalized
13	Battle Ridge Road (SR 3024) & Rutherglen Drive / Old Oakdale Road	Unsignalized
14	Battle Ridge Road (SR 0978) & Union Avenue (SR 0978)	Unsignalized
15	Robinson Run Road (SR 3024) & Battle Ridge Road (SR 0978)	Unsignalized
16	Robinson Run Road (SR 3024) & Cemetery Hill Road / Cecil Sturgeon Road	Unsignalized

### 3.0 PLANNED ROADWAY IMPROVEMENTS

Based on discussions with the Township, there are some planned roadway improvements that have been included in the 2038 Future Pass-Through conditions. These improvements are as follows:

- **Mayview Road and Boyce Road** – As part of the PennDOT SR 3005-A05 project, improvements include the addition of a westbound left turn lane, an eastbound left turn lane, and a northbound right turn lane with an overlap phase.
- **Route 50 and Hickory Grade Road** – As part of a Green Light-Go project, adaptive signal equipment is to be added to this intersection.
- **Millers Run Road and Presto-Sygan Road** – As part of the final plans for the Newbury Market development occurring along Presto-Sygan Road, the developer has agreed to install a traffic signal.

### 4.0 EXISTING TRANSPORTATION CAPITAL IMPROVEMENTS PROGRAM

The South Fayette Township roadway system consists primarily of two-lane, undivided roadways with the exception of Route 50 and Washington Pike. Major regional access to / from the Township is provided via I-79, Route 50, and Washington Pike (SR 3003). The study intersections shown in **Figure 1** constitutes the transportation roadway network analyzed pursuant to Act 209.

The existing transportation capital improvement program is summarized in **Table 3** and **Table 4** for the South and North TSA's, respectively. These tables provide details on the necessary roadway improvements to achieve the preferred levels of service under existing 2018 conditions as documented in the updated *Roadway Sufficiency Analysis Report (RSAR)*. The tables also provide cost allocations for the improvements indicating the portions of the total cost for which the Township and PennDOT are responsible. The total cost of the existing transportation capital improvement program is \$1,000,000.

**Table 3 – Existing Transportation Capital Improvement Program: South TSA**

Int. #	Intersection	Recommended Improvements	Total Project Cost	Allocated Funding Source		Construction Completion
				PennDOT/Other	Township	
2	Washington Pike (SR 3003) & Boyce Rd (SR 3006)	Install traffic signal and construct a southbound left turn lane.	\$750,000	\$375,000	\$375,000	2038
3	Washington Pike (SR 3003) & Alpine Rd	Install traffic signal.	\$250,000	\$125,000	\$125,000	2038
<b>Total</b>			<b>\$1,000,000</b>	<b>\$500,000</b>	<b>\$500,000</b>	

**Table 4 – Existing Transportation Capital Improvement Program: North TSA**

Int. #	Intersection	Recommended Improvements	Total Project Cost	Allocated Funding Source		Construction Completion
				PennDOT/Other	Township	
n/a	None	None required	\$0	\$0	\$0	n/a
<b>Total</b>			<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	

## **5.0 FUTURE PASS-THROUGH TRANSPORTATION CAPITAL IMPROVEMENTS PROGRAM**

The future pass-through transportation capital improvement program is summarized in **Table 5** and **Table 6** for the South and North TSA's, respectively. These tables provide details on the necessary roadway improvements to achieve the preferred levels of service under future pass-through 2038 conditions as documented in the updated *RSAR*. The tables also provide cost allocations for the improvements indicating the portions of the total cost for which the Township and PennDOT are responsible. The total cost of the future pass-through transportation capital improvement program is \$1,260,000.



**Table 5 – Future Pass-Through Transportation Capital Improvement Program: South TSA**

Int. #	Intersection	Recommended Improvements	Total Project Cost	Allocated Funding Source		Construction Completion
				PennDOT/Other	Township	
1	Boyce Rd (SR 3006) & Mayview Rd (SR 3005)	Modify traffic signal timings	\$10,000	\$5,000	\$5,000	2038
3	Washington Pike (SR 3003) & Alpine Rd	Modify traffic signal timings and construct a northbound left turn lane and an eastbound right turn lane.	\$750,000	\$312,500	\$437,500	2038
8	SR 0050 & Alpine Rd / National Hill Rd	Install traffic signal.	\$250,000	\$125,000	\$125,000	2038
<b>Total</b>			<b>\$1,010,000</b>	<b>\$442,500</b>	<b>\$567,500</b>	

**Table 6 – Future Pass-Through Transportation Capital Improvement Program: North TSA**

Int. #	Intersection	Recommended Improvements	Total Project Cost	Allocated Funding Source		Construction Completion
				PennDOT/Other	Township	
13	Battle Ridge Rd (SR 3024) & Rutherglen Dr / Old Oakdale Rd	Install traffic signal.	\$250,000	\$125,000	\$125,000	2038
<b>Total</b>			<b>\$250,000</b>	<b>\$125,000</b>	<b>\$125,000</b>	

## **6.0 FUTURE DEVELOPMENT TRANSPORTATION CAPITAL IMPROVEMENTS PROGRAM**

The future development transportation capital improvement program is summarized in **Table 7** and **Table 8** for the South and North TSA's, respectively. These tables provide details on the necessary roadway improvements to achieve the preferred levels of service under future development 2038 conditions as documented in the updated *RSAR*. The tables also provide cost allocations for the improvements indicating the portions of the total cost for which the Township, PennDOT, and future development are responsible. The total cost of the future development transportation capital improvement program is approximately \$3,496,675 for the South TSA and approximately \$9,851,380 for the North TSA.

**Table 7 – Future Development Transportation Capital Improvement Program: South TSA**

Int. #	Intersection	Recommended Improvements	Total Project Cost	Allocated Funding Source		Construction Completion
				PennDOT/Other	Impact Fees	
1	Boyce Rd (SR 3006) & Mayview Rd (SR 3005)	Construct southbound left and right turn lanes and a westbound right turn lane.	\$1,453,575	\$726,788	\$726,787	2038
2	Washington Pike (SR 3003) & Boyce Rd (SR 3006)	Modify traffic signal and timings and construct a westbound right turn lane	\$775,000	\$387,500	\$387,500	2038
5	SR 0050 & Hickory Grade Rd	Construct dual northbound right turn lanes and an eastbound shared thru-right turn lane.	\$961,980	\$240,495	\$721,485	2038
6	Hickory Grade Rd & Old Pond Rd	Construct a westbound right turn lane.	\$306,120	\$0	\$306,120	2038
<b>Total</b>			<b>\$3,496,675</b>	<b>\$1,354,783</b>	<b>\$2,141,892</b>	

**Table 8 – Future Development Transportation Capital Improvement Program: North TSA**

Int. #	Intersection	Recommended Improvements	Total Project Cost	Allocated Funding Source		Construction Completion
				PennDOT/Other	Impact Fees	
9	SR 0050 & Millers Run Rd (SR 0978) / Parks Rd	Construct a southbound right turn lane.	\$745,980	\$279,743	\$466,237	2038
10	Millers Run Rd (SR 0978) & Battle Ridge Rd (SR 0978)	Install traffic signal and construct southbound right turn lane and eastbound right turn lane.	\$1,950,000	\$975,000	\$975,000	2038
12	Millers Run Road (SR 3026) & Presto-Sygan Road (SR 3028)	Construct eastbound left turn lane, construct westbound right turn lane, construct southbound right turn lane	\$3,889,000	\$1,944,500	\$1,944,500	2038
14	Battle Ridge Rd (SR 0978) & Union Ave (SR 0978)	Construct a single-lane roundabout.	\$1,575,500	\$787,750	\$787,750	2038
15	Robinson Run Rd (SR 3024) & Battle Ridge Rd (SR 0978)	Construct a single-lane roundabout with a northbound right turn bypass lane.	\$1,690,900	\$845,450	\$845,450	2038
<b>Total</b>			<b>\$9,851,380</b>	<b>\$4,832,443</b>	<b>\$5,018,937</b>	

## 7.0 IMPROVEMENT SUMMARY

The total costs of the South Fayette Township *Transportation Capital Improvement Plan*, which includes existing, pass-through, and development improvements for both the north and south service areas are summarized in **Table 9**. As indicated, the total cost of the *TCIP* for the entire Township is approximately \$15,608,055. Of the total costs approximately 7.6% or \$1,192,500 is allocated to the Township, while approximately 46.5% or \$7,254,726 is allocated to PennDOT with the remaining approximately 45.9% or \$7,160,829 allocated to future development projects within the Township.

**Table 9 – Transportation Capital Improvement Summary**

Description	Cost Allocation			
	PennDOT	Township	Development	Total
<b><u>South TSA</u></b>				
<i>Existing</i>	\$500,000	\$500,000	\$0	\$1,000,000
<i>Pass-Through</i>	\$442,500	\$567,500	\$0	\$1,010,000
<i>Development</i>	<u>\$1,354,783</u>	<u>\$0</u>	<u>\$2,141,892</u>	<u>\$3,496,675</u>
<b>Total</b>	<b>\$2,297,283</b>	<b>\$1,067,500</b>	<b>\$2,141,892</b>	<b>\$5,506,675</b>
<b><u>North TSA</u></b>				
<i>Existing</i>	\$0	\$0	\$0	\$0
<i>Pass-Through</i>	\$125,000	\$125,000	\$0	\$250,000
<i>Development</i>	<u>\$4,832,443</u>	<u>\$0</u>	<u>\$5,018,937</u>	<u>\$9,851,380</u>
<b>Total</b>	<b>\$4,957,443</b>	<b>\$125,000</b>	<b>\$5,018,937</b>	<b>\$10,101,380</b>
<b><u>Combined</u></b>				
<i>Existing</i>	\$500,000	\$500,000	\$0	\$1,000,000
<i>Pass-Through</i>	\$567,500	\$692,500	\$0	\$1,260,000
<i>Development</i>	<u>\$6,187,226</u>	<u>\$0</u>	<u>\$7,160,829</u>	<u>\$13,348,055</u>
<b>Total</b>	<b>\$7,254,726</b>	<b>\$1,192,500</b>	<b>\$7,160,829</b>	<b>\$15,608,055</b>

The impact fee calculations for development improvements are summarized in **Table 10** for the TSA's, which also includes the fair-share costs associated with preparing the *RSAR*.

**Table 10 – Transportation Impact Fee**

Transportation Service Area	Development Capital Improvement Costs <sup>(1)</sup>	Development Trips	Impact Fee <sup>(2) (3)</sup>
South	\$2,154,747	1,520 trips	\$1,418
North	\$5,046,082	4,211 trips	\$1,198

(1) Inclusive of the pro-rated share of costs incurred for the completion of the *Roadway Sufficiency Analysis Report* that is attributable to development (\$12,855 as allocated by the cost of development-warranted improvements for the South TSA and \$27,145 as allocated by the cost of development-warranted improvements for the North TSA.

(2) To be assessed on a per "new" weekday afternoon peak hour trip basis

(3) Development capital improvement costs divided by "new" development trips