

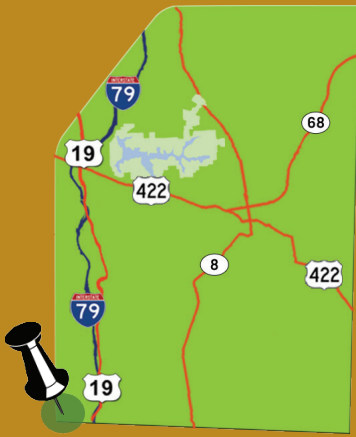


# Cranberry Twp Rochester Road (SINC) Project Summary

## REGIONAL TRAFFIC SIGNAL PROGRAM CYCLE 3

### PROJECT LOCATION

Butler County



The Southwestern Pennsylvania Commission's (SPC) Regional Traffic Signal Program was established to assist local municipalities with improving traffic signal operations by optimizing signal timings and upgrading existing signal equipment. **The Cranberry Township Rochester Road Signals In Coordination (SINC) Project** is a traffic signal retiming project with a goal of optimizing signal operations at intersections along the Rochester Road corridor while considering all users of the intersections. [See map below for project area].



- |                                      |  |
|--------------------------------------|--|
| 1 Rochester Road & Powell Road       | 3 Rochester Road & Haine School Road/Hamstead Lane |
| 2 Rochester Road & Cross Creek Drive | 4 Rochester Road & Graham Park Drive/Dover Drive   |
|                                      | 5 Rochester Road & Thomson Park Drive/Norman Drive |

Corridor Length: Approx. 1.5 miles

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### PROJECT PARTNERS

Federal Highway Administration  
Pennsylvania Department of Transportation, District 10-0  
Butler County  
Cranberry Township  
Whitman, Requardt & Associates, LLP

### Traffic Signal Coordination:

- Improves safety because vehicles stop less often, which reduces the probability for rear-end crashes
- Benefits the environment by reducing vehicle emissions
- Reduces travel costs by reducing the amount of time stopped at red lights
- Saves money at the gas station by reducing fuel consumption

### Southbound Norman Dr at Rochester Rd



Before



After

There were no signal equipment upgrades requested for this project, however Cranberry Township implemented two short term recommendations from the project. A protected and permitted phasing was added to the southbound Powell Road approach and southbound Norman Drive was restriped to provide a separate left turn lane to also add a protected and permitted left turn phase. Powell Road and Cross Creek Drive intersections were added to other coordinated signals along the corridor. Coordination of traffic signals is one of the most cost effective ways of improving traffic flow along a corridor.

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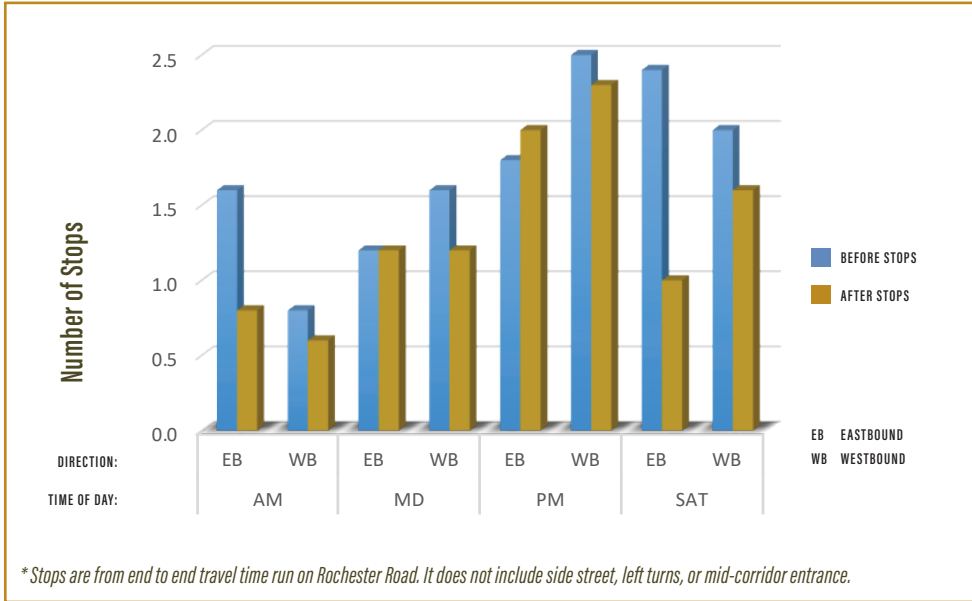
## Travel Improvements:

The results show that the peak travel times and stops were reduced overall. There was a reduction of 17% in the eastbound AM travel time with 50% less stops, similarly a 20% reduction in travel time and 58% less stops for the eastbound Saturday Middy Peak.

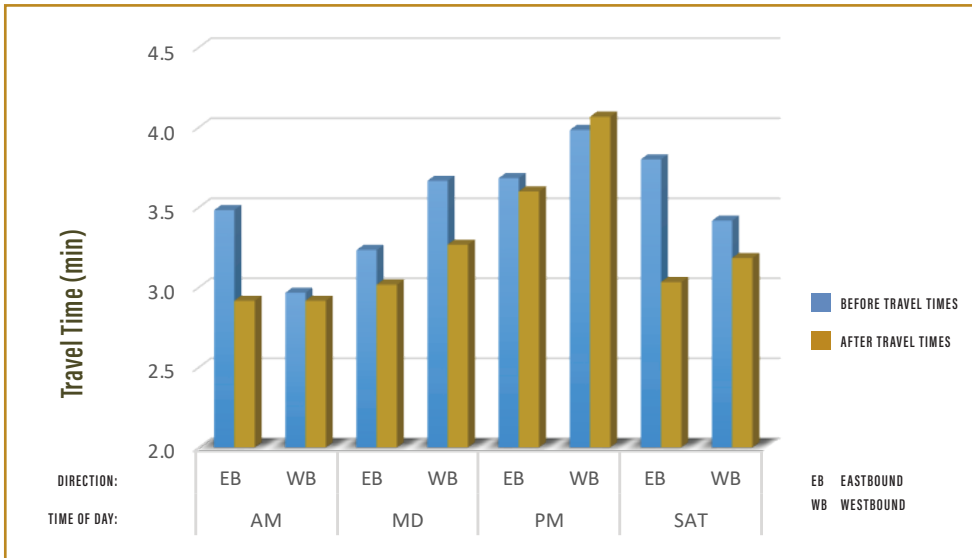


20,054 vehicles travel this corridor on an average day

### Number of Stops\*: Before and After Comparison



### Travel Time: Before and After Comparison



Some of these intersection timings were previously optimized utilizing an advanced traffic management system. These timings were reviewed and adjusted based on the latest data.

## Summary of First Year Benefits

534,318



Reduced Vehicle Hours of Travel

29,394 gallons



Reduced Fuel Consumption

2,867 kg

Reduced Total Pollutant Emissions

534,318



Reduced Number of Stops

Total Benefit\*\*  
**\$641,892**

\*\*reduced travel time, emissions, stops & fuel consumption

Benefit Cost Ratio

**16:1**