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 Brentwood Borough Signals In Coordination with Equipment Upgrades (SINC-UP) Project is a traffic signal project with the goal of optimizing signal operations at intersections along the Brownsville Rd corridor while considering all users of the intersections [See map below for project area].

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

As part of this project, the Brownsville Rd and Marylea Ave intersection received a full signal replacement with ADA curb ramps. Global Positioning Satellite antenna and receivers were installed at the intersections to allow for time-based coordination. Coordination of traffic signals is one of the most cost effective ways of improving traffic flow along a corridor.
Travel Improvements:
The results showed that PM travel time improved over 10% and 25% NB and SB respectively.

Prior to this SINC-UP Project, motorists typically experienced frustration of consecutive stopping at traffic signals due to the uncoordinated signals. This retiming project coordinated the traffic patterns through these intersections which alleviated consecutive stopping and reduced the motorist’s frustration. This project also implemented a school timing pattern to accommodate the school zone between intersections.

Number of Stops*: Before and After Comparison

Travel Time**: Before and After Comparison

Summary of First Year Benefits

15,625
Reduced Vehicle Hours of Travel
15,599 gallons
Reduced Fuel Consumption
935,321
Reduced Total Pollutant Emissions
936,509
Total Benefit***

Benefit Cost Ratio
9:1

https://www.spcregion.org/trans_ops_traff_vids3.asp