

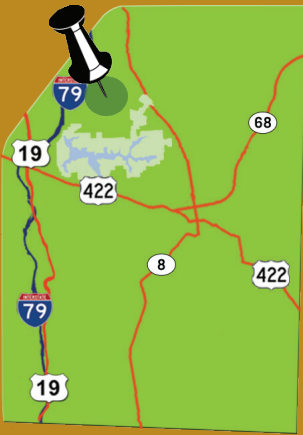


Slippery Rock Borough Main Street and Franklin Street (SINC-UP) Project Summary

REGIONAL TRAFFIC SIGNAL PROGRAM CYCLE 3

PROJECT LOCATION

Butler County



SOUTHWESTERN PENNSYLVANIA COMMISSION

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PROJECT PARTNERS

Federal Highway Administration

Pennsylvania Department of Transportation, District 10-0

Butler County

Slippery Rock Borough

Whitman, Requardt & Associates, LLP

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 Slippery Rock Borough Main Street and Franklin Street Signals In Coordination with Equipment Upgrades (SINC-UP) Project** is a signal equipment upgrade and retiming project with the goal of optimizing signal operations at intersections along the Main Street and Franklin Street corridors while considering all users of the intersections [See map below for project area].

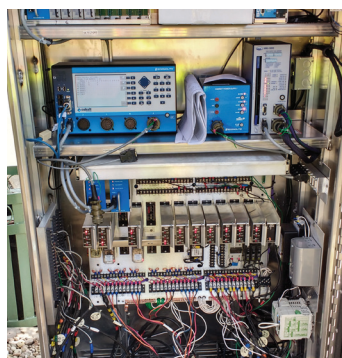
- 1 Franklin Street & Grove City Road
- 2 Main Street & New Castle Street/Franklin Street
- 3 Main Street & Cooper Street
- 4 Main Street & Kiester Street

Combined Corridor Length:
Approx. 0.75 miles



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



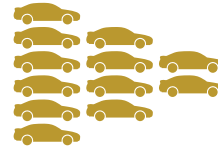
As part of this project, two intersections received new modern controller cabinet assemblies and audible emergency pre-emption systems. Global Positioning Satellite Antenna and Receivers were installed at the intersections to allow for time-based coordination during the weekday AM, Midday, and PM peaks as well as Saturday Midday Peak. Coordination of traffic signals is one of the most cost effective ways of improving traffic flow along a corridor.



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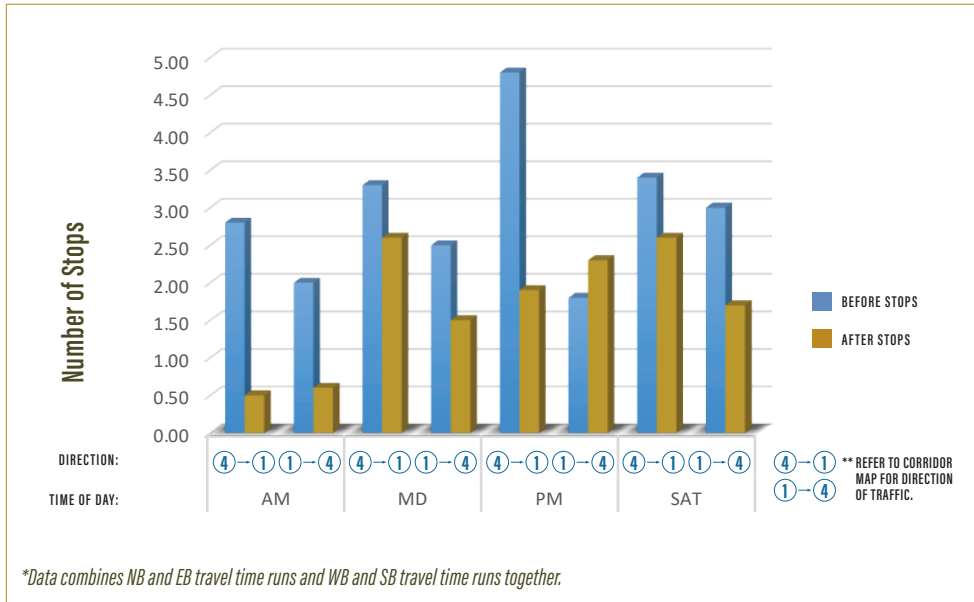
Travel Improvements:

The average improvement across all peaks for travel time and number of stops was 15% and 40% respectively. Northbound and eastbound directions experienced significant travel time improvement during the AM and PM Peaks, 30% and 45%.

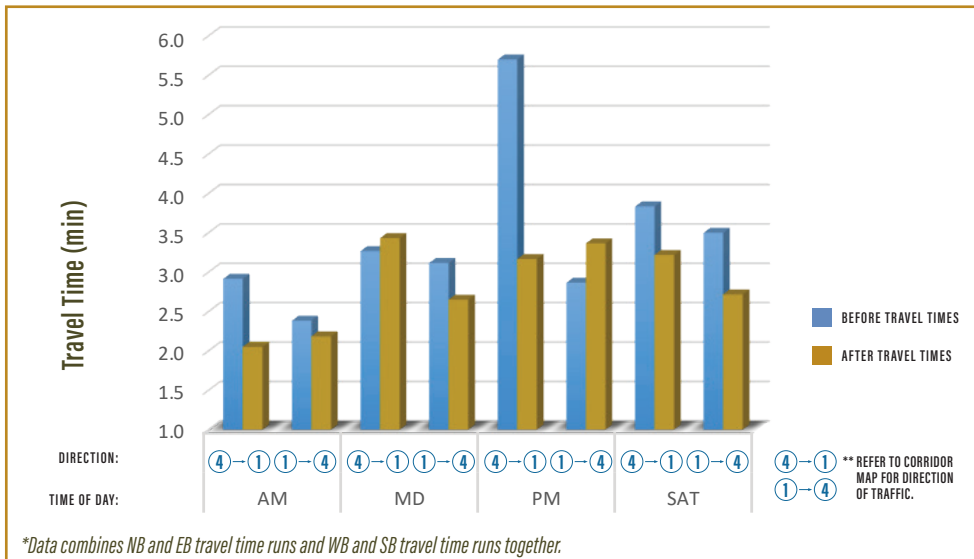


11,000 to 13,000 vehicles travel this corridor on an average day

Number of Stops*: Before and After Comparison



Travel Time*: Before and After Comparison



Prior to this SINC-UP Project, motorists typically experienced moderate delays and the frustration of consecutive stopping at traffic signals. This retiming project coordinated the traffic patterns among these intersections which alleviated consecutive stopping and reduced the motorist's frustration. This project also configured signal timings to handle moderate traffic surges caused by university traffic.

Summary of First Year Benefits

24,689



Reduced Vehicle Hours of Travel

21,005 gallons



Reduced Fuel Consumption

2,069 kg

Reduced Total Pollutant Emissions

672,479



Reduced Number of Stops

Total Benefit***

\$509,100

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

Benefit Cost Ratio

13:1