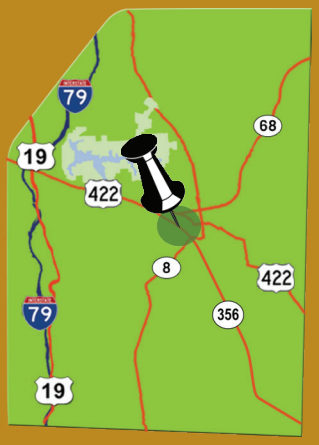
Butler Township and City of Butler (SINC-UP) Project Summary

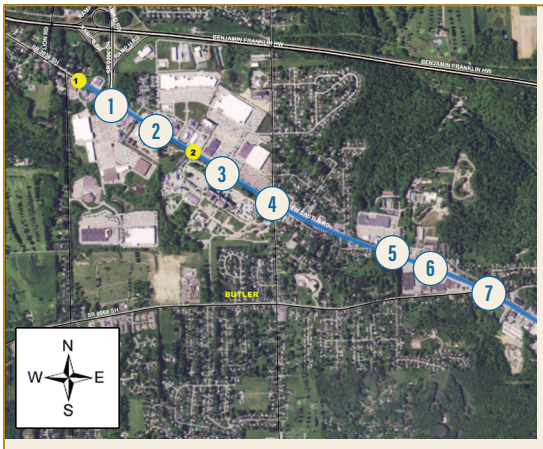
REGIONAL TRAFFIC SIGNAL PROGRAM CYCLE 3

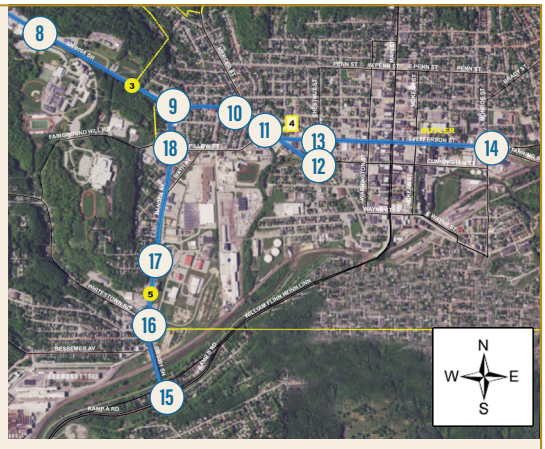
The Southwestern Pennsylvania Commission's (SPC) Regional Traffic Signal Program was established to assist local municipalities with improving traffic signal operations by optimizing signal timings and upgrading existing signal equipment. **The Butler Township and City of Butler Signals In Coordination with Equipment Upgrades (SINC-UP) Project** is a traffic signal project with the goal of optimizing signal operations at intersections along the SR 68/356 & Hansen Ave corridors while considering all users of the intersections [See map below for project area].

PROJECT LOCATION

Butler County







1 SR 356 & SR 3036/Moraine Pointe Blvd
2 SR 356 & Hindman Rd
3 SR 356 & Butler Mall/VA Hospital Dwy
4 SR 356 & Duffy Rd
5 SR 356 & Alameda Park Rd
6 SR 356 & Point Plaza Dwy
7 SR 356 & SR 68
8 SR 68/356 & Campus Ln
9 SR 68/356 & Hansen Ave
10 SR 68/356 & New Castle St/4th Ave
11 SR 68/356 & Pillow St
12 SR 68/356 & Race St/Chestnut St
13 SR 68/356 & Chestnut St
14 SR 68 & Monroe St
15 SR 8 & Hansen Ave
16 Hansen Ave & Whitestown Rd
17 Hansen Ave & Pullman Center South
18 Hansen Ave & Pillow St/Fairground Hill Rd

Combined Corridor Length: Approx. 4.20 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, many intersections received new signal controllers or controller assemblies and emergency vehicle preemption. SR 68/356 & Hansen Ave intersection received a full signal upgrade. Global Positioning Satellite antenna and receivers were installed at multiple 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.

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PROJECT PARTNERS

Federal Highway Administration

Butler County

Pennsylvania Department of Transportation, District 10-0

Butler Township

City of Butler

Whitman, Requardt & Associates, LLP

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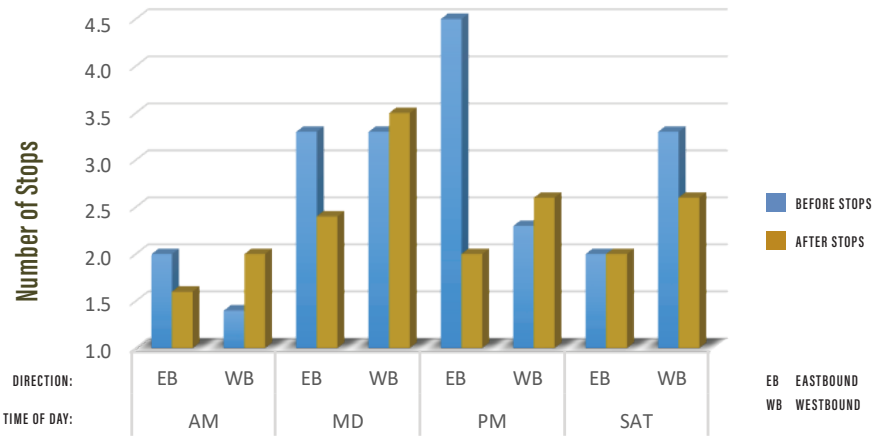
Travel Improvements:

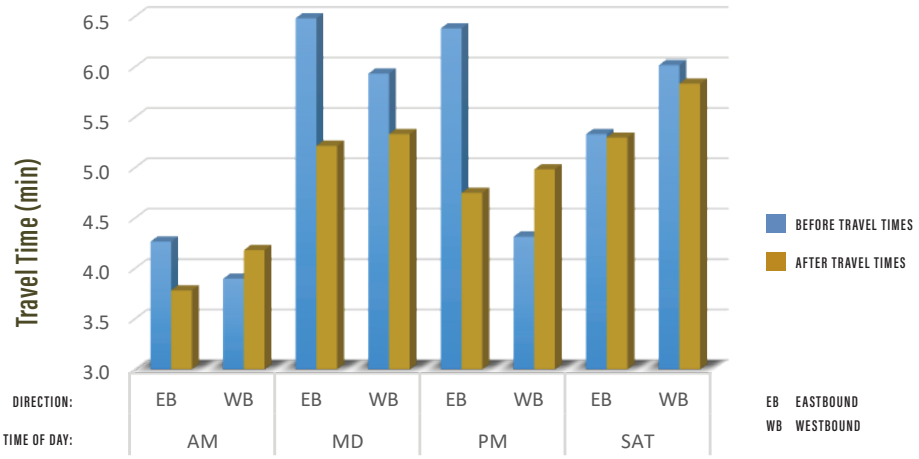
The results showed that eastbound SR 356 travel time improved approximately 10%, 20%, and 25% during the AM, Midday, and PM peaks respectively.

Number of Stops*: Before and After Comparison



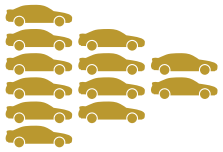
Stops are from SR 356 end to end travel time run from Moraine Pointe Plaza to Campus Ln. It does not include side street, left turns, or mid-corridor entrance.

Travel Time**: Before and After Comparison



**SR 356 travel time run from Moraine Pointe Plaza to Campus Ln.

The SR 68/365 corridor was coordinated prior to this SINC-UP Project, however over time traffic patterns and volumes changed creating delay and additional stopping along the corridor. This retiming project updated the coordination which alleviated consecutive stopping and reduced the motorist's frustration. A twice per cycle northbound left turn was also added to the Hansen Ave & Whitestown Rd intersection to reduce queuing and delay.



18,400 to 19,400 vehicles travel the SR 356 corridor on an average day

Summary of First Year Benefits

235,668

Reduced Vehicle Hours of Travel

176,087 gallons

Reduced Fuel Consumption

Reduced Total Pollutant Emissions

997,134

Reduced Number of Stops

Total Benefit***

$4,709,511

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

Benefit Cost Ratio

23:1

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

JULY 2019