

Implementation of Automated Traffic Signal Performance Measures (ATSPMs) along an Urban Traffic Signal Corridor: Real Time Traffic Information through Bluetooth Deployment

PROJECT TITLE

Implementation of Automated Traffic Signal Performance Measures (ATSPMs) along an Urban Traffic Signal Corridor: Real Time Traffic Information through Bluetooth Deployment

STUDY TIMELINE

January 2019 – July 2022

INVESTIGATORS

Derek Lyman, P.E., VTrans
Eleni Churchill, CCRPC

VTRANS CONTACTS

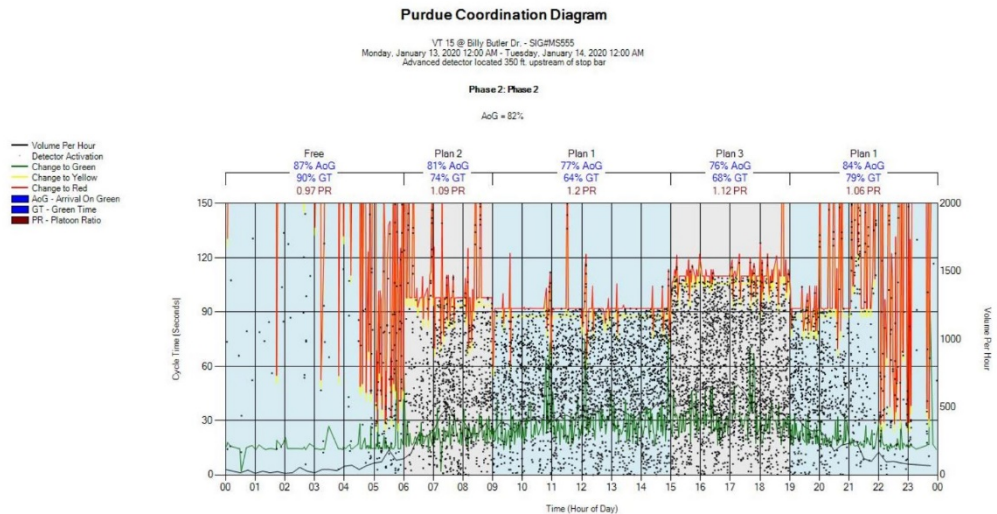
Derek Lyman, P.E., Traffic Signal Operations Engineer
Taylor Sisson, P.E., Traffic Design Project Manager

This fact sheet was prepared to highlight recent Accelerated Innovation Deployment (AID) Grants and State Transportation Innovation Council (STIC) Incentive Awards.

More information about the VTrans Research Program, including additional Fact Sheets, can be found at:
<http://vtrans.vermont.gov/planning/research>

Introduction or Problem Statement

The Vermont Agency of Transportation (VTrans), in coordination with the Chittenden County Regional Planning Commission (CCRPC), will implement remote communications along the US 7 (Shelburne Road) corridor in Chittenden County to improve the flow of traffic through the corridor while measuring the performance of the traffic signals utilizing the Automated Traffic Signal Performance Measures (ATSPMs).



Methodology or Action Taken

The project includes the installation of new traffic signal controllers, advanced vehicle detection, and Bluetooth travel time devices and will establish remote communications utilizing ethernet radios to collect ATSPMs at 17 intersections along Shelburne Road.

Conclusions or Next Steps

The equipment needed to collect ATSPMs will be installed as part of the Shelburne – South Burlington NHG SGNL(51) construction project in 2020 and 2021. Upon completion of the project, VTrans will be able to start collecting ATSPMs to optimize the performance of the signals and improve the flow of traffic along the corridor.

Potential Impacts and VTrans Benefits

The benefits of this project will be to reduce congestion and crashes in the corridor. The benefits will be measured utilizing the output of the following ATSPM reports; Purdue Coordination Diagram, Flow Rate, Cycle Length, Green Times, and Split Failures for vehicle delay, arrivals on green, etc. The VTrans Crash Data Reporting System will also be monitored for reduction in crashes.