



## Mechanical/Environmental Sustainability Project

### Sustainable & Smart Traffic Signal Controls

#### Mission Statement

The mission of the Sustainable and Smart Traffic Signal Control team was to collect data, simulate existing network, design and evaluate alternative scenarios, and implement the best solution to decongest traffic and minimize pollutant emissions in downtown Hartford.

#### Synopsis

This project objective was to investigate the traffic flow of several intersections along the Farmington Avenue corridor. In addition, investigation and research was done into an adaptive smart traffic control system recently installed at the intersection of Asylum Avenue and Woodland Street in the city of Hartford, CT. An engineering study was applied to simulate current traffic conditions using an advanced computer program named CORSIM (CORridor SIMulation). The purpose of this simulation was to help provide insight into the development of a sustainable and smart traffic signal control system to minimize vehicle delays, pollutant emission, and fuel consumption.

The team members examined the existing field conditions, interviewed the city traffic engineer, conducted data collection, simulated the network, researched different alternatives to congestion and recommended a cost effective and short implementing solution.

The results of this project have been submitted to Professor Clara Fang. A continuation of this work is anticipated for the 2011-2012 academic year



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