



The LiRo Group

Westchester County Signal Retiming Various Locations, NY

Client:

Westchester County
Department of Public Works
148 Martine Avenue
White Plains, NY 10601

Reference:

Kevin Roseman, P.E.
Traffic Engineer
(914) 995-4084

Total Project Cost:

\$750,000 fee

Completion Date: 2006

Project Overview:

The Traffic Division of LiRo was selected to assist Westchester County Department of Public Works in a comprehensive analysis of 340 signalized non-county intersections. The goal of this project is to enhance traffic flows and improve air quality by modifying traffic signal timing and phasing plans at intersections controlled by local municipalities in Westchester County. (WCDPW, \$750K)

The Traffic Division of LiRo was selected to assist Westchester County Department of Public Works in a comprehensive analysis of 340 signalized intersections controlled and operated by 17 local municipalities. The goal of this project was to enhance traffic flows and improve air quality by modifying traffic signal timing and phasing plans at the intersections.

LiRo staff supervised the collection of turning movement volumes at the key intersections in addition to performing an inventory of the signal controller hardware at 340 locations.

Traffic volumes, geometric data, signal phasing/timings and link and node information were entered into a series of SYNCHRO networks to model different groups of intersections established based on their location and jurisdiction. Networks were prepared and analyses were conducted for the AM and PM peak hours.

The following three scenarios (levels) were analyzed:

- Existing conditions (Level I)
- Optimized signal timings, with existing hardware (Level II)
- Optimized signal timings, with improved hardware and coordination (Level III)

The reductions in delays obtained by the SYNCHRO analysis were used to determine improvements in emissions. This information was then used to develop a cost to benefit ratio. Ultimately this information was shared with each municipality. The findings to secure funding for upgrading equipment were presented in reports where significant reductions were achieved.

Key Features:

- Collect demand data
- Collect signal controller data including type and signal timing
- Collect geometric data from digital orthographic data and field visits
- Create Synchro Network for Level 1, 2 and 3 analysis
- Quantify reduction in emissions
- Prepare final report

