

Region of York Corridor Traffic Management System

LEA provided the planning, design and pilot deployment of a Corridor Traffic Management System (CTMS) for a selected arterial/freeway corridor.

The defining feature of this project was a Pilot Traffic Responsive Control (TRC) System for the selected freeway/arterial roadway corridor. The System is capable of initiating appropriate signal timing plans for the arterial(s) in the corridor (timing plans selected automatically from among a predetermined library of timing plans), that match with the field traffic conditions as registered from a system of detectors. The primary motivating factor for this pilot TRC deployment is the inherent capability in the Region's Centralized Traffic Signal Control system to incorporate a library of signal timing plans, from among which the System could automatically implement appropriate timing plans in response to defined sets of field traffic conditions. Roadway corridors encompassing freeway (i.e. 400-series highways) segments were considered as candidates for this deployment, as incidents on these freeways are typically known to cause significant fluctuations in traffic patterns. Within the core objective of the TRC system, the pilot deployment also investigated and, where appropriate, provided for the following additional components as part of an overall Corridor Traffic Management System (CTMS) system:

- A system of Closed Circuit Television Cameras (CCTV) sited at key locations along the corridor. As a complement to the TRC system, the CCTV cameras will be used to visually monitor



traffic operations along the corridor, and thereby enable manual changes to signal timing plans, so as to improve traffic operations during conditions that are not captured by the TRC timing plan library.

- A Traffic Information Web Page on the Internet, accessed from the Region's homepage. Serving a CTMS objective, this web page will provide "live" video feeds from the CCTV cameras, that motorists can use to pre-plan their trips along the corridor.
- As a framework to accomplishing the above objective, this project also developed an overall vision for CTMS/ITS deployment for the Region of York, to principally guide this current initiative, while also serving as a roadmap to further ITS deployment in the Region of York. However, the vision-building exercise is only a by-product of this study, with the core objective being the pilot deployment of a Traffic Responsive Control System.

PROJECT SUMMARY

Client:
Region of York

Location:
York Region, Canada

Services Provided:
Planning, design and pilot deployment of a Corridor Traffic Management System