



# case studies

customer success stories from the paramics community

## Project

Massena Broder Corssing Operational Analysis (2004)

## Organization

Edwards and Kelcey, Inc.

## Sector

Transportation Planning / Operational Assessment

## Objective

To upgrade the facilities and to reconfigure the roadway network on the international border at the Massena, NY Point-of-Entry

## Highlights

- Border Operation
- Plaza Simulation

## Contact Point

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## Massena International Border Point-of-Entry

Edwards and Kelcey conducted a project to upgrade the facilities and to reconfigure the roadway network on the international border between Canada and the U.S. at the Massena, NY Point-of-Entry. The project involved a traffic circulation analysis to ensure an efficient traffic operation at the facility and to provide a good connection with the highways on both the U.S. and Canada sides.



EK chose Paramics for this project for its:

- Advanced functionality to customize vehicle operational manoeuvres, such as primary and secondary inspection with variable service time and different procedures;
- Integration of queuing analysis and traffic operational analysis;
- Ability to seamlessly assess and evaluate alternative designs and various traffic management strategies;
- 3D graphics for presentation.

The study area has a border station, manufacturing plant, and other commercial access points connected to the roadway network in both countries. All vehicles must go through the primary inspection when entering the U.S., the east station being for bus and autos while the west station serves commercial trucks.

A percentage of both passenger and commercial vehicles entering the United States are also sent to secondary inspection. The Paramics model tracked all vehicles crossing the border, both those released after primary inspection at the plaza and those sent for secondary inspection.

Alternative construction plans were assessed in the simulation model, in which various configurations, such as circulation direction, number of lanes open, and traffic signal timing strategies were tested as well as various management approaches. The recommended plan was determined based on the microsimulation analysis to permit efficient and secure operations.

