

Importance of Integrated Transport Planning for Congestion Alleviation at Major Road Corridors (A Case Study)

Tissa U. Liyanage, Krishani R. Perera, Gayashan Dalpedadu
Master Hellie's Engineering Consultants (Pvt.) Ltd

Since the new Parliament of Sri Lanka was shifted from Colombo to Sri Jayewardenepura Kotte in the 1980s, Sri Jayewardenepura Mawatha has become an important road corridor. The shift of the many government offices to the new capital city gradually developed the entire area with microeconomic activities being set up over time. More residential developments and private business entities migrated to the area due to the change in demand for land use. Later, Sri Jayewardenepura Road became the most important land transport corridor connecting Colombo City, with radical changes in land use.

Traffic along the main road corridor is increasing at present at a high rate, and hence traffic congestion has become a huge problem for the road users. Therefore some major improvement projects were implemented after year 2016: namely Rajagiriya Flyover, integrated signalisation at intersections, introduction of a bus priority lane (BPL) and re-routing of buses.

The six-lane highway corridor at the Welikada Plaza Intersection was observed to have carried 60,000 to 75,000 vehicles in October 2015 after the flyover was opened. The maximum traffic flow at the main corridor has increased from 74,316 to 119,320 which is an increment of 45,000 vehicles, and an increase from a minimum of 20% to a maximum of 66% over two year period. Intersection traffic has increased by 62% from 107,143 to 173,206 vehicles. This is an extremely high growth and a remarkably strange situation. Therefore, it is evident that there is a highly sensitive traffic attraction at the Rajagiriya main corridor after the introduction of the flyover.

Even though travel speeds including peak hours have improved compared with those prior to the improvement projects, congestion issues are still observed during peak hours. Many external factors obstruct the flow of traffic at and near the Rajagiriya Intersection as observed at the post project evaluation stage. Some such externalities arise due to the *non-integration* of the projects formulated in the recent past.

This research is an attempt to understand how such huge traffic attraction affects to flow conditions through an empirical analysis based on data collected before and after the flyover is constructed at the Rajagiriya Intersection. It also aimed at examining how such impacts could be minimised by integrating major transport projects implemented in the road corridor.