Lane Occupancy Charges

Principal Investigator: Dr. Dimitrios G. Goulias, Polytechnic University, Dr. Shmuel Yahalom, State University of New York, Dr. Steven I-Jy Chien, New Jersey Institute of Technology

Occupancy of travel lanes during construction and road maintenance are ordinary activities frequently undertaken to maintain the well-being of road infrastructure. When these activities take place, they impact traffic flow and often cause delays for road users. At rush hour these direct and indirect costs come to a peak. Because lane closures are scheduled events, they can be planned to occur at times of day when their negative impacts are minimized.

Charging contractors for the impacts of construction on road users can mitigate these impacts. This can be achieved through a two-part bidding process: one that covers the activities and cost of the work to be performed; and a second that describes the number of days to complete the project and the cost associated with lane rental based on daily rental rates. With this type of contract a disincentive/incentive provision covers time overruns and/or early completions, respectively. To accomplish the objectives of applying the lane rental provisions, the rental amount must be defined so that the contractor is encouraged to use innovative and fast-track construction methods without compromising quality.

This study developed guidelines for lane occupancy charges to minimize the disutility of traffic lane closures during construction. The guidelines consider the impact on traffic and road users, depending on the characteristics of the projects, such as the AADT during the time of day, season, type of highway/lane closure, and other situational factors. It is expected that the criteria used to determine lane rental value for maintenance and construction schedule alternatives will reduce private and social costs, and reduce total construction time, while proving acceptable to the public and decision makers.

With cooperation from NJDOT engineers, the project research team examined traffic and construction patterns at heavily traveled locations in the New Jersey region. Information regarding traffic flow with respect to time of day, season, AADT, highway characteristics, and other factors. were reviewed in this examination. The project considered both economic and simulation analysis for examining the impact on user cost and construction operations due to different patterns of lane closure.

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