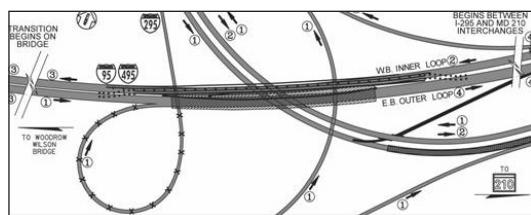


[www.tfhrc.gov/its/quickzon.htm](http://www.tfhrc.gov/its/quickzon.htm)

## CASE STUDY SNAPSHOT #2

# I-95 Operational Analysis for Lane Closures at Night



Maintaining roadway capacity is an important aspect in the ongoing **Woodrow Wilson Bridge replacement project** in the Washington, DC metropolitan area. Lane closures are conducted only at night to minimize impact on road users. In the fall of 2001, a contractor for the Maryland State Highway Administration was in the process of constructing one of many new bridges as part of the project at the MD 210/I-295/I-95 interchange just east of the Potomac River shoreline. The plan included closing lanes during the overnight hours (12 a.m. to 4 a.m.) and was scheduled to take from 4 to 6 months to complete. When this phase of the roadwork began, it was clear the limited hours of lane closures were incompatible with required setup and takedown time.

**Project engineers responded with a QuickZone analysis that included multiple scenarios for extending the lane closure duration time and the number of lanes closed.** The results showed an insignificant difference for motorists if the lane closures began at 9 p.m. instead of the proposed 12 a.m. Opening all lanes by 5 a.m. would be sufficient to maintain traffic flow. As a result of this information the lanes were closed at 9 p.m. and reopened by 5 a.m. Consequently, total duration of the construction project was reduced from an estimated 6 months to 2 months, hence reducing the impact on motorists. Moreover, the increase in the contractor's productive time (from 2.5 hours to 6 hours) resulted in better utilization of available resources and ultimately saved money on the overall construction project. QuickZone allowed the management team to easily test various work zone plan scenarios and determine the best compromise between the interests of the construction project and the public.

### KEY OBSERVATIONS

QuickZone can be used to estimate delay and queuing on large construction projects with high volumes.

Impacts on the motorist were reduced since total duration of the construction project was reduced from an estimated 6 months to 2 months.

Efficient dialog was created between the construction contractor and the Woodrow Wilson Bridge management team.

### QUICKZONE

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### CASE STUDY

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