

**Mileground Road
Supplemental Traffic Analysis**

Addendum to the Mileground
Road Traffic Analysis Final Report



(formerly ENTRAN, PLC)

Prepared for:
West Virginia Department of
Transportation, Division of
Highways

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EXECUTIVE SUMMARY

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Executive Summary

The objective of the original Mileground Road Traffic Analysis was to conduct an evaluation of previously developed alternatives for improving the heavily-traveled Mileground Road and to provide information to decision makers in selecting a preferred alternative. That study demonstrated that the No Build or Do Nothing alternative was not a good option, as anticipated traffic growth in the corridor would only serve to worsen current congestion. Two feasible alternatives resulting from that study were:

- A five-lane alternative would upgrade Mileground Road to a five-lane facility with a continuous center two-way left-turn lane and signalized intersections;
- A four-lane alternative would upgrade Mileground Road to a four-lane median-divided facility with roundabouts at major intersections.

The initial study evaluated the impacts of these alternatives and listed advantages and disadvantages associated with each, but did not recommend a preferred alternative (as providing this recommendation was not within the scope of work).

Since the initial study was completed, in response to local concerns over a proposed roundabout intersection at Mileground Road/Hartman Run Road/Airport Boulevard, the West Virginia Department of Transportation, Division of Highways ("WVDOH") performed an independent analysis of this roundabout.

As a supplement to the initial study, Stantec was tasked with performing an analysis to look further into traffic operations at this intersection. Specific tasks involved reviewing the initial study results, reviewing the WVDOH analysis results, providing a comparison between roundabout and traffic signal control at the Mileground Road/Hartman Run Road/Airport Boulevard intersection, and drawing conclusions from the supplemental analysis. Questions to be answered included:

- What are anticipated peak period queue lengths?
- Are there left-turn spillback issues and impacts with either design and, if so, what are they?
- What are the cross-sectional needs for a roundabout design and for a signalized intersection design?
- What are turn lane storage requirements?
- What are pedestrian issues that need to be considered with each alternative?

MILEGROUND ROAD SUPPLEMENTAL TRAFFIC ANALYSIS

From this supplemental analysis, the following conclusions were reached:

- Generally longer queues and associated delays would be expected for the roundabout when compared to signal control.
- Queues associated with a roundabout can be reduced with a reduction in U-turns at this intersection. Providing channelized median openings at intermediate points along Mileground Road would accomplish this objective for the four-lane median divided alternative (which includes the roundabout).
- Delays and queues associated with traffic signal control are a function of the implemented signal timing plan(s) in combination with the approach geometry. It is important to optimize signal timing plans so that approach delays and queues are minimized.
- Pedestrian crossings at signalized intersections involve more vehicle/pedestrian conflict points, but are controlled by designated signal phases. Pedestrian crossings at roundabouts involve fewer conflict points and vehicular arrival directions are more predictable, but they are made at the splitter islands on intersection approaches and may include significant delay to pedestrians waiting for acceptable crossing gaps when traffic flows are heavy.

As with the initial study, no recommendations are provided. Rather, this information is intended to be used as input in the final decision making process.