Public Acceptance of INDOT’s Traffic Engineering Treatments and Services

Introduction

As a public agency, interacting with and understanding the public's perspective regarding agency activities is an important endeavor for the Indiana Department of Transportation (INDOT). Although INDOT conducts a biennial customer satisfaction survey, it is occasionally necessary to capture public perception regarding more specific aspects of INDOT’s activities. In particular, INDOT needs an effective way to measure and track public opinions and awareness or understanding of a select set of its traffic engineering practices. A statewide public opinion survey focusing specifically on traffic engineering activities of interest was undertaken in order to better understand public perception.

This research project and survey instrument focused on public perception of the following emerging traffic engineering infrastructure treatments and current traffic engineering practices.

- Ramp Metering
- Alternative Intersection/Interchange Designs
  - Roundabout
  - Restricted Crossing U-Turn (RCUT)
  - Displaced Left Turn (DLT)
  - Diverging Diamond Interchange (DDI)
- INDOT Communications
- Work Zone and Construction Traffic Management Operations
- Roadway Lighting and Visibility
- Driver Speed Behavior

Findings

- Public awareness regarding ramp meters and alternative intersections/interchanges that are not currently widely implemented in Indiana is low and opposition to these emerging treatments is prominent. Older or female drivers are less likely to be
aware of emerging treatments, and older drivers are more likely to oppose potential implementation of these treatments. Although roundabouts are commonplace in Indiana, multi-lane roundabouts remain controversial and confusing among the public.

- Myths regarding usability of alternative intersections by large vehicles, pedestrians, and bicyclists remain prominent. Alternative intersections are perceived as too confusing by a large portion of the public.
- INDOT is perceived as doing a middling job regarding communications about road work, taking community input regarding perspective work, and in minimizing delays during construction.
- Regarding maintenance and protection of traffic during work zones and full or partial roadway closure, public preference is for partial closure. This preference is stronger in rural areas.
- Lighting of urban roadways is considered good, while lighting of rural interchanges is perceived as mediocre, and lighting of rural roadways is perceived as poor. Visibility of permanent and temporary traffic control devices at night and in inclement weather is fair.
- Approximately 76% of Indiana drivers believe themselves to be above average or excellent drivers, while an additional 23% believe themselves to be average. Driver perceptions of average highway speeds are not aligned with posted speed limits, since the perceived average speed on Indiana’s urban freeways and rural and urban state highways were considerably higher than the actual speed limit.

Implementation

The findings regarding public awareness and acceptance of emerging traffic engineering treatments can be used to guide future public outreach activities regarding those treatments in general and also specific, individual projects. Such activities can be directed at increasing general awareness of emerging treatments as well as addressing common myths and potential driver confusion. Additional public outreach campaigns can be conducted regarding multi-lane roundabouts, which remain controversial and are perceived as confusing to the public despite their increasing prevalence on Indiana roadways.

Additionally, public preference for partial closure with roadway utilization for construction can be taken into account when planning construction activities. Findings regarding quality of INDOT construction-related communication and INDOT’s minimization of construction-related traffic delays can inform future communication practices regarding construction activity and potential delays.

Lighting and visibility findings can guide future maintenance planning in these areas, including additional or improved lighting at rural interchanges and on rural roadways. Traffic control device visibility could be improved with increased retroreflectivity or more frequent replacement.

Finally, findings related to perceived driving ability and perceived highway speeds across the state can be used to inform speed-related driver education efforts and allow for better understanding of the driving population.

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