

The Technical Experts in the Resource Center of the Federal Highway Administration have evaluated the proposed roundabout at the convergence of the Hoosier Heartland Industrial Corridor (HHIC) and the existing SR-25 just east of the I-65 Interchange.

Several members of the Resource Center's Safety & Design Team have examined the capacity analysis prepared by Butler, Fairman, and Seufert (BF&S) Civil Engineers, and can offer the following comments related to questions/concerns as well as additional considerations for this project.

1. Can the proposed roundabout adequately handle the projected future traffic volumes?

Yes. We concur with the conclusion from the BF&S analysis. The proposed number of entry lanes and lane designations are adequate to handle the projected future traffic volumes. A single-lane roundabout can accommodate approximately 1,200 vph (this includes circulating plus entering volumes on the approach) and a two-lane roundabout can accommodate approximately 1,800 vph (again this includes circulating plus entering volumes on the approach). A two lane, four-leg roundabout has the ability to handle upwards of 45,000 vehicles per day and this proposed roundabout has an estimated 2030 volume of ~31,000 vehicles per day.

We note that this roundabout is between two signalized intersections approximately 800 ft apart. It is important that this roundabout also be analyzed with the two signalized intersections on the corridor and not just in isolation. It is possible for the signalized intersections to queue traffic into the roundabout.

2. Is the roundabout likely to hinder access to Interstate 65 and be detrimental for economic development?

No. Roundabouts typically provide improved access by reducing delays at intersections and facilitate travel through corridors. Roundabouts complement access management strategies by facilitating U-turns on divided roadways. The Golden Road corridor in Golden, CO is a well documented case study of how roundabouts helped were beneficial for businesses along the corridor ([www.ci.golden.co.us/files/roundaboutpaper.pdf](http://www.ci.golden.co.us/files/roundaboutpaper.pdf)).

3. Is the roundabout a safe alternative?

Definitively yes. Properly designed modern roundabouts are the safest intersection alternatives available. Roundabouts reduce motorist speeds and practically eliminate the risk of severe right angle (T-bone) type crashes. Based on comprehensive studies of modern US roundabouts, crashes can be potentially reduced 35% and injury and fatal crashes can be reduced 76% (source: NCHRP 572 *Roundabouts in the United States*).

4. Will motorists be confused?

Good roundabout design supplemented with appropriate pavement marking and advance signing provides motorists with the information needed to navigate roundabouts. Roundabouts have been constructed in many areas where there are unfamiliar motorists such as tourists (Clearwater, FL and Vail, CO). However, it is important to provide ample roundabout education opportunities for the public regarding navigating roundabouts. Lafayette's proximity to Carmel, IN would provide drivers an opportunity drive many roundabouts to get the feel. Olathe, KS is another good example of a community that has documented the acceptance and preference of roundabout intersections.

With regard to the traffic forecast used by INDOT, we have determined that the year 2030 data used for the I-65 interchange intersections and the SR 25 / HHIC intersection was obtained directly from "Traffic Volume Forecast" report dated November 2006 and prepared by CTE / AECOM. It is discussed in the executive summary (page 1) of the 2006 report that the growth rate used to forecast the traffic volumes is based on the growth rate used in the Engineers Report dated December 2003 and prepared by Qk4. That report references INDOT, manual counts and the Tippecanoe County APC model for traffic forecasts.

Lastly, we will be working with INDOT to complete the Environmental Reevaluation for the 2004 Record of Decision to document this design modification and to address the issues raised by our experts as well as any other issues. However, based on the analysis and the data we have to date, we do not see any significant issues with this proposed roundabout. The analysis by our experts validates that the proposed roundabout will operate at an acceptable level of service, serve to reduce the potential for serious accidents, impact less land and cost less.