Study Needs: Roadway Geometrics

Roadway and geometric deficiencies can lead to safety and operational concerns. Two locations on the US 51 corridor with recorded crashes that appear to be associated with roadway geometrics are 1 the intersection skew of the north leg of the intersection at US 51 and US 151/East Washington Avenue and 2 the two horizontal curves north of Pierstorff Street.

HORIZONTAL GEOMETRIC DEFICIENCIES

VERTICAL GEOMETRIC DEFICIENCIES

SIGHT DISTANCE DEFICIENCIES

DEFINITIONS

Grade: The amount of a roadway's rise or drop in a given distance.

Horizontal curve: The area of transition (change) of the alignment or direction of the road.

Vertical curve: The area of transition (change) of the grade of the roadway.

Deflection point: A change in the direction of the road (horizontal) or a change in the grade of the road (vertical) without a horizontal or vertical curve to ease the transition.

Superelevation: The banking of a roadway along a horizontal curve so motorists can safely and comfortably maneuver the curve at reasonable speeds. A steeper superelevation rate is required as speeds increase or horizontal curves become tighter.

Decision sight distance (DSD): The distance at which a driver can clearly see ahead on a roadway to detect a decision point in an environment of visual clutter, recognize the change in environment, and safely react to it by changing lanes, merging, or another maneuver. DSD was evaluated for situational locations along the corridor.

Stopping sight distance (SSD): The distance at which a driver can clearly see ahead on a roadway to detect a potential hazard in their path and still have enough time to react and bring the vehicle to a complete stop.

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51 NORTH STUDY