Building Safer Roads
Studying Median Safety and Crash Reduction in Northeastern Illinois

Multi-lane roads are commonly the site of serious—and sometimes fatal—collisions.

Nationally, studies have been conducted to understand roadway safety, but none with a local focus. In 2017, IDOT commissioned a study in Northeast Illinois to identify crash patterns and median treatments that reduce collision rates in our area.

Here is what we learned to make our roads safer.
ABOUT THE STUDY
This study compares two median types: flush medians and raised curb medians.

We surveyed crash data for 18 corridors across 5 local counties. The study mainly focused on 4-lane raised curb medians and 5-lane flush medians*, and roadways that represent a mix of transportation demands and traffic volumes.

*6- and 7-lane roadways were also included in the study, but are not as prevalent in the region.

KEY FINDINGS
Overall crash rates were significantly lower when raised curb medians were present.

Crash reduction rate with raised curb medians

<table>
<thead>
<tr>
<th>Median Type</th>
<th>Vehicle</th>
<th>Pedestrian</th>
<th>Bike</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raised curb</td>
<td>70-80%</td>
<td>85%</td>
<td>97%</td>
</tr>
<tr>
<td>Flush</td>
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</tbody>
</table>

Results reflect 5-lane flush vs. 4-lane raised curb medians. Similar reductions were also found when comparing 7-lane flush vs. 6-lane raised curb medians.

Flush medians
No access restrictions, left-turning vehicles removed from through lanes.

Raised curb medians
Limited access, turn lanes identified as specific segments.

Raised curb medians benefits
When compared to a flush median, raised curb medians present 81% fewer conflict points, which are locations where a collision can happen.

Flush median
11 conflict points

Raised curb median
2 conflict points

In addition to safety benefits, raised curb medians provide greater opportunities for:
- Pedestrian refuges
- Water quality
- Landscaping

THIS STUDY HELPS US
Identify median types that reduce overall crashes.

Reduce conflict points for multi-lane roadways.

Make travel safer for all modes of transportation, including biking and walking.