Rural Roundabouts: An International Perspective

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History of Circular Intersections

- Traffic Circles – 1905
- Modern Roundabout – UK 1960’s
- Europe
- Midwest – 1990’s

Modern Roundabouts


Benefits of Modern Roundabouts

- Reduction in crash severity
- Speed reduction
- Improved capacity
- Reduction in queues and delays
- Reduction in emissions
- Maintenance costs lower
- Aesthetics
- Suitable for most locations and traffic volumes
- Traffic calming

Safety

- Crash Reduction in the US (Persaud et al, 2001)
  - 23 Intersections
  - All crashes - 40%
  - Injury Crashes - 80%
  - Consistent with internationally studies
United States Actively Implementing Rural Roundabouts

Kansas DOT
Minnesota DOT

State Highway 13 and County Rd 2 - Scott County, MN

**Task:**
A 3-lane rural highway and a 2-lane County Rd intersecting in a roundabout. Lane widths are 11.5 ft.

**Description:**
A roundabout is installed to help reduce the number of collisions with cross traffic.

**Reasons:**
The roundabout reduces the number of collisions with cross traffic.

Source: FHWA/MnDOT

Maryland DOT

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Projected Roundabout

Average Daily Traffic

<table>
<thead>
<tr>
<th>Category</th>
<th>Injury Accident Statistics High-Speed Roundabouts vs. High-Speed Signals</th>
<th>Injury Accident Statistics High-Speed Roundabouts vs. High-Speed Signals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fatal</td>
<td>Slight</td>
</tr>
<tr>
<td>15-20 mph</td>
<td>2.6</td>
<td>1.4</td>
</tr>
<tr>
<td>25-30 mph</td>
<td>1.8</td>
<td>0.8</td>
</tr>
<tr>
<td>35-50 mph</td>
<td>1.0</td>
<td>0.3</td>
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<tr>
<td>50-70 mph</td>
<td>0.5</td>
<td>0.2</td>
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</tbody>
</table>

Discussion/Questions

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Thank You

Gratzie

Merci

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