Road Improvement Demonstration Program

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What is the AAA Road Improvement Demonstration Program?

A public/private partnership designed to enhance traffic safety by reducing the frequency and severity of crashes at high risk urban intersections.
The Problem

- 8,500 people killed and 1 million injured nationwide in intersection crashes.
- 50% of all crashes in urban areas occur at intersections.
- Societal costs for intersection crashes are approximately $40 billion.
Program Goals

- Reduce the frequency and severity of crashes (and claims) at high-risk urban intersections.
- Proposed changes must be low cost / cost effective.
- Identify possible sites, conduct safety audits and re-engineer high-risk intersections.
- Achieve a minimum 2:1 benefit-cost ratio.
- Encourage a proactive approach to traffic safety.

Launch Date: 1996
Program History

- 1996 – City of Detroit / AAA Michigan Agreement
- 1997 – First three pilot project completed in Detroit
- 1998 to 2003 – Almost 400 projects have been planned and/or implemented in Detroit, Grand Rapids, Port Huron & Bay City
- 2004 – Initiated the AAA Wisconsin RIDP
- 2006 – Release of the RIDP Toolkit
The Partnership

City of Detroit
Wayne County

Bay County, MI
Port Huron, MI
Wauwatosa, WI

FHWA

SEMCOG

OHSP

Wayne State University

CITY OF GRAND RAPIDS MICHIGAN

Madison, WI

St. Clair County, MI
Greenfield, WI
Oak Creek, WI

Southeast Wisconsin Regional Planning Commission

Dane County, WI
West Allis, WI

Fitchburg, WI
Franklin, WI

FHWA
PROGRAM ACCOMPLISHMENTS

- 450 Locations studied in Michigan and Wisconsin
- Improvements made at 351 intersections
- 15 year societal savings projected at $100 million in reduced medical care, emergency services, property damage and productivity losses due to fewer crashes at improved intersections
How the Program Works

- Police Crash Reports
- AAA Claims Data
- Most Severe Intersections

Identify Target Intersections
How the Program Works

Identify Target Intersections

Conduct Safety Audit

• Collision History
• Operational Analysis
• Geometric Review
• Conflict Studies
• Human Factors Review
• Suggest Countermeasures
How the Program Works

1. Identify Target Intersections
2. Conduct Safety Audit
3. Conduct a Benefit Cost Analysis
   Is AAA Investment beneficial?
4. Minimum of 2:1 Benefit Cost Ratio over 2 Years
How the Program Works

1. Identify Target Intersections
2. Conduct Safety Audit
3. Conduct a Benefit Cost Analysis
   - Is AAA Investment beneficial?
4. Develop Project Funding Strategy

Develop cost sharing agreements with the project partners.
How the Program Works

1. Identify Target Intersections
2. Conduct Safety Audit
3. Conduct a Benefit Cost Analysis
   Is AAA Investment beneficial?
4. Develop Project Funding Strategy
5. Design and Construct Improvements
How the Program Works

1. Identify Target Intersections
2. Conduct Safety Audit
3. Conduct a Benefit Cost Analysis
   - Is AAA Investment beneficial?
4. Develop Project Funding Strategy
5. Design and Construct Improvements
6. Conduct Post Improvement Evaluation Study

Collision History

Evaluate safety and economic benefits of the improvements
Seven Mile & Dequindre in Detroit
Before Improvements

Left-Turn Prohibition

Smaller 8” diameter signal lenses

NO dedicated left-turn lane
Seven Mile & Dequindre in Detroit
After Improvements

- Added a protected left-turn green arrow
- New dedicated left-turn lane
- Replaced the smaller signal lenses with larger and brighter 12” diameter lenses
Eastern at Franklin in Grand Rapids
Before Improvements
Eastern at Franklin in Grand Rapids
After Improvements
Trends from 84 RIDP Intersections in Detroit & Grand Rapids

More than 25% Reduction in Total Crashes

More than 40% Reduction in Total Injuries

- Data includes a minimum of 24 months “before” and 12 months of “after” data
- Data Source: UD-10 Crash Reports provided by MI State Police, Detroit Police Dept. & GR Police Dept.
## Impact on Senior Drivers

**Detroit, MI**

<table>
<thead>
<tr>
<th></th>
<th>Total Crash Rate Reductions by Age</th>
<th>Injury Crash Rate Reductions by Age</th>
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<tbody>
<tr>
<td></td>
<td>25-64  17%</td>
<td>25-64  4%</td>
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<tr>
<td></td>
<td>65+     31%</td>
<td>65+     35%</td>
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- Crash data reflects 30 intersections on Woodward Avenue in Detroit, MI.
- Total crash rate and injury crash rate reductions are stated as crashes per registered driver.
RIDP Toolkit

- Designed for municipal leaders and planners
- Used to identify intersection safety problems
- Provides countermeasures that will positively impact these safety problems
- A template for action to implement needed changes in local jurisdictions
- Enact tested real-world solutions
Program Awards

- 1998 Federal Highway Administrator's Safety Award
- 1998 National Association of Governors Highway Safety Representatives Safety Award
- 1999 Traffic Safety Association of Michigan Recognition Award
- 2001 SEMCOG/Metropolitan Affairs Coalition Joint Public Service Award
- 2003 AAA Public Affairs National Recognition
- 2004 Council of State Governments
- 2005 Michigan Governor’s Traffic Safety Award
Questions?