

ALASKA STRATEGIC HIGHWAY SAFETY PLAN



Vision: Everyone Counts: zero deaths and injuries on Alaska's surface transportation system.

Mission: Improve the safety of everyone through a proactive leadership structure and focus resources on the most effective solutions using evidence-based engineering, enforcement, education, and emergency response initiatives.

Goal: Reduce the rate of fatalities and major injuries by one third over the next 10 years.



HI.2 SINGLE-LANE ROUNDABOUTS – TIER ONE

DESCRIPTION: Promote the use of single-lane roundabouts (SLR) at intersections that would otherwise be signalized. Fund single-lane roundabouts under the HSIP when cost-beneficial. Single-lane roundabouts greatly improve safety, reduce delay, reduce power consumption, and look better when compared to traffic signals.

SLRs could be promoted by adding text to Section 450.5.2, Design Study Report, of the DOT&PF Preconstruction Manual similar to the following:

“Single-Lane Roundabout analysis should be conducted at all locations where traffic signal installation is being considered. If a single-lane roundabout will not be installed, provide an explanation of why it is not an appropriate solution.”

The Insurance Institute for Highway Safety determined that roundabouts reduce fatalities by 90 percent, injuries by 76 percent, and all crashes by 39 percent at intersections. This makes SLRs one of the best tools in our safety toolkit. 30-40 percent reduction in pedestrians and 10 percent bicycles crashes.

RESPONSIBLE AGENCY:

Lead Agency: Alaska Department of Transportation and Public Facilities

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NECESSARY PARTNERS:

- DOT&PF HQ and Regions.
- Local communities.

DATA ANALYSIS NEEDS OR AVAILABLE RESOURCES:

On a case by case basis, each DOT&PF region needs to determine whether roundabouts are feasible safety solutions at intersections within their region that would otherwise be signalized.

EXPECTED EFFECTIVENESS/OUTCOME:

Narrative: Reduction of fatal and major injury crashes at intersections.

Average number of lives lost and major injuries sustained due to this problem over the past five years: On the average, about 17 lives are lost each year at intersections. There are around 250 intersection crashes that result in major injuries each year.

Estimated number of lives saved and major injuries prevented in one year following implementation: Life saving in future years will depend on the number of roundabouts built and the crash history at the roundabout locations.

FUNDING AND RESOURCE REQUIREMENTS:

Narrative: The HSIP will fund cost-beneficial roundabouts. Many roundabouts are funded with non-HSIP funds.

Estimated Cost to Implement: \$0.5 to 0.75 million per roundabout. Depends on how many roundabouts are built.

ACTION STEPS AND TIMELINE

ACTION STEP	RESPONSIBLE AGENCY	TIMELINE/DUE DATE
Draft policy for roundabout first.	DOT&PF	October 2007
Get Regional Concurrence.	DOT&PF	October 2007
Construct SLRs using HSIP funds, where safety cost-beneficial, and other funds where appropriate.		

MEASUREMENT AND EVALUATION

STRATEGY PERFORMANCE MEASURES:

Before/after crash studies at individual roundabouts.

EVALUATION:

Before/after crash studies at individual roundabouts. If constructed with HSIP funding, before/after results will be published in the HSIP Annual Report after enough time has passed to get sufficient “after” data.