

WSDOT's Rumble Strip Program

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Objective of Rumble Strips

Reduce fatal & serious injury crashes by targeting run off the road and cross centerline crashes.

Shoulder Rumble Strip Policy

Background

- Shoulder Rumble Strips installed on the shoulders of Interstate Highway starting in mid 1990's
 - Policy Established in 1997
 - Required on rural interstates
 - Considered on other divided highways
- In early 2000's experimental locations were installed on a few miles of undivided highways
- In 2001 WSDOT began working with bicycling groups - evaluating shoulder rumble strips on undivided highways
 - Policy Established in 2003
 - Strategic approach – site specific decision – criteria driven
 - Crash experience balanced with bicycling concerns

Centerline Rumble Strip Policy Background

- In 2004 WSDOT evaluated centerline rumble strips using a benefit/cost analysis
- Analysis indicated a highly favorable safety investment
 - Program initiated in 2004
 - Programmatic approach - entire highway network is considered

Installations

- Shoulder Rumble Strips
 - Interstate and other divided Highways – still installing
 - mileage not tracked
 - Undivided highways – 344 miles to date
- Centerline Rumble Strips
 - Undivided Highways – 2,732 miles to date

Shoulder & Centerline Rumble Strips Crash Reduction

Collision Type	Injury Severity	Crash Rate Before Rumble Strips	Crash Rate After Rumble Strips	% Change
Run off the Road Right (ROTRR)	All injury severities	0.147	0.056	- 61.6%
	Fatal & serious injury	1.414*	0.655*	- 53.7%
Cross Centerline (Crossover)	All injury severities	0.131	0.038	- 71.0%
	Fatal & serious injury	2.159*	0.917*	- 57.5%
Lane Departure (Crossover & ROTRR)	All injury severities	0.278	0.094	- 66.0%
	Fatal & serious injury	3.573*	1.573*	- 56.0%

Crash rates depict crashes per million vehicle miles traveled

*Crash rates for Fatal and serious injury crashes depict crashes per 100 million vehicle miles traveled.

Note: Shoulder Rumble Strips are most often installed in conjunction with centerline rumble strips.

Centerline Rumble Strips

Cross Centerline Crash Reduction

Injury Severity	Crash Rate Before Rumble Strips	Crash Rate After Rumble Strips	% Change
All injury severities	0.152	0.84	-44.6%
Fatal & serious injury	2.512*	1.292*	-48.6%
Evident injury	0.045	0.020	-55.5%
Possible injury	0.020	0.018	-10.0%
No injury	0.053	0.033	-38.9%
Unknown injury	0.009	0.001	-86.6%

Crash rates depict crashes per million vehicle miles traveled

*Crash rates for Fatal and serious injury crashes depict crashes per 100 million vehicle miles traveled

Questions?

For additional information on WSDOT's Rumble Strip program,
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