Proposed: Establish Minimum Skid Resistance Values for High-Risk Roadway Safety Locations

Robert N. Dingess

President, Mercer Strategic Alliance

ATSSA Policy Proposal

POLICY: Minimum Skid Resistance Levels for Horizontal Curves, Pedestrian and School Crossings, Intersections and Bridge Decks

POSITION: ATSSA strongly supports efforts to establish minimum skid resistance levels designed to enhance roadway safety at horizontal curves, pedestrian and school crossings, intersections and on bridge decks. ATSSA supports the systemic use of roadway safety devices to provide an equivalent safety benefit alternative, when appropriate.

2008 FARS DATA

- All fatal crashes: 34,017
- All fatalities: 37,261
- Cost of Roadway Fatalities ($230+billion Annually)

Fatal Crash Percentages

- Horizontal Curves (25%) **(8X more Dangerous)**
- Intersections (21%)

Highway Safety Act of 1966

"…such uniform standards shall include…highway design and maintenance (including lighting, markings and surface treatment), traffic control…and correction of high or potentially high accident locations…"

Minimum Skid Resistance Levels

1966 Highway Safety Act

International Minimum Skid Resistance Standard for Pavements (1969)

"The need for minimum international skid-resistance requirements on roads and highways is apparent from accident statistics in several countries."

Highway Research Board Special Report. Issue Number: 101

Highway Safety Program Management Guide (1979)

Skid Accident Reduction Program

"Each State should inventory all paved roads with posted speed limit of 40 m.p.h. or greater for skid resistance.

HIGHWAY SAFETY PROGRAM MANAGEMENT GUIDE (1979), 2(c) Skid Accident Reduction Program

Skid Accident Reduction Program

(Cont'd.)

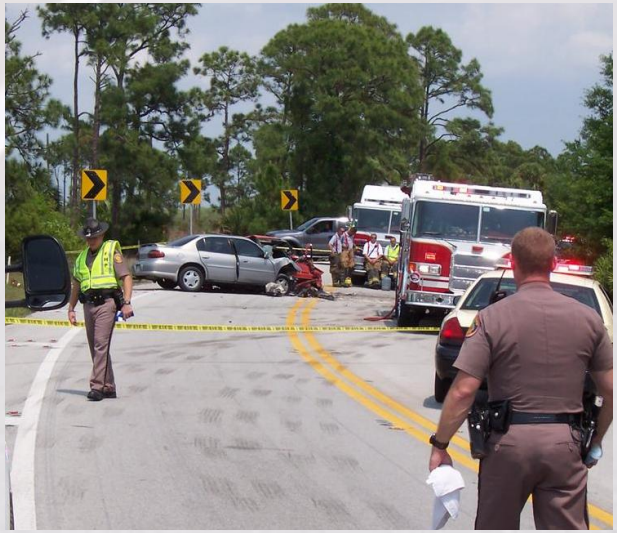
A program should be prepared which establishes priorities for correcting locations with a disproportionately high percentage of skidding accidents and for pavements where the coefficient of friction is less than the recommended minimum Skid Numbers (SN) included in HSPM Volume 12.

HIGHWAY SAFETY PROGRAM MANAGEMENT GUIDE (1979), 2(c) Skid Accident Reduction Program

Skid Accident Reduction Program

(Cont'd)

Such a Statewide inventory for skid resistance should be established and in operation."



HIGHWAY SAFETY PROGRAM MANAGEMENT GUIDE (1979), 2(c) Skid Accident Reduction Program

National Transportation Safety Board

Safety Board Urges 'Comprehensive' Skid-Reduction Program

- “Noting that wet-weather crashes are claiming more lives, the ***National Transportation Safety Board*** has urged the federal government to adopt a "comprehensive" program to reduce crashes caused by skidding.”

- Before a "rational" program can be adopted, though, the Federal Highway Administration (FHWA) must adopt **"some minimum criteria" specifying pavement skid-resistance levels**.

Insurance Institute for Highway Safety, Status Report, Vol. 15, No. 17, Nov. 21, 1980

Safety Board Urges 'Comprehensive' Skid-Reduction Program

- …*The FHWA proposal called only for "adequate" skid resistance, without determining what it meant by the term.*

- While FHWA officials acknowledged *that some state skid test programs are* ***"mythical,"*** they said other states have made significant strides in locating and eliminating high-hazard locations, either by resurfacing or grooving pavement to improve skid resistance. *But, they conceded, there is little likelihood the agency will set minimum skid-resistance standards, primarily because of state opposition*.

Insurance Institute for Highway Safety, Status Report, Vol. 15, No. 17, Nov. 21,1980

FHWA Pulls Skid Resistance NPRM

- March 4, 1982 FHWA withdrew Rulemaking
- “Proposed rule is not warranted.”
- NTSB criticized FHWA’s actions.

Why Resisted?

- **Tort Liability**
- **Cost**

Most S-curve accidents have been fender-benders and fewer than five involved motorcycles.

Credit: Lance Iversen / The Chronicle

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Enhance Rural Road Safety

1997 – 2006 (22) Crashes
Three Deaths , Four Injuries

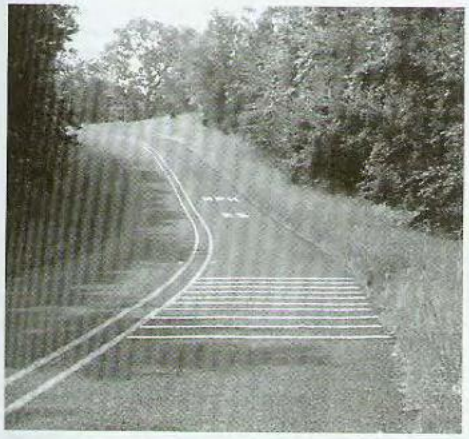
Avg. Surface Skid Resistance Before (33)
Avg. Surface Skid Resistance After (95)

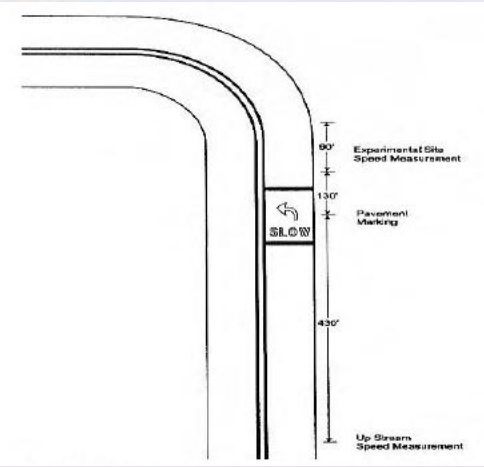
City of Bellevue, WA. 1997 – 2002 intersection experienced 21 crashes. Some serious including four rollovers. After treatment there were only two crashes (inattentive driver, brake failure)

Long Island, New York

- 1995-1997 New York State treated 36 sites
- Reduction of 800 annual wet-road crashes.
- Determined that enhanced friction reduced wet-weather crash rate by 50%.

Examples of Sign & Pavement Marking





Virginia Department of Transportation

Legislative Language

- National Academy of Sciences Develop Minimum Skid Resistance Levels for High-Risk Safety Locations (Horizontal Curves, Intersections, Bridge Decks, Pedestrian and School Crossings.)
- Minimum levels designed to enhance motorcycle and other roadway user safety.
- Applies to Pavements and Road Markings
- Enhanced stopping capacity for vehicles approaching pedestrian and school crossings
- Exemptions for engineering or other speed control measures that provide equally safe road environment.
- Applies to newly constructed lane miles and future resurfacing or repaired pavement after January 1, 2013.
- Title 23, Section 120(c)(1) shall be amended by inserting ‘high friction surface treatments,’ after ‘installation of’.

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