

Approved: 2/7/96
Date

MINUTES OF THE SENATE COMMITTEE ON TRANSPORTATION AND UTILITIES.

The meeting was called to order by Chairman Ben Vidricksen at 9:00 a.m. on February 6, 1996 in Room 254-E of the Capitol.

All members were present except:

Committee staff present: Hank Avila, Legislative Research Department
Ben Barrett, Legislative Research Department
Bruce Kinzie, Revisor of Statutes
Martha Ozias, Committee Secretary

Conferees appearing before the committee:

Senator Robert Vancrum - 11th District
Senator Nick Jordan - 10th District
Representative Dee Yoh - 2nd District
Dean Carlson - Secretary of Transportation
Colonel Lonnie McCollum - Superintendent, Kansas Highway Patrol
Richard Morrison - National Motorists Association
Darryl C. Lutz - Butler County Engineer
Bill Hancock - District 2 Commissioner, Sedgwick County
Kelly Wendeln - Chanute
Dale V. Crawford - Johnson County Bicycle Club

Others attending: See attached list.

HB 2602 -- SPEED LIMITS

Senator Vancrum addressed the Committee basically in support of this legislation but suggested two amendments. One was that a limit of not more than 60 miles an hour be set in an urban area and the second was that speed limits for large trucks be no more than 65 miles an hour. (Attachment 1)

Senator Nick Jordan also requested an amendment to this bill to establish a speed limit of 60 mph in urban areas. (Attachment 2)

Representative Yoh appeared on behalf of a number of her constituents urging more thought and consideration when making the decision to raise speed limits and requested that if the buffer was changed it should be 10 mph only on two-lane roads. (Attachment 3)

Dean Carlson explained that the 85th percentile speed (the speed at or below which 85% of free-flowing vehicles are traveling) is the safest vehicle operation and appears reasonable to most drivers. He stressed the importance of balancing speed, safety, and economic considerations in establishing limits and presented several recommendations. (Attachment 4)

Colonel McCollum spoke in support of uniform speed limits and the 5 mph exemption in which violations do not count against driving records. He felt it sent a clear message that close compliance with established speed limits is essential. (Attachment 5)

Statistics were presented by Richard Morrison who urged changing the limits to within 5 mph of the 85th percentile stating traffic flow would be smoother, enforcement easier, insurance surcharges reduced and citizen resentment eased. (Attachment 6)

Darryl Lutz expressed concerns with the wording of the present bill and suggested setting a statutory maximum speed limit of 55 mph on local roads and allowing for a higher speed limit based on engineering and traffic investigation. He also felt that local units of government should be included with the Secretary of Transportation for any indemnification period allowed under this bill. This would allow the necessary time to do investigations, budget money, re-sign and re-stripe local roads that may need changes. (Attachment 7)

CONTINUATION SHEET

MINUTES OF THE SENATE COMMITTEE ON TRANSPORTATION AND UTILITIES, Room 254-E
Statehouse, at 9:00 a.m. on February 6, 1996.

Bill Hancock expressed some concerns of Sedgwick County which included understanding of definitions. He requested the same considerations and protection for county governments as would be accorded the Secretary of Transportation if this legislation goes into effect. (Attachment 8)

Thoughts on speed limits and Highway Patrol ticket policy were presented by Kelly Wendeln. (Attachment 9)

Dale Crawford addressed concerns of bicyclists who utilize two lane highways. In some rural areas the highways are often the only roads suitable for cycling and raising speed limits will greatly increase reaction time for motorists and bicyclists to share the road. The Club recommended that each highway be evaluated with consideration given to the safety of bicyclists before raising the speed limit. Concerns were expressed about raising speed limits until improvements are completed to safely accommodate both bicyclists and motorists. (Attachment 10)

Time being a factor the Chairman closed the hearing for comments and requested a motion on the minutes. Senator Papay made a motion to approve the minutes of the February 1st meeting. This was seconded by Senator Lawrence and the motion carried.

The meeting was then adjourned at 10:00 a.m.

The next meeting is scheduled for February 7, 1996.

SENATE TRANSPORTATION AND UTILITIES COMMITTEE GUEST LIST

DATE: FEBRUARY 6, 1996

NAME	REPRESENTING
John W. Smith	KDOR DMV
Betty McBride	KDOR DMV
Darryl Lutz	Butler County
Stella Thurkill	KSNT TV
Sandra de Courcy	KS Ind. Dept.
Anne Spiess	Ks. Assoc of Counties
Neresa Slemmer	State Farm
G. Hobson	Wagler
Ken Mac	ARATE OF KANSAS
Larry Ridgway	Urban
Mike Bohloff	Division of the Budget
Dee Ueh	Rep
Bob Totten	Ks Contractors Association
Nancy Bogina	KDOT
Dean Carlson	KDOT
Bill Watts	KDOT
Richard Morrison	National Motorists Association
Bill Hancock	SEDWICK Co
MARK FORST	SEDWICK CO.

Senate Transportation + Utilities

2-1-96 contd.

W. Marten

Ken Baber

Dale Crowford

Louise R. McColin

TERRY MAPLE

Selgrove County

Economic Lifelines

Johnson County Bicycle Club

K.H.P.

K.H.P.

BOB VANCURUM
 SENATOR, ELEVENTH DISTRICT
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COMMITTEE ASSIGNMENTS

VICE-CHAIRMAN: ENERGY AND NATURAL RESOURCES
 MEMBER: WAYS AND MEANS
 JUDICIARY
 MEMBER: COMMERCE, LABOR AND REGULATIONS
 COMMITTEE, NATIONAL CONFERENCE ON
 STATE LEGISLATURES
 MEMBER: ENVIRONMENTAL TASK FORCE,
 COUNCIL ON STATE GOVERNMENTS

**TESTIMONY FOR
 SENATE TRANSPORTATION AND UTILITIES COMMITTEE
 ON
 HOUSE BILL 2602 - HIGHWAY SPEED LIMIT BILL**

Thank you Mr. Chairman and members of the committee for letting me say a few words stating my views of the above bill. As sent over by the House, the bill is very close to the Governor's original proposal and I would have no trouble supporting as passed, but I believe it can be made even better. I would suggest two different amendment to this bill:

(1) I believe and I think the majority of my constituents agree that 70 miles an hour plus an additional five mile an hour cushion for a non-moving violation is simply too fast for many of our urban multi-lane highways. Highway I-435 will soon be an eight lane interstate and I-35 which is a six lane interstate are both in or near my district. The traffic congestion on these highways at most hours of the day makes 75 miles an hour an unsafe speed. Perhaps under Section (5) the secretary of transportation could set a lower speed, but I feel strongly that we should set a speed of not more than 60 miles an hour in an urban area. This would still permit persons to travel 65 miles an hour on urban interstates without a moving violation. For what it's worth, I read that Missouri has recently set a 55 mile per hour speed for urban interstates. While I would agree that some multi-lane highways even in urban areas could carry a faster speed, I believe most are unsafe at this speed.

(2) I also believe with regard to **separated multi-lane highways** only that it is very unsafe to have large trucks going 75 miles an hour without a moving violation as the bill would currently permit. I think this speed limit should be no more than 65 miles an hour so that they will be traveling no faster than 70. I'm certain all of you have had the experience of being passed by a semi-trailer truck hauling one, two or three semi-trailers in heavy downpours going well over the speed limit. I would not support lower speed limits on two lane road because I believe that creates an equal hazard, but see no reason why large trucks (one or more semi-trailers) should be permitted to travel 75 miles an hour on separated on multi-lane highways. Even the 65 miles an hour that I am suggesting is faster than the 60 miles an hour that they were permitted to

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go prior to the federal mandate that has just been lifted. 75 is a real windfall to the industry.

I can well imagine the heavy lobbying that will occur on this issue from the trucking industry and I do not envy your task, but I strongly feel that this area needs to be addressed on this bill.

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DATE: 2/2/94
ATTACHMENT: 1-2

NICK JORDAN
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TOPEKA

SENATE CHAMBER

TESTIMONY TO THE
SENATE TRANSPORTATION AND UTILITIES COMMITTEE

TUESDAY, FEBRUARY 6, 1996

BY

SENATOR NICK JORDAN

Thank you, Mr. Chairman, and Members of the Committee.

My interest today is the speed limits for urban areas. As I understand HB2602, speed limits along four-lane interstate highways would be 70 mph and 65 mph for two-lane highways. The Secretary of Transportation may establish lower speed limits on highways determined unsafe for 65 mph speeds.

Urban areas such as I-35 and I-435 through Johnson County are unique situations. These highways run through numerous municipalities. I am sure similar circumstances exist in Sedgwick and Wyandotte Counties. Not knowing what would prompt the Secretary of Transportation to establish lower speed limits, it seems possible the speed limits could be 70 mph or vary between municipalities.

Today, I would like to request that HB2602 be amended to establish a speed limit of 60 mph in urban areas.

Thank you for your consideration.

SENATE TRANSPORTATION
DATE: 2/6/96
ATTACHMENT: 2

DEE YOH
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TOPEKA

HOUSE OF
 REPRESENTATIVES

COMMITTEE ASSIGNMENTS
 GOVERNMENTAL ORGANIZATION AND ELECTIONS
 HEALTH AND HUMAN SERVICES
 JUDICIARY

February 6, 1996

Testimony, HB2602

Thank you for the opportunity to testify before you today. I am here representing a number of constituents from my area. They include Sheriff's Deputies, County Officials, City Officials, a Highway Contractor, and a number of members of the general public. After lengthy discussions, they decided rather than all come up here and subject you to lengthy testimony, they would agree to allow me to represent their positions.

It became evident there was not enough support to keep speed limits at 55 mph and therefore, we will move directly on to what we believe would make this bill better.

Why did the Larkin amendment fail in the House:

- *The Secretary was not required to evaluate roads within any certain time period. (Consider a specific date or time frame upon publication.)
- *Many Representatives did not realize the impact the current bill would have on county roads. Consider one-lane bridges, gravel, dirt, and poorly paved roads, in addition to the condition of the shoulder of these roads.

Why should this change in the bill be supported:

- *The Secretary will need to take affirmative action to raise speed limits. I believe more thought and consideration will be taken into consideration when making decision to raise speed limits.
- *The process will be done over a period of time, and therefore, there will not be the same time pressure in posting new speed limit signs.
- *County roads would not be affected.

With regards to the buffer:

I served on the Transportation Committee during the interim and at every meeting heard sentiments that if we were going to raise the speed limit, we should strictly enforce it. According to the Highway Patrol, the current buffer on interstate highways is 5 mph, not 10. To raise the speed limit, and also raise the buffer directly defies this logic. If you chose to change the buffer back to 10 mph, please follow current law and raise it to 10 mph only on two-lane roads.

If we are to raise the speed limit on highways in Kansas, we need to do so in the most reasonable and prudent manner. I will be happy to stand for questions.

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KANSAS DEPARTMENT OF TRANSPORTATION

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Bill Graves
Governor of Kansas

**TESTIMONY BEFORE THE
SENATE COMMITTEE ON TRANSPORTATION & UTILITIES
Regarding H. B. 2602 As Amended
Establishing New Speed Limits for Kansas**

February 6, 1996

Mr. Chairman and Members of the Committee:

I appreciate the opportunity to testify before you today regarding H.B. 2602. This bill would respond to recent federal legislation by establishing new speed limits for Kansas.

The federal legislation that establishes the National Highway System also repeals the national maximum speed limit. As permitted by that legislation, Governor Graves has taken action to delay any change in Kansas' speed limits until sixty days after the state's legislative session convened, or March 8, 1996. If no statutory change is enacted before that date, Kansas' speed restrictions would revert to the limits that were in place in 1974, before the national speed limit was enacted.

The national speed limit was originally set to conserve energy. However, we later discovered that it had a safety benefit as well. Speed -- exceeding the posted limit or driving too fast for conditions -- is one of the most prevalent factors contributing to traffic crashes. Speed is a factor in 31 percent of all fatal crashes and the economic cost to society of speed-related crashes is \$24 billion each year. Crash severity increases based on the speed at impact. Speed extends the distance necessary to stop a vehicle and increases the distance a vehicle travels while a driver reacts to danger. The chances of death or serious injury double for every 10 mph over 50 mph a vehicle travels.

Despite these considerations, research shows that the 85th percentile speed (the speed at or below which 85 percent of free-flowing vehicles are traveling) does not change appreciably when the speed limit is raised or lowered. The 85th percentile speed is important as it represents the speed at which accident

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involvement is the lowest for a particular road. Speed limits based upon the 85th percentile speed result in the safest vehicle operation and appear reasonable to most drivers.

While the Department agrees that many Kansas highways can safely handle higher speed limits, we believe it is important to balance speed, safety, and economic considerations in establishing those limits. In earlier testimony before the House Committee on Transportation we recommended several changes in this bill which reflected the Governor's recommendations based on our discussions. A number of those recommendations have been amended into the bill that is before you today. Briefly, those recommendations were:

- **Set a maximum speed of 30 mph in any urban district, rather than 20 in business districts and 30 in residence districts.**
- **Set a maximum speed limit of 70 mph on any separated multi-lane highways, as designated and posted by the Secretary of Transportation, rather than 75.**
- **Set a maximum speed of 65 mph for all other routes on the State Highway System, but provide for discretion to post lower speeds as appropriate.**
- **Eliminate the differential between passenger vehicles and commercial vehicles.**

We strongly support these amendments.

In conclusion, since the critical March 8th date is fast approaching, we would respectfully ask you to move HB 2602, in its present form, out of committee as quickly as possible. Any additional amendments or changes you would like to consider could be handled in other related bills that are not subject to the March 8 deadline.

Kansas Highway Patrol
Summary of Testimony
1996 House Bill 2602
before the
Senate Transportation Committee
February 6, 1996

Good morning Mr. Chairman and members of the Committee. My name is Colonel Lonnie McCollum, Superintendent of the Kansas Highway Patrol, and I appear before you to comment on HB 2602 which amends maximum speed limits in Kansas.

The mission of the Patrol is to enforce traffic and state laws relating to vehicles, highways and drivers to enhance safety of citizens traveling on our states roadways. As a result, we are concerned about issues that may jeopardize Kansas motorists and feel safety must be foremost when establishing speed limits. Therefore, we offer the following comments regarding HB 2602.

The provisions of the bill that establish a speed limit of 70 m.p.h. on the interstate system are reasonable. Our interstate system is designed to safely handle this speed. Additionally, a 5 m.p.h. increase would require only small changes in existing driving skills.

The proposed limit of 65 m.p.h. on other roadways is acceptable in most cases. Most improved two lane highways are designed to safely support these speeds. The provisions of the bill allowing the secretary of transportation to alter limits will provide flexibility in situations where slower speeds are necessary.

The house amendment that removed lower speed limits for trucks was a sound decision. The lower limits create potentially hazardous situations, especially on two lane roadways. Uniform speed limits help reduce the potential for these problems.

Additionally, the 5 m.p.h. exemption in which violations do not count against driving records is acceptable. This "buffer" zone allows for reasonable variances in speed caused by driver and speedometer error. It also sends a clear message that close compliance with established speed limits is essential. A larger buffer zone would only convey the perception that it is acceptable to exceed established limits.

It is with these thoughts in mind we ask for your favorable consideration of HB 2602.

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NATIONAL MOTORISTS ASSOCIATION

- I. Premise: Speed limits are intended to inform drivers of the maximum reasonable and safe travel speed.**
- A. A fixed speed limit set by political compromise cannot accomplish the above intent.
 - B. Speed limits set by engineering studies enjoy the highest compliance rate.
 - C. Ninety-five percent of all drivers travel at or below speeds that are reasonable and safe.
 - 1. Accident rates are lowest for drivers that travel in the 30 to 95th percentile speed.
 - 2. Accident rates are highest for the slowest 5% of drivers.
 - 3. Accident rates increase for the fastest 5% of drivers.
 - D. The House of Representatives bill would set some speed limits too high and some too low.
 - 1. The 5 m.p.h. insurance waiver is a tacit admission that 70 m.p.h. on divided four-lane roads is too slow. It says to our citizens that it is acceptable for the State to fine them for being reasonable, but not acceptable for insurance companies to do the same thing to them.
 - E. The legislature should direct the appropriate department to set the speed limit for the various roads in Kansas at the 5 m.p.h. increment at or just above the 85th percentile speed.

- II. Background: The above is based mainly on studies made by the Traffic safety Research Division of the Federal Highway Administration (abstracts attached, full copies available).**

III. Other problems with the House of Representatives bill:

- A. It does not make sense to raise limits on the safest roads half as much as on other roads.
 - 1. In 1994, 77% of fatal accidents occurred on two-lane roads, which carry just 51% of the vehicle miles traveled (2.03 deaths per 100 million miles*).
 - 2. Roads with four or more lanes have 13.8% of fatal accidents with 41.7% of vehicle miles traveled (.95 deaths per 100 million miles*).
- B. Improperly set speed limits foster non-compliance.
 - 1. In 1973 states with 75 m.p.h. rural interstate limits had 90%+ compliance. Seventy m.p.h. limits had about 80% compliance and 65 m.p.h. limits had 60% to 70% compliance.
 - 2. In 1994 New York's 55 m.p.h. limits had only 4% compliance.
 - 3. Raising or lowering speed limits up to 15 m.p.h. results in negligible changes in actual travel speeds.

IV. Solution and benefits:

- A. Adopt the Model Speed Zoning Law proposed by the National Motorists Association (copy attached).
- B. Safety will be enhanced.
 - 1. Accidents are reduced 3.5% where speed limits are changed to within 5 m.p.h. of the 85th percentile speed.
 - 2. Traffic flow will be smoother.
- C. Enforcement can focus on drivers who clearly are reckless or discourteous.
- D. Undeserved insurance surcharges will be reduced.
- E. Citizens will not resent the traffic laws, law enforcers, or lawmakers.

ATTACHMENTS:

- 1) "Effects of Raising and Lowering Speed Limit: Final Report" abstract.
- 2) "Comparison of Speed Zoning Procedures and Their Effectiveness" abstract.
- 3) "Driver Speed Behavior on U.S. Streets and Highways"
- 4) "Synthesis of Speed Zoning Practice" Technical Summary.
- 5) *Car and Driver* article on the above study.
- 6) Do Speed Limits Matter?" article by NMA President James J. Baxter.
- 7) Model Speed Zoning Law.

Presented by: Richard Morrison, NMA Representative
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* The Road Information Program

SENATE TRANSPORTATION
DATE: 2/4/96
ATTACHMENT: 4

Technical Report Documentation Page

1. Report No. FHWA-RD-92-084		2. Government Accession No.		3. Recipient's Catalog No.	
4. Title and Subtitle EFFECTS OF RAISING AND LOWERING SPEED LIMIT: FINAL REPORT				5. Report Date October 1992	
				6. Performing Organization Code	
7. Author(s) M. R. Parker, Jr.				8. Performing Organization Report No.	
9. Performing Organization Name and Address Martin R. Parker & Associates, Inc. 38549 Laurenwood Drive Wayne, Michigan 48184-1073				10. Work Unit No. (TRAIS)	
				11. Contract or Grant No. DTFH61-85-C-00136	
12. Sponsoring Agency Name and Address Office of Safety and Traffic Operations R&D Federal Highway Administration 6300 Georgetown Pike McLean, Virginia 22101-2296				13. Type of Report and Period Covered Final Report October 1985 - June 1992	
				14. Sponsoring Agency Code	
15. Supplementary Notes Contracting Officer's Technical Representative (COTR): Howard H. Bissell, HSR-30 Davey L. Warren, HSR-10					
16. Abstract <p>The objective of this research was to determine the effects of raising and lowering posted speed limits on driver behavior and accidents for non-limited access rural and urban highways. Speed and accident data were collected in 22 States at 100 sites before and after speed limits were altered. Before and after data were also collected simultaneously at comparison sites where speed limits were not changed to control for time trends. Repeated measurements were made at 14 sites to examine short- and long-term effects of speed limit changes.</p> <p>The results of the study indicate that lowering posted speed limits by as much as 20 mi/h (32 km/h), or raising speed limits by as much as 15 mi/h (24 km/h) had little effect on motorists' speeds. The majority of motorists did not drive 5 mi/h (8 km/h) above the posted speed limit when speed limits were raised, nor did they reduce their speed by 5 or 10 mi/h (8 or 16 km/h) when speed limits were lowered. Data collected at the study sites indicated that the majority of speed limits are posted below the average speed of traffic. Lowering speed limits below the 50th percentile does not reduce accidents, but does significantly increase driver violations of the speed limit. Conversely, raising the posted speed limits did not increase speeds or accidents.</p>					
17. Key Words 85th percentile speed, speed zoning criteria, accident analysis, driver compliance.			18. Distribution Statement No restrictions. This document is available through the National Technical Information Service. Springfield, Virginia 22161		
19. Security Classif. (of this report) Unclassified		20. Security Classif. (of this page) Unclassified		21. No. of Pages ::	

Technical Report Documentation Page

1. Report No.		2. Government Accession No.		3. Recipient's Catalog No.	
4. Title and Subtitle COMPARISON OF SPEED ZONING PROCEDURES AND THEIR EFFECTIVENESS				5. Report Date September 1992	
				6. Performing Organization Code	
7. Author(s) M.R. Parker, Jr.				8. Performing Organization Report No.	
9. Performing Organization Name and Address Martin R. Parker & Associates, Inc. 38549 Laurenwood Drive Wayne, Michigan 48184-1073				10. Work Unit No. (TRAIS)	
				11. Contract or Grant No. 89-1204	
12. Sponsoring Agency Name and Address Michigan Department, of Transportation P.O. Box 30050 Lansing, Michigan 48909				13. Type of Report and Period Covered Final Report Sept. 1989 - Sept. 1992	
				14. Sponsoring Agency Code	
15. Supplementary Notes Contract Manager: Kamel Boctor					
16. Abstract <p>This study was conducted to determine if including factors in addition to the 85th percentile speed could increase the effectiveness of the Michigan speed zoning procedure by improving safety and increasing driver compliance. The scope included a nationwide survey to identify current speed zoning methods, a before and after accident analysis of Michigan speed zones established on nonlimited access highways, and an assessment of the effects of methods used by selected states to set speed limits. In addition, the effects that time of day and location of the speed survey station have on the 85th percentile speed were examined on selected Michigan roadways.</p> <p>The analysis of accidents at 58 sites on nonlimited access highways revealed that the current Michigan speed zoning method reduced total accidents by 2.2 percent. Accidents were reduced by 3.5 percent at sites posted within 5 mi/h of the 85th percentile speed. Lowering speed limits more than 5 mi/h below the 85th percentile speed did not reduce accidents. An assessment of speed zoning methods revealed that the current Michigan method of setting speed limits within 5 mi/h of the 85th percentile speed was superior to the other methods examined in this study.</p> <p>Recommendations are offered to minimize time of day effects and data collection errors.</p>					
17. Key Words 85th Percentile Speed, Speed Zoning Criteria, Accident Analysis, Driver Compliance				18. Distribution Statement	
19. Security Classif. (of this report) Unclassified		20. Security Classif. (of this page) Unclassif		21. No. of Pages	22. Price

SENATE TRANSPORTATION
 DATE: 2/4/96
 ATTACHMENT: 4-3

Driver Speed Behavior on U.S. Streets and Highways

Samuel C. Tignor, Ph.D., and Davey Warren

Introduction

During the past five years, the Federal Highway Administration has sponsored a number of studies to establish a better understanding of travel speeds and speed limits on various types of roads. The study of the speed zoning problem was prompted in part by concern about widespread violations and the seemingly arbitrary level of many posted speeds.

Speed limits are intended to inform drivers of the maximum reasonable and safe travel speed. However, there is little agreement on what constitutes a safe speed. In a nationwide survey of current speed zoning practices, all states and most of the 44 localities reported using the 85th-percentile speed as the basic factor in setting speed limits. However, the posted speed is often set up to 10 mph lower than the prevailing speed based on a subjective consideration of other factors such as roadside development. The relative subjectivity of the speed zoning process points to the need to re-examine the criteria and procedures used in setting speed limits.

Properly established speed limits foster voluntary compliance and separate the occasional high-risk driver from the vast majority of drivers. On the other hand, speed limits which are set artificially low tend to be ignored and misallocate resources, apprehending and prosecuting motorists driving at safe speeds. Over time this could lead to a loss of respect for all speed limits and create the impression that traffic law enforcement and the judicial system are unfair. The same public when emotionally aroused demand and often get reduced speed limits by believing the lower limit will slow down traffic and reduce accidents.

Even though a great deal has been written and said about speed limits, there is almost no scientific research on the precise effects on the number of accidents of altering speed limits. Most traffic officials agree we should be working to improve our knowledge of the effects of speed limits and to develop criteria that are objective and scientifically sound.

This paper presents some preliminary results of our research on speed limits, speeds, and accident risk. The final results are not expected until early next year.

Data Collection

The basic data for the analysis described here consists of speeds from two separate studies. In one study, data were collected to determine speed characteristics and the reasonableness of speed limits on low and moderate speed roads in urban, small-urban, and rural built-up areas. Speeds were measured for a 24-hour period on 52 roads and streets in four states: Delaware, North Carolina, Colorado, and Arizona. The measurements were made with the IRD 1040 traffic statistics recorder connected to a pair of loop mats in each lane. The equipment stores the arrival time, lane, speed, and length of each vehicle. The sites were randomly selected from the Highway Performance Monitoring System using a stratified clustered sampling procedure to represent different road types and speed laws. Accident data were obtained for a three-year period and the relation between accident risk and travel speed in urban areas was determined using the estimated travel speed before the crash.

A second study is taking advantage of routine speed zoning changes made by the States to determine on a scientific basis the effects of altering speed limits on travel speed, accidents, and injury consequences. Speeds and headways were measured for a 24-hour period at 102 sites in 23 states before and one year after the change took place. The measurements were made using the Sarasoto VC1900 traffic classifier connected to a pair of portable loop mats in each lane. The data were collected in the free-flow mode which classified the speeds in 1-mph bins from 1 to 128. A four-second headway was used to define free vehicles. Data were simultaneously collected at another 102 sites on similar roads without any change in speed limit to control for time trends. The sites represent a full range of speed limits and road types including a few 65-mph freeways.

Supplemental measurements were made at some of the sites to investigate any spillover effects on surrounding roads.

Tignor is the chief of the Traffic Safety Research Division of the Federal Highway Administration, same facility. Charts and graphs are not reprinted. Reprinted by permission of the Institute of Transportation Engineers, Washington, DC. Originally published in ITE 1990 Compendium of Technical Papers.

Preliminary Results

Driver compliance with speed limits is poor. On average, 7 out of 10 motorists exceeded the posted speed in urban areas. Compliance ranged from 3 to 99 percent. Compliance tended to be worse on low-speed roads, better on roads with prima facie limits, or where the speed limit was based on an engineering study. Better does not mean good compliance; less than 10 percent on the sites had more than 50-percent obedience with the posted speed.

On many streets and highways the speed limit is set 8 to 12 mph below the prevailing 85th-percentile speed. The extreme case was a prevailing speed of 51 mph in a 30-mph zone. Truck speeds were consistently 3 mph slower than car speeds in urban areas. The factors that had the most influence on speeds were number of access points and commercial development.

The accident involvement rates on streets and highways in urban areas was highest for the slowest 5 percent of traffic, lowest for traffic in the 30-to-95-percentile range and increased for the fastest 5 percent of traffic. The relative involvement rate is a measure of the chance of being involved in an accident, and is a ratio of the percent of accidents in a given speed range to the percent of travel in the same speed range.

For each accident that occurred at a site, the speed of each vehicle involved in the accident was assigned to the appropriate percentile speed category for that site. All such data from each site were then combined and the relative risk computed. The risk curve for roads in built-up areas is consistent with the work of Solomon, Cirillo, and West, and Dunn which showed that the risk of involvement in accidents is minimum near the average speed of traffic and increases dramatically for vehicles traveling much slower or faster than average. The rate at which drivers experience overtakings follows a similar U-shaped relationship and provides a theoretical explanation for the shape of the speed-risk curve.

Many current speed limits coincide with 30-percentile speed, which is near the lower bound of safe travel speed. Speed limits should be set in the 70-to-90-percentile range or roughly 5 to 10 mph above the average speed to correctly reflect maximum safe speed. Speed limits are set in multiples of 5 mph; the 70-to-90-percentile range will almost always include a 5-mph multiple. Allowing a 5-mph tolerance, enforcement would then be targeted at drivers who are clearly at risk. If speed limits were raised to more realistic levels, would drivers automatically drive 5 to 10 mph over the new speed limit as is commonly believed? The answer is no. Raising the speed by various amounts up to 15 mph has little or no effect on speeds over a broad range of road types and speed levels.

Conversely, lowering the speed limit will not slow down traffic. Although speed increases of 3 mph and decreases of 3 mph were observed at individual sites, the expected change in speed is less than 1 mph, which is normal variation. In addition, there is no evidence in our studies that raising the speed limit to 65 on rural interstate freeways led to an increase in speeds off the freeway.

Conclusions

It would be premature to draw any firm conclusions since the research is still underway. However, the findings to date suggest that, on the average, current speed limits are set too low to be accepted as reasonable by the vast majority of drivers. Only about 1 in 10 speed zones has better than 50-percent compliance. The posted speeds make technical violators out of motorists driving at reasonable and safe speeds.

For the traffic law system to minimize accident risk, then speed limits need to be properly set to define maximum safe speed. Our studies show that most speed zones are posted 8 to 12 mph below the prevailing travel speed and 15 mph or more below the maximum safe speed. Increasing speed limits to more realistic levels will not result in higher speeds but would increase voluntary compliance and target enforcement at the occasional violator and high-risk driver.

One way for restoring the informational value of speed limits requires that we do a better job of engineering speed limits. Hopefully, the results of this research will provide engineers with the knowledge and tools needed to set maximum safe speed limits that are defensible and accepted by the public

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U.S. Department
of Transportation

Federal Highway
Administration

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TECHNICAL SUMMARY

SYNTHESIS OF SPEED ZONING PRACTICE

Report No. FHWA/RD-85/096

July 1985

Limit Should Reflect Traffic Speed

Introduction

Speed zoning is the establishment of reasonable and safe speed limits based on an engineering study. Speed zoning incorrectly used on streets and highways can lead to driver non-compliance with speed limits.

This study reviewed the principles and practices used to set speed limits. It is based mainly on a survey of traffic officials conducted by the American Association of State Highway and Transportation Officials (AASHTO) Subcommittee on Traffic Engineering. All States and 44 city and county agencies responded to the survey.

Results

Some of the problems found with current speed zoning practices include:

- o Lack of understanding and support for current speed zoning criteria.
- o Difficulty of using other factors such as road characteristics and accident experience in conjunction with prevailing speed.
- o Public pressure based on concern about past accidents.
- o Concealing radar and obtaining speed samples on low volume roads.

Traffic officials generally agree speed limits should reflect the speed of most drivers. All States and most of the local agencies use the 85th percentile speed of free flowing traffic as the basic factor. However, it is fairly common to reduce the speed limit based on a subjective consideration of other factors.

The main factors used in setting speed limits are shown in Table 1. The most commonly reported lower level of the speed limit is 5 mph below the 85th percentile speed with 10 mph below being the extreme.

Table 1. Main Factors Used to Set Speed Limits

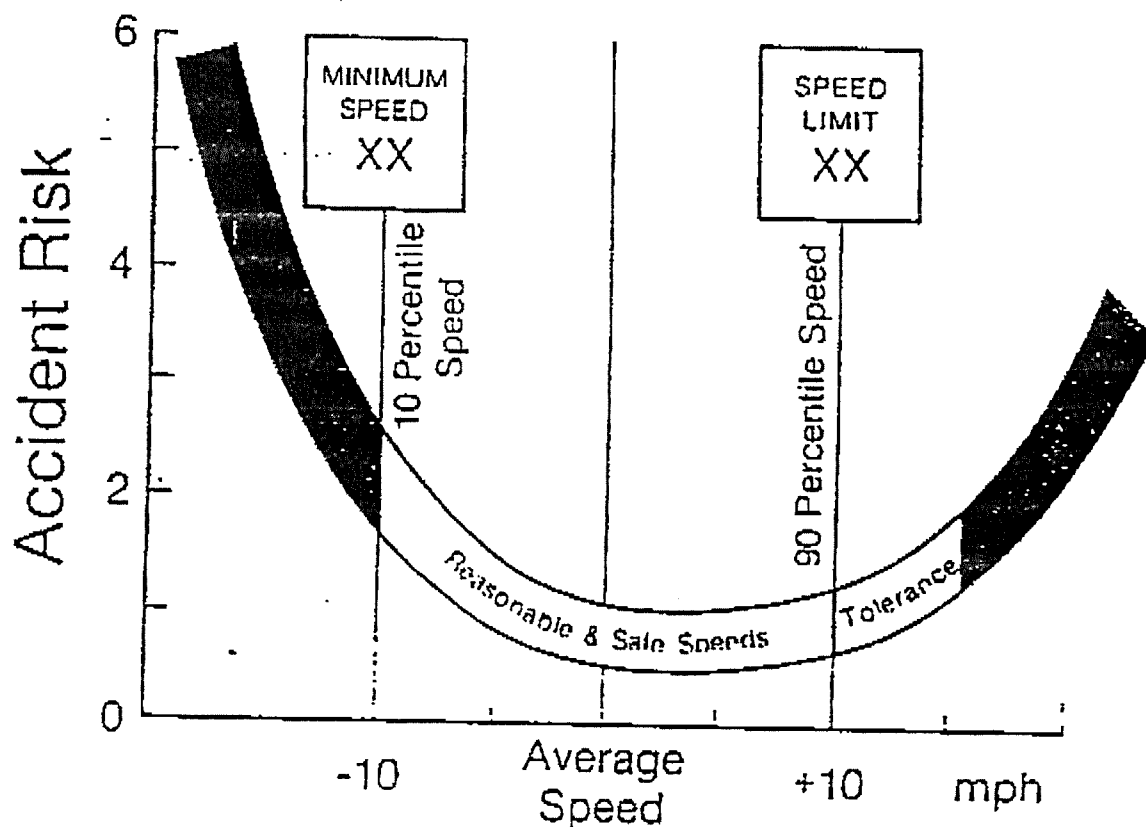
Factor	Percent of	
	States	Locals
85th percentile speed	100	86
Roadside development	85	77
Accident experience	79	81
Adjacent limits	71	45
10 mph pace	67	34
Roadway geometrics	67	57
Average test run speed	52	34
Pedestrian		

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Based on the best available evidence, the speed limit should be set at the speed driven by 85 to 90 percent of the free-moving vehicles rounded up to the next 5 mph increment. This method results in speed limits that are not only acceptable to a large majority of the motorists, but also fall within the speed range where accident risk is lowest (Figure 1). Allowing a 5 mph tolerance, enforcement would be targeted

at drivers who are clearly at risk.

No other factors need to be considered since they are reflected in the drivers' speed choice. If there are unusual hazards not readily apparent to drivers, then a warning sign could be installed giving the nature of the hazard and, if necessary, supplemented with a realistic advisory speed.



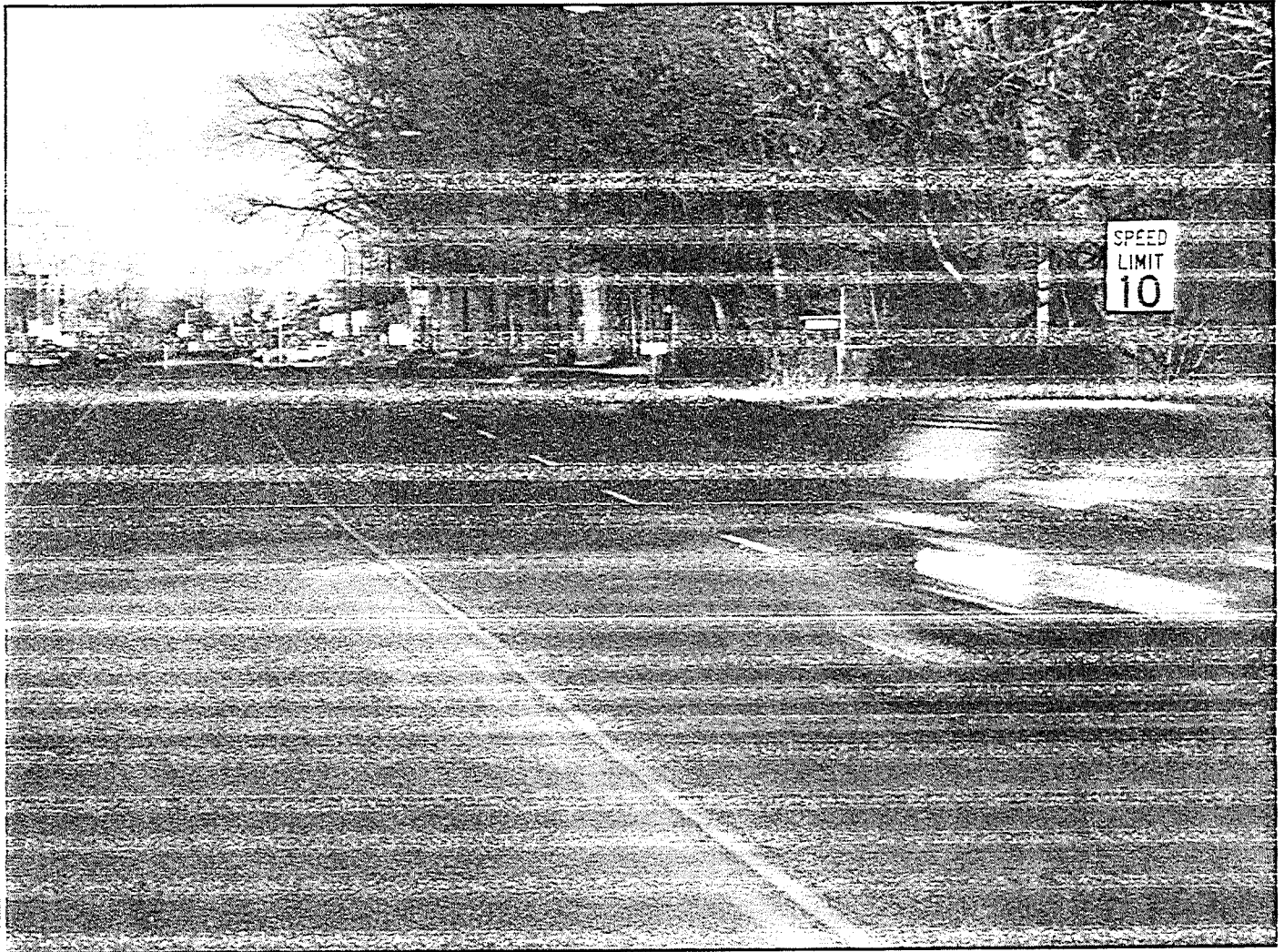
NOTICE

This technical summary is disseminated under the sponsorship of the Department of Transportation in the interest of information exchange. The summary provides a synopsis of the study's final report. The summary does not establish policies or regulations, nor does it imply FHWA endorsement of the study's conclusions or recommendations. The United States Government assumes no liability for the contents or their use.

This summary is distributed directly to Regions and Divisions. The final report for this study will be available in October 1987. Copies will be available only from the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161.

Report Number/Title: FHWA/RD-85/095. "Synthesis of Speed Zoning Practices," by Martin R. Parker & Associates, 44236 Suffolk Court, Canton, Michigan 48187-2129.

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DUCK KELLEY

Surprise, Surprise

Traffic engineers conduct a scientific study of speed limits and discover—my, my!—that they are being set unrealistically and intentionally low.

• If you regularly drive ten to fifteen miles an hour over the speed limit on freeways and surface streets, don't feel guilty—according to an engineering study, everyone does it.

A scientific survey by two Federal Highway Administration engineers supports what auto enthusiasts have been hollering about for decades: that American speed limits have been set artificially low.

The survey, *Driver Speed Behavior on U.S. Streets and Highways*, is the work of

Samuel C. Tignor and Davey Warren, both traffic research engineers with the FHA in McLean, Virginia. The FHA is not known for espousing the sort of radical findings that the two engineers ultimately set forth in their report.

The study was undertaken, they said, because of "concern about widespread [speeding] violations and the seemingly arbitrary level of many posted speeds." In short, the researchers wanted to know if speed limits were realistic, or if the nation's drivers had turned outlaw.

Two tests were conducted. The first recorded the speeds of motorists on "moderate speed" streets in "urban, small-urban and rural built-up areas," a description that seems to fit the old view of Middle America. The engineers set up measuring devices on 52 streets in four states—Delaware, North Carolina, Colorado, and Arizona—and monitored speeds for 24 hours. They also obtained data on accidents in those areas during three prior years in an attempt to learn if there was a relationship between acci-

dent risk and travel speed.

A second study measured the speeds of drivers on 102 streets and highways in 23 states where speed limits had been changed. Speeds were measured in these areas a year before the changes, and then a year afterward. At the same time, speeds on similar roads were checked at another 102 sites where posted speeds had remained unchanged.

"The sites represent a full range of speed limits and road types, including a few 65-mph freeways," the engineers said.

And guess what the study discovered? Almost everyone speeds, and apparently without creating havoc anywhere.

"Only about 1 in 10 speed zones has better than 50-percent compliance," they reported. In other words, the vast majority of drivers in this country do not accept these speed limits and are breaking the law.

Worse, "the posted speeds make technical violators out of motorists driving at reasonable and safe speeds."

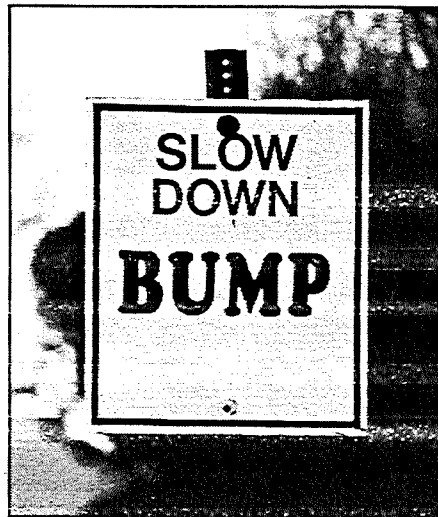
And that, Tignor and Warren conclude, "could lead to a loss of respect for all speed limits and create the impression that traffic law enforcement and the judicial system are unfair."

So why, then, have all these speed limits been set too low, and how did it happen?

Tignor and Wallace venture an explanation. Officials in all states and most localities, in deciding speed limits, have simply gone out and clocked the speeds of motorists traveling on the roads in question. They then determine what the "85th-percentile speed" is—the speed at or below which 85 percent of the traffic is moving—as the basic number in determining what the speed limit should be. What could be more democratic? It is the indicator of what the driving public considers the correct speed.

And then the monkey wrench is tossed into the formula. "The posted speed is often set up to 10 miles an hour lower than the prevailing speed based on a subjective consideration of other factors, such as roadside development."

The report doesn't mention the great array of "subjective considerations" that get tossed into this formula. They are also known in some circles as "social engineering"—the embracing of a well-intentioned popular belief, a notion that appears to serve the public good by being the right thing to do, but whose real-life benefits cannot, in most cases, be proved scientifically. For example, as Mr. Brimley declares on television, eating oatmeal is "the right thing to do" (which



also seems to somehow imply that your alternative choice will be akin to eating hog jowls).

The findings got scant attention in the national press. The report is reprinted in its entirety on page 93 of this issue. Here are its highlights:

- Speed limits are intended to inform drivers of the maximum reasonable and safe travel speed. However, there is little agreement on what constitutes a safe speed.
- Even though a great deal has been written and said about speed limits, there is almost no scientific research on the precise effects on the number of accidents of altering speed limits.
- Driver compliance with speed limits is poor. On average, 7 out of 10 motorists exceeded the posted speed in urban areas.
- Compliance tended to be worse on low-speed roads, better on roads with prima facie limits, or where the speed limit was based on an engineering study. Better does not mean good compliance; less than 10 percent of the sites had more than 50-percent obedience with the posted speed.
- The accident involvement rates on streets and highways in urban areas was highest for the slowest 5 percent of traffic, lowest for traffic in the 30-to-95 percentile range, and increased for the fastest 5 percent of traffic.
- The risk of involvement in accidents is minimum near the average speed of traffic and increases dramatically for vehicles traveling much slower or faster than average.
- Speed limits should be set in the

70-to-90-percentile range or roughly 5 to 10 mph above the average speed to correctly reflect maximum safe speed.

• If speed limits were raised to more realistic levels, would drivers automatically drive 5 to 10 mph over the new limit as is commonly believed? The answer is no. Raising the speed limit by various amounts up to 15 miles per hour has little or no effect on speeds over a broad range of road types and speed levels.

• Conversely, lowering the speed limit will not slow down traffic.

• There is no evidence in our studies that raising the speed limit to 65 on rural interstate freeways led to an increase in speeds off the freeway.

The researchers, who prepared this study for the 60th annual meeting of the Institute of Transportation Engineers ended by saying:

It would be premature to draw any firm conclusions since the research is still underway. However, the findings to date suggest that, on the average, current speed limits are set too low to be accepted as reasonable by the vast majority of drivers. Only about 1 in 10 speed zones has better than 50-percent compliance. The posted speeds make technical violators out of motorists driving at reasonable and safe speeds.

For the traffic law system to minimize accident risk, then speed limits need to be properly set to define maximum safe speeds. Our studies show that most speed zones are posted 8 to 12 mph below the prevailing travel speed and 15 mph or more below the maximum safe speed.

Increasing speed limits to more realistic levels will not result in higher speeds, but would increase voluntary compliance and target enforcement at the occasional violator and high-risk driver.

One way for restoring the informational value of speed limits requires that we do a better job of engineering speed limits. Hopefully, the results of this research will provide engineers with the knowledge and tools needed to set maximum safe speed limits that are defensible and accepted by the public and the courts. ●

Do Speed Limits Matter?

By James J. Baxter, President

The question, "Do speed limits matter?" hardly seems worthy of an answer. Insurance companies, police agencies, state transportation departments, and national safety organizations would have us believe that speed limits are a critical component of traffic regulation. Without those numbers on the signs and radar-wielding highway patrols, the entire system would self-destruct.

This belief is based on several dubious precepts, none of which have ever been proven or justified.

The most basic of these precepts is that motorists, in the absence of speed limits, will drive in a manner that ignores their own welfare and that of fellow highway users. That without speed limits, they would drive at reckless irresponsible speeds without concern for the consequences. Does that sound like you and the people you know?

Another piece of speed limit folklore is that posted speed limits, given reasonable enforcement, can dictate traffic speeds. By extension, it is implied that raising or lowering posted speed limits will change the speed of traffic in that area. This notion has been thoroughly disproved on several occasions but the myth persists.

"Speed Kills" and "Slow is Safe" are well-entrenched slogans that have no basis in fact. Repeated long enough and loud enough, these slogans have taken on the aura of "truths."

I know what you are thinking, "This guy is blowing smoke in my ear. He doesn't know what he's talking about." Stay with me for a bit longer and maybe I can change your mind, or at least bring about a little skepticism when one of those Public Service ads floats across your T.V. screen extolling the virtues of speed limits.

Let's first look at the premise that drivers will go berserk if they are not confined by speed limits.

Only one industrialized country officially allows unlimited speeds on portions of its public highways, Germany. Significant stretches of the Autobahn do not have speed limits. Yes, some vehicles travel at very high speeds, some in excess of 150 mph! But, the average speed for most vehicles is around 80 mph, about 10 mph faster than traffic in the U.S. on comparable highways. But, here's the clincher, the fatality rate on the German Autobahn is lower than the fatality rate on rural Interstates in the United States!

Lest you think this is the product of Teutonic discipline and training, keep in mind that a large portion of the traffic on German highways originates in several other countries. Despite the cultural and language differences, there is a common understanding of a few basic rules: pass on the left, yield the left lane to faster traffic, and pay attention to your driving. It really works well.

Do speed limits dictate travel speeds? Not much. Speed limits, backed up with intense enforcement, can retard traffic speeds, at least in the short term. However, the national 55 mph speed limit proved the folly of trying to use speed limits to slow traffic.

Let's clear up one major misconception: Speed limits do not regulate traffic speeds—never did and never will. Properly applied, speed limits should reflect the speed of the large (and safe) majority of vehicles using the highway. Keep in mind that millions upon millions of cars pound up and down our roads day in and day out, without having accidents. Except for a few vehicles, these cars are obviously traveling at speeds that are within reason. You say, "Aha, got you there. Those cars are

at reasonable speeds because they're being restrained by speed limits and the enforcement of those limits."

Let me tell you about the most recent and most exhaustive federal study on this very subject.

Over a five year period, researchers monitored motorist response to speed limits at 227 different locations around the United States. First, motorist speeds were measured at all the locations. Next, the speed limits were raised on some roads and lowered on others while yet others remained the same. The results? Speeds did not change. People continued to drive at speeds that they felt were comfortable and safe, just like you and I do.

This study also measured the relationship of speed limit changes and accident frequency. As you might expect, if speeds didn't change much, neither did accident rates. However, in those instances where speed limits were raised, there was a slight reduction in accidents. Could it be smoother traffic flow?

Is slower really safer? Not on our rural highways it isn't. Again, federal and state studies have repeatedly shown that the folks most likely to get in an accident are the ones driving at speeds significantly below the average speed of traffic. In fact, the safest motorists, in terms of avoiding accidents, are those who are driving 5 mph to 10 mph above the average speed of traffic.

You have probably seen those insurance company ads bemoaning the carnage and higher rates sure to follow, if speed limits are raised on rural highways. Do you know what percentage of all accidents occur on highways posted at 65 miles per hour? The answer is 2 percent. The insurance industry would have you believe that an increase of two miles per hour in traffic speeds (the in-

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limits were increased from 55 mph to 65 mph on rural Interstates), will set highway safety back at least a millennium and end civilization as we know it.

One of the most repeated and believed myths concerning speed limits goes like this, "You should keep the speed limit low because no matter where you set it, 'they' (whoever 'they' are) will always drive 10 miles over the limit." This is sheer nonsense, but it persists like the odor in a little kid's tennis shoes.

In 1973, when we had a 75 mph speed limit on the rural Interstates in 10 different states, there was 90 percent or better compliance with the speed limit in those states. The states that had 70 mph limits had around 80 percent compliance and the states with 65 mph speed limits had approximately 60 to 70 percent compliance. In 1994, New York measured motorist compliance with its 55 mph speed limit on rural Interstates. The result: 4 percent of the motorists were obeying the speed limit. Do you see a pattern here?

Whenever I'm confronted with the "they'll always drive 10 miles over" argument, I always ask, "If the speed limit were set at 100 mph would you then drive 110?"

If you've moved in my direction at all you might ask, "Do speed limits have any value at all?" Yes they do, but only if they're established in the right way for the right reasons.

The right reasons include informing the normally competent motorist about what is a safe and efficient speed for a given highway when there are good travel conditions. A second reason is to establish a speed limit that expedites smooth and harmonious traffic flow, in this instance, a target that most vehicles should try to emulate.

Multi-lane limited access highways can tolerate a great deal of speed

variance, as long as there is good lane discipline. Two-lane highways, at the other extreme, function best with uniform vehicle speeds. Properly set speed limits can accommodate these different circumstances.

Traffic engineers have repeatedly rediscovered that the best way to set speed limits is to measure the free-flowing speeds of traffic and determine the 85th percentile speed, which is the speed at which 85 percent of the vehicles are traveling at or below. With an 85th percentile speed limit, a 5 mph enforcement tolerance, and the unique phenomenon where faster traffic actually slows in the presence of reasonable speed limits, we will have 95 percent compliance with the speed limit. Compare those numbers with New York's 4 percent compliance.

DO SPEED LIMITS MATTER?
Yes they do. Today they generate millions of pointless traffic tickets and billions of dollars of undeserved insurance surcharges, disrupt traffic flow, increase congestion, and have created a siege mentality among those who frequently use our public highways.

It doesn't have to be this way. We can have rational traffic regulation, including appropriate speed limits, that will expedite traffic, improve safety, and focus enforcement efforts toward those motorists who clearly drive in a reckless or discourteous manner. All we have to do is demand that it be done. ☺

MODEL SPEED ZONING LAW

Statutory standards and requirements for establishing speed limits.

Purpose

Speed limits should represent the maximum safe and reasonable speed on a highway, during good traffic and road conditions, capable of being traveled by the normally competent vehicle operator in a typical motor vehicle. Traffic engineering studies have found that the best way to ascertain the appropriate speed limit is to survey the speeds of free flowing traffic. The speed at which 85% to 90% of the vehicles are traveling at, or below, has generally been determined to be a limit which minimizes accident risk and maximizes motorist compliance. It blends an optimum combination of efficiency, consensus, enforceability, and safety.

Current statutorily assigned speed limits are characteristically inflexible and based on general approximations or political considerations. The result is that speed limits have become largely irrelevant as a source of guidance to motorists and impractical as a threshold for enforcement purposes.

The speed zoning statute being proposed will overcome the failings and limitations evidenced by current state laws and practices. It provides a scientific basis to establish a uniform and flexible system of speed zoning that will result in safe, reasonable, and relevant speed limits. It allows for local road and traffic conditions and accommodates changing trends in vehicle speeds. It is further based on the knowledge that the vast majority of motorists are reasonable and responsible people who will comply with properly established speed limits.

MODEL SPEED ZONING LAW

(The following definitions are provided to aid in the understanding of this model legislation. They may or may not coincide with terms and definitions found in related state statutes.)

Statutory Speed Limits: Numerical speed limits that apply to various classes or categories of roads (e

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residential streets, primary arterials, etc.) in the absence of posted speed limits.

Posted Speed Limits: Numerical speed limits noted on signs, or other information displays, and placed along the road corridor to which they apply.

Prima Facie Speed Limits: Numerical speed limits (statutory and posted) that if exceeded justify enforcement action. However, if the accused motorist's actions can be proven to be safe, reasonable, and prudent for the prevailing conditions, the charge of "speeding" shall be dismissed by the court of jurisdiction.

Eighty-fifth Percentile Speed Limits: Numerical speed limits based on a scientific survey of free flowing vehicle speeds. The speed at which 85% of the vehicles are traveling at, or below, is the 85th percentile speed.

Speed Zoning: The process through which proper speed limits are determined and applied.

Speed Zoning Standards

Statutory speed limits shall be determined through valid speed surveys for each road classification. The speed limits shall be set by administrative rule at the 85% percentile speed rounded to the next highest 5 mph increment.

Road classifications for which separate statutory speed limits are to be determined shall include:

- Limited access, divided highway
- Rural highway, uncontrolled access
- Urban arterial
- Residential

Posted speed limits shall be based on 85th percentile speeds as determined by uniform traffic engineering surveys.

Posted speed limits shall deviate from statutory speed limits only if the observed and measured 85th percentile speed differs from the statutory limit for that road classification.

The survey of free flowing speeds by road classification

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shall be carried out by the Department of Transportation (or equivalent agency). Statutory speed limits shall be administratively adjusted to reflect the 85th percentile speed for each road classification, rounded to the next highest 5 mph increment, no less than once every ten years.

Speed Zoning Procedure

On a five year minimum interval, each road classification shall be surveyed, using scientific sampling procedures, to determine the 85th percentile speed representative of that road classification. Each survey shall be conducted during clear weather, on straight sections of dry road, absent construction, maintenance, or visible enforcement activity.

Speed measurement should be done in an unobtrusive, undetectable manner, so as to obtain a sample of normal traffic speeds. If a daytime/nighttime speed limit differential is believed warranted, speed surveys should be conducted during both time periods.

If separate speed limits are believed warranted for large trucks or other vehicle classifications, these vehicles should be the subject of a separate speed survey to determine their 85th percentile speed and subsequent speed limit.

Judicial Standards

The adjudication of speeding violations shall be based on the following standards as related to statutory and posted speed limits.

- Vehicle operator may be charged with excessive speeding regardless of the numerical limit if, in the judgement of the arresting officer, the vehicle was being operated at speeds in excess of those prudent for prevailing conditions.

The burden of proof is on the officer to document the conditions that required reduced speeds as well as the defendant's failure to drive at speeds that reflected those conditions.

- Exceeding statutory or posted speed limits is prima facie evidence of illegal speeding. Evidenc

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defendant's behalf, that proves to the court the defendant was not driving in an unsafe or irresponsible manner, shall be considered a valid defense to justify dismissal of the speeding charge.

— It shall be an absolute defense in any trial for speeding in excess of a posted or statutory speed limit if the defendant was not exceeding the 85th percentile speed as determined by a valid speed survey for the subject road.

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SENATE TRANSPORTATION COMMITTEE TESTIMONY

TO: Senator Ben Vidricksen, Chairman of the Senate Transportation Committee and Honorable Committee Members

FROM: Darryl C. Lutz, Butler County Engineer

DATE: February 6, 1996

RE: H.B. 2602 as amended by the House Transportation Committee

Thank your for the opportunity to appear before the Senate Transportation and Utilities Committee.

As the County Engineer for Butler County, I have serious concerns with the present wording in H.B. 2602 which would statutorily designate a maximum speed limit of 65 mph on "all other highways" as proposed for paragraph (3), subsection (a), K.S.A. 8-1558. In consideration of the nature and typical use of roads under local jurisdiction, I would recommend adding an additional paragraph to this bill that would set the maximum speed limit on County and Township roads at the current 55 mph. In consideration of local units of government desiring to set higher speed limits on local roads, additional wording could be added to the bill allowing speed limits over 55 mph, but not to exceed 65 mph, on local roads based on an engineering and traffic investigation. The following items are principal concerns:

Of the 417 miles of County maintained roads in Butler County, most of these do not meet current engineering standards for stopping sight distance or for shoulder widths for 65 mph design speeds. Additionally, most of the local roads built over the last 20 years on the county road system have been designed for 55 mph speeds.

Of the approximately 1700 miles of gravel and dirt roads maintained by the 29 Townships in Butler County, none are constructed for nor are maintained for 65 mph speeds.

Most Butler County maintained roads are capable of safely carrying traffic at 55 mph and are, therefore, not currently posted for speed except for a few sections of road with restricted speeds less than 55 mph.

Setting a maximum speed limit of 65 on two lane roads would require most of Butler County's local roads to be posted for reduced speed. Posting of local roads would cost taxpayers of Butler County and of Kansas as much as \$300 to \$600 or more

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per mile of road requiring posting in order to perform the necessary engineering and traffic investigations, to purchase and install speed limit signs and to modify current passing zones. Most of the 417 miles of County roads and all of the 1700 miles of Township roads would require posting for reduced speeds.

This bill allows only 15 days from the date of signing to go into affect, thus, exposing local governments to significant liability issues. If passed, the bill at a minimum should allow the same liability indemnification period as allowed for the Secretary which is until July 1. The period of time from the effective date to July 1, however, does not even allow adequate time to perform the necessary investigations, to prepare and let contracts, to order and install signs and to re-stripe passing zones. The result will be a significant liability exposure to tort claims for all local units of government during a transition period.

Most local units of government have not budgeted for nor have planned for such a major expense. Local government budgets and mill levies were set during the Summer of 1995. Additionally, the cost for most Townships in Butler County would consume their total annual budgets resulting in their roads never being posted. Townships, therefore, would have significant additional liability.

The Board of County Commissioners of Butler County by consensus concurs with and supports the above position. Additionally, the Board expresses a real concern that this bill is yet another mandate that places significant additional unfunded costs on local units of government whose budgets have already been set and who in many cases are under a statutorily imposed tax lid. The Board further expresses concerns with regard to public safety and governmental liability as most of Butler County's local roads are not designed for 65 mph speed limits.

All of the above concerns can be addressed by setting a statutory maximum speed limit of 55 mph on local roads and allow for a higher speed limit of up to 65 mph based on an engineering and traffic investigation. Additionally, local units of government should be included with the Secretary of Transportation for any indemnification period allowed under this bill. This type of legislation would allow Butler County and, I suspect, most other local governments the necessary time required to perform required investigations, to budget money for, and to re-sign and re-stripe the few miles of local roads that warrant increasing the present speed limit of 55 mph. I thank this committee for hearing and considering these concerns.

Respectfully submitted,

Darryl C. Lutz, P.E.

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Senate Transportation and Utilities Committee

House Bill 2602

Testimony of Commissioner Bill Hancock
Sedgwick County Commissioner, District Two

February 6, 1996

Chair Vidricksen and members of the Committee, I am Commissioner Bill Hancock. Thank you for this opportunity to comment on House Bill 2602. I am speaking on behalf of the Sedgwick County Commission.

The Sedgwick County Commission supports HB 2602 but recognizes that some provisions of the bill will put certain hardships on Sedgwick County. However, with only slight modifications, Sedgwick County will be able to accommodate the provisions without significant difficulty.

Section 5, (a), (1): Sedgwick County does not have a clear understanding of the definition of "urban district". Traditionally, the speed limits have been set at 20 miles per hour in business districts and 30 miles per hour in residential districts.

Section 5, (a), (2) states that separated multilane highways as designated by the Secretary of Transportation may have a maximum speed limit of 70 miles per hour and subsection (3) states that "all other highways, 65 miles per hour". Coupled with Section 5, (e), this would require Sedgwick County to mark all county highways and roads, including unpaved roads, in order to limit the maximum speed below 65 miles per hour in no more than 15 days, and that, only after an engineering study substantiates the necessity. We respectfully ask that all County and Township roads, including unpaved roads remain at 55 miles per hour until engineering studies can demonstrate the safety of such roads at the maximum 65 miles per

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hour. In the event it is the intention of the legislature to have travel set at 65 miles per hour on all county roads, including unpaved roads, we respectfully request that county governments be given the same effective date as the Secretary of Transportation of July 1, 1996.

Section 5, (c), provides that "The Secretary of Transportation shall not be liable for any damage or loss, asserted to have been sustained between the effective date of this act and July 1, 1996, based on a claim of failure to post any speed limit, or to erect signs or place markings in relation to any speed limit established by this act". Sedgwick County feels that 15 days is not enough to provide signs or prepare for the change in speed limits and limit the potential liability created by the need for new signs or markings. We would respectfully ask that counties be accorded the same protections as the Secretary of Transportation and be held harmless until July 1, 1996.

If the bill remains as proposed, speed signs and markings will be necessary on highways and roads to limit the speed to what engineering studies find to be a safe limit. The county engineer estimates the cost to be \$407.00 per mile. Sedgwick County and its 27 Townships have approximately 1,350 miles of unpaved roads. We estimate the minimum cost of over \$500,000 to sign these roads lowering the speed limit below 65 miles per hour should engineering studies prove such action is warranted.

In closing, I want to thank the Committee for taking the time to hear our concerns. And, of course Sedgwick County stands ready with the greatest cooperation possible to make any changes necessary to our driving laws as approved by the legislature.

Thank you.

SENATE TRANSPORTATION
DATE: 2/6/96
ATTACHMENT: 8-2

Testimony

to the

Kansas Senate Transportation Committee

concerning

HB 2602 - raising speed limits

on

Tuesday, February 6, 1996 9:00 AM

by

Kelly Wendeln, Chanute, Kansas

SENATE TRANSPORTATION
DATE: 2/4/96
ATTACHMENT: 9

Congress Returns Power

The federal government has finally gotten out of the speed limit business, something I have long advocated, and returned that power to where it rightfully belongs, to you, the state legislators.

Proponents of 55

I have known of actual cases where people claimed being in favor of the 55 speed limit, but friends have known them to speed. I think these people are called hypocrites.

Prior Speed Limit

Did you know that prior to February 11, 1957, the speed limit on Kansas highways was just like Montana's, reasonable and prudent? I will not advocate any particular speed limit. That job is yours. I do have some ideas you should consider.

The 85th Percentile Method

Back in the 1930's or 40's, a Chicago professor came up with the idea that about 85 percent of the people drive at a reasonable speed. They would clock drivers and if 85 percent drove at say 80 miles per hour or less, they would subtract 5 mph and set the speed limit at 75mph. This 85th Percentile method worked pretty good and was widely used until the 55 speed limit messed everything up.

Kansas Highway Patrol Ticket Policy

Something I have never heard discussed is the Kansas Highway Patrol's policy change. Before 55, it was the policy of the KHP to start writing tickets at 10 mph over the speed limit. When 55 was passed, KHP's policy changed to writing tickets at 6mph over the speed limit. So even if you return our highways to the speed limits of 22 years ago, the effective speed that you can drive without getting a ticket is 4 mph slower than it used to be.

SENATE TRANSPORTATION
DATE: 2/2/96
ATTACHMENT: 9-2

February 5, 1996

Senate Transportation & Utilities Committee
State Capitol, Room 254 E
Topeka, KS 66612

Regarding: H.B. 2602

Dear Committee Members,

On behalf of the Johnson County Bicycle Club, thank you for this opportunity to appear in the Committee hearings for House Bill 2602 and address the clubs concerns regarding the raising of speed limits, particularly on two lane highways, in Kansas. I appear today as a representative of a bicycle club which has, for over 25 years, promoted the safe use of bicycles for recreational and utilitarian purposes.

The number of bicyclists utilizing the roadways is steadily increasing. Our members and thousands of other bicyclists in Johnson County routinely utilize the two lane highways in and around Douglas, Franklin, Johnson, Leavenworth, Miami, Shawnee, Wyandotte Counties and other counties. Some of the highways frequently used in our area are US 56, US 24, US 40, K 68, K 33, K 32, K 7, K 5, and portions of K 10 and US 59. Other cyclists throughout the state accordingly use the highway system in their locale. In some rural areas, the highways constitute most of the, if not the only, paved roads suitable for cycling.

Even though bicycles have always been a legal mode of transportation on Kansas highways, very few highways and roads in Kansas have been designed with consideration given to the physical and safety needs of bicyclists. Raising the speed limit will greatly increase the reaction time needed for motorists and bicyclists to effectively share the road and increase the likelihood of disastrous accidents for both bicyclist and motorist. Our club's recommendation is to evaluate each highway with consideration given to the safety of bicyclists before raising the speed limit. Some highways with fully paved shoulders and partial width rumble strips may safely handle motorists and bicyclists with 65 miles per hour speed limits. However, very few highways are built to this standard. Consequently, we are opposed to raising the speed limit on most Kansas' two lane highways until improvements are completed to safely accommodate bicyclists and motorists.

The Kansas Department of Transportation has recently produced the informative "Kansas Bicycling Guide" to assist bicyclists and cycling tourists in their two-wheeled travels across Kansas. All of the routes designated on the guide are on two lane highways which may be affected by the change in speed limit. Increasing the speed limit on these roads will only make it more dangerous for tourists from out of state, as well as from Kansas, to enjoy the beauty of our state and unique experiences that traveling by bicycle can offer.

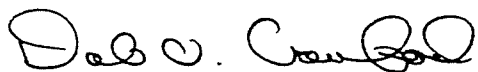
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Additional concern arises from the tendency for law enforcement agencies to allow motorists to travel 5 to 10 miles per hour in excess of the posted speed limit on highways. In fact it is the Club's understanding the current H.B. 2602 encourages speeds of 10 miles per hour over the speed limit by minimizing the fine issued by the Kansas Highway Patrol to only one dollar per mile. Tickets less than 10 miles per hour over the speed limit will not be reported to insurance companies, again, encouraging speeding. If this trend continues, the acceptable speed on two lane highways may be as high as 75 miles per hour. This would be an extremely dangerous situation for bicyclists and all highway users.

I know the safety of all Kansas residents and its tourists on the highway system will be foremost on your minds in making these decisions regarding speed limits. Please understand the Johnson County Bicycle Club is not opposed to the raising of speed limits. We do believe there is a proper time for change. The Johnson County Bicycle Club would greatly appreciate your support for keeping the speed limit on two lane highways at 55 miles per hour until such time that adequate safety improvements for all users of the highway system can be implemented.

I would like to thank this Committee for the opportunity to be involved in the deliberations on H.B. 2602 regarding raising the speed limits on two lane highways in Kansas.

Sincerely,



Dale V. Crawford
Board of Directors
Johnson County Bicycle Club

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