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Testimony of Representative Chenette
L.D. ~~611~~ 654, An Act To Raise the Speed Limit on Interstate 295
Before the Joint Standing Committee Transportation

Sen. Mazurek, Rep. Theriault, and honorable members of the Transportation Committee. I'm Rep. Justin Chenette of Saco and I am here today to speak in support of LD 654 An Act To Raise the Speed Limit on Interstate 295.

Unlike the title, this bill does not raise the speed limit directly. In fact, if this bill passes nothing will change in terms of how fast or slow you go on the Interstate. This bill does one simple thing; it grants the authority to the Transportation Commissioner to raise the speed limit to up 75 mph on the Interstate.

I would like to suggest an amendment that this be for the entire length of the Interstate rather than just simply one section after speaking with a representative of the Department of Transportation. The Commissioner could then determine through thorough analysis and study if any part(s) of our Interstate system could implement higher speeds. I am amenable to lowering it 70 mph much like other states, but keep in mind the legislative intent would be to allow the Commissioner up to 75 mph. While there is not a fiscal note right now, I don't expect there to be one initially as no speed limit would be changed enacting this legislation. If the Commissioner, who is an engineer, along with his team deems a stretch of highway safe and plausible for raising the speed limit, then and only then would there be a fiscal note in changing speed limit signs and the like.

A number of factors would go into determining raising or lowering a speed; such as how congested an area is, the number of on-ramps, painted lines or guard rails, and the like. The intent isn't to simply hand over power to the Commissioner and set and it forget it. There will not be arbitrary speed increases without proper vetting. This committee still has oversight of the DOT and I would hope that decisions made regarding this topic would continue to fall under your jurisdiction for accountability purposes.

It is important to point out what other states are doing on this very issue including one bordering neighbor. According to the Insurance Institute for Highway Safety, there are about 35 states with a maximum speed limit of 70 mph like that of West Virginia, Indiana, Michigan and Kentucky, about 13 states with a limit of 75 mph, and even two states in the 80 to 85 range. The below chart details what other states speed limits are including a breakdown between the rural portions of their state's Interstate system and more congested urban areas.

State	Rural interstates (mph)	Urban interstates (mph)	Other limited-access roads (mph)	Other roads (mph)
Alabama	70	65	65	65
Alaska	65	55	65	55
Arizona	75	65	65	65 trucks: 65
Arkansas	70; trucks: 65	55	60[1]	55
California	70; trucks: 55	65 trucks: 55	70 trucks: 55	65 trucks: 55
Colorado	75	65	65	65
Connecticut	65	55	65	55
Delaware	65	55	65	55
District of Columbia	n/a	55	n/a	25
Florida	70	65	70	65
Georgia	70	65	65	65
Hawaii	60[2]	60[2]	55[2]	45[2]
Idaho	75; trucks: 65	75	65	65
Illinois	65	55	65	55
Indiana	70; trucks: 65	55	60	55
Iowa	70	55	70	55
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Kentucky	65; 70 on specified segments of road[3]	65	65	55
Louisiana	75	70	70	65
Maine	75	65	65	60
Maryland	65	65	65	55
Massachusetts	65	65	65	55
Michigan	70 (trucks 60); <70 (trucks 55)	65	70	55
Minnesota	70	65	65	55
Mississippi	70	70	70	65
Missouri	70	60	70	65
Montana	75; trucks: 65	65	day: 70; night: 65	day: 70; night: 65
Nebraska	75	65	65	60
Nevada	75	65	70	70
New Hampshire	65	65	55	55
New Jersey	65	55	65	55
New Mexico	75	75	65	55
New York	65	65	65	55
North Carolina	70	70	70	55
North Dakota	75	75	70	65
Ohio	65; 70 on Ohio Turnpike	65	55	55
Oklahoma	75	70	70	70
Oregon	65; trucks: 55	55	55	55
Pennsylvania	65	55	65	55
Rhode Island	65	55	55	55
South Carolina	70	70	60	55
South Dakota	75	75	70	70
Tennessee	70	70	70	65
Texas	75; 80 or 85 on specified segment of road[4]	75	75	75
Utah	75; 80 on specified segments of road[5]	65	75	65
Vermont	65	55	50	50
Virginia	70[6]	70[6]	65	55
Washington	70; trucks: 60	60	60	60
West Virginia	70	55	65	55
Wisconsin	65	65	65	55
Wyoming	75	60	65	65

The New Hampshire House of Representatives voted on Wednesday in favor of increasing speed limits on certain parts of their Interstate system on I-93 from 65 mph to 70 mph. The bill awaits approval in the Senate.

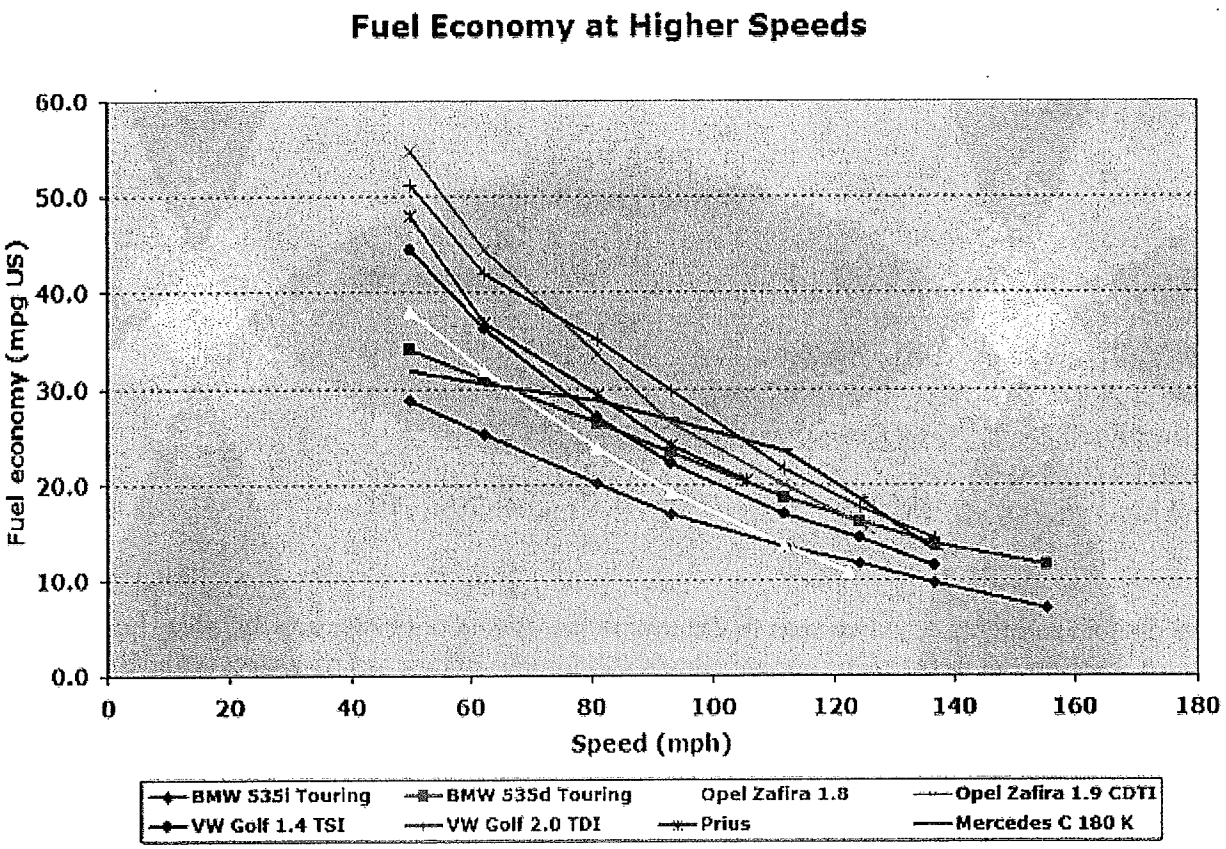
The Ohio legislature is considering similar legislation this month to increase speed limits on their Interstate from 65 mph to 70 mph while congested areas would remain at the lower speed of 55 mph much like Portland would be for us. According to the AAA, the number of fatalities dropped on the Ohio Turnpike when it was raised two years about from 65 mph to 70 mph.

Which leads to an interesting point; could raising the speed limit actual help to save lives? This would surely be an interesting argument as it would be common thought to think that the higher speed you go the more dangerous it is. You will see in the additional handout a 1992 final report from an independent research company in Virginia for the Federal Highway Administration and the U.S. Department of Transportation that conducted research across 22 states including both rural and urban highways to see driver behavior.

Turner-Fairbank Highway Research Center found that accidents at 58 experimental sites where speed limits were lowered increased by 5.4 percent. Accidents at 41 experimental sites where speed limits were raised decreased by 6.7 percent. A number of researchers in the study noted the potential for being involved in an accident is highest when traveling at speeds much lower or much higher than the majority of motorists rather than simply a higher speed limit.

One thing that Iowa did after raising their speed limit to 70 mph was to triple the fines for speeding offenses to avoid excessive speeding on top of that raised rate. This is something I would wholeheartedly support.

Another argument against this has to do with the fuel efficiency of a particular vehicle at lower speeds versus higher speeds.



Caption: Photo from German weekly Auto Bild via Greencarcongress.com

Studies have consistently shown that yes in fact the higher speed you go the less fuel economy you have. I would argue that by setting a speed limit you are merely setting the maximum speed one could choose to go. The minimum speed is also there. Setting the minimum speed limit in conjunction with any speed limit increase could be something additional to take a look, but the key is right now people can choose to go 45 instead of 65 for instance. That choice will still be there for those that make fuel efficiency an important factor in their everyday driving.

In the last session the youngest legislator introduced legislation to raise a portion of the Interstate between Old Town and Houlton to 75 mph as you see attached. It passed. Must be keeping up with that tradition with this bill. Safety should and will remain a number one concern, hence why I am only asking for the option to raise the speed limit not to arbitrarily raise it. I want to ensure no matter which stretch of road called into question, that it doesn't pose an additional safety hazards for our drivers going to and from work.

I would urge this committee to give LD 654 all due consideration of possible passage.
Thank you for your time.

Effects of Raising and Lowering Speed Limits

Final Report
(Abstract and Finding)

Report No. FHWA-RD-92-084 **October 1992**

U.S. Department of Transportation
Research, Development, and Technology
Turner-Fairbank Highway Research Center
6300 Georgetown Pike
McLean, Virginia 22101-2296

The objectives 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 the time trends. Repeated measurements were made at 14 sites to examine short - and long-term effects of speed limit changes.
The results of the study indicated 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 motorist' speed. The majority of motorist did not drive 5 mi/h (8 km/h) above the posted speed limits 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 are lowered. Data collected at the study sites indicated that the majority of speed limits are posed 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.

Introduction

This study was conducted to examine driver behavior and accident effects of raising and lowering posted speed limits on nonlimited access rural and urban highways. While much research in recent years has focused on the effects of the 55 and 65 mi/h (89 and 105 km/h) speed limits on limited access facilities, the major emphasis of this research is on streets and highways that were posted between 20 and 55 mi/h (32 and 89 km/h)
A maximum speed limit is posted or set by statute on a highway to inform motorists of the highest speed considered to be safe and reasonable under favorable road, traffic, and weather conditions.

A review of early vehicles speed legislation in the United States suggests that regulations were established to improve public safety. The rational for government regulation of speed is based on the fact that unreasonable speed may cause damage and injury. Speed laws also provide a basis for punishing the unreasonable behavior of an individual driver.

Every State has a basic speed statute requiring drivers to operate their vehicles at a speed that is reasonable and prudent under existing conditions. This law recognizes that the maximum safe speed varies due to traffic, roadway, weather, light and other conditions, and places the responsibility of selecting a safe and reasonable speed on the driver.

The majority of motorists select a speed to reach their destination in the shortest time possible and to avoid endangering themselves, others, and their property. In selecting their speed, motorist consider roadway, traffic, weather, and other conditions. The collective judgment of the majority of motorists represents the level of reasonable travel and acceptable risk. Prior research has shown that the upper region of acceptable risk is in the vicinity of the 85th percentile speed.

Most traffic engineers believe that speed limits should be posted to reflect the maximum speed considered to be safe and reasonable by the majority of drivers using the roadway under favorable conditions. Procedures used to set speed limits have evolved through years of experience and research. Most States and localities set safe and reasonable maximum speed limits based on the results of an engineering and traffic investigation. While all States and most jurisdictions use the 85th percentile speed as a major factor in selecting the appropriate speed limit for a given street or highway, other factors such as roadside development, accident experience, and design speed are often subjectively considered.

The lack of consensus on how to establish safe and reasonable speed limits has led to nonuniform limits. While newspapers and scientific articles dating to the early 1900's discuss the problem and need for uniform limits, engineers such as Bearwald, in 1964, criticized traffic engineers for using nonuniform limits in both rural and urban areas and called for the establishment of speed zones of a factual and scientific basis as opposed to opinion and political expediency. Bearwald's suggestion apparently received little attention. For example, Harkey recently examined speed limits in rural and urban areas in four States and found that speed limits were set from 6 to 14 mi/h (10 to 23 km.h) below the 85th percentile speed. One primary reason for setting speed limits lower than speed considered safe and reasonable by the majority of motorists is based on the belief that lower speed limits reduced seeds and accidents. Also it has been frequently suggested that most motorists drive 5 to 10 mi/h (8 to 16 km/h) over the posted speed limit, so lower limits should be established to account for this condition.

Conversely, it is believed that raising the speed limit increases speeds and accidents. For example, following a severe accident, one of the most frequent requests made to highway jurisdictions is to lower the speed limit. These requests are founded on public knowledge that accident severity increases with increasing vehicle speed because in a collision, the amount of

kinetic energy dissipated is proportional to the square of the velocity. Simply stated, when a vehicle is involved in a crash the higher the vehicle speed, the greater the chance of being seriously injured or killed. However, as noted by a number of researchers, the potential for being involved in an accident is highest when traveling at speed much lower or much higher than the majority of motorists.

Arbitrary, unrealistic and nonuniform speed limits have created a socially acceptable disregard for speed limits. Unrealistic limits increase accident risks for persons who attempt to comply with limit by driving slower or faster than the majority of road users, Unreasonably low limits significantly decrease driver compliance and give road users such as person not familiar with the road and pedestrians, a false indication of actual traffic speeds.
Unrealistically high speed limits increase accident risk for drivers who are inexperienced or who disregard the basic speed law. Unrealistic limits also place enforcement officials and judges in the position of subjectively selecting and punishing violators. This practice can result in punishing average drivers, as well as high-risk violators.

For years, traffic engineering texts have supported the conclusion that motorists ignore unreasonable speed limits. Both formal research and informal operational observations conducted for many years indicate that there is very little change in the mean or 85th percentile speed as the result of raising or lowering the posted limit. Very few accident studies have been conducted to determine the safety effects or altering posted speed limits.

Highway administrators, enforcement officials, the judiciary system, and the public need factual information concerning the effects of speed limits to address pertinent issues. For example, do lower posted speed limits reduce vehicle speeds and accidents? If the speed limit is raised, will speeds and accidents increase? Do most motorists driver 5 to 10 mi/h (8 to 16 km/h) above the posted speed limit. What are the effects or lowering and raising speed limits on driver compliance? Answers to these questions and related issues are addressed in this report.

Summary of Findings

The pertinent findings of this study, conducted to examine the effects of lowing and raising posted speed limits on nonlimited access rural and urban highways, are listed below:

- Based on the free-flow speed data collected for a 24-h period at the experimental and comparison sites in 22 States, posted speed limits were set, on the average, at the 45th percentile speed or below the average speed of traffic
- Speed limits were posted, on average, between 5 and 16 mi/h (8 and 26 km/h) below the 85th percentile speed.
- Lowering speed limits by 5, 10, 15, or 20 mi/h (8, 16, 24, or 26 km/h) at the study sites had a minor effect on vehicle speeds. Posting lower speed limits does not decrease motorist's speeds.

- Raising speed limits by 5, 10, or 15 mi/h (8, 16, or 25 km/h) at the rural and urban sites had a minor effect on vehicle speeds. In other words, an increase in the posted speed limit did not create a corresponding increase in vehicle speeds.
- The average change in any of the percentile speeds at the experimental sites was less than 1.5 mi/h (2.4 m/h), regardless of whether the speed limit was raised or lowered.
- Where speed limits were lowered, an examination of speed distribution indicated the slowest drivers (1st percentile) increased their speed approximately 1 mi/h (1/6 km/h). There were no changes on the high-speed drivers (99th percentile)
- At sites where speed limits were raised, there was an increase of less than 1.5 mi/h (2.4 km/h) for drivers traveling at and below the 75th percentile speed. When the posted limits were raised by 10 and 15 mi/h (16 and 24 km/h), there was a small decrease in the 99th percentile speed.
- Raising speed limits in the region of the 85th percentile speed has an extremely beneficial effect on drivers complying with the posted speed limits.
- Lowering speed limits in the 33rd percentile speed (the average percentile that speed were posted in this study) provides a noncompliance rate of approximately 67 percent.
- After speed limits were altered at the experimental sites, less than one-half of the drivers complied with the new posed limits.
- Only minor changes in vehicles following as headways less than 2s were found at the experimental sites.
- Accidents at the 58 experimental sites where speed limits were lowered increased by 5.4 percent. The level of confidence of this estimate is 44 percent. The 95 percent confidence limits for this estimate ranges from a reduction in accidents of 11 percent to an increase of 26 percent.
- Accidents at the 41 experimental sites where speed limits were raised decreased by 6.7 percent. The level of confidence of this estimate in 59 percent. The 95 percent confidence limits for this estimate ranges from a reduction in accidents of 21 percent to an increase of 10 percent.
- Lowering speed limits more than 5 mi/h (8 km/h) below the 85th percentile speed of traffic did not reduce accidents.
- The indirect effects of speed limit changes on a sample of contiguous and adjacent roadways was found to be very small and insignificant.

Conclusion

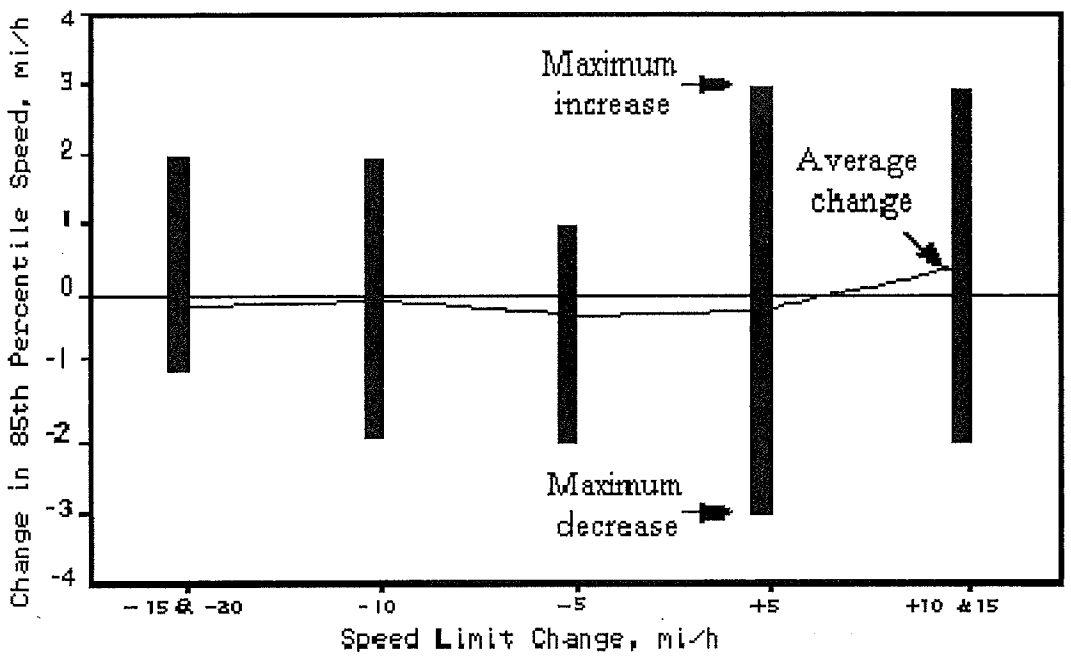


Figure 10. Maximum and average changes in the 85th percentile speeds at the experimental sites.

The primary conclusion of this research is that the majority of motorist on the nonlimited access rural and urban highways examined in this study did not decrease or increase their speed as a result of either lowering or raising the posted speed limit by 4, 10, or 15 mi/h (8, 16, or 24 km/h). In other words, this nationwide study confirms the results of numerous other observational studies which found that the majority or motorist do not alter their speed to conform to speed limits they perceive as unreasonable for prevailing conditions.

The data clearly show that lowering posted speed limits did not reduce vehicle speeds or accidents. Also, lowering speed limits well below the 86th percentile speed did not increase speeds and accidents. Conversely, raising the posted speed limits did not increase speeds and accidents. The majority of motorist did not drive 5 to 10 mi/h (8 to 16 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 to 16 km/h) when speed limits were lowered.

Because there were few changes in the speed distribution, it is not surprising that the overall effects of speed limit changes on accidents were minor. It is interesting to note that compliance decreased when speed limits were lowered and accidents tended to increase. Conversely, when compliance improved after speed limits are raised, accidents tended to decrease.

Based on the sites examined in 22 States, it is apparent that the majority of highway agencies set speed limits below the average speed of traffic as opposed to setting limits in the upper region of the minimum accident risk band or about 85th percentile speed. This practice means that more than one-half of the motorist are in technical violation of the speed limits laws.

Although there are variations from State to State, on average, speed limits were posed 5 and 16 mi/h (8 and 26 km/h) below the 85th percentile speed. As all States use the 85th percentile as a major criterion for establishing safe and reasonable speed limits, it is surprising that the new speed limits posted on the experimental sections examined in this study deviated so far from the 85th percentile speed. There are several plausible reasons. Once commonly cited reason for posting unreasonably low speed limits is public and political pressure. While individuals and politicians clearly influence some speed limit decision, there are other factors involved. Although the 85th percentile speed is used as the major guideline in setting speed limits, other factors such as land use, pedestrian activity, accident history, etc., are often subjectively considered in the decision making process. Together, these factors can account for sped limits that are set 10 mi/h (16 km/h) below the 85th percentile speed. In addition, the 85th percentile speed is often estimated based on a minimum of 200 vehicles or 2 h sample. This process does not take into account the wide hourly fluctuations in the 85th percentile speed over a 24-h period. Furthermore, the vehicle selection process use of radar which is detected by motorist contribute to a bias sample, i.e., usually lower then the average 24-h 85th percentile speed.

Although the study sites could not be randomly selected, they represent a wide range of rural and urban conditions, traffic volume, and regional situations. As large changes in the posted speed limit did not create a meaningful increase or decrease in the motorists' speeds at the study sites, it is plausible that this effect would also be found on other nonlimited rural and urban access highways.

The data collected during this study indicate that there are no benefits, either from a safety or operational point of view, from establishing speed limits less than the 85th percentile speed. This does not mean that all speed limits should be raised. Traffic and engineer investigations should be conducted to obtain an accurate measure of the speed distribution. Greater emphasis should be placed on using the 85th percentile speed in setting safe and reasonable speed limits. These studies should be repeated as land use and traffic characteristics change.

The information provided in this report will be useful to highway agencies, enforcement officials, and other involved in establishing uniform safe and reasonable speed limits on the nation's highways. The graphics, such as figure 10 on p.15 [above], can be used to illustrate the effects of speed limit changes on vehicle speeds. As shown below, figure 41 (which shows the changes in accidents, as well as the 95th percentile confidence limits of the changes) can be used to illustrate the effects of lowering and raising speed limits in accidents. This figure should only be used by persons who have read the accident analysis section in this report and have a basic understanding of the analysis results.

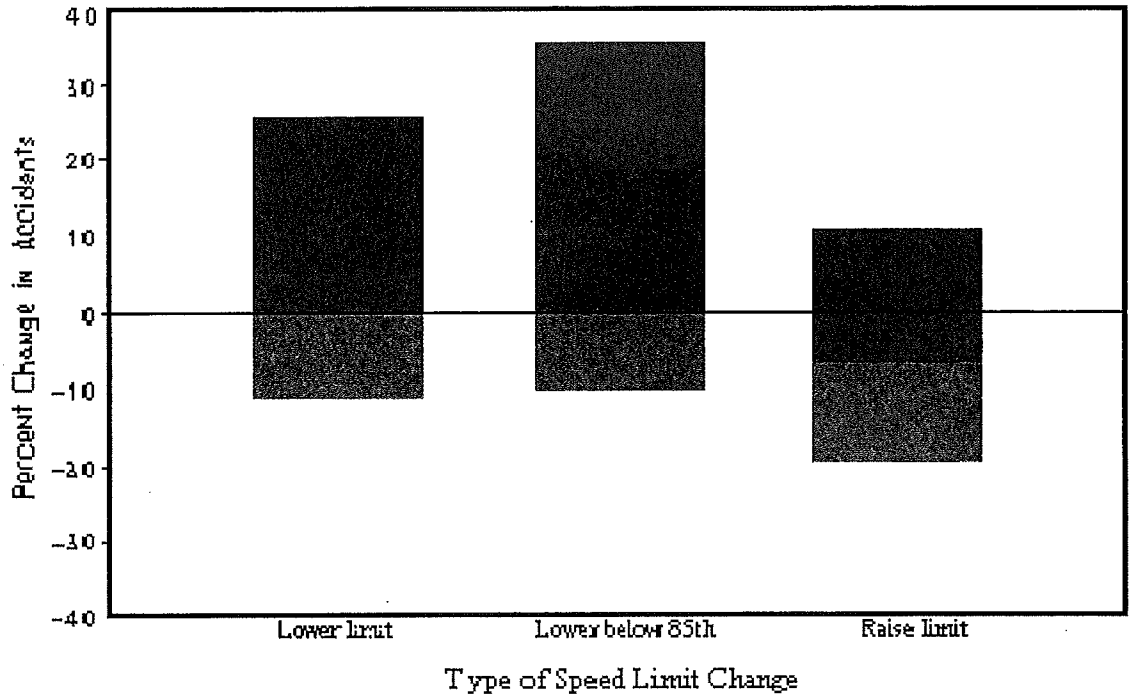


Figure 41. Summary of accident effects of altering posted speed limits.

Performing Organization Name and Address:
Martin R. Parker & Associates, Inc.
38549 Laurenwood Drive
Wayne, Michigan 48184-1073
Sponsoring Agency Name and Address:
Office of Safety and Traffic Operations R&D
Federal Highway Administration
6300 Georgetown Pike
McLean, Virginia 22101-2296
Contracting Officer's Technical Representative (COTR): Howard H. Bissell, HSR-30 and Davey L. Warren, HSR-10.
Contract or Grant Number: DTFH61-85-C-00136.
Type of report and dates covered: Final, October 1985 - June 1992

Be it enacted by the People of the State of Maine as follows:

Sec. 1. 29-A MRSA §2052, sub-§6, as enacted by PL 1993, c. 683, Pt. A, §2 and affected by Pt. B, §5, is amended to read:

6. Ways with speed limit of 65 or more miles per hour. An operator driving on a limited-access way with a speed limit of 65 or more miles per hour is restricted in ordinary operation to the right-hand lane and may use adjacent lanes for overtaking and passing another vehicle, but must return to the right-hand lane at the earliest opportunity. This requirement does not apply to an authorized emergency vehicle, or to a vehicle otherwise directed by posted signs, a law enforcement officer or a highway maintenance crew.

Sec. 2. 29-A MRSA §2073, sub-§1, ¶C, as enacted by PL 1993, c. 683, Pt. A, §2 and affected by Pt. B, §5, is amended to read:

C. Make an adjustment of maximum rates of speed. An adjustment under this paragraph is exempt from the provisions of the Maine Administrative Procedure Act.

The commissioner may not set maximums that exceed 60 miles per hour or, on the interstate system or other divided controlled-access highways, 65 miles per hour or 75 miles per hour on the Interstate Highway System from the City of Old Town to the Town of Houlton.

The commissioner may not set maximums for the Maine Turnpike.

Sec. 3. 29-A MRSA §2074, sub-§3-A, as enacted by PL 1995, c. 584, Pt. B, §9, is amended to read:

3-A. Minimum fine. A person who operates a motor vehicle on the Maine Turnpike or the Interstate Highway System at a speed that exceeds the posted speed of 65 miles per hour or of 75 miles per hour on the Interstate Highway System from the City of Old Town to the Town of Houlton by less than 30 miles per hour commits a traffic infraction punishable by a fine of not less than $50.

SUMMARY

This bill raises the speed limit on Interstate 95 from 65 miles per hour to 75 miles per hour on the highway from the City of Old Town to the Town of Houlton.