

Legislation for Increased Highway Safety

W. A. Goodwin
University of Tennessee and
J. B. Phillips, Jr.
Tennessee Office of Urban and Federal Affairs

The Federal-Aid Highway Act of 1956 authorized positive action on the problem of highway safety. The National Traffic and Motor Vehicle Safety Act and the Highway Safety Act, both passed in 1966, gave highway safety national priority. The Highway Safety Act includes 18 safety standards that, if fulfilled, will increase the effectiveness of the total highway transportation system. Other federal legislation, including title II of the Federal-Aid Highway Act of 1973 (known as the Highway Safety Act of 1973), is discussed. Among the goals of these pieces of safety legislation are to standardize and simplify operation of the system, which in turn will increase its utility.

Public awareness and concern for highway safety date back to the early 1920s when Secretary of Commerce Herbert Hoover called the first National Conference on Street and Highway Safety. The conference was aimed at furthering means to save life and prevent accidents and to make highway travel safer for both pedestrians and passengers. The death rate at that time was 17 per 100 million vehicle-miles traveled.

In 1946 the first President's Highway Safety Conference was convened. In 1954, the White House Conference on Highway Safety was convened, and out of this conference the President's Committee for Traffic Safety was formed.

It was not until the 1956 Federal-Aid Highway Act that positive action was authorized. This act directed the Secretary of Commerce to undertake a comprehensive investigation of the entire subject of highway safety and to report the findings. The findings and recommendations were published in 1959 (1).

Among the recommendations of this study was the establishment in 1960 of an inter-departmental highway safety board chaired by the Secretary of Commerce and including the Departments of Health, Education, and Welfare, Defense, and Labor and the Interstate Commerce Commission, General Services Administration, and Post Office Department.

This board formed a working committee. The board in 1965 published a report on federal policy and programs for highway safety (2). By 1965, the number of deaths per 100 million vehicle-miles traveled had dropped to about 5.8.

Subsequent to the Commerce study, several important pieces of legislation were enacted, including standards for seat belts, hydraulic brake fluid, and the Baldwin amendment to the 1965 Federal-Aid Highway Act. This amendment clearly established

leadership and coordination for a national highway safety effort. It noted among other things that "after December 31, 1967, each state should have a highway safety program . . . designed to reduce traffic deaths, injuries, and property damage. . . ."

In late 1965, President Johnson commented to the public about traffic deaths and noted that in 1966 he planned to recommend steps to mount a major campaign against such senseless and terrible loss of life.

Such highway accident statistics for 1965 as 49,000 fatalities, 1.5 million disabling injuries, and \$8.5 billion in property damage gave the impetus to Congress to promulgate the 1966 acts. When the landmark Highway Safety and National Traffic and Motor Vehicle Safety Acts of 1966 were signed, safety on the nation's highways became a national priority.

Although street use was not among the issues that led to the highway safety acts, several of the 18 highway safety standards that have been promulgated under section 402 of the 1966 act have a direct bearing on the issue; an indirect effect is noticeable in others if all requirements are fulfilled.

Increased effectiveness of the total highway transportation system will occur when accidents that cause delays and confusion among system users have been reduced. In addition, the safety requirements standardize and, to some extent, simplify the operation of the system, thereby increasing its utility. Among the standards that have a direct bearing on street use are the following:

<u>Standard No.</u>	<u>Issue</u>
301	Periodic motor vehicle inspection
306	Codes and laws
609	Identification and surveillance of accident locations
310	Traffic records
612	Highway design, construction, and maintenance
613	Traffic engineering services
316	Debris, hazard control, and cleanup

Implementation of the requirements of many of these standards may necessitate legislative action on the part of the states. For example, Tennessee must conduct periodic motor vehicle inspection (PMVI) by June 1975, or the state will lose federal funds.

PMVI may be justified on the basis that some accidents are caused by faulty vehicle components; studies reveal that about 6 percent of all fatal accidents may have been caused primarily by a faulty vehicle component. The primary goal of PMVI is to reduce crashes resulting from improperly maintained or repaired vehicles.

State legislation concerning PMVI predates the Highway Safety Act by many years; Massachusetts initiated a motor vehicle inspection program in 1926. Eleven states have enacted legislation since the passage of the 1966 act, and today 31 states and the District of Columbia require vehicle inspection on a statewide basis. Obviously vehicles that are well maintained have a greater chance of being operated on roads and streets with minimum downtime and interference with traffic flow.

Making maximum use of existing highway transportation facilities requires that their users be governed by specific rules and understand what conduct is necessary and permitted for safe travel. Where the traffic laws of a state conflict or are inconsistent with those of other states, drivers crossing state borders may find themselves in situations where adherence to the traffic statutes of their home states results in traffic violations and accidents. To establish a substantial degree of uniformity among the states' traffic regulations, standard 306 was issued in 1967. It requires that each state develop and implement a program to achieve uniformity of traffic codes and laws throughout the state.

The Uniform Vehicle Code sets forth rules that should govern the behavior of drivers and pedestrians as they interact on public roads. The National Committee on Uniform Traffic Laws and Ordinances states that, if the public is to understand, remember, and

observe these rules in moving from state to state, the rules should be exactly the same, word for word, in every state. Such uniformity makes it easier for police officers, judges, and traffic engineers to exercise their duties in a fair and equitable manner.

Standard 609 covers the identification and surveillance of accident locations. It requires that each state maintain a current inventory of accident locations and that it organize a system for identifying and correcting particularly high accident locations. Probably the most important standard, as related to the management of the states' overall highway safety effort, is the one setting forth the requirements for traffic records. Standard 310 requires that information on vehicles, drivers, and accidents be systematically entered into a computer-based data system for rapid entry and referral.

Standard 310 has probably been the greatest stumbling block for the states because of the lack of guidance and coordination at the federal level. Many states began in ignorance setting up computer-based systems, and those that did begin did so with little or no guidance in making the systems compatible among themselves. A nationwide traffic record system with each state having a subsystem could have tremendous benefit in the determination of causes and the identification of remedies as well as efficient allocation of resources. FHWA standard 612 has a direct impact on street and highway use. It covers highway design features that lead to accident prevention such as break-away utility poles and postcrash activities including routing for emergency vehicles. FHWA standard 613 encourages and requires identification of needs and reporting of deficiencies. Another significant requirement of this standard is the upgrading of existing traffic control devices. Several states have completed inventories of all traffic control devices and have devised a system for keeping the inventory current. Information contained in the system will aid in the selection and installation of the needed traffic control devices.

Highway safety standard 316 was issued in 1968 and requires that each state have a debris, hazard control, and cleanup system. Each state, in cooperation with its governmental units and political subdivisions, is to ensure rapid, orderly, and safe removal from the highway of wreckage, spillage, and debris resulting from highway incidents. Such a system will also reduce the likelihood of secondary and chain-reaction collisions. The standard calls for an operational procedure to enable rescue and salvage equipment and personnel to arrive on the scene of accidents and incidents with minimum delay. The following description illustrates how standard 316 can improve street use and capacity during incidents:

A heavily loaded truck crashed into a bridge railing recently at mid-afternoon in Washington, D.C. The driver was tossed 50 feet to the river below while the truck remained above, blocking traffic and causing a huge traffic jam on the bridge that extended considerably beyond both bridge approaches. At one time traffic in almost one-fourth of the city was involved in the jam. The truck was so heavy police cranes had to be threaded—and threaded seems to be the right word—through the knotted traffic to the scene. Overall, over 3 dozen policemen spent almost 3 hours untangling the traffic confusion.

The actual and potential impact on street capacity and use of the 1966 Highway Safety Act and its resulting standards is recognizable and constitutes an improvement to the transportation system. Although saving lives is the most important element of the nationwide highway safety goals, the disheartening element is that the federal government has not felt a mandate to adequately fund highway safety activities. The most important section of the act is section 402, which establishes the states' partnership with the federal government in implementing the 18 standards and reducing deaths, injuries, and accidents. Even the most uninformed clearly recognize that a greater impact on saving lives and reducing costs to motorists could be achieved by appropriate funding. For example, the authorization for section 402 for fiscal year 74 was approximately \$100 million, whereas the appropriations were only \$80 million. The direct federal aid to states and communities under section 402 totaled \$470,779,000 from fis-

cal 1967 through fiscal 1974. These funding levels might not be questioned except that the 1968 study to determine the cost of carrying out the Highway Safety Act of 1966 estimated that it would require \$8.3 billion in federal funds for fiscal 1974 and 1975. This study, commonly known as the needs study or the 207 study, took a critical look at the funding requirements for the 10-year period for 1967 to 1976. Inasmuch as the study was released in October 1968, the estimate is probably conservative.

A commendable feature of the 1966 act is the requirement that each state develop and submit for review and approval a 5-year comprehensive plan as a planning guide to program development. In 1971, planning and budgeting procedures were further refined when the NHTSA required the states to initiate an annual work program that outlined program plans on a fiscal year basis.

The comprehensive plans and fiscal year work programs submitted by the states provide a realistic estimate of funds needed to fully implement the highway safety standards. In the absence of appropriate funding levels from the federal government, the states are reluctant to pass needed legislation. For example, a number of states are dragging their feet on initiating statewide PMVI and, as a consequence, will be forced into acting when the Secretary of Transportation invokes the penalty clause in the act. This clause essentially permits the withholding of federal funds. Some believe that adequate funding by the federal government would lead to greater cooperation by the states in their passage of needed legislation.

The most important federal legislation on highway safety passed by Congress since the 1966 act is title II of the Federal-Aid Highway Act of 1973, which is frequently referred to as the Highway Safety Act of 1973.

In addition to section 402 and section 403, the 1973 act sets forth specific programs that Congress deems appropriate and needed. These programs are identified as separate sections of title II.

Section 203 requires that each state conduct and systematically maintain a continuing survey of all highways to identify those railroad crossings that may require separation, relocation, or protective devices and to establish and implement a schedule of projects to correct the deficiencies. Specific reporting requirements were included in the legislation, and the first report was due in September 1974; thereafter, they are due annually. An important aspect of this section is the availability of funds to local governments for matching state funds for the improvement of railroad crossings.

Section 205 amends the U.S. Code by adding a pavement marking demonstration program to provide greater vehicle and pedestrian safety. Under this section, work can be performed on any highway whether or not it is on the federal-aid system. The only exclusion is the Interstate System. This, of course, means that roads and streets are included and their use can be improved by clearly visible markings that conform to FHWA standards.

Section 209 requires the states to make a continuing survey of all highways to identify and correct high-hazard locations that may constitute a danger to vehicles and pedestrians. For fiscal year 74, \$50 million was appropriated out of the Highway Trust Fund. Section 209 has specific reporting requirements including an assessment of the cost of, and safety benefits derived from, the means and methods used to mitigate or eliminate hazards and also report on the previous and subsequent accident experience at locations where projects are undertaken.

Section 210 authorizes \$25 million in funds for use solely on projects to eliminate roadside obstacles on any federal-aid road except Interstate. This section also authorizes the replacement of existing sign and light supports that are not designed to break away upon impact.

FHWA published instructions for conducting surveys required by sections 203, 209, and 210. These instructions make use of the rail-highway crossing inventories that were begun in early 1973. The information in these inventories, coupled with on-site inspection, should allow the states to advance some of their grade crossing improvement projects to a higher priority for funding. Many states already have continuing engineering surveys of high-hazard locations on the federal-aid system, and these pro-

cedures can be expanded to apply to all highways. Section 210 suggests using a windshield survey of statistically selected sections of highways to determine the number and types of hazardous obstacles—for example, utility poles that are within 30 feet of the edge of the traveled way, except those installed in protected locations. The FHWA instructions also suggest that this survey use or be supplemented by other roadway data that may be on file with the state and local governments.

Although the 1973 act has other sections such as educational programming and driver education evaluation that have an impact on highway safety and are not discussed here, there are two more sections that are unique and have a more direct bearing on improved use of existing transportation facilities.

Section 214 authorizes expenditure of federal-aid highway funds for the construction of bikeways and pedestrian walkways outside the normal highway right-of-way along federal-aid highways. The new program provides for the construction of bicycle and pedestrian facilities on a 70 percent federal and 30 percent state funding basis. The maximum annual expenditure during any fiscal year is \$40 million, and there is a \$2 million limit for an individual state. Another feature of this section is that the funds may be used to acquire additional right-of-way to assist in the construction of facilities to serve traffic that would have normally used the federal-aid route. The states are being encouraged to take advantage of this opportunity to use federal-aid funds because of the anticipated environmental, recreational, and safety benefits.

Section 230 is probably the most exciting element of the 1973 act as it contains the Federal-Aid Safer Roads Demonstration Program. This program applies to all public roads or segments that are not on the federal-aid system and that need improvements to correct safety hazards selected or designated by the state. This section is another first, for it authorizes federal-aid funds for safety improvements on non-federal-aid roads. The section requires that each state provide a report identifying and setting a priority on projects for improvement of highway marking and signing, elimination of roadside obstacles, elimination of hazards at railroad-highway grade crossings, and correction of high-hazard locations that have been identified by accident reporting and traffic records systems. FHWA has suggested that these projects may be selected from the states listings developed through the safety improvement program and TOPICS studies.

Tennessee implemented this section through its Department of Transportation and the Office of the Governor's Highway Safety Coordinator who met with the state's nine development districts and are providing funds for local surveys of needs on non-federal-aid roads.

The priority of these project needs will be based on local government evaluation and will be reviewed by the state DOT and Highway Safety Office for statewide coordination and allocation of funds. Activities are under way in Tennessee to meet the requirements of this section.

Section 402 on state and community programs has a new provision that authorizes the Secretary of Transportation to offer incentive grants—up to 25 percent of a state's annual grant apportionment—to states that enact mandatory seat belt use laws or make significant progress in reducing traffic fatality rates. Other provisions written into section 402 include teaching bicycle safety in driver education programs.

The most important change in section 403 on research and development is the safety needs study. By January 10, 1976, Congress is to receive a report on the evaluation of ongoing federal programs and is to provide a basis for further authorizations.

In 1972, the Motor Vehicle Information and Cost Savings Act was passed. This act has four titles.

1. Title I authorizes the promulgation of bumper standards.
2. Title II requires that a comprehensive study and investigation of the methods for determining certain characteristics of passenger vehicles relating to damage, crash-worthiness, and repair be conducted.
3. Title III requires the establishment of diagnostic inspection demonstration proj-

ects to determine repair costs for vehicles when inspected in accordance with the vehicle-in-use standards. Also, information on the costs for maintenance and repair of emission control systems will be collected. The first demonstration project is under way. The act specifies not less than five nor more than 10 projects.

4. Title IV relates to odometer requirements and establishes the reliability of odometers and safeguards against their alteration or resetting.

SUMMARY

It has taken a long time for the Congress and the public to recognize the importance of a nationally organized highway safety program to save lives and reduce injuries and property damage.

The 1966 act was a major piece of legislation in this respect. Had appropriate federal funding and adequate guidance from the federal level been provided and had sincere dedicated response been forthcoming from state and local governments, much more could have been accomplished in the past 8 years. This has not been the case; and, as a consequence, a rejuvenation is in order. The 1973 Highway Safety Act goes a long way toward putting highway safety back on the track of meeting its 1966 goals. We know what needs to be done, and how to do it, so why can't we!

REFERENCES

1. The Federal Role in Highway Safety. U.S. Government Printing Office, March 3, 1959.
2. Federal Policy and Programs for Highway Safety. Interdepartmental Highway Safety Board, March 1965.
3. Comprehensive Plan for Highway Safety, State of Tennessee. Office of Urban and Federal Affairs, Highway Safety Planning Division, 1973.