

# National Conference on Street and Highway Safety

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## *Report of the* **COMMITTEE ON TRAFFIC CONTROL**

*Appointed by*  
**The Secretary of Commerce**

This report is one of eight issued for consideration in advance of the National Conference on Street and Highway Safety. The reports are: I Statistics; II Traffic Control; III Construction and Engineering; IV City Planning and Zoning; V Insurance; VI Education; VII The Motor Vehicle; VIII Public Relations

Washington, D C  
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# Conference on Street and Highway Safety

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## Committee on Traffic Control

*Hon. Herbert Hoover, Chairman*

*Conference on Street and Highway Safety*

*Washington, D. C.*

SIR Effective control of traffic from the point of view of safety is bound up with the provision of streets and highways adequate for such control the maintenance of the highway vehicles in safe condition the availability of trained officers to administer the traffic regulations efficiently and the education of the public to realize their individual responsibility to promote safety in every way These matters are within the scope of other committees of the Conference and will doubtless be treated fully by them Your Committee deems it proper, however, to point out some of these elements that are essential to successful traffic control

Considering first the highway traffic can be most easily controlled and safeguarded when there is adequate provision of hard-surfaced streets and highways of suitable widths and with safe grades and curves Safety regulations are most likely to be observed when indicated by simple and unmistakable signs, properly located and uniform in all localities Provision of through-traffic arterial highways safeguarded against cross traffic, will speed up currents of heavy traffic and so reduce congestion and the attention difficulties of traffic control Provision of suitable bypasses around congested business districts will similarly tend to safeguard the necessary local travel in those districts Parking restrictions can be enforced most successfully when adequate space for necessary parking is available where traffic will not be in danger Pedestrians can be most effectively controlled when suitable space is provided and designated for them Traffic control at railroad highway grade crossings difficult to enforce, becomes unnecessary when the grades of highway and railroad are separated

The condition of the motor vehicle particularly its brakes and its steering gear, has an important bearing on the ability of its operator to conform to the traffic regulations The dazzling headlight is a menace to safe operation of other vehicles, as is the unrestricted use of the spotlight Some other color should be substituted for red for the rear lights of motor vehicles so as to leave red to indicate immediate

danger. Thus effective traffic control requires safe vehicles and their equipment as well as safe highways.

Traffic control and traffic-law enforcement have been added to the duties of police forces that in some cases are little if any larger than before the advent of the motor car, and the traffic has outgrown the organization to control it. Unable to enforce the law continuously, the police have tried spasmodic severity in the enforcement of certain rules and regulations, thus frequently losing the cooperation of both the courts and the motoring public. Uniform, impartial enforcement of reasonable requirements by adequate and properly organized police is a primary necessity in reducing street and highway accidents.

Merely addition of numbers of traffic officers untrained in the special problems of traffic control will not insure the desired result. Traffic control in large cities particularly has become a science which requires the most skilled direction based upon traffic surveys and other intensive study carried out by men especially trained for the purpose.

Finally the most abundant provision of adequate streets and highways, the most careful working out of traffic regulations and the most vigorous enforcement of traffic laws, to be 100 per cent effective in the reduction of accidents, must be supplemented by a sense of personal responsibility instilled in every motorist and every pedestrian.

Assuming that the other committees of the Conference will point the way to the accomplishment of these ends, your Committee presents the following summarized conclusions relating to its particular field of traffic control:

### Summary of Conclusions

1 Traffic laws and regulations should be effective and reasonable, based on the lessons of experience. Rules governing the conduct of drivers and others on the highway should be uniform. The excellent work already done by associations and conferences of officials concerned toward standardization of such laws and regulations should be coordinated and completed.

2 In city streets, except one-way streets and on rural highways whenever the traffic is heavy, the current of traffic should be on the righthand side of the roadway. Heavy and slow-moving vehicles should keep to the right where possible and their operators should, by mirrors or otherwise, keep a good lookout to the rear so as not to obstruct traffic.

3 Regulation of speed of vehicles should be directed primarily at reckless driving and should be uniform throughout the country as far as practicable. It should be unlawful to operate a vehicle at a speed greater than is reasonable and proper having regard for the traffic and the use of the highway or so as to endanger the life, limb, or property of



any person Municipalities and other political subdivisions of the state should be empowered to fix speed-limit zones according to local conditions but should be required to mark the boundaries of such zones plainly and in order to promote uniformity the speed limits should be subject to general control by state law The state law should prohibit any municipality from establishing a speed limit lower than 15 miles per hour In rural areas, instead of an absolute speed limit it should be provided that when any vehicle exceeds 35 miles per hour that speed shall be prima facie unreasonable and it shall be incumbent upon the operator to prove affirmatively the reasonableness of such greater speed

4 Vehicles before entering or crossing a properly designated "through-traffic" street or highway should be required to come to a full stop At all other intersections any approaching vehicle should be required to grant the right-of-way to any vehicle approaching from its right at such speed as to reach the intersection at approximately the same time

5 Except in wide city streets carrying two or more well defined lines of traffic in the same direction, a vehicle should pass another moving in the same direction only on the lefthand side of the overtaken vehicle, and only after giving due warning of approach Overtaking moving vehicles on sharp curves approaching hillcrests at intersections or at railroad crossings should be prohibited An overtaken car should not increase its speed while being overtaken and the operator of an overtaking car should exercise care not to crowd from the highway the car being overtaken Street cars stopped to discharge or receive passengers should not be overtaken except where a safety zone or loading platform is provided

6 Parking should not be permitted where it will endanger or seriously impede moving traffic or prevent reasonable access to the sidewalk for loading or unloading of vehicles This will prohibit the parking or stopping of cars on any part of the traveled portion of a rural highway and also involves the prohibition or vigorous restriction of parking at congested points in cities To make such prohibition feasible rural highways should be provided with wide shoulders or other parking spaces at intervals of not more than 300 feet and in business districts of cities it may become necessary by some means to provide ample parking space entirely off the street

7 Safety requires that operators of motor vehicles indicate by hand signals their intent to do anything which may affect the movements of others in the vicinity Uniformity and simplicity in such signals are both highly important A single cautionary signal made by extending the arm well outside the vehicle, as a warning that the operator is about

to turn, slow down, stop or back, is recommended as preferable to a code which attempts to show more exactly what the operator intends to do

8 Local speed limits and other special regulations should be conspicuously announced by standard signs at appropriate places on the highways

9 Special regulations of the use of particular streets including the placing of automatic signs and signals the designation of arterial streets and highways, and restrictions of class of traffic direction of traffic parking privileges and the hours and periods of such restrictions should be based upon competent traffic counts and analyses and established in accordance with some general plan of traffic movement founded upon the design of the street system in each city

10 In congested centers and where large volumes of vehicle movement take place between centers considerably removed it is suggested that an effort be made to segregate street cars, motor trucks and passenger automobiles on separate thoroughfares

11 Vehicles should not be permitted to exceed a speed of 15 miles per hour when approaching within 100 feet of any railroad crossing It should be made a violation of law for a motorist to disobey a clearly visible and positive signal to stop at a grade crossing

12 Pedestrians and motorists should bear a considerate attitude each to the other Along rural highways wherever there are suitable sidewalks or paths pedestrians should use them Where there are not they can generally walk most safely on the lefthand side facing the traffic but should not force motor traffic out of line or otherwise impede it In cities pedestrians should be instructed, urged and required to keep within the boundaries of designated safety zones and crossing places and, when there is congestion, to cross only with the traffic Motorists should be required to accord pedestrians safe and dignified use of such safety zones and crossing places

13 Reckless driving and any other flagrant disregard of the rights of others by any user of the streets or highways should be vigorously and unceasingly prosecuted There should be legislation providing adequate penalties for infractions of traffic rules, including mandatory revocation of licenses for a specified length of time for cumulative evidence of carelessness or irresponsibility, for operating a motor vehicle while under the influence of intoxicating liquor or drugs or for other serious offenses against the motor vehicle law and severe penalties for driving after revocation, there should be a sufficient number of organized traffic officers to detect and prosecute such infractions and there should be co operation between states for the enforcement of the laws in each state

14 All persons operating a motor vehicle should be properly licensed. A reasonable length of time after the passage of the law requiring operators to be licensed should be granted operators already qualified in which to secure licenses without examination. Thereafter any applicant should first secure an instruction license permitting him to operate a car not more than thirty days when accompanied by a qualified driver and then qualify by an examination for an operator's license.

15 All operators' licenses should be issued by a state department or division having the entire administration of the automobile law as its exclusive duty. This department or division should have full authority to refuse an operator's license to any person and to suspend or revoke a license already issued for any reason deemed sufficient.

16 Before granting an operator's license, the department or division administering the motor vehicle law should determine the applicant's ability to operate a motor vehicle safely by ascertaining his physical and mental fitness and his knowledge of the laws, and by requiring an actual demonstration of his ability to operate a motor vehicle. It is recommended that all states designate the minimum age limit, but that no person under sixteen years of age, and no person who cannot read English, should be permitted to operate, drive or direct a motor vehicle.

By the Committee,

Washington November 3, 1924

ROY F. BRITTON,  
*Chairman*

Messrs Britton, Baitholomew, Helt, Hinkle, Kemper and Root do not endorse Conclusions 14, 15 and 16 but favor instead the following single conclusion:

All persons operating a motor vehicle should be properly licensed. All operators' licenses should be issued by a state department or division having the entire administration of the automobile law as its exclusive duty. This department or division should have full authority to refuse an operator's license to any person, and to suspend or revoke a license already issued for any reason deemed sufficient. No person under sixteen years of age, and no person who cannot read English, should be permitted to operate, drive or direct a motor vehicle. It may be desirable in congested districts, before granting an operator's license, that the department or division administering the motor vehicle law should determine the applicant's ability to operate a motor vehicle safely by ascertaining his physical and mental fitness and his knowledge of the laws and by requiring an actual demonstration of his ability to operate a motor vehicle.

[The full text of the Committee's report follows]

### Uniform and Reasonable Traffic Laws

That most of the traffic laws and regulations everywhere are violated frequently and that almost every motor vehicle operator, however good a citizen he may be, violates some traffic law or regulation occasionally, is well known. Because so many of these laws are practically unenforceable and so many of them unreasonable an unwholesome contempt for the law and inclination to substitute individual judgment for the prescribed rules has grown up throughout the country. This contempt has of course been enhanced by the great lack of uniformity in different localities.

A requisite therefore to effective traffic laws and regulations is that they be reasonable and enforceable, based on the lessons of experience and that they be as nearly uniform as feasible. Rules of the road should be uniform in detail throughout the country. These will naturally have to be supplemented by special requirements to fit local conditions, but even so they should be uniform in principle, so that the motorist from St. Louis, for example, may know what to expect in the way of local requirements in Cleveland. Deviations from standard rules should be conspicuously posted where they are in effect.

The Motor Vehicle Conference Committee, the Council of National Defense, the International Police Conference and other associations and conferences have already done excellent work toward such standardization, but certain minor differences are yet to be harmonized, and the actual adoption by states and cities of the recommendations of these organizations has not progressed to a satisfactory extent. The coordination of these groups of recommendations should be completed and the results put into effect, and your Committee believes that this Conference has an opportunity to do effective work in bringing about the desired result.

### Currents of Traffic

The purpose of the street or highway is to carry the traffic as safely, comfortably and expeditiously as possible. On narrow rural highways or highways with considerable center elevation vehicles will naturally occupy the center of the highway where the traffic permits. On highways or streets where the traffic is heavy the currents thereof should be on the righthand side.

Operators of trucks and slow-moving vehicles should use every effort to avoid holding back faster moving vehicles, thus creating congestion. They should keep to the extreme right side of the street or highway where practicable and should, by mirrors or other means, maintain a sharp lookout to the rear.

### Speed Limits

The question of speed limits is one to which your Committee has given serious attention. There are three schools of thought on this subject. (1) Some hold that the average motorist is incapable of judging for himself what is a safe speed and that the only way of controlling him is to prescribe absolute speed limits for each section of the street or highway. (2) The second school advocates designation of limits beyond which there is presumption of reckless driving on the part of the operator, whether or not higher maximum limits are prescribed. (3) The third school believes that the law should be directed solely against reckless driving, that it is impossible to fix any safe limit and that the attempt to do so, with the resultant constant violation of and contempt for the law, is one of the chief causes of motor accidents.

Your Committee believes that the third plan is right in principle, and recommends a basic control of speed through uniform state laws which lay the emphasis on reckless driving. At the same time it recognizes that speed may be a large factor in street and highway safety, both through the lessened control by the driver of vehicles running at high speed and the likelihood of more serious consequences in case of accidents, and it also realizes that in fixed speed limits traffic authorities have a yardstick by which to measure, however roughly, violations of the principle of safe driving. Therefore cities, villages, townships and other political subdivisions should be empowered to establish speed limits within their boundaries in harmony with the state law.

Under present conditions some small municipalities establish limits considerably below those found by more experienced authorities to be safe and sometimes in direct conflict with the state law, and then proceed to enforce these unreasonable restrictions to the point of persecution of passing motorists. To prevent this the state law should prohibit any municipality or other local subdivision from establishing any limit lower than 15 miles per hour. The law should require also that the boundaries of all speed zones be clearly marked.

Outside of cities and incorporated towns and villages your Committee believes that the safe allowable speed depends so largely upon the traffic conditions, the character of the highway and other conditions that there should merely be established a limit beyond which there is presumption of reckless driving. Your Committee would place the limit at 35 miles per hour on the open highway. Under favorable conditions motorists might go faster than this, but in case of accident or court proceedings for any cause it should be incumbent upon the operator to prove affirmatively that he was not driving recklessly. On through-

traffic highways protected by boulevard stops generally higher speeds may be permitted than on other highways

Collisions occur frequently at street and highway intersections, and in cities at the outlets of alleys. Some cities have established very low speed limits at such points. When the traffic is light and the view unobstructed these limits can often be greatly exceeded with safety, and so they are generally little regarded by motorists. At controlled intersections, also, traffic is frequently conducted at greater speeds. These cases illustrate the importance of stressing the prohibition of reckless driving irrespective of speed. To drive out of a blind alley at as low a speed as six miles per hour may be to drive recklessly, both on account of pedestrians and on account of other motor vehicles. Driving into or across an important thoroughfare from a secondary street or highway without observing the traffic in each direction, taking advantage of the rule which in most localities gives the right-of-way to the vehicle on the right, is driving recklessly and should be dealt with accordingly.

( On highways of heavy travel, particularly those of heavy travel in each direction, it is obvious that one prolific source of danger can be eliminated if all of the vehicles in one direction move at the same rate of speed and there is no overtaking. The excessively slow vehicle on such a highway which impels all drivers behind it to overtake it may be as serious a menace to traffic in the opposite direction as the speed maniac who wants to overtake all others. Your Committee doubts the feasibility of attempting by legislation to compel motorists using heavily traveled highways to maintain the prevailing speed on the highway but believes efforts should be made to educate the individual motorist to do this for the safety and comfort of his fellow motorist.

### Right-of-Way Rules at Intersections

Designation of through traffic highways with the requirement that all vehicles entering or crossing the same must first come to a full stop has the great advantage that it speeds up the travel on the major highways and so increases their capacity. A disadvantage is that unless such through-traffic highways or boulevards are equipped with block signals it is dangerous to enter or cross them within a reasonable time and dangerous for a pedestrian to cross at any time. Another disadvantage is that unless these boulevards are adequately marked strangers are likely not to recognize them.

The designation of boulevards with boulevard stops should be confined in any city or district to a few arterial ways carrying heavy traffic a large part of the time. The boulevard plan has failed in some cities because too many streets have been so designated and because

they have been insufficiently marked. It follows that warning signs indicating such boulevards should be placed on all intersecting streets and highways, and your Committee understands that the Committee on Construction and Engineering will recommend that such signs be used to demand a full stop before proceeding.

At all other intersections the vehicle approaching from the right should be given the right-of-way. The law should be so worded however, as to indicate that the car approaching from the left shall be required to *give* way to the car approaching from the right rather than that the car approaching from the right may *take* the right-of-way. The law should also make it clear that the rule applies only when the two vehicles traveling at a reasonable speed would reach the intersection at approximately the same time. It should not authorize the vehicle from the right to make a sudden dash for the crossing.

An objection often made to this right-of-way rule is that motorists conforming to the letter of the law dash out of secondary and obscure highways at unexpected points, jeopardizing and frequently colliding with vehicles proceeding along the main thoroughfare. This, as previously pointed out, should be regarded as reckless driving and punished as such. Education to personal responsibility, however, is perhaps the only complete remedy for it. No motorist should rely on a technical right if to do so will endanger others.

### Overtaking Other Cars

One of the most serious sources of danger on the public highways is the motorist who undertakes to pass another vehicle going in the same direction regardless of whether he has a clear view ahead, taking it for granted that the way will open up for him to get back into line if he suddenly meets a car coming from the opposite direction. There should be an absolute prohibition against overtaking of other cars on sharp curves, at approaches to hillcrests, at highway intersections, railroad tracks, or at any point where the operator of the overtaking car has not a clear view and space ahead sufficient to assure that he can get back to the right side of the road before any vehicle coming from the opposite direction can possibly reach him,

The prevailing rule that a vehicle may pass another moving in the same general direction only on the lefthand side of the overtaken vehicle is a necessary rule to prevent sudden swerving of the overtaken car into the path of the other, as is also the rule that due warning should be given of the approach of the overtaking car. This rule naturally does not apply in streets carrying two or more lines of traffic in the same direction. Here each line is a thing unto itself, and the motorist is

conforming to the reasonable requirements for safety if he maintains a proper distance between himself and the vehicle ahead. In such cases he should not turn out of his line of traffic in either direction without exercising due care that he will not foul other lines of traffic. Where traffic is light overtaking on the right, even on wide streets should be prohibited and will be automatically lessened if motorists traveling at less than the safe and proper speed under the conditions will keep to the right as far as possible.

An overtaken car should not increase its speed while being overtaken. Even at points where overtaking is unlawful, to attempt to shut out the offending car when it is alongside is merely to imperil the law-abiding motorist coming from the opposite direction. On the other hand, the operator of an overtaking car should use care not to crowd too closely in front of the car being overtaken.

Where street cars operate on the traveled portion of the highway they should be overtaken on the right wherever practicable. Street cars which have stopped to discharge or receive passengers should not be passed by motor vehicles moving in the same direction without due caution. When approaching any street car which has so stopped unless it can be passed at a distance of at least 8 feet and at a rate of speed not exceeding 12 miles per hour, the motorist following should come to a full stop at least 8 feet from the rear of the street car and proceed only after all passengers getting on and off are in safety.

### Parking

Technically vehicles are "parked" when they are left standing and unattended in a public street or highway at an angle with the center line of the street or highway and are "ranked" when they are left standing in a line parallel to the center line of the street or roadway. In common usage however, the term "parking" has come to be applied to any car left standing in whatever position, and whether on, partly on or entirely off the street or highway. Your Committee has not undertaken to go into the relative merits of parking and ranking, which will naturally be governed by local conditions, and will follow the common usage by the general term "parking."

Studies made by the Maryland Department of Public Works of the records of accidents covering several years show that one of the most fruitful sources of accidents on rural highways is the car standing partly on the traveled portion of the highway. This applies even more to cars stopping a few minutes for changing tires or other small repairs or for conversation with persons alongside than to cars parked for considerable periods, inasmuch as the operators of the latter usually seek



a place well off the roadway. On improved highways there is practically always an opportunity every few hundred feet to get entirely off the traveled portion of the highway, and your Committee understands that the Committee on Construction and Engineering will recommend that these places be provided where needed. Your Committee believes therefore, that there should be enacted legislation prohibiting parking or stopping for any period of time on any part of the traveled portion of the highway.

Roadside garages, gasoline stations, milk stations, refreshment booths and the improvised vending stands of roadside farmers as frequently located are inducements to motorists to stop on or partly on the traveled roadway. If the law is made to prohibit stopping of vehicles on any part of the traveled way at these points the owners of the establishments will automatically be forced to move them back where they will not endanger traffic.

The general attitude toward parking in cities particularly in the congested districts of cities, is one which is undergoing change at the present time. Merchants in some cities who once objected to the prohibition or restriction of parking in front of their stores on the theory that the rules kept out of the district prospective shoppers now complain against unrestricted parking on the ground that prospective shoppers cannot get up to their stores. The problem is a difficult one. Your Committee understands that the Committee on City Planning and Zoning will deal extensively with the subject of parking in congested districts recognizing the need of some provision for such parking and pointing out the economic solution of the problem.

Meanwhile the traffic authorities in each city must prescribe the parking rules. Your Committee urges that the rules be based on traffic counts and analyses, and be modified from time to time if and when changed conditions require. Your Committee urges further that they be strictly enforced. If the local rule requires ranking close to the curb, the occasional car left with the rear wheels standing two or three feet from the curb is a source of danger, and the car or delivery truck left standing outside of the line of ranked vehicles whether or not occupied, is a menace which should not be tolerated. Where angle parking is called for, white lines painted on the pavement to indicate the individual parking spaces help to conserve the total space.

### Hand Signals

Efforts to standardize hand signals throughout the country have thus far been unsuccessful. One difficulty has been the attempt to indicate too much. Whether position of the arm, number of fingers

extended or motion of the arm or hand are depended upon for the various indications all are open to the objection that they are difficult to distinguish unless made more accurately and crisply than the average motorist will make them

Your Committee believes that the motorist should be required before making any turn to be in the proper position in the roadway and that under such circumstances it is enough for him to extend his arm as a cautionary measure if he intends to do anything which may affect the actions of others in the vicinity. This means that for a lefthand turn he should be near the center of the roadway (unless the local rules require him to be in some other position) but must extend his arm before turning unless all traffic is being turned to the left, while for a righthand turn, being already at the extreme right, he need give no signal unless he intends to reduce speed or unless it is necessary to warn pedestrians. He must obviously always give a signal before stopping or reducing speed rapidly, whether in a lane of traffic or approaching a curb, and must signal before turning abruptly from a curb. He should give his signal far enough in advance to give motorists following ample opportunity to take the warning.

### Control of Masses of Traffic

Control of masses of traffic other than that automatically effected by uniform and properly enforced rules of the road is mainly a local problem. It is accomplished largely by restrictions on the use of particular streets, such restrictions applying to classes of traffic, directions of traffic, parking privileges and the hours and periods of such privileges. These restrictions should not be made by guess-work but should be based upon traffic counts and analyses by the police or other regulating authorities. Their effects should be carefully studied. It sometimes happens that restricting the use of certain streets throws traffic to other streets and causes greater congestion than before.

This applies directly to the question of one-way streets. Where the streets are very narrow and the traffic heavy one-way streets have become a necessity. Where the roadways are wide, however, and particularly where there is a preponderance of traffic in one direction in the morning and in the other direction in the afternoon to establish one-way streets is to crowd the morning traffic into a smaller number of streets and the afternoon traffic likewise, leaving the other streets practically deserted. The question of one-way streets is tied closely to the question of parking and often the one-way restriction can be avoided if the parking can be eliminated. Where one-way streets are established it is usually well to establish them in pairs.

Local traffic arrangements which speed up through traffic to the maximum point consistent with safety reduce congestion and danger of accidents. Your Committee has already pointed to the desirability of designating a few carefully selected arterial streets and highways for such purposes and protecting them with boulevard stops.

One important form of arterial way for through traffic is the bypass around the business district. Where there is a large amount of both local and through traffic bypassing the latter is highly desirable where the street layout permits, particularly in view of the fact that local traffic is usually very heterogeneous and cannot be moved at a uniform speed. Local conditions will determine whether it is desirable to subordinate the local traffic to the extent of establishing boulevard stops on the bypass.

Uniformity in character of traffic makes for evenness of flow and minimizing of congestion. It follows that in some cities having long parallel thoroughfares there is opportunity to segregate street cars, motor trucks and passenger automobiles on separate streets. A complete segregation is difficult because each class of motor vehicle is likely to have local business in the streets relegated to the other class and to street cars. Nevertheless, a partial segregation may greatly reduce congestion and danger of accidents.

### Railroad Grade Crossings

Your Committee understands that the Committee on Construction and Engineering will recommend grade crossing elimination as the ultimate even if distant solution of the problem of the railroad crossing and will further recommend that while the grade crossings remain they be safeguarded as far as reasonably possible. Assuming that that Committee will recommend the placing of a warning sign a sufficient distance from the crossing, your present Committee recommends that a vehicle shall not be permitted to exceed a speed of 15 miles per hour while approaching within 100 feet of a grade crossing. The purpose of such a restriction is to force the operator to have his vehicle in complete control until reasonably certain that no train is approaching and at some crossings where the view is obscured safety may demand a much lower speed before actual proceeding upon the crossing.

There are numerous instances in which motorists disregard crossing warnings dashing by flagmen or crashing through crossing gates. It should be made a violation of law for a motorist to disregard any clearly visible and positive stop signal at a grade crossing whether a flag or other device held by a watchman, a mechanical wigwag signal or a lowered crossing gate.

Local traffic arrangements which speed up through traffic to the maximum point consistent with safety reduce congestion and danger of accidents. Your Committee has already pointed to the desirability of designating a few carefully selected arterial streets and highways for such purposes and protecting them with boulevard stops.

One important form of arterial way for through traffic is the bypass around the business district. Where there is a large amount of both local and through traffic bypassing the latter is highly desirable where the street layout permits, particularly in view of the fact that local traffic is usually very heterogeneous and cannot be moved at a uniform speed. Local conditions will determine whether it is desirable to subordinate the local traffic to the extent of establishing boulevard stops on the bypass.

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### Pedestrian and Motorist

Pedestrians and motorists should bear a considerate attitude each to the other. The pedestrian should realize that other means of locomotion have come, and come to stay, because they serve the public convenience and necessity, including his own. The motorist should realize that the development of this new form of locomotion does not take away from the pedestrian the right to a reasonable use of the streets and highways.

Along rural highways wherever there are suitable sidewalks or paths pedestrians should use them. Where there are not, pedestrians can generally walk most safely on the lefthand side facing the traffic. They should understand, however, that there is no law which authorizes them to walk against traffic. They should therefore be watchful and when motor vehicles approach them they should give way rather than attempt to crowd the vehicles from the righthand side perhaps endangering vehicles moving in the other direction or causing a general slowing down of traffic. While it is in general safer to walk on the lefthand side on long straight stretches and easy curves, walking on the lefthand side on sharp lefthand turns is dangerous and should be avoided.

In cities pedestrians should be instructed, urged and required to keep within the boundaries of designated safety zones and crossing places, and should proceed over crossings with the traffic. In many cities under present conditions they are discouraged from doing this for the reason that frequently they are blocked by vehicles that come to a stop directly across the pedestrian way or are marooned in the center of the street by a sudden shift of the stop and-go signal. Pedestrians crossing at intersections also have to watch traffic on all four streets and frequently have to dodge vehicles which swing suddenly around corners. At intersections not officered they find little inclination on the part of the motorist to give them any opportunity to cross the street and even at officered intersections the officer often appears to be much more interested in keeping the vehicles moving than in safeguarding the pedestrians.

Due partly no doubt to this condition and partly to ordinary carelessness, the average pedestrian seems to have little regard for traffic regulations even those intended to promote his own safety. He crosses the street between blocks reading newspapers, steps from behind standing vehicles without warning and in other ways violates the simplest requirements of safety on the streets.

Since the pedestrian doing these things is mainly risking his own life the extent to which he can be compelled by law to do otherwise is

problematic. Certainly if motorists will display proper consideration for the pedestrian crossing at the intersections with the traffic thus demonstrating his greater safety at these points, this will go far toward encouraging him to promote his own and the general safety.

Public streets are no longer a safe place for children to play. It is obvious therefore, that public playgrounds should be supported and multiplied so that street play for children may be eliminated.

### Legislation and Administration

Reckless driving and other flagrant disregard for the rights of others are unquestionably responsible for the great majority of accidents on the streets and highways, and the public authorities should apply themselves vigorously and unceasingly to the stamping out of these practices.

Where not already existing legislation should be enacted providing penalties for infractions of standard rules for traffic control and these should be drastic enough to discourage such infractions. Fines have proved inadequate. Prison sentences should be imposed for the most serious offenses. Suspension or revocation of licenses for lesser offenses with severe penalties for driving after revocation, should be effective if coupled with frequent checking up to determine whether the operator has a license. It should be mandatory on the licensing authorities to revoke licenses for a specified length of time for cumulative evidence of carelessness or irresponsibility in driving, for operating a motor vehicle while under the influence of intoxicating liquor or drugs, or for other serious offenses against the motor vehicle law. A punishment inflicted with successful results in some cities for offenses not serious enough for permanent revocation is a prison sentence of thirty days or sixty days suspended on condition that the offender operate no motor vehicle during the period of the sentence.

States should cooperate in the apprehending and punishing of offenders. Provision should be made in each state permitting revocation or suspension of license when the owner or driver of a car fails to respond to a warrant issued in another state for the violation of a traffic regulation.

In many cities and states the traffic police are inadequate in numbers and insufficiently trained for the special duties of traffic control. There should be motor-mounted traffic officers organized in adequate numbers and under state control supplemented by local traffic officers in urban districts. It has been found that the mere presence of traffic officers has a salutary effect on the highways, even though they make no arrests.

Unfortunately a certain percentage of motorists, evidently inspired more by fear than by humane instincts carefully obey the law while in

the presence of officers but cast aside restraint when out of sight. Persons observing serious violations of the traffic laws should file complaints with the proper authorities, giving the plate numbers and any other means of identifying the offender. The authorities should regard any accumulation of complaints against an individual as ample cause for a searching inquiry into his record and his right to continue to drive. The request of two reputable persons should likewise be sufficient cause for such inquiry. Public-spirited citizens must cooperate with the public authorities to eliminate from the highways the violator of the Golden Rule. Safety education and the perfection of the highway, the vehicle and the rules for the use of the one by the other will eliminate the lesser dangers.

### Licensing of Drivers

The earliest automobiles were regarded as expensive luxuries within the reach of only a few, and it was assumed without question that those few would be competent to drive them or would employ competent chauffeurs. The chief restrictions were therefore the drastic ones relative to speed.

Within a generation the situation has changed completely so that now a small cash payment will buy a used car, and within the last five years the motor truck, driven in many instances by young and irresponsible operators, has come into wide commercial use.

Many of the most populous eastern states have already perceived the necessity of restricting the operation of motor vehicles of every class to those who have proved their competence to operate them, and where these license laws have been in effect a sufficient time there has been a decided reduction in the proportion of accidents to the number of motor vehicles.

Putting into effect a licensing law in a state entails two difficulties, the purely mechanical one of examining the large number of residents of a state who have been driving motor vehicles for varying periods without licenses, and the natural resentment of those who have been doing this successfully for a considerable period against undergoing examinations. These difficulties can best be met by allowing all operators in the state a reasonable time in which to file applications for licenses without examination, and depending upon the revocatory powers of the licensing authorities to weed out those who prove to be incompetent.

Obviously persons can ordinarily learn to drive motor vehicles only on the public highways, and reasonable opportunity must be given them to learn to drive. At the same time they should be restricted so as to eliminate the likelihood of accidents during the instruction period.

Therefore your Committee recommends that the beginner be required to obtain an instruction license which will permit him for a period of not more than 30 days to operate a car only when accompanied by a qualified driver. This period should ordinarily be ample for him to qualify for an operator's license, but if during the instruction period he has only occasional opportunity to drive or for any other reason he is unable to acquire the necessary knowledge of driving he should in the absence of proved defect that would permanently disqualify him be permitted to renew his instruction license.

### Special State Department or Division

Some states which require an operator's license have made no adequate provision for examinations and issuing of such licenses but have added the work to unrelated state departments or divisions not particularly in sympathy with the work. Insufficiency of examiners and of other facilities for the issuance of licenses has worked hardship and excessive loss of time on applicants for licenses. The tests should on the one hand be thorough and conclusive and on the other hand they should be conducted in such a way as to consume as little of the applicant's time as possible and to this end the issuance of licenses should be under a state department or division having the entire administration of the automobile law as its exclusive duty.

This department should receive the reports of all serious accidents and keep a record of each operator's offenses against the traffic laws and regulations, and besides having full authority to refuse an operator's license to any person, should have authority to suspend or revoke licenses for any reason deemed sufficient.

### Qualifications

Conditions vary so widely that your Committee deems it inadvisable to undertake to define the eligibility requirements of drivers in more than the most general terms. There are three general requirements. First, that the applicant be mentally and physically qualified to operate a vehicle, second, that he shall know the laws governing the operation of a vehicle, and third that he shall understand the operation of a vehicle and prove it by an actual demonstration under conditions comparable to those he would naturally encounter on the streets and highways.

Different states which have licensing laws interpret all of these requirements differently. In some states persons with one arm or leg and persons deaf or color blind are deemed physically incompetent to drive. In other states these defects are not regarded as conclusive. In some states the test of knowledge of the laws is rigid in others brief



and perfunctory. In some states the physical demonstration may prove little more than ability under favorable conditions to start, stop and turn, while in others the applicant must drive in difficult traffic and surprise features are introduced.

Without attempting to specify detailed standardized requirements at this time, your Committee urges that the tests be sufficiently rigid to exclude from the roads those who are not able to meet safely the actual conditions on the road.

Mechanical efficiency in driving a motor vehicle may be acquired at an early age. Safe driving requires reasonably mature judgment as well as mechanical efficiency, and your Committee therefore believes that all states should designate the minimum age limit but that there should be a minimum age requirement of not less than 16 years. Many advocate that this be 18 years.

Safety also requires that all operators be able to read traffic-control signs and respond to them promptly. Hence no person who cannot read English should be permitted to operate a motor vehicle.

Licensing of operators is not a panacea for the dangers of the road. Examinations properly conducted will keep the sheerly incompetent drivers off the road, but will not reach those probably much more dangerous persons, the competent drivers who take chances and willfully disregard the safety of others. Licensing, however, affords a ready means of keeping the record of every operator, and revocations based on these records will reach the dangerous drivers, whether dangerous through incompetence, indifference or recklessness.