

THE URGENT NECESSITY FOR UNIFORM TRAFFIC
LAWS AND PUBLIC SAFETY DEVICES.

by
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REPRODUCTION

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The following official notice appeared in the Lancaster,
Pennsylvania, Journal, January 22, 1796:

"Sec. 13. (1) And be it further enacted, by authority of
aforesaid, that no wagon or other carriage with wheels the breadth
of whose wheels shall not be four inches, shall be driven along
said road between the first day of December and the first day of
the May following in any year of years, with a greater weight
thereon than two and one-half tons, or with more than three tons
during the rest of the year; that no such carriage, the breadth of
whose wheels shall not be seven inches, or being six inches or
more shall roll at least ten inches, shall be drawn along said
road between the said day of December and May with more than five
tons, or with more than five and one-half tons during the rest of
the year" etc., etc. **** "that no cart, wagon, or carriage of bur-
den whatever, whose wheels shall not be the breadth of nine inches
at least, shall be drawn or pass on or over the said road * * * *
with more than six horses, nor shall more than eight horses be
attached to any carriage * * *, and if any * * carriage shall be
drawn * * by a greater number of horses or with a greater weight
* * * one of the horses shall be forfeited to * * * said company,

(1) Hulburt - Historic Highways.

* * * * provided always it shall * * be lawful for said company
* * * to alter any * * * regulations * * * if on experience
such alterations * be found conducive of public good."

These were regulations by the Philadelphia and Lancaster Turnpike Company to govern the traffic on the 62-mile road between these points, ⁽¹⁾ the first macadamized roadway in the United States. In some detail they specify total load, load per inch width of tire, permissible power, seasonal load restrictions, and the penalties for violations. ⁽²⁾ As a commentary on width, six miles east of Lancaster, for a short distance, the road was macadamized one hundred feet wide. This record of elaborate traffic regulations goes back one and one quarter centuries in the United States, but even so is relatively recent.

⁽³⁾ "In 1621, we see James the First forbidding any four-wheeled waggon whatsoever, or the carriage of more than a ton of goods at a time, as the vehicles bearing 'excessive burdens so galled the highways, and the very foundations of bridges, that they were public nuisances'".

"In defiance of warning and experience, Parliament again and again recurred to the device of limiting the load. The climax of

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- (1) Hulburt - Historic Highways
 - (2) Hulburt - Historic Highways
 - (3) Webb - English Local Government

regulative activity was perhaps reached in the detailed and ever-changing code as to the construction of the vehicle itself, and more especially of its wheels. In the interminable series of enactments, amendments, repeals, and re-enactments of the eighteenth century, we watch successive knots of amateur legislators laying down stringent rules as to the breadth of the wheel; the form of its rim; the use of iron tires and headed nails; the height of the wheel; the position of the felly, the spokes and the axles; the space between each pair of wheels, and the respective lines of draft between back wheels and front. Throughout this tangled skein of legislation the mass of which must be seen to be believed, we discover practically one and the same implicit assumption, that the wheeled carriage was an intruder on the highway, a disturber of the existing order, a cause of damage - in short, an active nuisance to the roadway - to be suppressed in its most noxious forms, and, where inevitable, to be regulated and restricted as much as possible."

Through the seventeenth, eighteenth and nineteenth centuries the Anglo-Saxon has been building up and tearing down regulations, and at the end of this, the first quarter of the twentieth, we find ourselves with the problem pending and labeled "urgent." It is for us first to get a sane perspective - to evaluate the real principles revealed through the more than three centuries, and to pray for a

liberal sense of humor that we do not force ourselves into an absurd attitude. Transportation is one of the big, elemental necessities of humanity to be provided. The physical processes of transportation produce not one problem but an infinite number of problems. There is no complete or final answer any more than there is a permanent solution to the food problem or any other problem of living. Safety is neither a cause or effect. It is an attribute - a characteristic of properly functioning processes. When this is being accomplished, society has done what it can to protect the individual. After this, safety lies in the individual. It comes to us, the highway officials of State and nation, to preserve by the grace of humor and good sense a sane outlook, to recognize that we cannot decide the forms of transportation the public will provide and utilize. Deep running currents over which we have no control will determine. It is given to us to assist or to retard the perfecting of some of the processes of highway transport. We may clear the way or place obstacles in the path of economical progress, but when we as individuals or as a group shall relinquish to others our duties and responsibilities, the value of our service will be measured by our contribution to the economy and utility of transportation generally and of highway transport particularly. Unless there be maintained a fair, broad-minded outlook, tempered by the truths that have come out of the past and tuned to understand the

true necessities of the present, we cannot hope to plan well for the future or to leave a record of intelligent, successful service. No proud record can be written in narrow and hampering restrictions on transportation or in a failure to provide facilities justly required. Proper regulations should direct and assist, not restrict, development. These are necessary but they must be based on the most careful analysis of cause and effect, of the long time trend and the temporary circumstance.

It has been pointed out that traffic regulations are at least three centuries old with the Anglo-Saxon. In that time there have been present all of the time one or more of these five major conflicts, out of which has grown the demand for traffic regulations and laws. The general tendency through the years has been to say "thou shalt not". This analysis segregates the various conflicts we must face, and by examples of outstanding importance at the moment, sets up the proposition that highway transport economy, including safety in its broadest sense, is a matter of executed plans adequate to meet the demands. Economy and safety are matters, in a major sense, of facilities. Restrictive laws or regulations are only an auxiliary to prevent and to deter by fear of punishment the improper use of proper facilities. Here are the conflicts that are to be met:

1. The conflict between the vehicle and the road.
2. The conflict between different forms of transportation.
3. The conflicts between different groups within each form.
4. The conflict between society and each form of transportation.
5. The conflict between human attributes and the elements of each form.

The Conflict between the Vehicle and the Road.

The conflict between the vehicle and the road called forth the earliest traffic laws and regulations. The laws were framed upon the premise that the vehicle was an intruder upon the road, and that its use was to be restricted as much as possible. This began about 1631, and the same principle is perpetuated in laws in effect in 1924 in some of the States, i.e. laws are in effect and others are proposed which restrict the proper utilization of available vehicles. Highway transport cannot develop its greatest and most economical service under such conditions. In the adjustment of the vehicle to the road, and this combination to the transport needs of the nation, lies progress. The Highway Transport Committee of this Association, in joint conferences with a like committee representing the National Automobile Chamber of Commerce, has approached this phase of the general

subject from the angle of neither the road nor the vehicle, but from that of transportation economy. Careful consideration has been given different districts having wide variations in their needs for highway transport service. The tentative report is to be presented at this meeting, recommending a classification of roads, each class to carry specified maximum loads. These loads have been determined by detailed transport surveys in different areas, and by special studies of commodity hauling, particularly of agricultural products such as milk. Major consideration has been given the fact that for any well designed highway the road cost per unit carried is such a small percentage of the total that the only material possibility to decrease highway transport costs lies in lessening the per ton mile, and per passenger mile vehicular costs, grouping all kinds of traffic. The report makes recommendations as to wheel concentrations, speeds, tires, and other details which are based upon the physical research and investigations of a number of the State departments and the Federal Bureau, - of the relationships between the road and the vehicle, and the effects, each upon the other. So far as the Committee is advised, this is the first attempt in three hundred years of regulations directed against the vehicle, to apply the results of scientific research in the formulation of regulatory principles to the constructive end of greater transportation economy.

But why is there urgent public need for uniformity of these regulations between the States? The reason does not lie in long distance hauling. The big percentage of highway use by the heavier types such as bus and truck movements, and by the private automobile, is not and will not be long distance. It is a shuttle traffic, in and out, of the population centers, but all boundary lines are disregarded. In Connecticut, on the Boston Post Road, the State average traffic shows State licenses of 90.1 per cent of the passenger cars, and 89.9 per cent of the trucks, leaving an average of only ten per cent foreign licenses for both passenger cars and trucks. On the same road near the State line the State licenses drop to 52 per cent for passenger cars and 51.4 per cent for trucks, leaving 48 per cent and above foreign licenses for both trucks and passenger cars. In Pennsylvania on the Lincoln Highway there is the same story with somewhat changed percentages. Near the State line the foreign licenses are trucks, 41.4 per cent, and passenger cars, 46.0 per cent.

Uniformity of laws and regulations has long been urged for tourist and long distance travel. This is important, but here are the records which show what large injustice is done the really local traffic on the borders of every State if the laws and regulations are not uniform between the States.

The Conflict between different Forms
of Transportation.

With reference to the conflicts which exist between highway transport and other forms of transportation, only one matter of traffic regulation will be touched upon. A number of States have enacted laws requiring all motor vehicles to stop before crossing any railroad at grade. Undoubtedly, there will be attempts made to write this same restriction into the laws of many States this winter. The North Carolina law reads, "That no person operating any motor vehicle upon a public road shall cross, * * * any railroad or inter-urban track intersecting the road at grade * * *, without first bringing said motor vehicle to a full stop at a distance not exceeding fifty (50) feet from the nearest rail." This law is a grave error in traffic regulation. It is unjust and unfair to highway traffic. There are crossings at which the highway traffic should stop, and those at which the trains should stop, but a law requiring all highway traffic to stop at every rail crossing outrages the sense of justice of every fair minded citizen, and breeds contempt for all regulatory laws. It is time to stop monkeying with the safety of people. It is time to stop experimenting with human life. There is a wide contrast in the Oregon law which sets up this principle - "It shall be the duty of the public service commission to investigate conditions surrounding all

railway crossings with streets and public highways at grade, and determine at which of such crossings public safety reasonably requires that vehicles on the streets and highways should come to a full stop."

The one law labors under the handicap of individual resentment and public injustice; the other appeals to the good judgment of the average citizen as a safeguard provided after careful investigation of the conditions at the particular crossing. Further, it does not breed contempt for other traffic regulations. There is sufficient possibility of reducing the hazard at grade crossings on certain classes of highways, and for specific crossings, to make desirable the adoption of a sane, uniform law, lodging authority in the State Highway Department and the State Railroad Commission jointly to determine after investigation at what grade crossings highway traffic should be stopped, and further, to determine at what grade crossings trains should be stopped, - the relative traffic and public convenience to be the facts upon which the decision shall rest.

The North Carolina and similar "stop" laws are based on tradition, not on existing facts. The presumption that all rail traffic is superior and therefore should have right-of-way over all highway traffic is fallacious. No one denies right of way to main line and long distance rail traffic, but the major highways

cross at grade many more branch rail lines than main rail lines. It is time we began to think in terms of transportation economy. Some conception of major highway traffic is shown by the following peak loads:

Peak Loads - Total Vehicles

	24-hr. Max. day	Max. hour
Boston Post Road, Greenwich, Conn.	15,219	1,167
*Lincoln Highway, Sta. 57, Penn.	12,114	1,097
South of Portland, Me. Sta. 406	10,671	813

* November to April only.

Truck Peak Loads

	Max. day	Max. hour
Boston Post Road	1,195	97
*Lincoln Highway Portland, Maine	839	75
	556	45

* November to April only.

Any arbitrary interference with the flow of such traffic jeopardizes the safety of thousands. The highway and railway officials must together meet these questions fairly on the basis of existing facts. It is only with the hope that this cooperation can be brought about on a much larger national scale that such a general law is suggested. It would at once hasten crossing protection for no stop order would be issued without first installing adequate warning and protection devices, and on many main

highways it would be found impossible both from the operating and from the safety standpoint to stop the traffic. There are only two answers to such a situation - separate the grades or stop the rail traffic.

The Conflicts between different Groups
within each Form.

In the traffic regulations report referred to before, the highway facilities needed by motor truck, motor bus, automobile and other vehicles have been carefully considered, and the tentative draft represents a concurrence of the opinion of representatives of these major groups. Limitations have necessarily been recommended, but for the single purpose of transport economy taken as a whole.

The Conflict between Society and each
Form of Transportation.

Congested street and highway traffic has brought many people into conflict with the motor vehicle. This is not strictly true, for it is really a conflict between people themselves. Too many people are simultaneously trying to use highway and street facilities for too many purposes in too many ways. The motor vehicle is only the mechanical tool. Here again it is a question of inadequate facilities. No detailed discussion is necessary. The only permanent relief must come through traffic

planning, city and country alike. Adequate planning can only follow a complete understanding of the facts, and this means a highway transport survey on broad lines. But the big, important point is that the main highway system for the States can no longer be dealt with on the basis of sections of highway, separated by urban streets. The States will have to stop dumping traffic in an ever increasing flow at the corporation lines. Whether this traffic is carried around or through, it means new, expensive facilities. It must be remembered that the motor vehicle is a potential builder of property values, but it is also a potential destroyer, through congestion which destroys its own utility and economy, particularly of time.

The most serious tendency in recent legislation has been to divert gas taxes from the completion and maintenance of the main State highways and out from under the jurisdiction of the State highway departments. The only way to meet this is to stand on the single principle of transportation economy, and to plan the system as an unbroken network.

The Conflict between Human Attributes
and the Elements of each Form of
Transportation.

It is common knowledge how traffic laws and regulations vary from State to State, but the situation is not hopeless. Test this phase by the same standard of transportation economy.

By this measure the operator cannot be separated from the vehicle. Taken as a unit, the operator and vehicle must function together. The vehicle cannot think, neither can the operator, under emergency conditions. He must act without time to think. His processes are reflex.

Uniformity between the States of all those matters of law, regulation and safety devices which involves the human attributes in the operation of the vehicle, is highly necessary to promote economy with safety. You will note that this discussion is not supported upon the great necessity and responsibility of the highway officials to do everything possible to decrease accidents of all kinds, and to prevent the loss of life. To what extent this may be done is problematic. Such statistical evidence as exists points clearly to human attributes as the prolific causes of accidents. The accidents caused by recklessness or carelessness on the part of motor vehicle driver or pedestrian probably comprise between 80 and 90 per cent of all accidents. Better facilities for traffic flow and drastic enforcement of uniform rules are both necessary, and everything else that will help even in a small way to promote safety. But this is only one of the problems. The motor using public demand uniform laws and other conditions under which to develop to the highest degree highway transport. This means:

- (a) Interstate continuity of routes
- (b) Uniform vehicle operating laws
- (c) Uniform loadings for similar classes of roads
- (d) Uniform markings and signs
- (e) Uniform color code

There is only one plan of successful action for this whole matter. The highway officials who have been tied down to the business of building roads must take over their operation as public utilities. The planning of and for moving traffic economically and safely will either be done by engineers or by police. The engineering approach is to provide adequate facilities. The police approach is to restrict the use of existing facilities. Under which plan will the public be best served? There will always be the necessity for both to work in cooperation, but traffic congestion and transportation waste must be eliminated by adequate facilities.

At this point it probably occurs to many of the States that here are national questions which they are being urged to meet. The position of the Bureau on these questions is the same as on the Federal aid construction work. They are all phases of a single big problem. The time has come to do these things. The highway departments must not yield the administrative position won. These definite propositions are made to this Association by the Bureau of Public Roads to focus attention on concrete steps to be taken.

1. The Bureau will recommend to the Secretary the appointment of a joint board of representatives of the Association and the Bureau to carry forward the naming and numbering on a national scale of the system now established.

2. The Bureau is of the opinion that "inter-State highways" is a fairer descriptive term for the main system than Federal aid highways.

3. The Bureau will agree to help this same board or other representatives of the Association to obtain uniform motor vehicle legislation in the details where exact or approximate uniformity is necessary.

4. Finally the Bureau will agree to a Federal aid project for each State on application of the State to mark and sign the through routes, and to erect uniform safety or guarding devices where dangerous conditions exist - this in advance of construction and subject to the qualification that we may need some new legislation to make this possible.

This suggestion will not be misunderstood. The public has not yet determined or been convinced that the construction organization ought also to be the operating one. But highway transport safety and economy can be reached only through adequate facilities properly used. The major problem must be met by these competent engineering organizations. It must be met in the large way by the State and Federal highway organizations of this country.