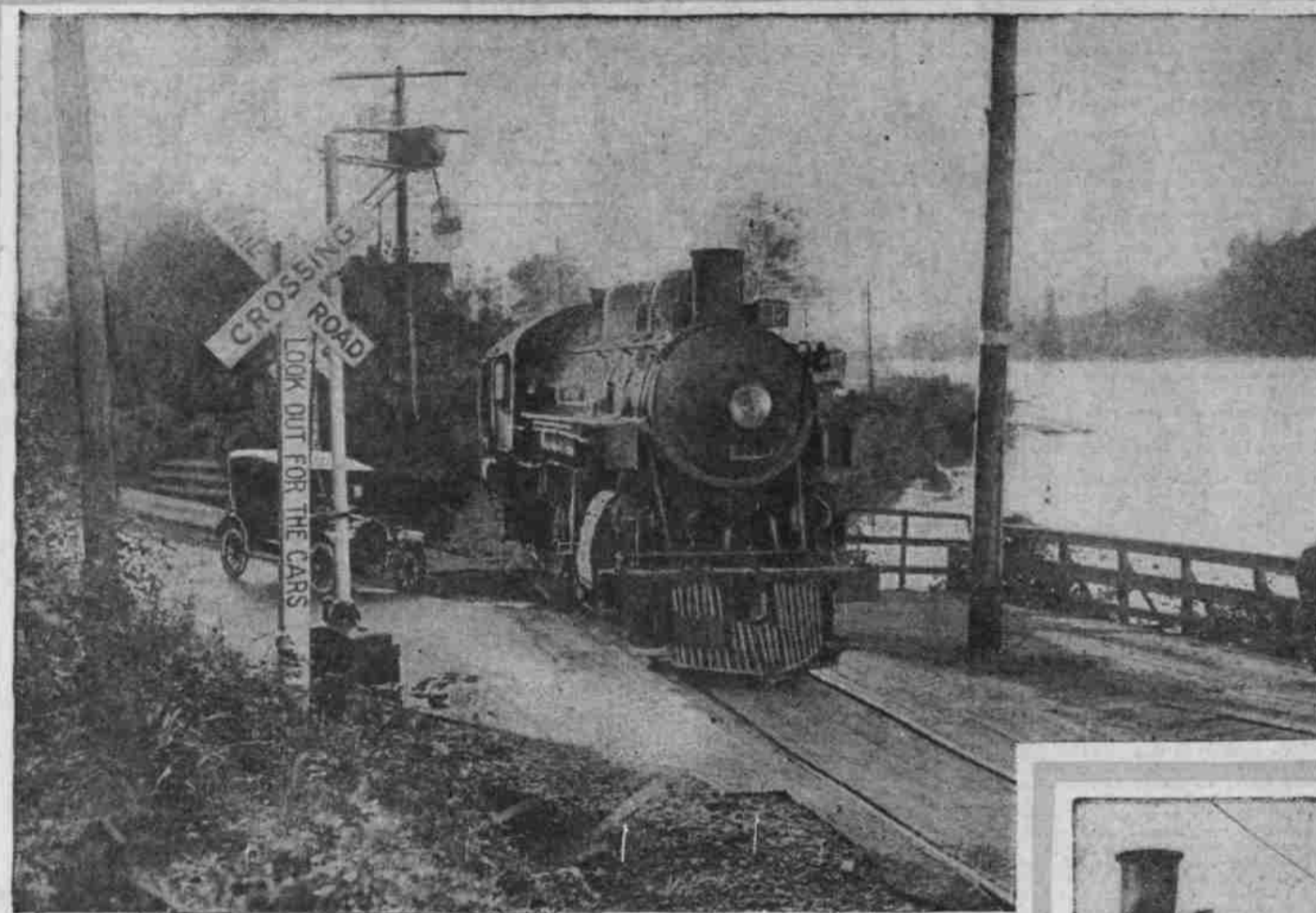




Railroad Crossings' Scenes of Many Accidents

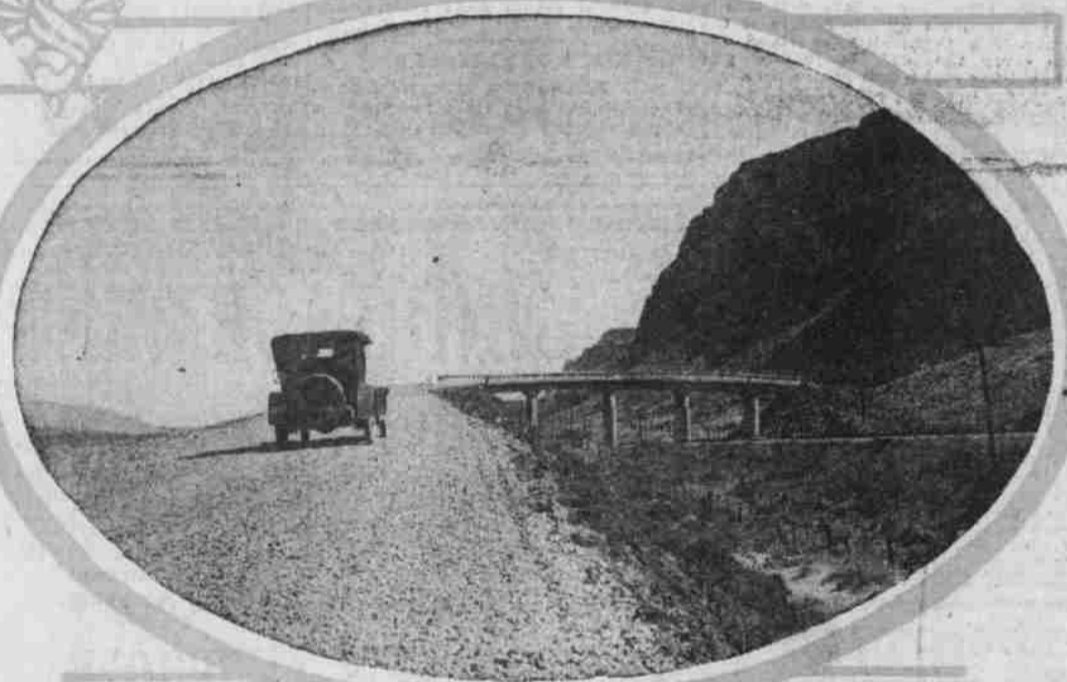
Oregon Strives to Eliminate Them



Dangerous Crossing Just South of Oregon City.



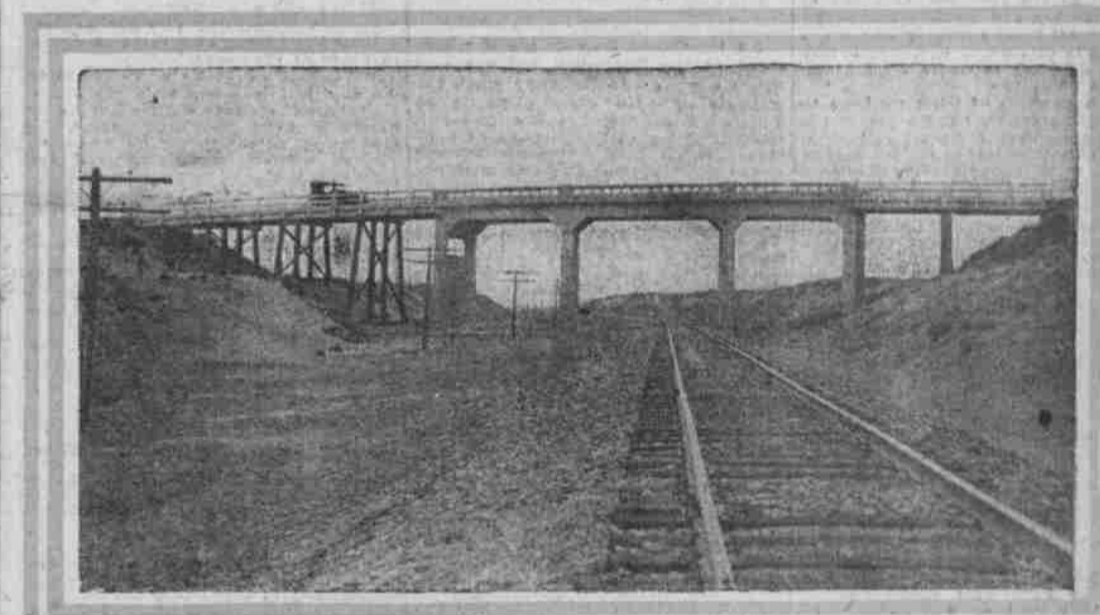
Chevrolet Car at Tunnel Under Railroad Near Pendleton.



The Modern Way—Viaduct Across Track Near Celilo



Remember, the Train Cannot Stop!



Messner Viaduct on Upper Columbia River Highway.

BY H. W. LYMAN.

ALONG a smooth paved road, through a peaceful rural section, an automobile is speeding. At the wheel is Mr. Average Driver, keenly interested in the landscape about him and conversing in a bantering way with the women folks in the rear seat. A few miles away across the rolling farm land a train is speeding. At the engine's throttle is a veteran engineer, urging the big iron monster on to the performance of its schedule.

As the moments pass the two agents of modern transportation, the automobile and the railway train, speed on toward a common destination. Suddenly the two traffic lines run rapidly together and cross. The glistering pavement runs toward the steel path, makes an upward sweep to the railroad grade and crosses the track. The shrill warning of the locomotive's whistle splits the air. There is a sudden grinding of brakes, the smell of burning rubber as the tires slide along the pavement, a crash of crumpling metal, a woman's scream—and the railroad crossing has again taken its toll of human life.

Such, in barest outline, is the picture of many a railroad crossing accident which has happened in the United States this year, and in past years since the automobile became a common instrument of transportation. The minor details of location, speed and causes may vary, but the result is the same. The happy motor party, in the barest fraction of a second and because of one fleeting failure of judgment, is overcome by tragedy. The bright car is a mass of wreckage, the occupants lie along the track, dead or severely injured.

Death Lurks at Crossings.

Death lurks at every railroad crossing, ready to take its toll from among the thoughtless, the reckless and the absent-minded. The great train, whose tremendous momentum will carry it on for many feet despite the greatest care of its engineer and the most perfect working of the brakes, is its instrument. The motorist, whose duty it is to have his car under control at all times and to exercise the most careful judgment at all crossings, but

who speeds on in heedless hurry, is the victim.

During the last four years statistics show that an average of three people each day have lost their lives in this country as a result of grade crossing accidents. Three times that many have been severely injured. While figures for 1921 are, of course, not available, it seems assured that this tremendous waste of human life is still going on. Oregon is offering its sacrifices to recklessness and thoughtlessness, along with other states of the union. Less than a month ago, at the outskirts of the city of Portland, three lives were snuffed out in one accident of this nature.

A total of 4350 deaths and 12,750 injuries in crossing accidents in the United States in 1917, 1918, 1919 and 1920! The statistics point directly to the need of utmost caution and alertness upon the part of drivers as they approach grade crossings. When approaches are blind or obscure or when the crossing is at the top of a steep pitch, as is frequently the case when the highway lies at a lower level than the railroad track and climbs a score of feet or so to reach the railroad grade, the driver should bring his car to a stop, slip in the low gear and proceed over the crossing. In this way the car is under perfect control and danger of stalling on the track is eliminated.

Accident Causes Given.

A study of the records of the Oregon-Washington Railroad company regarding accidents at railroad crossings gives an insight into the ways in which these accidents occur. In the year 1920, as a result of accidents of this nature over railroad crossings of the Oregon-Washington line in this state, there were three killed and nine injured. Thus far this year there have been none killed and but five injured. Safety-first propaganda is beginning to tell. Brief selections from the railroad report tell their own story:

At Imbler, Or.—A truck loaded with boys traveling from the county fair to Imbler crashed into a train at a crossing. The boys, including the driver, were watching an airplane above them until the moment before the accident

occurred. Three were instantly killed and three injured.

At Pendleton—An automobile stalled on the track before an approaching train. Two were severely injured.

Near Umatilla—An automobile was apparently racing with the train in the effort to beat it over a crossing. It failed to do so and one was severely injured.

At Athena—A driver, approaching a crossing at a rapid rate, swerved into the ditch at the side of the road to avoid a collision with a moving train. Two were severely injured.

And thus runs the list of explanations. The accident on October 26 at a crossing on the Mount Hood electric line about a mile east of Gresham, which was the most serious of the present year in Oregon and took the lives of three school teachers, occurred when the driver relaxed his caution for a moment under what should have been the most favorable circumstances. The man at the wheel was used to making that same drive at that same hour every day, and he knew that there was no train scheduled to pass at that time. The train which bore down upon the car and hurled the occupants to their death was a special, carrying employes of the railway line. Rain on the windshield and fog, those two instruments of evil to motorists, prevented the driver from obtaining a clear view of the track, while the noise of the car and the beating of the side curtains by the wind may have prevented him from hearing the warning whistle.

Crossings Being Eliminated.

But the situation is not without its bright side, so far as Oregon is concerned, and that bright side is the progress which is being made in the elimination of grade crossings on the main state roads. Remarkable steps have been taken by the state highway departments, with the aid of county officers and railroad officials. Dozens of crossings have been eliminated by changes of road locations or by the construction of viaducts or tunnels. This work is of the utmost importance in proper highway development and vies in necessity with grading and paving construction.

The work already done, incomplete though it is, is a monument to the state highway commission.

There were originally 100 grade crossings on the main highways of the state, the Columbia river highway from Astoria to Pendleton, the Pacific highway from Portland to Junction City, the Old Oregon trail from Pendleton to Ontario and the West Side highway from Portland to Junction City. Of this number 73 now have either been eliminated or are in process of elimination. Of the remaining 27 all but six have been acted upon and work of eliminating them will go forward as rapidly as possible. As the result of this work there is not a single grade crossing on the entire Columbia river highway, taking main-line tracks into consideration. Although the highway crosses the main line three times between The Dalles and Umatilla, three splendid viaducts have been constructed, which carry the highway over the railroad track in each instance. While there have been several grade separations by viaducts and tunnels and grade-crossing eliminations by relocation in various parts of the state on secondary highways, these are not taken into consideration in the figure above, nor are grade crossings in Multnomah county and in incorporated cities and towns considered.

Great Expense Involved.

It has been the policy of the highway commission consistently to remove all the grade crossings where it has been possible to do so by a reasonable expenditure, and some grade crossings which were extremely hazardous have been removed at a very great expense. Probably the most expensive grade-crossing elimination is the one on the Pacific highway at McVeigh point, three miles south of Eugene, now under way, the total cost of which will reach \$80,000.

Frequently it has been possible to combine river crossings and railroad crossings in the same structure, a fine example of this being the crossing of the Umpqua river and the railroad near Myrtle Creek on the Pacific highway in Douglas county. The same condition holds true for two crossings on the Old Oregon trail in Union county.

ings by relocation are numerous, a particularly good example of this is the new Pacific highway between Myrtle Creek and Dillard in Douglas county. The original location had six dangerous grade crossings. By relocation on the other side of the river all of these crossings were eliminated. Between Baker and Huntington on the Old Oregon trail there were originally 19 grade crossings, all of which have been eliminated by relocation and by the construction of three overhead structures.

Few Not Yet Acted On.

Of the 27 crossings on the major state highways outside of incorporated towns remaining to be eliminated, the ones not yet acted upon include the crossings of the Southern Pacific and the Oregon Electric at Tigard, the crossing of the Southern Pacific at Canemah, the crossing of the Southern Pacific at Holmes Gap and the crossings of the Southern Pacific and the Oregon Electric north of Albany.

There are, of course, several grade crossings on these main highways which it probably will never be possible to eliminate according to members of the state highway commission, such as the crossing on the main street of Grants Pass, crossing in Junction City, in Harrisburg and McMinnville and in other incorporated towns. It is the hope of the highway commission, however, to have 25 per cent of the grade crossings on these main state highways eliminated by the end of 1922.

Chevrolet Car Aids Photographer.

The illustrations on the front page of the automobile section this week, showing the old and the new in grade crossings throughout the state, were secured with the aid of the Fields Motor Car company, Chevrolet dealers in Portland and vicinity. At the upper left is shown a dangerous crossing on the Pacific highway just south of Oregon City, where the highway crosses the main line of the Southern Pacific. One of the limited trains from California is shown speeding towards Oregon City, while at the side of the track is shown one of the new Chevrolet 490 models. Elimination of this crossing is a difficult problem, and involves the matter of a new and better approach to Oregon City from

the south. The present narrow plank road running along the edge of the river will soon be unable to care for the traffic and a new entrance to the city will have to be worked out. When this is done arrangements undoubtedly can be made to eliminate the railroad crossing.

The photograph above at the right shows one of the many modern crossings provided during the last couple of years. This tunnel is on the Oregon-Washington highway near Pendleton.

In the lower row of photographs is shown two of the modern crossings on the upper Columbia river highway. At the right is one of two concrete viaducts near Celilo. In this vicinity the highway crosses the track twice, and each time over a splendid concrete viaduct. Below and at the right is shown the Messner viaduct on the Columbia river highway at Messner, west of Umatilla. This is one of the best examples in the state of the extent to which the state highway commission has gone to eliminate crossings. The highway west of this point is parallel to and at the same grade as the railroad for many miles. Just east of the crossing the same condition holds true. To carry the highway over the railroad by means of the viaduct it was necessary to build a long fill on each side of the viaduct to raise the highway to the level of the top of the viaduct. A direct crossing could have been made without a change of grade or a fill at either side, but the highway commission rejected such a plan in view of its programme of grade crossing elimination.

The photograph in the lower center, showing the Chevrolet car stopped just before the on-coming train, was taken on the east side Pacific highway just north of Oregon City. This crossing over the main line of the Southern Pacific is one of the most dangerous in the vicinity of Portland. The road is a county highway, however, and elimination of the grade crossing involves such a difficult and expensive process that it is doubtful if this can be accomplished in the near future.

Official Resume Given.

A brief resume of grade crossing work which has been carried on on the state highways has been prepared by the state highway department at the request of The Oregonian and is given below. By the term "grade separation" is meant either a viaduct

or a tunnel allowing the highway to pass over or under the railroad.

"Railroad grade crossings eliminated on the main trunk highways of the state are as follows:

Relocation.	Grade separation.
Columbia River Highway—	
Astoria-Portland.....	3
Portland-Pendleton.....	3
Old Oregon Trail.....	3
Pendleton-Ontario.....	15
Pacific Highway (E. side).....	14
Portland-Roseburg.....	4
Roseburg-California line.....	4
Pacific Highway (W. side).....	3
Portland-Junction City.....	3
Totals.....	51

The average cost of grade separation by overhead or underneath structures is \$40,000, representing a total expenditure for this feature of \$2,050,000. The average participation is 40 per cent by the railroad, 30 per cent by the state and 30 per cent by the county, although in several instances this has been modified by the public service commission order to lessen the share of the railroad companies and the counties.

The commission at the present time has in course of preparation plans for the elimination of six grade crossings on the Pacific highway and two on the West Side Pacific highway by overhead structures, also eleven grade crossing eliminations on the Old Oregon trail, six of which will be separations by structures and five eliminations by relocation. These are in addition to some proposed for other state highways.

The additional cost involved in eliminating grade crossings by relocation is difficult to determine. With one or two exceptions, the cost of these improvements has been borne entirely by the state or county.

In many instances, also, the state and counties have been subjected to enormous additional expense in construction due to construction operations lying in close proximity to railroad property, notably on the Columbia River highway between Pendleton and Astoria, the Old Oregon trail between Pendleton and Kameia and on some parts of the Pacific highway.

In fairness to the railroads it should be said that they have shown a fine spirit of co-operation on the removal of these hazards and have offered no objection to the assessment made upon them by the public service commission. The public service commission also has indicated a commendable spirit of fairness in the assessments to the railroads, counties and the state.

TRAFFIC STUDY COMPLETED

Agricultural Department Shows When Travel Is Heaviest.

WASHINGTON, D. C., Nov. 12.—If you are going on an automobile trip and want to avoid all possible traffic you should go on Tuesday or Wednesday. Such is the conclusion reached from a study of a traffic census taken recently by the bureau of public roads, United States department of agriculture, on one of the most traveled roads in the United States. If you want to go at an hour when there will be the least traffic, start between 2 and 3 o'clock in the morning.

Traffic increases in amount steadily from Wednesday to Saturday, the census shows, and then jumps into big volume on Sunday. On Monday on Sunday is about twice that on Tuesday or Wednesday. On Monday there is a decided drop from the Sunday figures and on Tuesday the lowest ebb is reached.

There is less traffic on the road between 2 and 3 o'clock in the morning than at any other time of day. From 3 o'clock to 6 there is a slight increase; then a steady climb until 11. Between 11 o'clock and 1 there is a slight drop, and then an increase again until the peak is reached between 2 and 3. After 3 o'clock traffic drops slightly until 7, when the decrease becomes more pronounced.

Ninety per cent of the day's traffic, the census shows, rolls over the road between 7 A. M. and 9 P. M., and 52 per cent between 1 P. M. and 8 P. M.

ROAD FOR HORSES FAVORED

Humane Society Pleads for Strip of Road for Animals.

SAN JOSE, Cal., Nov. 12.—Old Dobbin, crowded off the highways of the state by King Auto, had his inning at the convention of the State Humane association of California here.

One of the speakers made a plea for a strip of road along the highways of the state, where a horse can travel unhindered by automobile traffic.

The convention went on record as in favor of the suggestion.