

HR-228 Engineering Study, Automating Iowa's Speed Monitoring Program

Key Words: Vehicle speed, Automatic speed monitoring,

ABSTRACT

Excessive speed on State and County highways is recognized as a serious problem by many Iowans. Speed increases both the risk and severity of accidents. Studies conducted by the FHWA and NHTSA have concluded that if average speeds were increased by five MPH, fatalities would increase by at least 2,200 annually.

Along with the safety problems associated with excessive speed are important energy considerations. When the national speed limit was lowered to 55 MPH in 1974, a tremendous savings in fuel was realized. The estimated actual savings for automobiles amounted to 2.2 billion gallons, an average of 20.75 gallons for each of the 106 million automobiles registered in 1975.

These benefits prompted the Federal-Aid Amendment of 1974 requiring annual State enforcement certification as a prerequisite for approval of Federal-aid highway projects. In 1978, the United States D.O.T. recommended to Congress significant changes in speed limit legislation designed to increase compliance with the national speed limit. The Highway Safety Act of 1978 provides for both with-holding Federal-aid highway funds and awarding incentive grants based on speed compliance data submitted annually.

The objective of this study was to develop and make operational, an automatic speed monitoring system which would have flexible capabilities of collecting accurate speed data on all road systems in Iowa.

Automatic speed monitoring equipment has been in use for over a year advantages have been realized with the new system. Human error has been eliminated especially in high volume areas. Detection of survey personnel by motorists, thereby affecting the results, is no longer a problem and much better representation of true speeds is obtained due to 24 hour sampling.

Variables such as inclement weather, which could adversely affect any manual data collection effort, do not present any problem with automatic equipment. Also in terms of safety, the hazard of being exposed to high speed, high volume traffic for long periods of time has been eliminated. The surveyor can now set the equipment in a matter of minutes, usually at an off-peak hour, and the required data can be retrieved very conveniently at a later time.

Minor limitation of automatic equipment is lack of data from very slow moving traffic. However, this has not caused any real problem and the effect on speed statistics has been very insignificant.

It could be concluded from the foregoing discussion that the Automatic Speed Monitoring Program in Iowa has been successful and needed data is being collected in the most economical manner possible.