

MINNESOTA ROADSIDE SURVEY PROGRESS REPORT ON ACCIDENT, ACCESS POINT AND ADVERTISING SIGN STUDY IN MINNESOTA

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In 1947 the Minnesota Highway Department undertook, in cooperation with the National Safety Council and the Bureau of Public Roads, an analysis of accidents, their location and causes in relation to geometric design features. The purpose of that study was to determine whether there was any direct relationship between accident frequency and accident type and the several elements of roadway and roadside design. That pilot study covered US Highway No. 52 extending from the southeast portion of the state in a general northwesterly direction to a point on the Minnesota-North Dakota State Line at Moorhead, Minnesota. The basic study in connection with the 1947 data was completed and a set of tabulating cards prepared and forwarded to the Washington office of the Bureau of Public Roads for analysis in connection with similar information from some thirteen other States.

Studies of this sort have a tendency to mushroom and in 1949 Minnesota undertook, at the request of the Bureau of Public Roads and the Highway Research Board, a somewhat related study of access points and advertising signs with relation to accident type and frequency.

Feeling that elements of highway design when considered in conjunction with access points and advertising signs might have some relationship to accident rates, the study procedures were developed so that information with respect to access points and advertising signs could be correlated with the previous information secured with respect to items of geometric design. Feeling also that the 350-mi. pilot section did not adequately reflect the several predominant types of rural routes

in this state, an additional 150 mi. was added to the study and accident data, as well as other items of information, secured for the complete 500-mi. portion.

The study is now about 80 percent complete. It is expected that the data will all have been coded, tabulating cards prepared and basic tabulating runs completed by early spring. We anticipate the preparation of a complete report on the complete 500-mi. segment.

A very preliminary study of approximately 170 mi. of the 500-mi. study segment reveals no apparent relationship between accident occurrence and advertising sign type or location. A fairly definite pattern of relationship appears evident between frequency of access points and accident occurrence. Whether this trend will be borne out when a complete analysis of the 500-mi. pilot section has been made, we do not know. If first results are borne out, however, we wish to inject a note of caution into the interpretation of results. It has been our feeling that the type of accident reports and the system of accident reporting now in use in most states may not be sufficiently accurate nor adequate to completely fix the cause of many accidents. Reports filed by drivers involved in automobile accidents are prone to reflect only those things which fix themselves upon the mind of the driver at the immediate moment of the accident. There may be contributory reasons for an accident of which the driver in his excitement has not been aware. It may well be that a much more detailed system of accident reporting and a much more detailed questioning of drivers involved in accidents will be necessary at least on a test basis before

it will be safe to assume, if it should so develop, that advertising signs have no apparent relationship to accident occurrence.

As an illustration of this point during the summer of 1948 the Minnesota Highway Planning Survey conducted, in cooperation with the State of Wisconsin, a comprehensive origin-destination traffic survey of the Duluth-Superior metropolitan area. One of the roadside interviewing stations operated in conjunction with this survey was located near the extreme south edge of the city of Duluth, just outside urban development. Trunk Highway 23 is known as the Evergreen Memorial Highway. It was so designated by special action of the Minnesota legislature, which act provided that for a distance of some 45 mi. from Duluth to the Village of Askov, no billboards or advertising signs should be placed within viewable distance of the roadway surface. In several instances during the course of the summer operation of the station located on this route, drivers, particularly from out of the state, when interviewed inbound into the city of Duluth expressed a feeling of fatigue and unease after having driven the 45 mi. section. The road is of modern alignment with adequate right-of-way, some grades and some horizontal curvature, but almost without sight restrictions over its entire length. The several people who commented did not remember until reminded that there were no advertising signs whatever on the right-of-way.

None of them expressed any definite opinion to the effect that the absence of billboards contributed to the apparent monotony of the 45 mi. section. Yet all were somewhat puzzled as to why they should feel the way they did feel after having driven this portion of the route. Prior to and subsequent to those reports, I personally drove that section of Trunk Highway 23 a good many times and found that I experienced much the same feeling. After considering the matter carefully, however, I was inclined to attribute my reaction to the fact that without being conscious of it I drove that section at an extremely high rate of speed. There are no towns directly on that section of the route. There are few crossroads and not many farm units. The relatively small number of detracting features, together with the complete absence of billboards, produces a feeling of security which tends to result in higher average driving speed. The accident experience on this route so far since its completion has been good although several rather severe accidents have occurred which have been attributed to excessive speed.

When the results of the parallel surveys being conducted in other states have been assembled, it would be well to carefully scrutinize the procedures by which each of the several studies have been made with particular emphasis on the care with which the accident reports were studied and the effort put forth to locate the exact point of accident occurrence.