

A Sign Manual for County Highway Departments

EUGENE R. RUSSELL
Graduate Research Instructor
HERPIC, Purdue

INTRODUCTION

The title of this paper is possibly misleading. It concerns a manual currently being prepared by the HERPIC staff, but it is not a page-by-page summary of the manual's technical contents. Instead, the value of such a manual and the importance of uniformity will be emphasized. Specifically, these questions will be answered:

- (1) Why all the concern about uniformity and manuals on uniform traffic control devices?
- (2) Why a county manual?
- (3) What will the county manual contain?

First, it should be emphasized that the county manual is not promoting anything new or different. Its contents in regard to signing, conform to the *Indiana Manual on Uniform Traffic Control Devices for Streets and Highways* which in turn conforms to the *National Manual on Uniform Traffic Control Devices for Streets and Highways*. Nation-wide uniformity of traffic control devices must be one of our goals. It has been streamlined to eliminate traffic control devices and situations that generally do not occur on county highways. One objective of this streamlining is to put emphasis on achieving uniformity of the more common signs.

Uniformity is a national problem and perhaps there is a tendency to think of national problems as someone else's problems—perhaps someone way off in Washington. However, achieving national uniformity is a *local* problem because 85 percent of all traffic control devices are the responsibility of local government units (4)*. Thus, the goal of nation-wide uniformity will never be realized until the many thousands of county and municipal units follow a single standard. Unfortunately, these local units are very often not in complete compliance with current

* Numbers in parentheses refer to references in the bibliography.

standards. In fact, various studies and estimates over the past decade indicate their record is poor—some very poor.

Several aspects of uniformity will be covered later in this paper. However, one point should be stressed from the beginning because it is perhaps of most importance. With growing liability damages being awarded by the courts, it is not unlikely that the liability could be much greater where poor or non-standard traffic control devices exist. Local units sometimes feel that they can't afford to bring their traffic control devices up to uniform standards. Perhaps the day has arrived when they can't afford not to.

UNIFORMITY

General

Uniformity is not a new concept. The need for uniform standards was recognized long ago. Unfortunately, the practice of installing whatever type sign or signal that suited the fancy of local officials had gotten a big head start. Back in the 1920's the situation could be thus described: (3)

“. . . city officials charged with installing signs, put up the type that seemed best to each of them. The result was a hodgepodge of signs and signals that made the motorist of that day throw up his hands in despair. They are still doing this in many communities.”

Perhaps the above does not apply to your community, but are you sure? Have you made an inventory lately? Do you have a program for placement, replacement and maintenance of traffic control devices aimed at conformance with current uniform standards?

Background

In 1927, the American Association of State Highway Officials published a manual for signing rural roads. In 1929, the National Conference on Street and Highway Safety published a similar manual for urban areas. In 1935, a joint committee of these two organizations developed and published the original edition of the *Manual on Uniform Traffic Control Devices*. This joint committee, currently with a considerably changed membership, has been in continuous existence since that time.

The current membership of the committee is as follows:

- American Association of State Highway Officials,
- Institute of Traffic Engineers,
- National Committee on Uniform Traffic Laws and Ordinances,

National League of Cities, and
National Association of County Officials.

Any modification of the manual must be approved by the five agencies. Standards set forth in the manual generally originate at the state and local level. These standards evolved through the years by practicing highway, traffic, design, planning and maintenance engineers with the cooperation of police, safety and education specialists. The main point is that the manual does not contain wild or costly theory dreamed up at the national level to be imposed on state, county and local communities. It is more correct to say that its contents originate at the local level or so-called "grass roots."

Benefits of Uniformity

Road signs, markings and signals are a means of communication. The facts they communicate to drivers can mean life or death. Where communication is inadequate, the confused driver becomes a menace on the highway.

Uniform traffic control devices aid highway users and increase the efficiency and safety of both old and new road-way systems. A driver needs to know and understand *one* set of laws—*one* set of directions—*one* set of controls.

The current edition of the manual (2) sets forth the value of uniformity as follows:

"Uniformity of traffic control devices simplifies the task of the road user because it aids in instant recognition and understanding. It aids police, courts and road users by giving everyone the same interpretation. It aids public highway and traffic officials throughout the economy in manufacture, installation, maintenance, and administration.

Simply stated, uniformity means treating similar situations in the same way. The use of uniform traffic control devices does not, in itself, constitute uniformity. In fact using a standard device where it is not appropriate is as objectionable as using a non-standard device."

The last point mentioned above is of particular concern to local communities. It can be called the problem of the well-intentioned citizen who often demands action contrary to the standards of uniformity. Too often their demands are met. One example is the unwarranted use of traffic signals, many of which create more accidents than they prevent. By adhering closely to the warrants set forth in the manual, this problem can be avoided.

Reasons for Uniformity Summarized

The case for uniformity is summarized by the following nine reasons: (4)

1. The speed and volume of today's traffic is such that drivers do not have time to study the meaning of signs. They must get the meaning "in a flash".
2. Drivers cross city, county or state lines daily or frequently. They have a right to expect uniformity.
3. Standard application of uniform devices makes driving more convenient.
4. Standard application of uniform devices makes street systems safer.
5. Standard application of uniform devices increases efficiency in the use of streets and highways allowing them to handle higher volumes.
6. Uniformity brings economies in traffic control devices.
7. Uniformity helps traffic administrators, the police and the courts by eliminating questions about the interpretations of control measures.
8. High quality traffic control has a public relations value to a community.
9. With growing liability damages being awarded in the courts, you could be assessed much more because of poor traffic control than if you followed recognized standards which will hold up in court.

Another factor to consider, is the relationship of uniformity to acquiring federal aid funds. On all federal-aid highways, traffic control devices should be in accord with manual standards. Federal funds have been made available in the past toward the cost of standardization. Thus on federal-aid roads there are strong financial reasons for conformance to the uniform manual.

SIGNING IN THE COUNTIES

Continuing Program

Counties, along with every unit of government, should have a continuing program of placement, replacement and maintenance of traffic control devices. Emphasis must be placed on conformance with the manual. Every effort to correct even minor discrepancies will be worthwhile. To quote from a recent article: (4)

"Often it's the little things that get people killed on our streets and highways. They are small, almost hidden hazards that could be corrected with very little expense if someone would only take time and trouble to point them out.

Among these are the stop or warning sign that is hidden by bushes or weeds, the warning sign that has been damaged or knocked over and not replaced, the nonuniform sign that may be perfectly understandable to a local driver, but means little or nothing to a transient motorist . . ."

Duties of County Commissioners

The duties of county commissioners, and other local authorities, in regard to traffic signs, signals and markings, is clearly set forth in *Acts of Indiana General Assembly, 1939, Chapter 38, Section 32*, where it states:

"Local authorities, in their respective jurisdictions, shall place and maintain such traffic control devices upon highways under their jurisdiction, not including state highways, as they may deem necessary to indicate and to carry out the provisions of this act, or local traffic ordinances, or to regulate, warn or guide traffic. All such control devices hereafter erected shall conform to the state manual and specifications."

The Indiana State Highway Commission prepared the *Indiana Manual on Uniform Traffic Control Devices for Streets and Highways*, pursuant to Section 30, Acts 1939, Chapter 48.

The State Manual

The Indiana manual conforms, so far as practical, with the *Manual on Uniform Traffic Control Devices*, 1961 edition prepared by a joint committee, mentioned above. Definitions which are not covered by Indiana state law are taken from that manual.

The obvious intent of the above-mentioned legislation is to promote uniform methods of controlling traffic throughout the State of Indiana. Certain modifications of the *American Association of State Highway Officials Manual* have been found necessary and desirable due to existing legislation and experience with local prevailing conditions.

The Indiana state manual, in two volumes, is divided into three main parts dealing with signs, markings and traffic signals. It discusses the design, application, operation, and necessity for traffic control devices and gives minimum warrants justifying the use of these various traffic controls. It does not cover certain complicated special cases and provisions because these should be made after a complete engineering study of the governing conditions. When any traffic control device is

found to be necessary, its design and application should conform to the standards established by this manual or any revisions thereof. This manual has been published as a guide and the contents contained therein should be used by state and local officials in determining the necessity for any traffic control device in their respective jurisdictions.

The County Manual

Why a county manual? Both the national and state manual on uniform traffic control devices contain many sections that are only applicable to interstate and similar high volume situations that infrequently, if ever, are of concern to county officials. The purpose then is to reduce the size of the manual, keeping only the relatively few control devices that are generally important on county highways. Having these in one manual should benefit particularly those counties that have no one with traffic engineering expertise, or no engineer at all. Also it should tend to emphasize the more important signs. That is not to imply that all *necessary* signs, *properly placed* are not important, and copies of the state manual should be kept handy also. Whenever possible, and certainly when there is even the slightest hint that a situation is not standard, a traffic engineer should be consulted.

Also contained in the manual will be sections on Traffic Sign Surveys, Personnel and Equipment, Budgeting for Traffic Signs, Ordinances for Traffic Signs, Model Traffic Ordinances, etc. No doubt some of you have excellent programs already. In these cases, we would like you to share ideas and programs with all counties. Hopefully, we will be able to seek out examples of good programs so that through the manual they can be passed on to all counties.

It is not the intent of this paper, to go into any of the technical aspects of the manual or traffic control devices. So far, some concepts and the importance of uniformity has been stressed. Putting the manual to work, to achieve uniformity is the responsibility of each local unit as it sees fit within its capabilities. However, below are some ideas in regard to getting started on a program, especially for those counties that have no traffic engineering capabilities.

A SUGGESTED COUNTY PROGRAM

Inventory

It is impossible to adequately plan or program needed changes in any system without first evaluating the present condition of that system. The inventory should provide at least the following information:

1. Conformance with uniform standards in all respects.
2. Physical condition of existing sign face.
3. Need for relocating of existing signs including straightening or raising sign.
4. Need for sign where there is none.
5. Need to remove sign where it is not warranted.
6. Need to replace non-standard signs.
7. Need for reflectors.
8. Need for routine maintenance, e.g., tighten bolts on sign, cut brush and weeds obstructing view, etc.

After the inventory, each county will have to determine its own program and priorities in accordance with the capabilities of their personnel and funds available. It is urged that great importance be given to finding out what needs to be done, and then making provision for personnel and money to do it.

Granted, it will take many man-hours just to give each county sign a "quick" check, and even more to maintain a continuing program of sign improvement and upkeep. Hopefully, all counties that do not now have such a program will recognize its importance and make the necessary commitment to get one going.

One possibility that could be considered, that reportedly has had some success in other parts of the country, is to encourage citizens' reporting of deficient signs and other traffic control devices. In some instances, publication of a form for reporting complaints has encouraged citizens to express their grievances or opinions in regard to traffic control devices. If nothing else, it should at least serve as a good public works gesture.

Some form of record should be kept on all signs, particularly at all intersections. In the manual, one or more suggested forms will be outlined. However, the important point to stress here is that you should keep records of this nature, not only as the basis for a sound continuing program but also as proof that you are giving attention to sign upkeep. Here again, this point could be of importance in any lawsuit that might arise.

Maintenance

Compared to the road bed, ditches, brush, etc., signs are the easiest part of the road system to maintain. It does require the commitment of a reasonable number of man-hours, but the task should not be slighted.

The National Association of County Engineers, *Manual on County Traffic Operations*, summarizes the importance of good maintenance.
(1)

“To maintain their authority as traffic control devices, all signs must be kept in good condition at all times. It is frequently better to be without a sign than to have one in need of maintenance.

The use of too many signs, especially those of the warning and regulatory type, also tend to be confusing. Sign effectiveness is often lost when this occurs and special care should be used to avoid this circumstance.

Often county road departments normally do not give sufficient personnel to implement a full scale sign maintenance program. However, all signs should receive scheduled inspections at least twice a year. Conditions to look for are position, damage, legibility, and general appearance. A program should then be undertaken to correct these deficiencies.”

Some periodic schedules should be fitted to the needs of each county, such as (5)

Yearly: Wash and inspect signs, make minor repairs as needed, e.g., tighten bolts, straighten, patch bullet holes.

Five Years: Clean and clear out reflective sheeting to restore reflective properties and inhibit weathering for three or four years.

Nine to Twelve Years: Replace sign or (if facilities are available) refurbish in sign shop.

The above suggestions are very brief and obviously must be tailored to the experience of each county. However, some form of continuing program should be established. As mentioned previously, it is not the intent of this paper to go into the technical aspects of traffic control devices, details of which will be contained in the manual.

CONCLUSION

In closing, you are, hopefully, convinced of two major points:

- (1) All counties must work toward the goal of 100 percent compliance with the *Manual on Uniform Traffic Control Devices*.
- (2) All counties must institute a continuing program to maintain these devices in top shape.

Anything less than a total commitment toward these goals is no longer good enough.

BIBLIOGRAPHY

1. National Association of County Engineers, *Manual on County Traffic Operations, A Program for Accident Prevention*, County Road Management Guide Series, Washington, D.C.
2. National Joint Committee on Uniform Traffic Control Devices, *Manual on Uniform Traffic Control Devices for Streets and Highways*, U.S. Department of Commerce, Bureau of Public Roads, Washington, D.C., June 1961.
3. "Technical Notes", *Traffic Engineering*, Vol. 33, No. 4, January 1963.
4. "Technical Notes", *Traffic Engineering*, Vol. 33, No. 5, February 1963.
5. Woltman, Henry L. "Programmed Sign Maintenance", *Rural & Urban Roads*, Vol. 2, No. 8, August 1964.