Signing of Road District and Township Highways
FOREWORD

This booklet is issued for convenience of road district highway commissioners and others who may be concerned with proper signage on highways under the jurisdiction of Illinois road districts. It provides a ready reference to typical sign details and typical applications; however, it is not meant to replace or supplement the Manual on Uniform Traffic Control Devices (MUTCD) or the Illinois Supplement to the MUTCD (ILMUTCD).

The most recent version on the MUTCD is available from the Federal Highway Administration’s (FHWA) website at http://mutcd.fhwa.dot.gov. The ILMUTCD is available from the department’s website at www.dot.il.gov/mutcd/utcdmanual.html. Road district highway commissioners should review the MUTCD before installing, replacing, or removing signs. The County Engineer may also be able to assist.
TABLE OF CONTENTS

CHAPTER 1 – INTRODUCTION ..............................................................1-1

SECTION 1: GENERAL................................................................. 1-1
SECTION 2: PURPOSE ................................................................. 1-1
SECTION 3: PRINCIPLES ............................................................. 1-2

CHAPTER 2 – SIGN AUTHORIZATION PROCEDURE .......................2-1

SECTION 1: GENERAL................................................................. 2-1

CHAPTER 3 - GENERAL REQUIREMENTS .....................................3-1

SECTION 1: SIGN ERECTION AND PLACEMENT ............................3-1
SECTION 2: REFLECTORIZATION AND ILLUMINATION ..................3-2
SECTION 3: MINIMUM RETROREFLECTIVITY LEVELS ...................3-3
SECTION 4: MAINTENANCE AND INSPECTION ..............................3-4
SECTION 5: INVENTORY ............................................................. 3-5

CHAPTER 4 - REGULATORY SIGNS .................................................4-1

SECTION 1: STOP SIGNS (R1-1) ................................................. 4-1
SECTION 2: YIELD SIGNS (R1-2) .................................................. 4-3
SECTION 3: SPEED LIMIT SIGNS (R2-1) ........................................ 4-4
SECTION 4: SCHOOL AREA SIGNING (S Series) ............................. 4-5
SECTION 5: ROAD CLOSED (R11-2) AND ROAD ENDS (R11-I100) SIGNS ................................................ 4-6
SECTION 6: WEIGHT LIMIT SIGNS ................................................ 4-6
SECTION 7: PENALTY FOR DUMPING ON PUBLIC HIGHWAYS (R15-I100) ................................................ 4-7

FIGURE IV-1 STOP ..................................................................... 4-11
FIGURE IV-2 STOP/YIELD AHEAD .............................................. 4-12
FIGURE IV-3 YIELD .................................................................... 4-13
FIGURE IV-4 SPEED LIMIT/REDUCTION ...................................... 4-14
FIGURE IV-5 TYPICAL SIGNING FOR SCHOOL AREA .................. 4-15
FIGURE IV-6 TEMPORARY ROAD CLOSURE ............................... 4-16
FIGURE IV-7 LONG TERM BRIDGE CLOSURE ............................. 4-17
FIGURE IV-8 LOW VOLUME ROAD CLOSURE .............................. 4-18
FIGURE IV-9 WEIGHT LIMITS ..................................................... 4-19
FIGURE IV-10 PENALTY FOR DUMPING ON PUBLIC HIGHWAYS .... 4-20

CHAPTER 5 - WARNING SIGNS .....................................................5-1

SECTION 1: HORIZONTAL ALIGNMENT SIGNS .............................. 5-3
SECTION 2: LARGE ARROW SIGNS (W1-6, W1-7) ........................... 5-3
SECTION 3: CHEVRON ALIGNMENT SIGN (W1-8) ......................... 5-3
SECTION 4: CROSS ROAD SIGN (W2-1) ....................................... 5-3
SECTION 5: SIDE ROAD SIGNS (W2-2 and W2-3) ........................ 5-4
SECTION 6: T SYMBOL (W2-4) ..................................................... 5-4
SECTION 7: Y SYMBOL (W2-5) ................................................................. 5-4
SECTION 8: STOP AHEAD (W3-1) AND YIELD AHEAD (W3-2) SIGNS ........ 5-4
SECTION 9: ROAD NARROWS SIGN (W5-1) ................................... 5-4
SECTION 10: NARROW BRIDGE SIGN (W5-2) ...................................... 5-4
SECTION 11: ONE LANE BRIDGE SIGN (W5-3) ................................. 5-4
SECTION 12: HIGHWAY-RAIL GRADE CROSSING ADVANCE WARNING SIGN (W10-1) ................................................................. 5-5
SECTION 13: SUPPLEMENTAL RAILROAD CROSSING SIGNING .......... 5-5
SECTION 14: VEHICULAR TRAFFIC SIGNS ....................................... 5-5
SECTION 15: NONVEHICULAR SIGNS ................................................. 5-5
FIGURE V-1 TYPICAL APPLICATIONS ............................................. 5-9
FIGURE V-2 CURVE ....................................................................... 5-10
FIGURE V-3 LARGE ARROW ............................................................... 5-11
FIGURE V-4 CHEVRON ALIGNMENT .............................................. 5-12
FIGURE V-5 CROSS ROAD SIGN .................................................. 5-13
FIGURE V-6 SIDE ROAD SIGN ..................................................... 5-14
FIGURE V-7 T SYMBOL ................................................................. 5-15
FIGURE V-8 Y SYMBOL .................................................................. 5-16
FIGURE V-9 ROAD NARROWS .......................................................... 5-17
FIGURE V-10 NARROW BRIDGE .................................................... 5-18
FIGURE V-11 ONE LANE BRIDGE .................................................. 5-19
FIGURE V-12 RAILROAD ADVANCE WARNING .............................. 5-20
FIGURE V-13 TYPICAL SUPPLEMENTAL SIGNING TREATMENT FOR RAILROAD CROSSINGS WITHOUT INTERSECTION TRAFFIC SIGNALS ................................................................. 5-21
FIGURE V-14 TYPICAL SUPPLEMENTAL PAVEMENT MARKING TREATMENT FOR RAILROAD CROSSINGS WHERE INTERSECTION TRAFFIC SIGNALS ARE INTERCONNECTED WITH ADJACENT RAILROAD WARNING SIGNS ............................................................................. 5-22

CHAPTER 6 - MISCELLANEOUS ............................................................ 6-1

SECTION 1: GUIDE SIGNS .................................................................. 6-1
SECTION 2: TOURIST ORIENTED DESTINATION SIGNING (TODS) .......... 6-1
SECTION 3: OBJECT MARKERS .......................................................... 6-2
SECTION 4: RURAL REFERENCE SYSTEM .......................................... 6-2
FIGURE VI-1 TYPICAL TOURIST ORIENTED DIRECTIONAL SIGNS ........ 6-5
FIGURE VI-2 TYPICAL SIGNING FOR TOURIST ORIENTED SERVICES ...... 6-6
FIGURE VI-3 EXAMPLE OF TRAILBLAZER SIGN REPLACEMENT .............. 6-7
CHAPTER 1 – INTRODUCTION

SECTION 1: GENERAL
Highway signing is important because it helps ensure traffic safety by providing for orderly and predictable movement of traffic on all street and highway systems.

The purpose of this publication is to provide guidance to the Highway Commissioner and County Engineer regarding signs and their uses and traffic control devices. Any reference to the “MUTCD” is to the “Manual on Uniform Traffic Control Devices” or the “Illinois Supplement to the National Manual on Uniform Traffic Control Devices”.

This publication should not be used as a substitute for engineering judgment. It is intended that the provisions of this publication be used as guidelines and not the final authority on the signing of township highways. Conformance with the latest editions of the “Manual on Uniform Traffic Control Devices” and the Illinois Supplement to the MUTCD is required by Section 11-304 of the Illinois Vehicle Code (625 ILCS 5/11-304). This statute states:

“Local authorities in their respective maintenance jurisdiction shall place and maintain such traffic control devices upon highways under their maintenance jurisdiction as are required to indicate and carry out the provisions of this Chapter, and local traffic ordinances or to regulate, warn, or guide traffic. All such traffic control devices shall conform to the State Manual and Specifications and shall be justified by traffic warrants stated in the Manual. Placement of traffic control devices on township or road district roads also shall be subject to the written approval of the county engineer or superintendent of highways.”

SECTION 2: PURPOSE
The purpose of highway signing on road district and township roads is to help insure safety by providing for the orderly and predictable movement of all traffic, both motorized and non-motorized throughout the local system and to provide regulations, warnings, and guidance as are needed to insure the safe and informed operation of all users of the system.

Highway signing should be used only where justified by engineering judgment or studies. Signs are essential to regulate and guide traffic over established routes and give information concerning direction and destinations. They warn of hazards that are not evident and call attention to special regulations and restrictions. To be effective, a highway sign should meet five basic requirements:

1. Fulfill a need;
2. Command attention;
3. Convey a clear, simple meaning;
4. Command respect of the road users; and
5. Give adequate time for proper response.

Failure to install and maintain proper signing on township highways has resulted in a number of liability suits. These suits have involved county and township employees who are responsible for highways and highway signing.

The primary purpose of this publication is to assist highway commissioners and county engineers in providing highway signing and guidance for persons driving on their roads. The recommended practices in this publication are based on typical conditions.
SECTION 3:  PRINCIPLES

More effective use of highway signing requires an understanding of some principles relating to good operating practices. Included in the basic principles are driver expectancy, positive guidance and consistency.

Driver Expectancy
Driver expectancies are affected by the type of function of road, such as an interstate highway, state highway, county road, or township road. The driver expects to drive each of these with different levels of caution.

What the driver expects on a road is greatly influenced by what he experienced on the previous section of road. The presence or absence of traffic control devices, road surface type, condition and width, or narrow bridges and culverts is what the driver expects for the next one-half to one mile.

Driver expectancy is affected not only by the very recent experience, but also by those things drivers have learned through the past experiences. For example, advance railroad crossing signs are located at railroad grade crossings, stop signs are red, and curve warnings are yellow and diamond shaped. The consistent use and placement of traffic control devices can do a great deal toward assuring that the driver expectancy is correct.

Positive Guidance
Positive guidance is the concept that a driver can be given sufficient information where and when needed and in a form which can be best used to avoid unsafe conditions. Positive guidance can be given the driver through combinations of signs, hazard markers, safe speed advisory signs, and probably most important of all, the view of the road ahead. If drivers could see curves far enough ahead, approaching cars on crossroads, and intersections hidden by the crest of a hill, there would be little need for anything more than an occasional stop or yield sign on low volume roads.

Consistency
Consistency relates to the “sameness” of the nature of the road from one section to another. Inconsistencies are sudden changes in the nature of the road. Inconsistencies are contrary to a driver’s expectancy, thus either the road should be made consistent, which is usually impractical, or something should be done to change the driver’s expectancy. For example, in the case of a hidden curve in a nearly straight roadway, the use of a curve warning sign, with perhaps an advisory speed plate will correctly change the driver’s expectancy. After seeing the curve sign, the driver expects the curve, knows whether the road curves left or right, and knows the speed at which the curve can be safely driven.
CHAPTER 2 – SIGN AUTHORIZATION PROCEDURE

SECTION 1: GENERAL
Placement of traffic control devices and signs authorized by the “Illinois Highway Code” or by the “Illinois Vehicle Code” on township or road district highways shall be subject to the written approval of the County Engineer or Superintendent of Highways. A placement program should be prepared in cooperation with the engineer/superintendent.

In order to establish a signing program, the following is required:

1. Designate through highways.
2. Determine where stop and/or yield intersections are warranted and the quantity of each sign needed.
3. Determine location and type of other regulatory, warning and guide signs and the quantity needed.
4. Secure approval of the County Engineer or County Superintendent of Highways. (See Exhibit II-1 for example letter.)
5. Acquire signs and sign supports.
6. Erect signs in accordance with the current Manual on Uniform Traffic Control Devices.

The following are a few general notes regarding some sign types and their applications. Chapters 4, 5, and 6 provide more detailed guidelines and information about commonly used signs.

A speed limit on road district roads which differs from statutory maximum limits can be established only by the county board of the county in which the road district is situated. The county board can establish an altered limit by ordinance. Guidelines for alterations of speed limits by local authorities is governed by Section 11-604 of the Illinois Vehicle Code (625 ILCS 5/11-604).

The law specifically sets the speed limit through school zones at 20 miles per hour “during school days when children are present.” This limit is not applicable unless the appropriate signs are posted.

Similarly, any restriction of weight on highways or structures under township jurisdiction is not effective unless and until the necessary signs are erected and maintained. Before erecting weight limit signs, written approval must be obtained from the County Engineer or County Superintendent of Highways.

The use of warning and guide signs, with the exception of railroad advance warning signs as indicated in Chapter 5, is discretionary with the highway commissioner, as there are no specific warrants which require signing. Signs of this type, therefore, should be placed at locations believed to be potentially unsafe. Once erected, however, it is essential that the warning sign be maintained as long as the potentially unsafe condition exists.
EXAMPLE SIGN REQUEST LETTER

Mr. Hank Hill  
County Engineer  
Austin, IL  

Dear Sir,  

If accordance with Section 6-201.16 (605 ILCS 5/6-201.16) of the Illinois Highway Code, I request formal approval to place, erect and maintain traffic control devices and signs authorized by the “Illinois Highway Code” and the “Illinois Vehicle Code” on township or road district roads under my jurisdiction, at the following locations:

<table>
<thead>
<tr>
<th>Type of Device</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop signs</td>
<td>On Tropicana Rd. at Frontier Rd.</td>
</tr>
<tr>
<td>Stop signs (4 way)</td>
<td>Dunes Rd. at Sands Dr.</td>
</tr>
<tr>
<td>Yield signs</td>
<td>On Thunderbird Rd. at Las Vegas Rd.</td>
</tr>
<tr>
<td>School speed limit signs</td>
<td>Sahara Dr. at Oasis School</td>
</tr>
</tbody>
</table>

It is understood that the traffic control devices and signs will conform to the requirements of the current “Manual on Uniform Traffic Control Devices for Streets and Highways and the “Illinois Supplement to the National Manual on Uniform Traffic Control Devices,” and that said devices shall be maintained in accordance with the MUTCD.

Very truly yours,

_________________________________  
Highway Commissioner  

APPROVED  

This__ day of______,______

_________________________________  
County Engineer/Superintendent of Highways
CHAPTER 3 - GENERAL REQUIREMENTS

The use of signs on road district roads is to provide directions, to inform motorists of hazards that are not readily apparent, and to call attention to regulations, restrictions, and other conditions.

Signs are classified according to use as follows:

1. **REGULATORY SIGNS** - Shall be used to provide the driver notice to traffic laws or regulations and indicate the applicability of the legal requirements that apply at a given place or on a given highway. To disregard these signs is punishable as an infraction, violation, or misdemeanor.

2. **WARNING SIGNS** - Call attention to unexpected conditions on or adjacent to a highway or a street and to situations that might not be readily apparent to road users. Warning signs alert road users to conditions that might call for a reduction of speed or an action in the interest of safety and efficient traffic operations.

3. **GUIDE SIGNS** - Essential to direct road users along streets and highways, to inform them of intersecting routes, to direct them to destinations, identify nearby streams, parks, forests, and historic sites, and generally to give such information as will help them along their way in the most simple, direct manner possible.

SECTION 1: SIGN ERECTION AND PLACEMENT

When erecting signs, it is essential that the location be determined which will provide maximum visibility. Positions cannot be standardized as signs must in all cases be placed in the most advantageous positions depending upon the highway design and alignment.

The following are some general rules for locating signs:

1. Locate signs on the right-hand side of the roadway where the driver is in a habit of looking for them.

2. Locate signs to optimize nighttime visibility and minimize the effects of mud spatter.

3. Locate signs so they do not obscure each other or are hidden from view by other roadside objects.

4. Locate decision making signs far enough apart to allow sufficient time to make the decision.

Signs are to be installed individually on separate posts or mountings, except where one sign supplements another, or where signs must be grouped.

Signs should be located so that they:

1. Are outside the clear zone unless placed on a breakaway or yielding support;

2. Optimize nighttime visibility;

3. Do not obscure each other; and

4. Are not hidden from view.

Care should be taken not to install too many signs. Regulatory and warnings signs should be used conservatively since these signs, if used to excess, tend to lose their effectiveness. However, the frequent use of route markers and directional signs, to keep drivers aware of their location, will not lessen their value.
Mounting Height
Signs erected in rural areas shall be mounted at a height of at least 5 feet (1.5 meters) above the level of the pavement or roadway edge, measured to the bottom of the sign. In areas where there is parking, pedestrian traffic or obstructions to view, the mounting height shall be at least 7 feet (2.1 meters). The height to the bottom of a secondary sign may be 1 foot (300 mm) less that the heights specified above.

Lateral Offset
For ground-mounted signs, the minimum lateral offset should be 12 ft (3.7 m) from the edge of the traveled way. If a shoulder wider then 6 ft (1.8 m) exists, the minimum lateral offset for ground-mounted signs should be 6 ft (1.8 m) from edge of the shoulder.

The minimum lateral offset is intended to keep trucks and cars that use the shoulders from striking the signs or supports.

All supports should be located as far as practical from the edge of the shoulder. Advantage should be taken to place signs behind existing roadside barriers, on over-crossing structures, or other locations that minimize the exposure of the traffic sign supports.

Posting and Posts Mounting
Sign posts and their foundations and sign mountings must be constructed to hold signs in a correct and permanent position, and to resist swaying in the wind or removal by vandalism. A single post may be used for the erection of up to 24 inch (600 mm) diamond shaped signs, signs with a horizontal dimension of 30 inches (750 mm) or less, and individual signs with areas of 6.25 square feet (0.58 square meters) or less.

All posts should be breakaway. The following are acceptable types of sign posts:

- Tubular steel posts;
- Telescoping steel post no greater than 2 ¼ in by 2 ¼ in (57 mm by 57 mm);
- U-channel posts;
- 4 in by 4 in (100 mm by 100 mm) wood posts; and
- 4 in by 6 in (100 mm by 150 mm) wood posts with the 6 in (150 mm) side parallel to the roadway with appropriately drilled holes to ensure that the post is breakaway.

SECTION 2: REFLECTORIZATION AND ILLUMINATION
Regulatory, warning, and guide signs shall be reflectorized or illuminated to show the same shape and color both by day and night, unless specifically stated in the MUTCD. School signs are not normally illuminated unless there is pedestrian activity to and from the school during non-daylight hours.

Reflectorization may be by means of:

1. Reflector “buttons” or similar units set into the symbol or message and border; or
2. Reflective sheeting, either on the sign background or where a white legend is used on a black or colored background, in the symbol or message and border, or both.

Reflector buttons in a highway sign are individual reflecting units arranged in rows or patterns to form letters, symbols, or borders. They are made of glass or transparent plastic with lenses or prisms.
Reflective sheeting is applied either to the background or the legend of a sign, or to both, to give a bright reflection over the area covered.

Sign reflective materials shall reflect white light, or if used as the background of a colored sign, it shall reflect the color of the background.

If a sign is to be illuminated, the illumination may be by means of:

1. A light behind the sign face, illuminating the main message or symbol, or the sign background, or both, through a translucent material; or
2. An attached or independently mounted light source designed to direct essential uniform illumination over the entire face of the sign; or
3. Some other effective device, such as luminous tubing or fiber optics shaped to the lettering or symbol, patterns or incandescent light bulbs, or luminescent panels that will make the sign clearly visible at night.

SECTION 3: MINIMUM RETROREFLECTIVITY LEVELS

Effective January 22, 2008, new language was added to the MUTCD that requires most traffic signs shall meet the minimum level of retroreflectivity outlined in the MUTCD. Including these minimum levels in the MUTCD does not imply that a highway agency must measure the retroreflectivity of every sign. Rather, the MUTCD language describes six methods that highway agencies may use to maintain traffic sign retroreflectivity at or above the minimum levels. However, highway agencies should adopt a consistent method.

Furthermore, the new language recognizes that there may be some individual signs that do not meet the minimum retroreflectivity levels at a particular point in time. As long as the highway agency with jurisdiction is maintaining signs in accordance with the MUTCD, the highway agency will be considered to be in compliance.

Compliance Dates

- January 22, 2012 - Implementation and continued use of an assessment or management method that is designed to maintain traffic sign retroreflectivity at or above the established minimum levels;
- January 22, 2015 - Replacement of regulatory, warning, and ground-mounted guide (except street name) signs that are identified using the assessment or management method as failing to meet the established minimum levels; and
- January 22, 2018 - Replacement of street name signs and overhead guide signs that are identified using the assessment or management method as failing to meet the established minimum levels.

Assessment or Management Methods

1. Visual Nighttime Inspection – The retroreflectivity of an existing sign is assessed by a trained sign inspector conducting a visual inspection from a moving vehicle during nighttime conditions. Signs that are visually identified by the inspector to have retroreflectivity below the minimum levels should be replaced.
2. Measured Sign Retroreflectivity – Sign retroreflectivity is measured using a retroreflectometer. Signs with retroreflectivity below the minimum levels should be replaced.
3. Expected Sign Life – When signs are installed, the installation date is labeled or recorded so that the age of a sign is known. The age of the sign is compared to the expected sign life. The expected sign life is based on the experience of sign retroreflectivity degradation in a geographic area compared to the minimum levels. Signs older than the expected life should be replaced.

4. Blanket Replacement – All signs in an area/corridor, or of a given type, should be replaced at specified intervals. This eliminates the need to assess retroreflectivity or track the life of individual signs. The replacement interval is based on the expected sign life, compared to the minimum levels, for the shortest-life material used on the affected signs.

5. Control Signs – Replacement of signs in the field is based on the performance of a sample of control signs. The control signs might be a small sample located in a maintenance yard or a sample of signs in the field. The control signs are monitored to determine the end of retroreflective life for the associated signs. All field signs represented by the control sample should be replaced before the retroreflectivity levels of the control sample reach the minimum levels.

6. Other Methods – Other methods developed based on engineering studies can be used.

An agency may choose to use either an assessment method or a management method, or a combination of the two. Agencies may develop other methods as long as they are documented in an engineering study and correspond to the values in the MUTCD.

**Exempt Signs**

Highway agencies may exclude the following signs from the retroreflectivity maintenance guidelines:

1. Parking, Standing, and Stopping signs (R7 and R8 series);
2. Walking/Hitchhiking/Crossing signs (R9 series, R10-1 through R10-4b);
3. Adopt-A-Highway signs;
4. All signs with blue or brown backgrounds; and
5. Bikeway signs that are intended for exclusive use by bicyclists or pedestrians.

**Additional Information**

The Illinois Technology Transfer Center conducts a ½ day workshop that provides more detailed information about the regulation and compliance methods. More information is available at [www.fhwa.dot.gov/retro](http://www.fhwa.dot.gov/retro).

**SECTION 4: MAINTENANCE AND INSPECTION**

All traffic signs should be kept in proper position, clean, legible, and should have adequate reflectivity at all times. Damaged or deteriorated signs should be replaced without delay.

Poorly maintained signs lose their effectiveness in functioning as traffic control devices. Signs which are damaged, defaced, dirty, or missing are ineffective and tend to discredit the agency responsible for the signs.

To assure adequate maintenance, a suitable schedule of inspection (both day and night) should be established. Semi-annual inspections have generally been sufficient. However, the more frequently inspections are done, even on a weekly or monthly basis, the less likely that deficient
signing conditions will exist and the potential for legal action to be taken against an agency due to substandard signing, and resultant accidents or injuries will be reduced.

The following areas have been found to often result in court cases for local agencies:

1. Missing, damaged, obstructed, or hidden STOP signs.
2. Stop signs improperly placed at a wrong height, location angle, or not of proper quality (non-reflectorized).
3. Absence of “STOP AHEAD” signs where necessary.
4. Shrubbery or other obstructions restricting view of signs or road conditions.
5. Failure to warn of “T” intersections.
6. Lack of an inspection program to determine various road defects and signing problems.

Situations listed above should be identified and corrected as soon as possible.

Inspections may also be conducted on a daily basis as employees of the local agency drive the township road system. Signs which have been damaged, deteriorated, or obscured should be replaced at the first opportunity.

Nighttime inspections should also be conducted to determine whether all signs are functioning properly at night.

Special care should be taken to ensure that weeds, trees, shrubbery, construction, or snow do not obstruct the face of any sign. If these conditions are found to be present, the obstruction should be cleared as soon as possible.

**SECTION 5: INVENTORY**

An inventory should be kept of all signs, inspections, and sign maintenance activities. Crash records should also be kept to help identify possible deficiencies within the road system.
CHAPTER 4 - REGULATORY SIGNS

Regulatory signs inform highway users of traffic laws or other regulations and indicate the applicability of legal requirements that would not otherwise be apparent. These signs shall be erected at those locations where the regulations apply and should be mounted in a manner in which they can easily be seen and legible to the motorists whose actions they are to govern.

Standard dimensions for all signs have been determined and are specified in the MUTCD. Sign sizes listed in this booklet are the minimum sizes for low volume roads and streets on which 85% of traffic travels at speeds of 35 mph (60 kph) or less. Larger signs should be used as need dictates. The Illinois Supplement to the MUTCD includes additional Illinois standard signs. Regulatory signs shall be reflectorized or illuminated, consistent with current reflectivity standards, except for school signs which should be reflectorized or illuminated only if there is significant pedestrian flow to and from the school after daylight hours.

SECTION 1: STOP SIGNS (R1-1)

Section 11-302 of the Illinois Vehicle Code (625 ILCS 5/11-302) grants authority to “local authority and road district highway commissioners” to designate any street or highway under their jurisdiction as a through highway, and to require all vehicles to stop or yield before entering or crossing such a through highway.

The STOP sign (Figure IV-1) is octagonal in shape, has a red background, and carries the word “STOP” in white letters. Secondary messages shall not be used on STOP sign faces.

On roads and streets without posted limits, a class B size sign, 30” X 30” (750 mm X 750 mm) should normally be used. In special cases such as low ADT and posted speeds of 35 mph (60 kph) and below, a class A size sign, 24” X 24” (600 mm X 600 mm) may be used.

STOP signs should not be used for speed control. Portable STOP signs shall not be used except for emergency situations and temporary traffic control purposes.

STOP signs should be used if engineering judgment indicates that one or more of the following conditions exists:

1. Intersections of a less important road with a main road where application of the normal right-of-way rule would not be expected to provide reasonable compliance with the law.
2. Street entering a through highway or street.
3. Unsignalized intersection in a signalized area.
4. High speeds, restricted view, or crash records, indicate a need for control by the STOP sign.

Prior to the application of these warrants, consideration should be given to less restrictive measures, such as the YIELD sign where a full stop is not necessary at all times. Existing STOP sign locations should be reviewed periodically to determine whether, due to changed conditions, a less restrictive control could accommodate the traffic demands safely and more effectively.

The STOP sign shall be installed on the right side on the approach to which it applies. When the STOP sign is installed at this required location and the sign visibility is restricted, a STOP AHEAD (W3-1) sign shall be installed in advance of the STOP sign. The STOP sign shall be located as close as practical to the intersection it regulates, while optionizing its visibility to the
At minor crossroads or “T” intersections, the stop sign should be set back from the through highway a minimum distance of 12 feet (3.6 meters).

At two-way stop intersections where accident records indicate a large number of crashes involving drivers stopping at the STOP sign and pulling into the path of cross traffic, the “CROSS TRAFFIC DOES NOT STOP” sign (W4-4p) may be used. The use of this sign should be restricted to locations where an engineering study indicated a need for this supplementary sign.

The Multiway Stop control is used where the volume of traffic on the intersecting roads is nearly equal. At a multiway stop intersection, each STOP sign shall be supplemented by a R1-3 or R1-4 plate (ALL WAY, 4-WAY, or 3-WAY) mounted below indicating the number or approaches. This plate shall be used only when all legs of the intersection are controlled by a STOP sign.

The decision to install multiway stop control should be based on an engineering study. The following criteria should be considered in the engineering study for a multiway STOP sign installation:

A. Where traffic control signals are justified, the multiway stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.

B. A crash problem, as indicated by 5 or more reported crashes in a 12-month period that are susceptible to correction by a multiway stop installation. Such crashes include right- and left-turn collisions as well as right-angle collisions.

C. Minimum volumes:

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day, and

2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour, but

3. If the 85th-percentile approach speed of the major-street traffic exceeds 65 km/h or exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the above values.

D. Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.

Other criteria that may be considered in an engineering study include:

A. The need to control left-turn conflicts;

B. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;

C. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to reasonably safely negotiate the intersection unless conflicting cross traffic is also required to stop; and

D. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multiway stop control would improve traffic operational characteristics of the intersection.
The CROSS TRAFFIC DOES NOT STOP and the ALL-WAY, 4-WAY, or 3-WAY plates are the only signs that may be mounted below the STOP sign. No other signs shall be used.

The STOP AHEAD sign (W3-1), shown in Figure IV-2 shall be used in advance of any STOP sign that is not visible for sufficient distance to permit the driver to bring his/her vehicle to a stop. Obstruction of view due to horizontal or vertical curves, parked vehicles, or foliage, and high approach speeds, shall be considered in determining the need for the erection of this sign. The STOP AHEAD sign shall be a minimum of 30 inches X 30 inches (750 mm X 750 mm).

STOP AHEAD signs on township roads which intersect with a State, County, or Municipal highway shall be maintained by the township unless an intergovernmental maintenance agreement with another agency is in effect.

In the event the township insists that the Department maintain the signs, an agreement must be entered into with the appropriate district office. The agreement will allow the Department to maintain the signs but requires the township to perform all inspections and notify the Department when maintenance is required. When this agreement takes effect, the Department will no longer patrol the township roads for the purpose of inspecting the signs.

SECTION 2: YIELD SIGNS (R1-2)

The YIELD sign, (R1-2) shown in Figure IV-3, assigns right-of-way to traffic on certain approaches to an intersection. Vehicles controlled by a YIELD sign need to slow down or stop when necessary to avoid interfering with conflicting traffic.

The YIELD sign shall be an equilateral triangle with one point downward, having a red border and white interior with the word “Yield” in red inside the border. The standard size for YIELD signs is 36 inches (900 mm) per side. However, for two lanes, low speed minor roads, the acceptable size is 30 inches (750 mm) per side.

The YIELD sign may be erected at an entrance to an intersection when an engineering and traffic investigation warrants that preference be given to traffic on a through street or highway designated in accordance with Section 11-302 of the Illinois Vehicle Code (625 ILCS 5/11-302).

The YIELD sign shall not be used as a substitute for a STOP sign where a STOP sign is warranted.

YIELD signs shall not be used:

1. Where visibility limitations or prevailing high speeds or volumes of traffic make a full stop necessary for safety.
2. Against the major flow of traffic at an intersection. However, a YIELD sign may be installed to control a major traffic movement where the majority of drivers in that movement are making right turns.
3. On the approaches of more than one of the intersecting streets or highways.
4. Where there are stop signs on one or more approaches of an intersection.
5. On through highways.

YIELD signs may be used instead of STOP signs if engineering judgment indicates that one or more of the following conditions exist:
1. When the ability to see all potentially conflicting traffic is sufficient to allow a road user traveling at the posted speed, the 85th-pecentile speed, or the statutory speed to pass through the intersection or to stop in a reasonably safe manner.

2. If controlling a merge-type movement on the entering roadway where acceleration geometry and/or sight distance is not adequate for merging traffic operation.

3. The second crossroad of a divided highway, where the median width at the intersection is 30 ft (9 m) or greater. In this case, a STOP sign may be installed at the entrance to the first roadway of a divided highway, and a YIELD sign may be installed at the entrance to the second roadway.

4. An intersection where a special problem exists and where engineering judgment indicates the problem to be susceptible to correction by the use of the YIELD sign.

At intersections, the YIELD sign should be set back from the through highway a minimum distance of 12 feet (3.6 meters). If the visibility of a YIELD sign at any location is restricted, the sign shall be erected as specified and a YIELD AHEAD sign (W3-2), shown in Figure IV-2, shall be erected in advance of the YIELD sign.

Where two roads intersect at an acute angle, the YIELD sign shall be positioned at an angle or shielded if necessary so that the message can not be seen by the traffic to which it does not apply.

SECTION 3: SPEED LIMIT SIGNS (R2-1)

Speed Limit signs (Figure IV-4) are intended to inform motorists of the maximum statutory speed limit established in Section 11-601 if the Illinois Vehicle Code (625 ILCS 5/11-601), or a speed limit altered on the basis of an appropriate engineering and traffic investigation, in accordance with Section 11-604 (625 ILCS 5/11-604).

No change in the basic statutory speeds on road district roads shall become effective until the prescribed action has been taken by the county board and appropriate signs are erected. The speed limit shall be posted in multiples of 5 miles per hour. The standard Speed Limit sign is 24 inches X 30 inches (600 mm X 750 mm). When a speed limit is to be posted, it should be within 5 mph of the 85th-percentile speed of free-flowing traffic.

In order to determine the proper speed limit on the basis of an engineering and traffic investigation, the following factors should be considered:

1. Road surface characteristics, shoulder condition, grade, alignment, and sight distance.
2. The 85th percentile speed and pace speed.
3. Roadside development and environment, and roadside friction.
4. Safe speed for curves or hazardous locations within the clear zone.
5. Parking practices and pedestrian activity.
6. Reported crash experience for at least a 12-month period.

Speed Limit signs shall be located at the points of change from one speed limit to another. These signs shall not be erected until the speed limits are approved and officially authorized.

A Speed Reduction sign (W3-5, W3-5a) should be used to inform road users of a reduced speed zone when engineering judgment indicates the need for advance notice in order to
comply with the speed limit posted ahead. These signs should be erected at distances in advance of Speed Limit signs as determined in Chapter 5, Table V-1 of this booklet.

SECTION 4: SCHOOL AREA SIGNING (S Series)
The SCHOOL SPEED LIMIT 20 WHEN CHILDREN ARE PRESENT sign assembly is for use in establishing speed zones authorized in Section 11-605 of the Illinois Vehicle Code (625 ILCS 5/11-605). The 20 miles per hour school speed zones are applicable only when the appropriate signs are posted.

The school speed limit sign shall consist of either a single sign (S4-I100) or a combination of separate panels consisting of a SCHOOL plaque (S4-3), a standard SPEED LIMIT 20 sign (R2-1) and an ON SCHOOL DAYS WHEN CHILDREN ARE PRESENT plaque (S4-I103).

School speed zones should be indicated by three signs:

1. The advance sign, SCHOOL SPEED ZONE AHEAD with a speed advisory sign, 20 MPH placed beneath (S4-I102) is shown in Figure IV-5. This sign should be erected a minimum of 400 feet (125 meters) ahead of the SCHOOL SPEED LIMIT 20 sign in urban areas and approximately 800 feet (245 meters) ahead in rural areas.

2. The SCHOOL SPEED LIMIT 20 DO NOT PASS (S4-I101), shown in Figure IV-5 is intended for use in unincorporated areas as required by Section 11-707(d) of the Illinois Vehicle Code. The panel may be mounted individually or combined into one 48”x48” (1.2 m x1.2 m) sign. Pavement markings shall not be used since the passing restriction is only in effect on school days when children are present.

3. The end of the school speed zone shall be marked by posting the appropriate standard speed limit sign or an END SCHOOL ZONE sign (S5-2).

School speed zones should be limited to those locations where public, private or religious school (nursery through secondary) buildings or grounds are adjacent to and from a school not adjacent to the highway. The school speed zone is only applicable on school days where children are present and so close to traffic that a potential hazard exists. School speed zones should not be used at schools where all of the children are either bused or driven to school and do not enter or leave the vehicles in close proximity to the highway.

The School Advance Warning assembly (S1-1 with Supplemental Plaque) shown in Figure IV-5, should be used in advance of locations where school buildings or grounds are adjacent to the highway. It may also be used in advance of established school crossings not adjacent to a school or to a school ground. This sign shall be used in advance of any installation of the School Crosswalk Warning assembly or in advance of the first installation of the School Speed Limit assembly, and shall be placed 150-700 feet (45-210 meters) in advance of the school grounds or school crossing.

If used, the School Advance Warning assembly shall consist of a School Advance Warning (S1-1) sign supplemented with a plaque with the legend AHEAD (W16-9p) or XXX FEET (XXX METERS) (W16-2 or W16-2a) to provide advance notice to road users of crossing activity.

If used, the School Crosswalk Warning assembly (see Figure 7B-1) shall be installed at the marked crosswalk, or as close to it as possible, and shall consist of a School Advance Warning (S1-1) sign supplemented with a diagonal downward pointing arrow (W16-7p) plaque to show the location of the crossing.
The School Crosswalk Warning assembly shall not be used at marked crosswalks other than those adjacent to school and those on established school pedestrian routes.

The School Crosswalk Warning assembly shall not be installed on approaches controlled by a STOP sign.

SECTION 5: ROAD CLOSED (R11-2) AND ROAD ENDS (R11-I100) SIGNS
The temporary ROAD CLOSED sign (Figure IV-6) is to be used to mark roads that have been closed to all traffic (except contractor’s equipment and other authorized vehicles) either because of construction or maintenance operations, or because of a temporary emergency such as high water or a landslide.

The sign should be mounted on a reflectorized orange and white Type III Barricade in or near the center of the roadway, at a minimum height of 1 foot (300 mm) above the pavement elevation although higher mounting heights are desirable. The DETOUR ARROW sign, if a detour has been designated, is usually placed just below the ROAD CLOSED sign. Where the sign faces through traffic, an Advance Road Closed warning sign with the secondary legend AHEAD shall be installed and, if applicable, an advance DETOUR warning sign should be used.

A ROAD ENDS sign should be used on a permanent road closure. It is recommended that the sign be mounted on a Type III Barricade when some significant hazard exists beyond the closure point. The barricade shall be striped red and white and be reflectorized. The sign should be mounted on the barricade as close to the center of the roadway as possible at a minimum distance of 1 foot (300 mm) above the pavement elevation, measured to the bottom of the sign, although higher mounting heights are desirable.

When the road has been removed and a hazard does not exist, a ROAD ENDS sign along with two or more reflectorized Type I Object Markers may be used to permanently close a low volume road. The sign should be mounted on an acceptable post in the center of the roadway with object marker signs on both sides. The distance between the pavement and bottom of the sign should be a minimum of 1 foot (300 mm) although higher mounting heights are desirable.

An example of a Long Term Bridge Closure and a Low Volume Road Closure may be found in Figures IV-7 and IV-8, respectively. Suggested approach signing is also shown.

SECTION 6: WEIGHT LIMIT SIGNS
The WEIGHT LIMIT ___TONS sign (R12-1), shown in Figure IV-9, shall be used at bridges and or roadways when a single weight limit has been authorized. The sign shall be located immediately in advance of the section of highway, or the structure to which it applies. In case of an extended length of restricted roadway, it shall be placed on the right hand side approximately 25 feet (7.5 meters) beyond intersecting roads, so as to be visible to all vehicles turning onto the restricted roadway.

The seasonal WEIGHT LIMIT___TONS/___to___sign (R12-I104), shown in Figure IV-10, shall be used on roadways seasonal weight restrictions provided under Section 15-316 of the Vehicle Code (625 ILCS 5/15-316). The signs shall be erected at each end of the portion of roadway affected and at such intermediate locations as determined by engineering judgment to be necessary to adequately inform motorists.

The BRIDGE WEIGHT LIMIT___TONS signs (R12-I101), not shown, is to be used where two separate weight restrictions are to be posted. The Department either upon request from a local authority shall, or upon its own initiative may, conduct an investigation of the bridge and determine and declare the maximum weight of vehicles that the bridge can withstand. The Department will then cause or permit suitable signing stating maximum allowable weights to be
erected and maintained. These signs shall be mounted within 300 feet (90 meters), but no closer than 50 feet (15 meters) of the bridge.

**SECTION 7: PENALTY FOR DUMPING ON PUBLIC HIGHWAYS (R15-I100)**
The PENALTY FOR DUMPING ON PUBLIC HIGHWAYS sign, shown in Figure IV-11, is authorized by Section 9-121 of the Highway Code (605 ILCS 5/9-121). It should be erected so as to provide the most efficient display of the message and may be parallel or at right angles to the pavement. This sign should be used only at such locations where dumping is likely to occur.
CHAPTER IV
REGULATORY SIGN
FIGURES
FIGURE IV-2
GENERAL NOTES

1. The school speed zone should begin at a point either 200 ft (60 m) from the crosswalk or 100 ft (30 m) from the school property, whichever is encountered first.

2. A complete series of signs is shown for one direction only. Complete signing is required for both directions.

3. Longitudinal dimensions may be adjusted to fit field conditions.

4. The speed zone ahead sign is not required when the limit on the adjacent zone is 30 mph (50 kph) or less.

TYPICAL SIGNING FOR SCHOOL AREA
FIGURE IV-6

Type III Baricades

Alternate white and orange reflectorized stripes at 45°. All stripes shall be 6 in (150 mm) in width.

ROAD CLOSED
R11-2

M4-10R or M4-10L

TEMPORARY ROAD CLOSURE
REGULATORY SIGN
ROAD CLOSED (R11-2)
GUIDE SIGN
DETOUR ARROW (M4-10R) (M4-10L)
GENERAL NOTES

1. Use 24-in (0.6 m) size signs for 2-lane, low ADT roads with speeds of 35 mph (50 km/hr) and below; 30-in (0.75 m) size signs for 2-lane, low ADT roads with speeds of 40 mph (65 km/hr) and above.

2. Where the bridge remains in place and the approach road ends at or within 500 ft (150 m) of the bridge, a permanent red/white fully reflectorized Type III barricade should be used to completely close the road. If the bridge or the deck has been removed or if a physical barrier (i.e., large pile of dirt, broken concrete or other energy dissipating material) is used to keep vehicles from accessing the bridge, the barricade should be located at least 100 ft (30 m) in advance of the barrier or stream bank.

3. Where the approach road has been completely removed at least 500 ft (150 m) in advance of the bridge site, two or more red reflectorized Type I Object Markers mounted at the end of the roadway may be used in place of the barricade. If the bridge has not been removed, a physical barrier should also be used at the bridge to deny access to off-road vehicles (See Figure No. IV-B).
GENERAL NOTES

1. If the road ends at the right-of-way line of another highway or where some significant hazard exists beyond the closure point, the signs may be mounted on a Type III barricade “fence.” Guardrail may be used in lieu of or in conjunction with the barricade “fence” where it is necessary to prevent deliberate entry onto access controlled right-of-way or an extreme hazard exists immediately beyond the closure point. Barricades, when used, shall be striped red and white and shall be fully reflectorized. If practical, old pavement should be removed to some distance beyond the closure point or covered with dirt to minimize the illusion of the road continuing and to provide a reasonably safe recovery area. The markers for the end of roadway shall conform with Section 3C-4 of the MUTCD.

2. Use where "d" exceeds 1500 ft (450 m) or where sight distance to the closure is less than 500 ft (150 m).

3. The DEAD END sign (W14-1) should be used in all cases except where the closure point is visible from the crossroad.

4. Where the point of closure is over 1 mi (1.6 km) from the last crossroad, a ___ Miles ahead plaque (W12-I103) may be used.
FIGURE IV-9
CHAPTER 5 - WARNING SIGNS

Warning signs are to be used to alert traffic of existing or potential hazardous conditions either on or adjacent to the road (Figure V-1). Warning signs require caution on the part of the motorists and may call for an adjustment of speed or other maneuvers in the interest of their own safety and that of pedestrians and other motorists.

Typical locations and hazards that may warrant the use of warning signs are:

1. Changes in horizontal alignment
2. Intersections
3. Advance warning of control devices
4. Converging traffic lanes
5. Narrow roadways
6. Changes in roadway design
7. Grades
8. Roadway surface conditions
9. Railroad crossings
10. Entrances and crossings
11. Other miscellaneous situations

The determination of the warning sign or signs to be erected shall be on the basis of an engineering study.

Since warning signs are primarily for the benefit of the driver who is unacquainted with the road, it is very important that care be given to the placement of these signs. Warning signs should provide adequate time for the driver to perceive, identify, decide, and react. This total time to perceive and complete a reaction to a sign is the sum of the times necessary for Perception, Identification/Understanding, Emotion/Decision-making, and Volition/Execution, and is referred to as the PEIV time. The PEIV time can vary from several seconds for general warning signs to six seconds or more for warning signs requiring high driver user judgment.

Table V-1 lists suggested minimum advance warning sign placement distances that may be used under two conditions:

Condition A – Speed reduction and lane changing in heavy traffic.

Condition B - Deceleration to the listed advisory speed (mph) for the condition.
## Guidelines for Advance Placement of Warning Signs

**Table V-1**

<table>
<thead>
<tr>
<th>Posted or 85(^{\text{th}}) Percentile Speed</th>
<th>Condition A</th>
<th>Condition B</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 mph</td>
<td>225 ft</td>
<td>N/A</td>
</tr>
<tr>
<td>25 mph</td>
<td>325 ft</td>
<td>N/A</td>
</tr>
<tr>
<td>30 mph</td>
<td>450 ft</td>
<td>N/A</td>
</tr>
<tr>
<td>35 mph</td>
<td>550 ft</td>
<td>N/A</td>
</tr>
<tr>
<td>40 mph</td>
<td>650 ft</td>
<td>125 ft</td>
</tr>
<tr>
<td>45 mph</td>
<td>750 ft</td>
<td>175 ft</td>
</tr>
<tr>
<td>50 mph</td>
<td>850 ft</td>
<td>250 ft</td>
</tr>
<tr>
<td>55 mph</td>
<td>950 ft</td>
<td>325 ft</td>
</tr>
<tr>
<td>60 mph</td>
<td>1100 ft</td>
<td>400 ft</td>
</tr>
</tbody>
</table>

Notes:

1. The distances are adjusted for a sign legibility distance of 175 ft for Condition A. The distances for Condition B have been adjusted for a sign legibility distance of 250 ft, which is appropriate for an alignment warning symbol sign.

2. Typical conditions are locations where the road user must use extra time to adjust speed and change lanes in heavy traffic because of a complex driving situation. Typical signs are Merge and Right Lane Ends. The distances are determined by providing the driver a PIEV time of 14.0 to 14.5 seconds for vehicle maneuvers (2001 AASHTO Policy, Exhibit 3-3, Decision Sight Distance, avoidance Maneuver E) minus the legibility distance of 175 ft for the appropriate sign.

3. Typical condition is the warning of a potential stop situation. Typical signs are Stop Ahead, Yield Ahead, Signal Ahead, and Intersection Warning signs. The distances are based on the 2001 AASHTO Policy, Stopping Sight Distances, Exhibit 3-1, providing a PIEV time of 2.5 seconds, a deceleration rate of 11.2 ft/second, minus the sign legibility distance of 175 ft.

4. Typical conditions are locations where the road user must decrease speed to maneuver through the warned condition. Typical signs are Turn, Curve, Reverse Turn, or Reverse Curve. The distance if determined by providing a 2.5 second PIEV time, a vehicle deceleration rate of 10 ft/second, minus the sign legibility distance of 250 ft.

5. No suggested distances are provided for these speeds, as the placement location is dependent on the site conditions and other signing to provide an adequate advance warning for the driver.

6. This table is provided as an aid for determining warning sign locations. The values contained in the table are for guidance purposes and should be applied with engineering judgment.

Guidelines for Advance Placement of Warning Signs

- The use of warning signs should be kept to a minimum because the unnecessary use to warn of conditions which are apparent, tends to breed disrespect for all signs.

- All warning signs shall be diamond-shaped (square with one diagonal vertical) with a yellow background with black legend and border unless specifically designated otherwise. All warning signs shall be reflectorized or illuminated. The minimum size for diamond-shape signs, except where otherwise specified, is 24 inches by 24 inches (600 m X 600 mm). The words CAUTION or SLOW or other similar messages are not to be used on warning signs since their shape and color implies that the motorists should exercise caution and may have to reduce speed.
The following sections describe warning signs commonly used on rural highways.

**SECTION 1: HORIZONTAL ALIGNMENT SIGNS**

The horizontal alignment Turn (W1-1) Curve, (W1-2R or 2L), Reverse Turn (W1-3), Reverse Curve (W1-4), or Winding Road (W1-5) signs 30” x 30” (750 mm X 750 mm), shown in Figure V-2, may be used where engineering investigations of roadway, geometric and operating conditions show the recommended speed on the curve to be less than the speed limit established for that section of highway. If the recommended speed on the curve is 30 mph or less, a Turn sign (W1-1) or Reverse Turn sign (W1-3) would be used. If the recommended speed on the curve is greater than 30 mph, a Curve Sign (W1-2) or Reverse Curve sign (W1-4) would be used. An Advisory Speed plate may be erected below the Turn or Curve sign or the speed may be included on the sign for additional protection. These signs should be placed in accordance with Table V-1.

When used, the combination Horizontal Alignment/Advisory Speed sign shall supplement other advance warning signs and shall be installed at the beginning of the turn or curve.

**SECTION 2: LARGE ARROW SIGNS (W1-6, W1-7)**

The One-Direction Large Arrow sign (W1-6) (Figure V-3), shall be a horizontal rectangle with a minimum size of 36” x 18” (1.2 m x 600 mm), having either a large arrow pointing right or left. A One-Direction Large Arrow sign is intended to give notice of a sharp change of alignment in the direction of travel. If used, the sign shall be erected on the outside of a curve or turn in line with and at right angles to approaching traffic.

The One-Direction Large Arrow sign shall not be used where there is no alignment change in the direction of travel, such as at the beginnings and ends of the medians or at center piers.

The Two-Direction Large Arrow sign (W1-7) shall be a horizontal rectangle with a minimum size of 36” x 18” (1.2 m x 600 mm) having a double arrow. If used, the W1-7 sign shall be installed on the far side of a T-intersection in line with, and at approximately a right angle to approaching traffic.

The Two-Direction Large Arrow sign shall not be used where there is no change in the direction of travel such as at the beginnings and ends of medians or at center piers.

**SECTION 3: CHEVRON ALIGNMENT SIGN (W1-8)**

The Chevron Alignment sign, shown in Figure V-4, shall be a vertical rectangle with a minimum 12 inches x 18 inches (300 mm X 450 mm) size and shall be a black chevron symbol on a yellow background. No border shall be used on the Chevron Alignment Sign. The Chevron Alignment sign is intended to provide additional emphasis and guidance to motorists as to sharp changes of horizontal alignment. Chevron Alignment signs, when used, are erected on the outside of a curve, sharp turn, or on the far side of an intersection, in line with and at right angles to approaching traffic. Spacing of the signs should be such that the motorists always have two in view, until the change in alignment eliminates the need for the signs. The signs should be visible for a sufficient distance to provide the road user with adequate time to react to the change in alignment.

**SECTION 4: CROSS ROAD SIGN (W2-1)**

The Cross Road sign, shown in Figure V-5, is intended for use on a through roadway to indicate the presence of an obscured crossroad intersection. An advance street name plaque may be installed above or below a Cross Road sign. These signs should not be used on approaches
controlled by STOP signs, YIELD signs, or signals. The relative importance of the intersecting roads may be shown by different widths of lines in the symbol. These signs should be placed in accordance with Table V-1.

**SECTION 5: SIDE ROAD SIGNS (W2-2 and W2-3)**
The Side Road sign (Figure V-6), showing a side-road symbol, either left or right, and at either a 45 or 90 degree angle is intended for use in advance of a side-road intersection to the same warrants as those set forth for the Cross Road sign.

**SECTION 6: T SYMBOL (W2-4)**
The T symbol sign, shown in Figure V-7, is intended to warn traffic approaching a T-intersection on the road that forms the stem of the T. The sign should not generally be used at a T-intersection that is channelized by traffic islands. It may be desirable to place a double-headed Large Arrow sign (W1-7) at the head of the T directly facing approaching traffic.

**SECTION 7: Y SYMBOL (W2-5)**
The Y symbol sign, shown in Figure V-8, is intended to warn traffic approaching a Y-intersection that is channelized by traffic islands. It may be desirable to erect a double-headed Large Arrow sign at the fork of the Y directly in line with approaching traffic.

**SECTION 8: STOP AHEAD (W3-1) AND YIELD AHEAD (W3-2) SIGNS**
The STOP AHEAD and YIELD AHEAD signs, shown in Figure IV-2, shall be installed on approaches to a STOP or YIELD sign that is not visible for a sufficient distance to permit the road user to respond to the device. The signs shall be a minimum of 30 inches x 30 inches (750 mm x 750 mm). The word messages STOP AHEAD or YIELD AHEAD may be used as an alternate to the symbol signs.

**SECTION 9: ROAD NARROWS SIGN (W5-1)**
A ROAD NARROWS sign, shown in Figure V-9, should be used in advance of a transition on a two lane road where the pavement width is reduced abruptly to a width such that vehicles might not be able to pass without reducing speed. Additional emphasis may be provided by the use of object markers and delineators. The Advisory Speed (W13-1) plaque may be used to indicate the recommended speed.

**SECTION 10: NARROW BRIDGE SIGN (W5-2)**
The NARROW BRIDGE sign, shown in Figure V-10, should be used in advance of a bridge or culvert having a clear two-way roadway width of 16 to 18 feet (4.9 to 5.5 meters) or any bridge or culvert having a roadway clearance less that the width of the approach travel lanes. Additional protection should be provided by the use of object markers, delineators, and/or pavement markings. A NARROW BRIDGE sign may be used in advance of a bridge or culvert on which the approach shoulders are narrowed or eliminated.

**SECTION 11: ONE LANE BRIDGE SIGN (W5-3)**
A ONE LANE BRIDGE sign, shown in Figure V-11, should be used on two-way roadways in advance of bridges or culverts having a clear roadway width less than 16 feet (4.9 meters), having a clear roadway width less than 18 feet (5.5 meters) where commercial vehicles constitute a high proportion of traffic having a clear roadway width of 18 feet (5.5 meters) or less where the sight distance is limited on the approach to the structure. Additional emphasis should be provided by the use of object markers, delineators, and/or pavement markings.
SECTION 12: HIGHWAY-RAIL GRADE CROSSING ADVANCE WARNING SIGN (W10-1)

The Highway-Rail Grade Advance Warning signs, shown in Figure V-12, shall be used in advance of every railroad crossing, except in the following circumstances:

A Highway-Rail Grade Crossing Advance Warning (W10-1) sign shall be used on each highway in advance of every highway-rail grade crossing except in the following circumstances:

1. On an approach to a highway-rail grade crossing from a T-intersection with a parallel highway, if the distance from the edge of the track to the edge of the parallel roadway is less than 100 ft (30 m), and W10-3 signs are used on both approaches of the parallel highway; or

2. On low-volume, low speed highways crossing minor spurs or other tracks that are infrequently used and are flagged by train crews; or

3. In business districts where active highway-rail grade crossing traffic control devices are in use; or

4. Where physical conditions do not permit even a partially effective display of the sign.

The MUTCD also requires the installation of signs, for advance warning of railroad crossings, on highways that are parallel to railroads (W10-2, W10-3, or W10-4) and less than 100 feet (30 meters) from the edge of the tracks to the edge of the parallel roadway. The purpose of these signs is to warn a motorist making a turn that they will encounter a highway-rail grade crossing soon after making a turn, and a W10-1 sign for the approach of the tracks shall not be required to be between the tracks and parallel highway.

SECTION 13: SUPPLEMENTAL RAILROAD CROSSING SIGNING

A XX FEET BETWEEN TRACKS AND HIGHWAY storage distance (W10-I100) sign shall be installed on any approach to a railroad grade crossing where the distance between the rail closest to the subsequent STOP sign controlled highway intersection and the intersection stop line is less than 81 feet. See the Illinois Supplement to the MUTCD for details.

A DO NOT STOP ON TRACKS sign (R8-8) shall be installed in advance of each crossing where a W10-I100 sign is used. The R8-8 sign may be placed under the W10-I100 sign.

SECTION 14: VEHICULAR TRAFFIC SIGNS

VEHICULAR TRAFFIC signs may be used to alert road users to locations where unexpected entries into the roadway by trucks, bicyclists, farm vehicles, emergency vehicles, golf carts, horse-drawn vehicles, or other vehicles might occur. VEHICULAR TRAFFIC signs should be used only at locations where the road user’s sight distance is restricted, or the condition, activity, or entering traffic would be unexpected.

SECTION 15: NONVEHICULAR SIGNS

NONVEHICULAR signs may be used to alert road users in advance of locations where unexpected entries into the roadway or shared use of the roadway by pedestrians, animals, and other crossing activities might occur. When used at a crossing, NONVEHICULAR signs shall be supplemented with a diagonal downward pointing arrow (W16-7p) plaque showing the location of the crossing.
CHAPTER V
RURAL WARNING
SIGN FIGURES
FIGURE V-1

TYPICAL APPLICATIONS OF WARNING SIGNS
Note: If used, the Turn (W1-1) sign is used when the advisory speed is less than or equal to 30 mph. The Curve (W1-2) sign is used when the advisory speed is greater than 30 mph.
Notes:

1. If used, Chevron Alignment (W1-8) signs shall be installed on the outside of a turn or curve, in line with, and at approximately a right angle to approaching traffic.

2. Spacing of the Chevron Alignment Signs should be such that the motorist will always have two in view, until the change in alignment eliminates the need for the signs.

3. The signs should be visible for a sufficient distance to provide the road user with adequate time to react to the change in alignment.
FIGURE V-5
A Road Narrows (W5-1) sign should be used in advance of a transition on two-lane roads where the pavement width is reduced abruptly to a width such that vehicles might not be able to pass without reducing speed.
FIGURE V-10
FIGURE V-11

Notes:

This sign is intended for use in advance of bridges or culverts:

1) Having a clear roadway width of less than 18 ft (4.8 m).
2) Having a clear roadway width of less than 18 ft (5.5 m) if trucks make up a large portion of the traffic.
3) When the sight distance is limited to an approach to a structure with a clear roadway width of 18 ft (5.5 m) or less.
GENERAL NOTES

1. Distance to be shown on sign measured from point 8 ft (2.4 m) from the rail closest to the intersection to the stop bar or crosswalk, which ever is closest, rounded (down) to nearest 5 ft (1.5 m). Where there is no stop line, measure to point where driver has a view of approaching traffic.

2. The clearance sign is also to be used as an interim measure at locations with interconnected intersection traffic signals where it is planned to change them to near-side signals at a future time. In this case, the distance to be shown on the sign is measured from the edge of the striped-out area instead of 8 ft (2.4 m) from the rail. The sign is to be removed when the near-side signals are installed and the pavement markings extended to the intersection.

3. Where there are no pavement markings, sign is to be located 8 ft (2.4 m) from the crossing gate (where present) or 15 ft (4.5 m) from the tracks.

SPECIAL NOTE

Signs are to be located and placed in accordance with these details and the MUTCD. Normal precautions should be taken for underground utilities. Signs placed on railroad right-of-way or structures must first be coordinated with the railroad.
GENERAL NOTES

1. Pavement markings to be installed only on paved approaches to intersections controlled by traffic signals which are interconnected with the railroad warning signals.

2. Where rear-side traffic signals are used, the pavement markings extend to the intersection.

3. Where the angle between the diagonal stripes and the back (2) would be less than approximately 20°, the stripes should be sloped in the opposite direction from that shown.

TYPICAL SUPPLEMENTAL PAVEMENT MARKING TREATMENT FOR RAILROAD CROSSINGS WHERE INTERSECTION TRAFFIC SIGNALS ARE INTERCONNECTED WITH ADJACENT RAILROAD WARNING SIGNALS
CHAPTER 6 - MISCELLANEOUS

SECTION 1: GUIDE SIGNS

Guide signs are used to guide motorists along established routes. They are used to inform the motorists of intersecting routes, to direct to cities, villages, or other important destinations, to identify nearby rivers and streams, parks, forests and historical sites, and generally to give such information as will help direct the way in the most simple method possible.

Low-volume roads generally do not require guide signs to the extent that they are needed on higher classes of roads. Because guide signs are typically only beneficial as a navigational aid for road users who are unfamiliar with a low-volume road, guide signs might not be needed on low-volume roads that serve only local traffic. If used, destination names should be as specific and descriptive as possible.

SECTION 2: TOURIST ORIENTED DESTINATION SIGNING (TODS)

The Tourist Oriented Destination Signing (TODS) program provides for the display of tourist oriented directional sign along various State-maintained non-freeways in order to provide motorists with travel related directional information to facilities of interest to tourism. The program applies to areas within the State of Illinois which are located in rural areas with rural being defined as “an area outside of an incorporated municipality with a population of 500 or less or any area with a population density of 500 or less inhabitants per square mile.”

For a business to qualify, it shall not be located on or adjacent to a marked State highway; however, it must be within 5 road miles of a marked State highway and must be located in a rural area as previously defined.

A business on a road intersecting with a marked State highway will be signed on the State marked highway if it is visible to the motorist from the intersecting road, or if a sign is on the business site advising motorists of the appropriate entrance to the establishment.

A business that is not on the road intersecting with a marked State highway will be signed on the marked State highway if trailblazing or other signs are in place on the intersecting road and on such other roads as may be necessary to clearly advise motorists where to turn to reach the business. Where the intersecting road or other roads leading from the intersection with the marked State highway are unmarked State highways, the department will place such trailblazer signs on the State highways for the fee established with the program.

Where roads are under local agency jurisdiction, signing will not be provided on State highways until legible trailblazer or other signs are placed by, or by permission of, such local agencies with directional information advising motorists where to turn. The business shall have the responsibility for arranging for the placement of all signs on roads under local agency jurisdiction. The decision to place or allow signs on the local system will rest with the local agency. The local agencies, under a statutory provision, shall also have the authority to sell or lease space on these signs to the owners or operators of the businesses.

TODS on highways under local agency jurisdiction may be of any legible design and color provided that the name of the business is consistent with that requested for the signing on the State highways and that the signs contain adequate directional information.

Examples of TODS and trailblazer sign placement are shown in Figures VI-1 through VI-3. Further information on the TODS program is available at www.dot.il.gov/tods/tods.html.
SECTION 3: OBJECT MARKERS
The use of object markers is intended to identify specific objects (e.g., bridge handrails, abutments, culvert headwalls) wherever the object is located either within or adjacent to the roadway. Obstructions within the roadway shall be marked with Type 1 or Type 3 object marker. In addition to markers on the face of the obstruction, warning of approach to the obstruction should be given by appropriate pavement marking. Objects not actually in the roadway are sometimes so close to the edge of the road that they need a marker. If used, the inside edge of the marker shall be in line with the inner edge of the obstruction.

The Type 3 Object Marker (Figure V-10) will be the one most frequently used on rural township roads. 1+ consists of a vertical rectangle 1 foot by 3 feet (300 mm x 900 mm) in size with alternating black and reflectorized yellow stripes sloping downward at angle of 45 degrees toward the side of the obstruction on which the traffic is to pass. The minimum width of the yellow and black stripe shall be 3 inches (75 mm).

When used for marking objects in the roadway that are 8 feet (2.4 meters) or less from the shoulder, the mounting height to the bottom of the object marker should normally be 4 feet (1.2 meters) above the surface of the nearest traffic lane. When used to mark objects more than 8 feet (2.4 meters) from the shoulder, the mounting height to the bottom of the object marker should be at least 4 feet (1.2 meters) above the ground.

When object markers or markings are applied to a hazardous object, which by its nature requires a lower or higher mounting, the vertical mounting height may vary according to need.

SECTION 4: RURAL REFERENCE SYSTEM
The Rural Reference System is a voluntary system that provides for the development of uniform reference points on rural county and township roads. Use of the Rural Reference System is recommended to provide orientation for non-local travelers and can also be used as a rural address program. With this system, traffic crashes can be located with an accuracy of 0.1 of a mile (0.16 km). Signs are usually placed at each intersection and provide the location within the county. The reference system coordinates may be combined with the road name on the signs. The Street Name (D3-1) sign shall be used. Lettering should be at least 6 in (150 mm) high in capital letters, or 6 in (150 mm) upper-case letters with 4.5 in (113 mm) lower-case letters. To optimize visibility, Street Name signs may be mounted overhead. Street Name signs may also be placed above a regulatory or STOP or YIELD sign with no required vertical separation.
CHAPTER VI
RURAL
MISCELLANEOUS
FIGURE V-1

GENERAL NOTE
* Series of lettering depends upon length of legend. Maximum length of business name per line is 84 in (1.63 m). Reflectance white legend and border on reflectorized blue background.
LEGEND

Marked State non-freeway

Unmarked State or local non-freeway

Trailblazer responsibility of agency having jurisdiction over road

Tourist panel with business sign at intersection with marked State highway

Business

GENERAL NOTES

1. Road miles to business will be measured from intersection of marked State highway to center of business entrance.

2. Tourist panels will not be installed until trailblazers or other signing is in place as necessary to direct motorists from marked State highway to business.