ORIGINATOR State Traffic Engineer		2-3-49
CHAPTER 2	Signing	
SECTION 3	Warning Signs	
SUBJECT 49	Determination of Sight Distance for Warning Signs	

A. Purpose

The 2009 MUTCD provides guidance for the installation of several types of vehicular and non-vehicular warning signs. Some of these signs include the school bus stop ahead, snowmobile crossing, fire truck, side road and crossroad warning signs. The MUTCD states that many of these types of warning signs *should* be used where the road user's sight distance is restricted, or the condition, activity, or entering traffic would be unexpected.

The May 25, 2011 Wisconsin Supplement to the 2009 MUTCD, Section 2C.46, provides additional guidance regarding proper sight distance in determining the need for a warning sign. This table on minimum visibility distances references Table 9-6, page 9-38 (Intersection sight distance - left turn from stop) of the 2011 AASHTO Standard Highway and Street Design Manual. This table provides an added factor of safety beyond the traditional stopping sight distances.

It *should* be noted that the minimum visibility table shown below is just for determination if the warning sign is needed. These are not sign placement criteria. Sign placement criteria is provided in Table 2C-4 of the Wisconsin Supplement to the MUTCD.

Minimum Visibility Distance

Posted or 85th Percentile Speed	**Minimum Visibility Distance (ft.)**
25 MPH	280
30 MPH	335
35 MPH	390
40 MPH	445
45 MPH	500
50 MPH	555
55 MPH	610
60 MPH	665
65 MPH	720
70 MPH	775

One question that has been commonly asked is “What are the acceptable field methods that can be utilized to determine the actual minimum visibility distance in order to provide accuracy and consistency?”. Listed below are several guidelines that *may* be utilized to assist in this effort and to provide for a consistent application statewide.

B. Guidelines

Cone Method (Preferred Method)

1. A 28” height cone *should* be used as a target at the location of the hazard (i.e. snowmobile crossings, pedestrian crossings and school bus stops). In lieu of a 28” height cone, a mailbox or other alternative methods approved by the Region *may* be used as a target.

2. Set the Distance Measuring Instrument (DMI) when the entire cone is first visible and measure the distance to the cone.

Vehicle Visibility Method (Optional Method)

1. For the installation of sideroad and crossroad warning signs, park on the sideroad and determine where mainline vehicle is first visible. Measure the distance between the mainline vehicle and the sideroad vehicle to determine minimum visibility distance.

2. An optional method that *may* be used is to park at the intersection or crossing and count the seconds, starting when the mainline vehicle is first visible and equate the time to a distance. For example, at a 60 mph speed, a vehicle travels approximately 88 feet per second. Therefore, at a minimum visibility distance of 665 feet (minimum visibility distance), it would take 8 seconds for the vehicle to reach the intersection or crossing.