

**Changeable Message LED Billboards
Test Period Observations and Findings
January, 2007 through June, 2007**

Introduction

On December 12, 2006, the Common Council of the City of Milwaukee passed Common Council File Number 060300 concerning the operation of changeable message light-emitting diode (LED) billboards in the City. Under this File, the City Code of Ordinances were amended to allow messages on billboards primarily oriented toward the freeway to be changed once every 30 seconds instead of the 60 seconds previously allowed by Code, and to allow an LED billboard with a message changing once every 6 seconds to be installed for a 6 month test period at the intersection of E. North Avenue and N. Oakland Avenue.

The Ordinance change took effect on January 4, 2007, subsequent to which an LED billboard was installed in the southeast quadrant of the intersection of E. North Avenue and N. Oakland Avenue, and at several locations along the Freeway system in the City.

Accident Analysis

One of the primary indicators to determine the overall traffic safety impact of the changeable message LED billboards is any change which may occur in accident frequency or patterns during the period of sign operation. Accident frequency and individual crash characteristics were assessed during the test period of operation at the intersection of E. North Avenue and N. Oakland Avenue to determine what, if any, change in accident patterns occurred at the intersection which may be attributable to the introduction of the electronic billboard near the intersection. With the proximity of the electronic billboard to the intersection, as well as the frequency of message change, particular attention was paid to accidents which could be attributable to driver distraction.

Copies of accident reports for crashes at the intersection of E. North Avenue and N. Oakland Avenue were obtained from the Milwaukee Police Department, and from Department of Public Works records. These accidents were then compared to the frequency and characteristics of crashes which occurred at the intersection in 2004, 2005 and 2006 both on an annual basis and during similar time periods. The crash frequency at this intersection is summarized in Table 1.

Table 1

**Accident Frequency: Intersection of E. North Avenue
and N. Oakland Avenue – 2004 through June 7, 2007**

Year	January 4 To June 7	Annual Total
2004	8	15
2005	8	11
2006	2	7
2007	4	--

**Source: Milwaukee Police Department and
Department of Public Works**

One of the primary concerns with the introduction of an electronic billboard at this intersection was the potential impact of driver distraction. As can be seen in Table 1, no dramatic increase in crash frequency occurred during the initial period of sign installation, such as that which occurred at the intersection of W. State Street and N. 4th Street following the introduction of the full motion video sign adjacent to Bradley Center. Accidents during the first six months of operation exceeded the total number of accidents in which occurred in the first six months of 2006, while remaining slightly less than that experienced during that same time period in 2004 and 2005. While not directly comparable due to the short duration of sign operation, the three year total average annual accident frequency prior to electronic billboard installation was 11 accidents per year.