



# MEMORANDUM

## LEGISLATIVE REFERENCE BUREAU

WWW.MILWAUKEE.GOV/LRB

---

**To:** Ald. Terry Witkowski  
**From:** Aaron Cadle – Legislative Fiscal Analyst  
**Date:** June 4, 2015  
**Subject:** On-Premises Changeable Message Signs – Comparison of Dwell Time, Illumination and Other Regulations

---

Per your request, this memo compares the regulations of dwell time illumination and other illumination-related operations of on-premises changeable message signs in various cities. Note: “dwell time” is the amount of time a message is displayed before it is replaced by a new message. While the regulations of changeable message signs for each city in Milwaukee County were reviewed, this memo is not a scientific study. All information was gathered from readily available online postings of city ordinances. LRB found no independent studies of the impact of on-premises changeable message signs on traffic safety, although there are a couple of studies of off-premises “highway billboard” signage.

### **Milwaukee County**

The majority of municipalities in Milwaukee County do not regulate changeable message signs in any way. Milwaukee, Greenfield, Oak Creek and St. Francis are the four that do. Greenfield and Oak Creek restrict dwell time to 5 seconds, while St. Francis does not regulate dwell time. Greenfield limits sign illumination to not more than 2,000 lumens during the day and 750 lumens at night. All 3 cities ban blinking, flashing and “distracting” changeable message signs.

### **Dwell Time**

Maximum dwell times in the cities reviewed ranged from 5 to 60 seconds. Greenfield and Oak Creek, along with Lawndale, CA, in Los Angeles County (population 33,000), have the shortest dwell times – 5 seconds - of 11 cities reviewed that regulate dwell time. Dwell time regulations for the 11 cities regulating dwell time are listed in Table 1.

**Table 1**

<b>Dwell Times (in seconds) - On-Premises Signs</b>			
Wisconsin Cities		Other Cities	
Oak Creek, WI	5	Gastonia, NC	8
Greenfield, WI	5	Philadelphia, PA	8
Racine, WI	30	Norman, OK	12
LaCrosse, WI	60	Chicago, IL	10
		San Antonio, TX	30
		Fort Collins, CO	60

**Illumination**

All but 2 of the 11 cities reviewed have some level of illumination regulation for changeable message signs. Lawndale, Fort Collins, and San Antonio, limit illumination to 0.3 lumens greater than ambient light, while 6 other cities set specific maximum illumination levels. Of the 6 cities with specific limits, Greenfield, is a very noticeable outlier at the high end for both day and night illumination, allowing 2,000 lumens of illumination during the day and 750 lumens at night. Philadelphia is a clear outlier for daytime illumination at the low end, restricting illumination to 140 lumens, while La Crosse, is alone at the low end for nighttime illumination with its 9.3 lumens illumination limit. The specific illumination limits for the 6 cities are listed in Table 2.

**Table 2**

<b>Illumination Limits (in lumens)</b>		
	Daytime	Night
Chicago, IL	650	23
Gastonia, NC	465	47
Greenfield, WI	2,000	750
LaCrosse, WI	465	9.3
Philadelphia, PA	140	14
Norman, OK	465	28

Other illumination-related restrictions for changeable message signs include:

- St. Francis, prohibits casting direct light onto adjacent properties.
- La Crosse and Lawndale limit light trespass at the property line to 0.5 and 0.3 lumens respectively.

- San Antonio prohibits changeable message signs in residential neighborhoods, and limits light projection to the nearest residential property to 0.2 lumens.
- Lawndale prohibits changeable message signs within 100 feet of a residential neighborhood, and signs must face away from properties zoned residential.
- St. Francis and Chicago prohibit light projection into public rights-of-way.
- Seven of the 11 cities reviewed (Chicago, Philadelphia, Norman, Fort Collins, Gastonia, Lawndale and San Antonio) require automatic dimmers or shutoffs in case of luminance malfunction.

LRB #158242