

Regulating Digital Billboards

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Note: *There are different regulations governing on-premise signs and off-premise billboards . Messages on billboards along roadways – including digital billboards – are static. On-premise signs (at malls and stadiums) can feature motion pictures. The information in this brochure deals with off-premise billboards.*

The History of Changeable Message Signs & Evolution to Digital Billboards

Digital technology is changing the delivery of information. There are digital cameras; digital phones; digital TV; and, yes, digital billboards.

On billboards, digital technology produces static images that are changed via computer. Typically, a digital billboard advertisement is displayed for six or eight seconds, and then fades away. A new static message then appears.

Digital billboards do not scroll, flash, feature motion pictures or emit intermittent light.

From the beginning, communication with the public via roadside billboards involved changing “copy.” Painters with buckets and ladders painted new ads. Bill-posters glued printed paper onto billboards. Then, researchers at MIT figured out how to print large high quality images on vinyl. Paint, paper, and vinyl are manual methods of installing new messages.

In addition to these manual methods of changing billboard ads, digital technology is a new non-manual way to post static billboard advertisements. Public policy reasons for employing modern technology to deliver static messages on to billboards include:

- Digital billboards deliver useful commercial and non-commercial information to the public.
- Digital technology allows multiple advertisers to communicate from one location.
- Digital technology speeds delivery of emergency information about public safety or “Amber Alerts” to find missing children. “We need the (digital) billboards,” said Major John Tharp of the Lucas County (OH) Sheriff’s Office.

The government relies on digital signs for quick communication with motorists. For example, when a fuel truck exploded on heavily traveled Interstate-95 in November 2005, roadway signs immediately alerted motorists from Maine to Virginia.

Regulations

More than 100 digital billboards are operating across the country, in communities large and small, from Altoona, PA, to Wichita, KS. Regulators accept this technology because it is a change of static copy which does not flash, feature motion pictures, or emit intermittent light.

“Messages change on nearly all signs,” said the Pennsylvania Department of Transportation (DOT) in 2002 when it issued a policy accepting digital billboards. “It is appropriate that the Department establish a policy regarding safe and reasonable change intervals to promote the orderly display of outdoor advertising.”

Billboards are heavily regulated. The Highway Beautification Act (HBA), enacted in 1965, requires states to regulate off-premise signs along federal-aid routes (Interstate highways, National Highway System, and federal-aid primary roads).

As technology advanced, the Federal Highway Administration (FHWA) issued a policy in 1996 to allow use of new technologies for billboards:

. . . Changeable message signs are acceptable for off-premise signs, regardless of the technology used, if the interpretation of the State/Federal Agreement allows such signs. In nearly all States, these signs may still not contain flashing, intermittent or moving lights . . . the frequency of message change and limitation of spacing for these signs should be determined by the State.

Key regulatory factors regarding digital billboards are the duration of the static message and the transition time to the next message. A typical “static time” is six seconds per message; a typical transition time between messages is one or two seconds.

Changes in Society and Advertising

Digital billboards—an important tool for businesses – reflect changes in communication and overall culture:

- Consumers are tech-savvy, and put a premium on time.
- Advertisers want to deliver concise information that is easily understood.
- Advertisers like to reach consumers when they’re making decisions (such as media promoting news and programming).

Types of Changeable Message Signs

Changeable message billboards can be placed into two basic categories: mechanically-changed and electronically-changed.

Mechanically-changed

A most common form of mechanically-changed billboards is known as tri-action displays, which have been installed in most states. Tri-action billboards can show three static advertisements. Messages are printed on vertical slats that rotate mechanically, by a motor. Typically, a static message is displayed for six seconds, and then the vertical slats are turned to show another advertisement.

Electronically-changed

Like the widely accepted tri-action billboard, a digital billboard typically displays a static message for six seconds, and then transitions to another advertisement. These energy-efficient digital billboards display electronic images that resemble billboard ads printed on vinyl or paper. Digital billboards are controlled via electronic communication and are on a secure network. Advertising “copy” is created on a computer.

Traffic Safety

Independent research shows that billboards, including eye-catching roadside signs, do not affect driver behavior.

“There appears to be no reason to believe that changeable message signs represent a safety hazard,” concluded Dr. Charles (Ray) Taylor, professor at Villanova University, after analyzing traffic data.

Summary

Outdoor advertising is, by its very nature, a medium involving changeable signs. Today, communication is evolving, with expanded use of digital technology to deliver information. Digital technology provides just another means of changing billboard “copy.”

Appendix A: Helpful Information Regarding State Statutes

State Model Statute Language for Digital Billboards

Existing Federal policy respect state flexibility. Indeed, states have adopted static message times, from four seconds to as long as 10 seconds. The model state statute below summarizes time allowed for static digital messages and the time allowed for transition between messages. The definitions included below are intended to clarify that digital billboard messages are a “change of copy” and are not considered intermittent, flashing, or moving lights.

In addition, several state statutes are included as a reference. (See page 5)

Below are several definitions to consider when constructing a state statute:

Definitions:

“Blinking” means a form of flashing where the pattern of sudden illumination changes occurs with more than two on-off cycles per second.

“Dissolve” means a transition between static message displays that is achieved with varying light intensity and where the first message gradually appears to dissipate and lose legibility simultaneous to the gradual appearance and legibility of the subsequent message.

“Digital Billboard ” means a sign displaying static images controlled by electronic communications.

“Fade” means a transition between static message displays that is achieved with varying light intensity and where the first message gradually loses light intensity to the point of not being legible and the subsequent message gradually increases intensity to the point of legibility.

“Flashing” means a pattern of changing light illumination where the sign illumination alternates suddenly between fully illuminated and fully non-illuminated in a time frame of less than four seconds. (Static “dwell” time is typically 4-10 seconds.)

“Intermittent” means a pattern of changing light intensity, other than that achieved with immediate, fade or dissolve transitions, where any message remains static at least four seconds.

“Moving light” means the physical change in position of any visible illumination source while lighted or the simulation of movement achieved with a pattern of sequentially illuminating visible illumination sources within close proximity to each other. (Static “dwell” time is typically 4-10 seconds.)

Suggested State Language:

Digital billboards are permitted, regardless of the technology used, within six hundred sixty feet of the edge of the right of way on any Interstate, federal-aid primary as of June 1, 1991, and the National Highway System provided such billboard:

- A. Has a static commercial or noncommercial image or message lasting no less than four seconds;
- B. Achieves a transition to another static image or message over a period of at least one second;
- C. Has spacing between conforming billboards consistent with existing state requirements;
- D. Does not include animated, flashing, scrolling, intermittent or full-motion video elements;
- E. Will appropriately adjust display brightness as ambient light levels change.

State Statutes – Resource Guide

Connecticut

Sec. 32, Section 13a-123 (f)

(f) Notwithstanding the provisions of subsections (a) and (e) of this section, signage that may be changed at intervals by electronic or mechanical process or by remote control shall be permitted within six hundred sixty feet of the edge of the right-of-way of any interstate, federal-aid primary or other limited access state highway, except as prohibited by state statute, local ordinance or zoning regulation, provided such signage (1) has a static display lasting no less than six seconds, (2) achieves a message change with all moving parts or illumination moving or changing simultaneously over a period of three seconds or less, and (3) does not display any illumination that moves, appears to move or changes in intensity during the static display period.

Florida

Section 14-10.0009 F.A.C., Chapter 479

The FL DOT interprets the lighting provisions of the State/Federal Agreement (as enunciated in Section 14-10.0009 F.A.C.) and Chapter 479, F.S. to allow the permitting of off-premise, changeable message signs under the following conditions: 1) Changeable message signs will be permitted regardless of the technology that is used, except, if such signs contain, include or are illuminated by any flashing, intermittent, or moving light or lights (other than signs giving public service information such as time, date, temperature, weather, or similar information), they are prohibited; 2) Permitting of changeable message signs will be limited to conforming signs, since applying the modern technology of such signs to nonconforming signs is considered a substantial change not allowed by subsection 14-10.0007 (2) (a) and 23 CFR 750.707 (d) (5); 3) Changeable message signs will be required to meet the remaining regulatory criteria of Chapter 479, F.S. and Chapter 14-10 F.A.C. including limitation of spacing to 1,000 feet on the federal-aid primary highway system and 1,500 on the interstate highway system; and 4) Frequency of message change will be limited by Rule to six (6) second minimum display time, with a two (2) second maximum change time.

Ohio

Chapter 5501: 2-2-02 Admin. Code (B)

- (B) “Multiple message and variable message advertising devices: such advertising devices may be permitted on the interstate system or the primary system under the following conditions:
- (1) Each message or copy shall remain fixed for at least eight seconds;
 - (2) When a message or copy changes by remote control or electronic process, it shall be accomplished in three seconds or less;
 - (3) No such advertising device shall be placed within one thousand feet of another multiple message or variable message advertising device on the same side of the highway visible in the same direction of travel;
 - (4) Such advertising devices shall contain a default design that will freeze the device in one position if a malfunction occurs;
 - (5) Any maximum size limitations shall apply independently to each face of a multiple message or variable message advertising device; and
 - (6) Only one multiple message advertising device shall be permitted at a single location facing the same direction.”

Appendix B: Model Sign Code Provisions for Digital Billboards

The need for a local ordinance should be analyzed on a case by case basis, including whether changes are needed to comply with state law.

Municipal Ordinance Resource Guide

An Ordinance of the Council of the City of Wheeling Modifying and Clarifying Part Thirteen of the Codified Ordinances of the City of Wheeling--Section 1359.11 (d) 2 and (h) Off-Premise Signs.

Be It Ordained by the Council of the City of Wheeling:

Section 1. The Codified Ordinances of the City of Wheeling are hereby modified and clarified by making the following changes to Section 1359.11 (d) 2 and (h) Off-Premise Signs:

1359.11 OFF-PREMISE SIGNS

(d) Type, Design, and Illumination

1. Back-to-back or V-Type signs will be permitted and shall be treated as one sign provided that the interior angle between the two signs does not exceed sixty degrees.
2. No advertising sign shall be erected or maintained which involves rapid motion or rotation of the structure or any part thereof **with the following exceptions: Changeable Message Signs (CMS) and Smartboard Technology Signs are permitted as defined in section 1359.03(f) of this code.**
3. No advertising sign shall contain lighting that is not shielded, and any lighting shall be of such low intensity as not to cause glare or impair the vision of the operator of any motor vehicle.
4. No advertising display or device shall be illuminated by any rapid flashing, intermittent light or lights.

Section 1359.03(f) Definitions:

Changeable Message Signs (CMS)--An off-premise advertising sign, display, or device which changes the message or copy on the sign by means of electronic rotation or panels or slats. CMS's are considered outdoor advertising signs and must comply with all requirements applicable to outdoor advertising signs. CMS's may not include lighting devices forming part of the message or border, video or scrolling messages. Each message displayed shall remain fixed for at least eight (8) seconds. When a message is changed, it must be accomplished within an interval of two (2) seconds or less. CMS must contain a default design that will freeze the sign in one position if a malfunction occurs.

Smartboards--An off-premise advertising sign, display, or device that changes the message or copy on the sign by means of a liquid crystal display. Smartboards may not incorporate animation in the copy or change of copy. Smartboard signs must contain a default design that will freeze the sign in one position if a malfunction occurs.