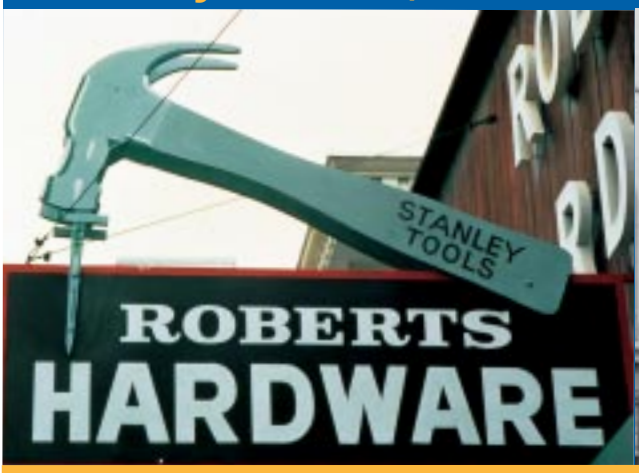
CONTEXT-SENSITIVE SIGNAGE DESIGN

Marya Morris, Mark L. Hinshaw, Douglas Mace, Alan Weinstein



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CHAPTER 1

Planning for Signs

By Marya Morris, AICP

By and large, on issues where their respective interests intersect, planners and sign manufacturers share the same goals for the communities in which they work: an attractive built environment, a vibrant natural environment, successful commercial districts, and a healthy local economy. But because this relationship is between the regulator and the regulated, it is natural that differences of opinion exist on how to achieve these common goals.

PLANNERS AND SIGNS

Signs are part of a myriad of elements of the built environment that a planner typically deals with on a daily basis. Long-range comprehensive or master planning, as well as issues of residential development, economic development, affordable housing, environmental protection and management, urban design, transportation and infrastructure, zoning and land development control, and information systems are the bread and butter of most planning agencies. For a planner, signage issues would be addressed in two ways: as part of long-range urban design planning or as part of current planning (e.g., permit review). For some communities, the two functions are very distinct; policies and codes are developed by one set of planners and are implemented by a different section or division within the planning department.

For planners whose chief responsibilities are to work on urban design or long-range comprehensive planning, signage issues are addressed when community design policies and guidelines—whether they be for special districts or the community as a whole—are developed. But for the most part, planners who deal with signage issues everyday work at the sign permit counter and/or serve as staff to design review, architectural review, or historic district commissions. The signage policies that current planners are implementing were likely determined in the long-range planning process or in the drafting or amending of the zoning or sign code.

Signage policies should represent the broadest possible consensus or prevailing community viewpoint about the physical appearance of the city. And this is exactly the reason that they will inevitably be construed as too restrictive by some and completely reasonable by others.

Ideally the planning and design policies that affect signage should result from a planning process that:

- assesses the overall visual character of the community and then sets goals;
- involves citizens to determine their concerns and preferences in balancing economic, social, and cultural values;
- engages those most directly affected—businesses and sign manufacturers—in deciding what is acceptable;
- promotes the positive contribution signs can make to creating a sense of place in a district and in a community; and
- aims to ensure that whatever regulation results will allow commercial districts to function efficiently and effectively.

Actions at the sign permit counter on a given day are far removed from the original participatory planning process because the long-range urban design planning and sign code revision processes occur on a relatively infrequent basis. The focus at the counter is largely on what businesses and sign manufacturers are required to do or are prohibited from doing, rather than on why sign standards and design guidelines are being applied and what the community is trying to accomplish.

The intent of this report, therefore, is to encourage planners to think outside of the regulatory framework where signs are concerned and to approach signs as a positive design and communication element in their communities. With regard to sign manufacturers, this report seeks to expand their understanding of the planning process and contribute to their acceptance of the intent of sign controls and design standards that aim to improve the built environment and support local businesses.

SIGN MANUFACTURERS AND PLANNING

For those who design, make, sell, and use them, signs represent their livelihood. The sign manufacturers are motivated by the need to keep their businesses profitable, to help their client businesses and organizations inform the public about the location of that client, and to help those clients take advantage of a relatively low-cost form of business advertising. Sign manufacturers believe very strongly in the value an attractive product will bring to their clients and do their best to provide that.

Many people in the sign industry have fostered excellent relationships with the planners and sign-permitting staff in the communities in which they do business. (Chapter 7 will provide case studies from communities in which sign makers and planners successfully work together.) These sign professionals have educated themselves about the planning process and have come to understand and even support the rationale for sign regulation and urban design controls. They act as concerned citizens when they see visual pollution from too many signs and as watchdogs for zoning enforcement when they see signs that are in violation of the code or that have fallen into disrepair. They realize that to influence the outcome of plans and sign regulations, they must get involved in planning matters that affect their work. Sign trade publications regularly publish articles and editorials encouraging sign makers to involve themselves in planning and zoning matters in their communities.

Sign company representatives who have fostered good working relationships with planning staff are often invited to participate in sign code revision processes and in urban design planning. In return, planning departments will work with these firms to make revisions to the code when there are obvious inaccuracies in the language or when there are problematic provisions that are leading to an excessive number of variance requests—a sure sign that the code needs to be reexamined.

In general, the attitude of sign manufacturers toward sign regulation ranges from sympathetic understanding, to tolerance of a necessary evil, to willful disdain for sign code standards and permit requirements.[1] Determining the economic impact of sign codes on businesses has been one source of friction between the sign community and the regulators. Chapter 4 is devoted entirely to this issue.

There are other issues that arise in the industry literature and in discussions with planners that need to be resolved to advance the working relationship between sign makers and the planning profession. The first issue is the notion of signage as visual clutter. Sign manufacturers reject the opinion common among planners and many elected officials that on-premise signage is a primary source of visual clutter in the built environment. Other physical elements—such as utility lines and poles, billboards, traffic signs and devices, bus benches, and illegal and temporary signs—are the real culprits of clutter, they contend. Sign makers argue that this bias against on-premise signs leads many communities to enact restrictive sign codes that attack one potential source of clutter but leave many other sources of visual clutter unaddressed.

The unpredictability of design review and sign-permitting processes is another major concern for sign manufacturers. For many in the sign business, securing a sign permit is the only uncertain factor in the process of taking a sign from a design concept to installation. As is the case with developers and contractors, sign companies want certainty in the approval process. In sign regulation, certainty means clarity in the regulations, fairness and uniformity in how the rules are applied, and a reasonable turnaround time in administration. Sign companies would prefer that each sign not have to undergo a subjective determination of whether it meets the code. Too often, they argue, design review board members

Sign manufacturers often object to the notion that signage is the primary source of visual clutter. They contend other things, such as utility poles and lines, traffic signs, bus benches, and illegal signs, are the real culprits.

Young Electric Sign Co.

Sign-making materials and techniques has evolved rapidly in recent decades. Large firms that produce electrical signs use vinyl, plastic, plexiglass, aluminum, steel, or various combinations thereof.

and planning staff interject their personal opinions about the appearance of a sign, even if their complaint has no basis in written guidelines or in the ordinance.

A final concern is the problem created for sign companies by staff turnover at the sign permit counter. Sign company personnel whose task it is to get permits have said that they often find themselves in the role of "trainer" for new planners who are unfamiliar with their municipality's zoning regulations, signage definitions, and structural terminology.[2] The varying levels of experience at the permit counter only add to fears about unpredictability and also can cause major delays.

Planners and sign makers have direct and ongoing involvement in each others' work. As in any relationship between a regulator and the regulated, a lot of the contact between the two fields has been acrimonious. This report will encourage each side to recognize the other's point of view and to learn to work together to achieve common goals.

AN OVERVIEW OF THE SIGN INDUSTRY

Signs have been used as wayfinding devices for thousands of years, since individuals in early civilizations began venturing beyond their immediate environment. Retailers of goods and services have used signs for identification, communication, and advertising purposes for many hundreds of years, since the time when ancient societies found themselves producing more than they could consume and began to trade their goods locally and overseas.[3] Advertising by retailers is believed to have begun in the early eighteenth century, when retailers and inns used elaborate sign boards and posters to vie for attention (Nystrom 1978). Today, the role of signs in local economies and in the landscape continues to adapt to meet the needs of businesses and consumers, local culture, and technology.

The process of sign making has also evolved over hundreds if not thousands of years. Early signs were generally very small and constructed of

whatever materials were available, typically stone, and later wood or metal. Electric signs came into use at the beginning of the twentieth century. Neon technology was developed by French scientist Georges Claude in the 1920s and first used in signage by a Packard car dealership in 1923. Today, sign-manufacturing processes make use of a variety of technologies, and signs are made of synthetic materials, woods, metals, neon, and computerized and mechanical systems.

Generally speaking, sign company products can be placed in five categories: pole, roof, wall, projecting, and temporary. The latter category includes window signs, for sale/lease signs, pennants, flags, banners, credit card emblems, and public information and direction signs (e.g., "Restrooms," "Exit," and Americans with Disabilities signage).

Sign companies come in every size. They include several very large manufacturers grossing nearly $200 million per year and employing thousands of people, to sizable corporations grossing more than $5 million per year with hundreds of employees working in several branch offices, to midsize firms grossing several hundred thousand dollars per year and employing five to 20 or more people, to small shops that gross less than $100,000 per year and employ only one or two people.

Large and medium-size sign companies are capable of manufacturing many different types of signs for both single-location and corporate franchise clients. These companies use a full complement of materials to produce many types of electrical signs, which may be made of luminous tubes, neon, flexible face material, vinyl, plastic, plexiglass, aluminum, steel, or various combinations thereof. Some companies also produce electronic message centers, such as time and temperature signs, and other variable text message systems that can be changed regularly. Many large and midsize companies also produce temporary signs, such as banners, and subcontract some of their work to custom sign makers. Small firms, on the other hand, have more narrow production capabilities, and consequently specialize in a limited number of types of signs. Other sign firms specialize in producing awning signs, both backlit electrical awnings or fabric awnings with vinyl lettering, which can be either electrical or nonelectrical. Relatively new entrants to the field are franchised retail sign companies that produce banners, paper signs, and other temporary signs on a quick turnaround time.

A major subgroup of the industry, referred to as "letterheads," produce small, one-of-a-kind signs using special materials and techniques, such as wood, glass, gold leaf, metal, hand painting, and air brushing. Some letterheads also produce vehicle graphics and painted window signs.

Until recently, U.S. sign companies generally operated either close to home or on a national scale; small and midsize firms worked and sold product primarily within the region in which they were located, while larger companies, with national corporate clients, delivered products throughout the country and had production facilities or divisions in several regions. Today, new computer technology has made it possible for smaller firms to cut production costs, improve design and engineering skills, diversify products, and thus compete at the national level.

Elizabeth Longley

A major subgroup in the sign industry, referred to as "Letterheads," produce one-of-kind signs using special materials and techniques, such as wood, glass, gold leaf, metal, hand painting, and air brushing.

SIGN TECHNOLOGY

The technology used in the sign-making process evolves rapidly, making capital investment an ongoing and costly necessity for sign companies. Computer-aided sign production (CAS) has been commonplace since the mid-1980s. Computers are routinely used for both graphic design and engineering components of sign design, and most vinyl cutters, routers, and plastic-molding equipment are now computerized. In

Pike's Tent and Awning Unlimited

Awning signs, made of industrial fabrics or vinyl, are commonly used on older and historic buildings to blend with the architecture and provide customers and pedestrians with protection from the elements.

a large or midsize electric sign company, standard equipment includes paint spray booths, digitized routers for carving aluminum and steel, large-format scanners and digital printers, vinyl cutters, sheet metal and aluminum- molding equipment, plastic-molding equipment, steel cabinetry production equipment, and installation trucks with booms and baskets.

The biggest change in sign production in the latter twentieth century occurred in the 1950s with the introduction of plastic sign faces and the development of paints that adhere to plastic. The onset of wide-format digital printing in the 1980s permitted sign producers to expand plastic technology to the point where they can now print photographic-quality images directly onto vinyl, canvas, or photopaper. Ink-jet printers, electrostatic, and thermal transfer printers are the three primary equipment types used for wide-format images. Thermal-transfer printers are the most common printers used to produce outdoor signage. The top-of-the-line equipment accommodates vinyl sheets that are 15 feet high and up to 50 feet in length. The vinyl strips can be also "tiled" to create a very large image. This technology is commonly used to produce billboards but is also now used to create large-scale on-premise signage. Finally, technology to create electronic message signs—some with image clarity and color that approaches the appearance of television—has evolved rapidly in recent years. Such signs present a new challenge for regulators, given their brightness and the rapidity with which their messages and images can change. (See Appendix A for a list of issues related to electronic variable message signs.

THE SIGNAGE PROCESS START TO FINISH

There are 11 major steps in the sign-making process, starting with the initial contact between the sign salesperson and the client, and ending with sign installation and maintenance.

1. *Client meeting.* A salesperson from the sign shop meets with the client to determine the client's signage needs. Sales people will visit the client site to determine and discuss signage options given site and sign code restraints. This step may involve the sign designer as well (see Step 2).
2. *Site visit and analysis.* Ideally the sign designer will visit the site, which will help him or her determine the appropriate size, placement, and overall appearance of the signs to be produced. Such a visit is important to the designer's understanding of the building or site on which the signage will be installed and, as important, the context of the area in which the sign or signs will be placed. Note this step does not take place with many sign projects. Instead, the designer is expected to work from the photographs and descriptions provided by the sales staff. If such visits were standard procedure rather than reserved for special situations, it is possible that many issues regarding inadequate or out-of-character signage could be addressed before they become problems.
3. *Graphic design.* The graphic design staff prepare hand-drawn renderings or computer-generated drawings of a proposed sign. Some clients have a logo or thematic colors that must be displayed on the sign. Other clients give designers free reign to design their sign. A sign designer will be provided a certain amount of sign copy, symbols, trademarks, or logos that must be placed within a limited amount of sign surface area. Through client meetings or site visits, the salesperson and designer should determine whether the client wants a high-concept design (e.g., unique materials, colors, projecting objects) or a straightforward design. Sign companies with fully computerized design processes are capable of presenting the client with several design options, although that can add to the firm's up-front costs.
4. *Price estimating.* Working with the engineers and the graphic artists, on-staff estimators provide the salesperson with a price estimate of what it will cost to produce the sign. The price is based on labor and materials.
5. *Sales presentation.* The salesperson presents the proposed design and price to the client. If requested by the client, modifications are made to the proposed design and materials, and the price is recalculated.
6. *Credit approval.* The sign company works with the client to arrange financing for a sign that is being purchased outright or to draft a lease for a sign that is being leased.
7. *Permit processing.* The business owner or a sign firm representative—either an in-house expediter or a outside permit agent working under contract—presents the drawings and design of the sign at the building and/or zoning permit counter. In some communities, when a sign being proposed is allowed as of right in the zoning district in which it will be built, a permit can be issued that day. When a sign being proposed requires a variance or must be approved by a design review board, the sign company will have to wait to schedule the sign for production until the permit application has been processed by a zoning board or design review board.
8. *Work order/job scheduling.* A work order is prepared to place the new job on the manufacturing schedule. This includes distributing blueprints to each department that is involved, coordinating with the purchasing department to order materials, and scheduling the job on the plant floor.
9. *Sign manufacture/production.* The sign is produced in the shop according to graphic design, engineering, and materials specifications.
10. *Sign installation.* The sign shop uses its equipment to install the sign, or it notifies one of its installation contractors that the sign is ready to be picked up and installed.
11. *Job completion.* The sign is completed and installed, and the client accepts the product and pays the sign company as agreed in the contract.

ENVIRONMENTAL GRAPHIC DESIGN

Environmental graphic design is a special discipline related to sign making. Signage and wayfinding systems found in major institutions (e.g., hospitals, zoos, campuses, downtowns, and tourist destinations) are often created by environmental graphic designers. The Society for Environmental Graphic Design defines the field as "the planning, design, and specifying of graphic elements in the built and natural environment." There are seven chief purposes served by environmental graphic design:

- Identification: confirms destination, creates landmarks, helps establish recognition (e.g., street numbering, entrance signs, public art)
- Information: communicates knowledge of designations, facts, and circumstances (e.g., kiosks, symbols, and directories)
- Direction: guides users to destinations in airports, hospitals, etc., and are commonly referred to as wayfinding systems
- Interpretation: provides verbal and visual explanations of a particular topic or set of artifacts (exhibits)
- Orientation: gives users a frame of reference within a particular environment (e.g., maps)
- Regulation: displays rules of conduct (e.g., "stop" or "no parking" signs)
- Ornamentation: enhances or beautifies the environment (e.g., banners, architectural coloration, gateways)

For new developments, environmental graphic designers work directly with architects and site planners to incorporate environmental signage into architectural and landscaping design themes. After the design is completed, the actual signage that comprises the environmental graphics system can be produced by a sign manufacturer that has the necessary equipment or materials, or that specializes in this type of special signage.

Source: Society for Environmental Graphic Design

ART AND GRAPHIC DESIGN

Sign design is fundamentally a commercial craft with an artistic element. The earliest professional sign makers were artistic painters and woodworkers. Today, new sign faces are designed by graphic designers, with the structure and electronic components being devised by engineers and technicians.

Sign designers do their work very much like all other graphic designers. Graphic artists at sign companies (or independent designers) work with the client to create a sign that conveys a desired image or message to the intended viewer, drawing on their respective senses and prior experience to create a mix of colors, letters, and materials that are visually compatible and likely to be noticed. Typically a client will have certain items of information that he or she wants to have included on the sign. Often sign makers are asked to develop a new logo or reproduce an existing logo or company typeface for a sign.

Sign companies that produce large numbers of identical signs for national or regional franchises and chains rely less heavily on in-house designers than those that customize signs to fit a site or building's specific setting and characteristics. These "quantity" companies are producing signs for which the color, typefaces, layout, and internal engineering mechanisms have been previously determined and standardized. There are also instances where a client will present the sign company with a drawing or description of a sign that he or she desires and simply ask that it be reproduced on a sign. A description of the sign-making process can be found in the box on the previous page.

NOTES

1. Information on sign industry perceptions of the sign approval process comes from interviews with sign professionals conducted by the author during site visits to sign companies in Toronto, Ontario; Winnipeg, Manitoba; South Bend, Indiana; Salt Lake City, Utah; and Las Vegas, Nevada.
2. See note 1.
3. Information on the history of signs comes from a conversation on March 13, 1998, with Kirk Brimley of Young Electric Sign Co. in Salt Lake City.

REFERENCE

Nystrom, Paul H. 1978. *Economics of Retailing*. New York: Arno Press.

CHAPTER 2

On-Premise Signs and Traffic Safety

By Douglas Mace

Traffic engineers understand that drivers use many roadside features other than public highway and street signage as navigational aids. Some of those roadside features are commercial, on-premise signs.

In fact, these signs may be just as important to wayfinding as street names, addresses, and highway directional signs. Recognizing that importance, this chapter, based on traffic engineering research about highway signs, will explore three important factors that affect the behavior of drivers and the effectiveness of signs. Those factors are:

- conspicuity or visibility, referring to how distinguishable a sign is from its "surround," which is a term used to describe the area around the sign that the a viewer sees from the location where the viewer would ideally detect the presence of the sign (in other words, how "conspicuous" the sign is given the elements in the area around it);
- legibility, which is related to a viewer's ability to make out the symbols (e.g., letters, icons, etc.) that constitute the sign, a factor dependent on distance and the viewer's eyesight; and
- recognition or readability, which describes how well the viewer can understand or make sense of what appears on the sign.

The chapter first addresses three hypotheses about the relationship of commercial signs to traffic safety. It then describes the engineering practice of Positive Guidance and the relationship of driving tasks, driver cognitive behavior, and the principles of Positive Guidance. This is followed by a section on guidelines that the business community, sign makers, sign regulators, and citizens might find helpful in determining how to make commercial signs visible and readable in a way that enhances economic activity, community appearance, and traffic safety.[1] Finally, it describes a process, cooperative triangulation, that might help communities reach a consensus among all the parties affected by signage issues. Firth (Transportation Research Circular, in press) has cited examples of this process that have produced positive results.

RESEARCH RELATING ON-PREMISE SIGNS AND TRAFFIC SAFETY

While there has been research directed at electronic message signs and billboards, there has been very little published research into the relationship of on-premise signing and traffic safety. The research that exists appears to explore the validity of two hypotheses that have sometimes been generalized to include on-premise signing.

The first hypothesis is that commercial (including on-premise) signs distract drivers and result in more accidents. This hypothesis suggests that advertising signs are traffic hazards because they distract a driver's attention from the primary driving tasks and, therefore, increase the likelihood of accidents. This may occur when a driver samples (i.e., looks at or pays full attention to) the traffic environment too infrequently for conditions. Without advertising displays, the driver may sample the roadway more frequently, providing a greater margin of safety.

The second hypothesis is that commercial signs mask the visibility of highway signs, which also results in more accidents. Advertising signs may provide background luminance, color, or movement that could make a traffic sign or signal of greater importance more difficult to detect. For example, Jenkins (1981) and Mace et al. (1982) have shown that the visual complexity of a scene reduces the likelihood of traffic sign detection. The problem can be circular because signs may contribute to visual complexity that reduces the conspicuity of other signs. Complex scenes reduce conspicuity, and conspicuity, together with information value, determine what signs are noticed.

The problem with both of these hypotheses is that they emphasize only the possible negative effects of commercial signs on traffic safety. Working from that premise alone, one can never prove that signs are good, only that they are bad. Therefore, these hypotheses and the conclusions that follow from testing them are limited.

Johnson and Cole (1976) point out that, in general, drivers' sampling *must* be sound; if not, there would be many more accidents in the vicinity of advertising signs. Also, they suggest that drivers can ignore information that they judge to be irrelevant or when they are preoccupied with a more important task. We would agree that "in general" this is all probably true. What concerns traffic engineers are the exceptions to the "in general" rule. Accident reduction is always concerned with the exceptions, not the rule.

Whatever the truth of these hypotheses,[2] there is a counter hypothesis that better serves the public interest by emphasizing the positive effect of all signing on traffic safety. That hypothesis simply states that information deficiencies increase the likelihood of accidents. This is true whether the deficiency is caused by distraction so that drivers do not attend to important information, by masking that prevents drivers from seeing information, by information overload that results in drivers missing information because they lack sufficient time to process it, or by the complete absence of information at the point where drivers need it. An information deficiency exists when needed information is not there at all, is not visible enough to be recognized at the required distance in the existing lighting conditions, is not presented with sufficient time to process it, or is not located within the "cone of vision" (i.e., the area in which a driver has a generally clear view of objects in and around the roadway).

The deficiency hypothesis suggests that sign deficiencies foster driver uncertainty and, therefore, increase the likelihood of an accident. Schwab (1998) noted that "traffic safety is not jeopardized by the sign itself or some type of stimulus overload; instead the culprit is inadequate sign size or lighting, or inappropriate placement, or a combination of these fac-

tors." He concluded that the proper use of on-premise signs could become a "major tool for enhancing public safety." Specifically, he set out to establish a minimum visibility threshold to assist sign makers, sign users, and public officials in identifying and eliminating deficient signing.

To expand the applicability of this alternative hypothesis, sign deficiencies should be defined in a very broad sense to include:

- too much irrelevant information for the current traffic circumstances;
- too many competing signs masking the visibility of needed information;
- missing navigational information (including on-premise signs);
- poor placement of signs (e.g., outside the cone of vision); and
- inadequate legibility distance, given traffic circumstances.

Signs are deficient if they do not provide needed information when and where it is needed. Signs that are missing, difficult to find, difficult to read, or provide too much, too little, or confusing information result in driver disorientation. Disoriented drivers are more likely to vary speed, brake excessively, encroach on lane lines, or miss exits or turns. Signs must have the conspicuity and size to be noticed and read where the information is needed, while at the same time recognizing the legitimate information needs of other driving tasks. Deficient signing is not a sign attribute, but a construct relating sign characteristics with driver needs determined by their motivation, expectancies, and visual ability. Hungry drivers are motivated to find food. Violated expectancies increase the importance and type of information needed. Drivers expecting an entrance in a certain location need a sign to tell them if it is or is not going to be there. Failure to provide this information is a signing deficiency.

All these hypotheses are accepted at face value and are not proved by any strong experimental foundation. This does not make them false, but it does serve notice that not much is known about the extent or conditions under which they are valid. In sum, we think all sides in the arguments over commercial signing have elements of truth in their positions. In other words, *in some circumstances*, commercial signs *do* distract, *sometimes* they *mask* more important information, and *sometimes* they *help* disoriented drivers find their way and drive more safely.

A THEORY OF DRIVER BEHAVIOR

In order to understand the interplay between commercial signing and traffic safety, one must understand the dynamics of driving. The highway literature is filled with accepted principles that can be used to infer a general theory relating signing and driver behavior. This information has provided researchers with a set of principles that can be employed in analytic tools to improve highway and traffic engineering. In particular, the theory described in this section was implicit in the development of the engineering practice called Positive Guidance (Alexander and Lunenfeld 1990). Positive Guidance was developed as a tool for traffic engineers to diagnose problems and propose solutions to improve safety and traffic operations at sites with identified safety problems, particularly problems related to the processing of highway information, including signs, by drivers. Positive Guidance attempts to improve the highway information system to match driver attributes and information demands. This chapter represents the first effort to apply the practice of Positive Guidance to commercial signing.

Driving and the Role of Primacy

Driver error results from excessive task demands, expectancy violations, too much or too little processing demand, or deficient information displays. There are three generic tasks in driving that can be described in terms of an ascending scale of task complexity and a descending scale of primacy (i.e., the relative importance of each task to safety).

1. ***Control:*** high in primacy; low in complexity
2. ***Guidance:*** medium in both primacy and complexity
3. ***Navigation:*** low in primacy; high in complexity

Control includes all activities (e.g., steering and speed control) involved in the driver's interaction with the vehicle and its controls and displays (e.g., the steering wheel and speedometer). Task performance ranges from relatively undemanding (passenger vehicle with automatic transmission and power steering) to relatively demanding (tractor-trailer with multiple gears and clutches). Information for this subtask comes primarily from the "feel" of the vehicle itself, from its displays, and from the roadway. Drivers continually make minute adjustments and use feedback to maintain control. While this is the most critical subtask (rated high in primacy), most control activities, once mastered, are performed "automatically" with little conscious effort (rated low in complexity). This situation can rapidly become more complex, such as when a vehicle loses stability on a slippery surface, experiences a tire blow-out, etc.

At the guidance level, the driver's main activities involve the maintenance of a safe speed and proper path relative to roadway and traffic elements (e.g., intersections, other vehicles, and work areas). Guidance activities are characterized by judgment, estimation, and prediction within a dynamic, constantly changing environment. Information is gathered from the highway and its appurtenances, traffic, and the highway's information system. Guidance-level decisions are translated into speed and path maneuvers in response to alignment, grade, delineation, hazards, traffic, and the environment.

The most complex subtask, navigation, refers to the execution of a trip from point of origin to destination. Trips may be planned in advance but may change in route (e.g., a driver suddenly gets hungry or the gas tank approaches empty). Most navigation consists of a pre-trip phase, when trips are planned and routes selected, and an in-trip phase, when the travel route is followed. Pre-trip information sources include maps and verbal instructions. In-trip information sources include landmarks, route guidance signs, street name signs, and on-premise signing. This subtask is most complex in that it requires integrating information from many sources and applying judgment.

The Hierarchy of Information Needs

The information needs of the driver mirror the three driving tasks of control, guidance, and navigation. Alexander and Lunenfeld (1990) point out that drivers are continually accepting information for all three subtasks. When information needs are competing, primacy dictates what information is needed most. For example, a driver stops looking for a place to eat when negotiating a sharp curve because control is higher in primacy than navigation. While it is true that failures in navigation are usually noncatastrophic (drivers become lost and delayed when navigation mistakes are made, but navigation failures generally have less impact on the system than control or guidance errors), navigational errors should not be dis-

ISSUES IN THE REGULATION OF COMMERCIAL ELECTRONIC VARIABLE-MESSAGE SIGNAGE (CEVMS)

By Jerry Wachtel

The Federal-Aid Highway Beautification Act of 1965 prohibited signs that used flashing, intermittent or moving lights, or animated or moving parts. In November 1978, the U.S. Congress amended the Act to allow on-premise signs, displays, and devices "including those which may be changed at reasonable internals by electronic process or remote control…and which provide public service information or advertise activities conducted on the property on which they are located."

Following the 1978 amendment, the Federal Highway Administration (FWHA) undertook a study about the safety and aesthetic impact of these signs, which came to be known as Commercial Electronic Variable-Message Signage (CEVMS). FHWA requested the study because Congress had left it to the agencies administering the law to conduct research that would refine the general criteria and specifications that Congress had set out for CEVMS use.

With regard to human factors and highway safety considerations, the report reached two principal conclusions, which are summarized below:

1. While some accident studies have reported a positive relationship between accidents, high driving-task demands, and the presence of roadside advertising, others have reached opposite conclusions. Because of the limitations of accident studies, the available evidence that can be drawn from them remains statistically insufficient to *support* or *refute* such a relationship. Some investigators, both prior and subsequent to the publication of the FHWA report, suggested that drivers are capable of exercising appropriate primacy by ignoring visual or other stimuli that are not essential to the driving task, such as CEVMS. Other research, however, including recent studies of driver distraction, indicates that drivers do not always engage in appropriate primacy behavior.

Marya Morris

2. The substantial flexibility of display possessed by CVEMS makes it possible to use such signs in ways that can attract drivers' attention at greater distances, hold their attention longer, and deliver a wider variety of information and image stimuli than is possible by the use of conventional advertising signs. Use of this potential by advertisers seeking to reach an audience of highway users may increase the risk of overloading a driver's capacity to process important safety information and, consequently, increase the likelihood of driver error, particularly under road and traffic conditions in which drivers may already be stressed. Although the nature of these risks has been recognized in the research literature, the authors of the FHWA study suggested that further research was needed to quantify and categorize it. Those studies have never been conducted to the best of our knowledge.

Proponents of CEVMS hold that such technology can be operated in a manner that is quite different from traditional flashing, animated, scintillating, or moving message signs. Indeed, the adoption of such technology for use in official highway signs supports this view. The fact remains, however, that CEVMS uses technology that *can* be operated in a manner that is distracting. Therefore, issues of sign operation, location, and use, rather than the existence of the technology per se needs to be addressed by the highway safety community.

Issues in regulating CEVMS are complex. The best information available at this juncture is in Appendix A to this PAS Report, which takes excerpts directly from the 1980 FHWA report. These excerpts define the issues that local government needs to examine before regulating CEVMS. Table 4 from that report, included in Appendix A, will be especially helpful in addressing issues related to traffic safety and the visual environment for CEVMS.

Jerry Wachtel is a psychologist and was one of the principal investigators and authors of the FHWA study, *Safety and Environmental Design Considerations in the Use of Commercial Electronic Variable-Message Signage*, FHWA/RD-80-051.

missed since they may increase driving time and distance, increasing exposure to an accident. Traffic safety is usually defined in terms of accidents per million vehicle miles. Therefore, to the extent that signing deficiencies result in additional miles of driving, these deficiencies reduce safety.

Information-Decision-Action

Each of the three driving tasks (control, guidance and navigation) are referred to as "information-decision-action" tasks. Drivers receive information from numerous sources and use that with information they already have (e.g., experience, skills, expectancies, and trip plans) to make decisions and perform actions. Drivers often have overlapping information needs. For example, a driver would need to know the position of his or her car in the lane at the same time he or she was trying to find an entrance to a drug store. In order to make a safe turn into that driveway, the driver: searches the environment; detects, receives, and processes information; makes decisions; and performs control actions in a continual feedback process.

Many researchers have noted different levels of information processing, which include the following stages.

1. Visual attention
2. Stimulus recognition and comprehension
3. Response selection and decision making

Visual attention. Hughes and Cole (1984) conceptualized the information acquisition process as it relates to driving. Their conclusions are summarized here.

- The visual environment contains information that is transferred to the retina of the eye where it is transformed to a neural code and transferred to iconic memory.
- There is probably little loss of information in this process, and the loss that does occur is related to the limits of the observer's eyesight.
- Iconic memory decays rapidly, but it can be "read" by some form of central processor and the information "read" is then transferred to short-term memory where it is available for recall or for decision making. Short-term memory decays over a period of several seconds, and its contents tend to be obliterated by new incoming information.

The factors that determine whether an element of information in iconic memory will be transferred to short-term memory, and therefore will be part of a recall or decision-making process, are the sensory conspicuity of the element, its information content, and the informational needs of the observer. Besides the incoming data, the central processor also employs other cognitive processes of the observer, including long-term memory. All of these sources will bear on the strategy used to scan the contents of iconic memory and on the criteria for selection of particular elements of information contained in it for transfer to short-term memory.

With regard to visual stimuli, drivers are serial processors who handle one source of visual information at a time. Given the need to parallel process (handle several displays simultaneously) while driving, they compensate by "juggling" several information sources. Drivers integrate various activities and maintain an appreciation of a dynamic, changing environment by sampling information in short glances and shifting atten-

tion from one thing to another. They rely on judgment, experience, estimation, prediction, and memory to fill in the gaps, to share tasks, and to shed less important information. Expectancy, motivation, and conspicuity all play a role in determining what a driver will notice.

Of course, for drivers to find information useful, it must first be noticed. Of the different levels of information processing, the greatest amount of research appears to have focused on the attention skills of the driver and driver performance. Attentional factors include, but are not limited to, *the preattentive process, selective attention,* and *divided attention*. There is also the issue of what attracts attention when driving. Of special significance is the relationship between attention factors and the abilities of older drivers—a topic addressed in the paragraphs below on selective attention and divided attention.

In the *preattentive process*, a driver's attention is quickly directed to events occurring in the visual field, including those in peripheral vision. The size of the visual field has long been addressed by visual science. Sanders (1970) defined the "functional" field of view as the spatial area needed to perform a specific visual task. Ball and Owsley (1993) defined the useful field of view (UFOV) as the visual field in which information can be quickly acquired in a glance. UFOV relates the diameter of the visual field to the ability of a subject to detect, localize, and identify highly conspicuous targets in complex scenes. Unlike the functional field of view, the diameter of this field is not related to the sensitivity of the eye but to both the conspicuity of the target and the duration of the target's exposure.

Parasuraman and Nestor (1991) define *selective attention* as the ability to focus and shift attention among stimulus locations, features, and categories. On the relationship of accident rates to information-processing stages, they present evidence that the switching of visual selective attention has the greatest correlation with driving performance. Higher correlations between selective attention and self-reported accident rates were found for older adults, and the highest correlations were found when switching attention from one focus to another.

A literature review (Staplin et al. 1986) on selective attention shows disagreement among researchers on the relationship of selective attention to driver performance. Staplin et al. suggest that the findings from several studies point toward the presence of age-related deficits on selective attention tasks "only when the whole stimulus array must be processed in order to find the relevant stimuli." For example, if visual search is required to gain relevant information for the driving task, the slower speeds of information processing for older drivers may be apparent. However, not all driving tasks require visual search, and experienced older drivers may know where to focus their attention.

Since driving already requires that a driver be capable of *divided attention*, the relationship between divided attention deficits and performance is unclear. The effects of divided attention on the driving task appear to be most evident when the driving environment is highly complex or demanding. In such an environment, drivers might have difficulty "automatically" responding to a situation and may need a greater reliance on memory to process information.

Brouwer et al. (1991) found older adults to have a significantly decreased ability to divide their attention between two tasks of lane tracking and visual analysis when compared to young adult drivers. In the visual analysis task, the older drivers had significantly more errors even though the task was self-paced. Their findings appeared to indicate that older subjects "were less able to detect their errors or to adjust their

speed," which may offer evidence on age-related accidents where older drivers misperceive situations or do not react appropriately.

As the population ages[3] and demographics change, these considerations will necessarily play a greater role in helping determine how commercial on-premise signs, as part of the navigational aids experienced by drivers, can be sited and designed. Further research about visual attention and older drivers may lead to more definitive guidelines about such placement and design.

As regards an underlying issue (namely, what attracts attention when driving), Hughes and Cole (1986) report that, half of the time, drivers fixate on things not related to driving. And, when asked to report what they see, drivers report that half of the objects they see are not related to driving. Where advertising appears, there is increased attention to advertising, but this increased attention to advertising *does not result* in less attention to driving-related objects. Instead, a driver decreases attention to other non-driving-related objects. Hughes and Cole report several studies that all show that drivers have from 30 percent to 50 percent spare capacity that can be devoted to objects not related to driving, such as on-premise signs.

While these studies seem to suggest that the distraction and masking hypotheses described at the beginning of this chapter are not a significant problem, they need to be replicated in this country because their findings might not be accurate for twenty-first century America. Even without additional research, common sense suggests that the amount of spare capacity available to process navigational information is a function of the road, the environment, and driver familiarity.

Stimulus recognition and comprehension. Stimulus recognition occurs in stages as incoming visual information is compared with stored memory and an object that is first detected becomes partially recognized, perhaps with respect to its color or shape or texture. Hughes and Cole (1986) suggest that information content and the informational needs of the observer play a critical role in attention. If the object is recognized as something that might satisfy the information needs of the driver, additional sensory input will be acquired as the driver gets closer and recognition is completed. Objects that are recognized but not understood are not likely to receive attention. On-premise signs that communicate the nature of the business early and quickly will enable interested drivers to attend to the secondary information on the sign as they approach. Other drivers will be able to disregard the sign and search for other information more relevant to their needs.

Expectancy also plays a role in stimulus recognition and comprehension. Alexander and Lunenfeld (1990) suggest that drivers assume that their destination, no matter how obscure, will be signed on the freeway. Likewise, when looking for a commercial establishment, drivers expect to see signs telling them where businesses are, if not directing them as they get near. It would be helpful if drivers could know in advance how the destination will be signed. This is one of the elements that makes well-established logos so valuable to both the general public and the business community.

Response selection and decision making. A study of the role of information processing in highway design and its effect on decision making (COMSIS 1995) noted that decision sight distance (DSD) is a key concept of highway design and is based on perception reaction time and maneuver time. Alexander and Lunenfeld (1975) defined DSD as "the distance at which a driver can detect a signal . . . recognize it . . . select appropriate

speed and path, and perform the required action safely and efficiently." This definition clearly parallels the stages of information processing: visual search, recognition, evaluation, decision making, response selection, and response maneuver.

Response selection and decision making can be a more significant problem for older drivers. Perhaps contrary to the findings in Brouwer et al. (1991), Hildebrand and Wilson (1990) report that "when faced with a decision, elderly people opt for accuracy in making a choice rather than speed. Their performance is worse when faced with severe time constraint." The speed/accuracy tradeoff has been studied by many researchers, and it has generally been found that speed is associated with higher error rates. Overall, older subjects tend to reduce their response speed for the sake of accuracy when the task is self-paced. Thus, we should expect them to take more time to read the information from an on-premise sign.

In uncertain or complex driving situations with multiple alternatives, older drivers demonstrate slower responses as they attempt to integrate information to make an appropriate response selection. One aspect of the age-related slowing of information processing occurs when older drivers scan their immediate and working memory to access information for decision making. Researchers have found that older individuals scan memory less effectively than younger subjects. Memory scanning for action sequences and decision rules are an important component of driving, and slower scanning is an age-related effect that increases as driving complexity increases (Staplin and Fisk 1991).

Use of advance cues or response preparation appear to help older drivers with response selection and decision making. When preparation time allows longer stimulus exposure and longer intervals between stimuli, older drivers performed better with less slowness in response (Stelmach and Nahom 1992). In a study on left-turn intersection problems, Staplin and Fisk (1991) found that "cueing drivers with advanced notice of the decision rules through a redundant upstream posting of sign elements improved both accuracy and latency of young and older drivers' decisions."

In general, age differences in performance are greater at increased retinal eccentricities, indicating a loss of UFOV (the Useful Field of View) among older drivers. Ball and Owsley (1993) reported that the three components of age-related reduction of UFOV are attention deficits in (1) speed of visual processing, (2) decreased ability to divide attention, and (3) reduced selective attention or the decreased ability to localize targets. Both Shiner and Schieber (1991) and Ball, Sloane, Roenker, and Bruni (1993) have shown that restricted UFOV results in an increased probability of accidents, particularly at intersections. The reduction in UFOV and its associated attention deficits are not easily overcome. The AARP 55 ALIVE/Mature Driving program stresses ways that older drivers can minimize the effects of these problems. (The program is an 8-hour classroom refresher course for motorists age 50 and older who have years of driving experience.) Sign designers, business interests, and planners can also minimize the problems associated with restricted UFOV by following principles suggested elsewhere in this report, including reducing the density of information on a sign through simplifying sign design and increasing recognition distances to give older drivers more time to respond to a sign safely.

GENERAL PRINCIPLES OF HIGHWAY SIGNING

Before looking at the specifics of designing signs for legibility and conspicuity, it may be helpful to review some general guidelines for sign

design for road users. Some general guidelines can be obtained from the Federal Highway Administration's *Manual on Uniform Traffic Control Devices* (hereinafter MUTCD). According to the FHWA web site (http://mutcd.fhwa.dot.gov/), "the MUTCD contains standards for traffic control devices that regulate, warn, and guide road users along the highways and byways in all 50 States. Traffic control devices are important because they optimize traffic performance, promote uniformity nationwide, and help improve safety by reducing the number and severity of traffic crashes." Other guidelines can be taken from the Positive Guidance engineering practice, which, as noted above, is based on principles that describe the relationship between highway information, including signs, and driver behavior. In both cases, the usefulness of these guidelines for our discussion about on-premise signs needs to be tempered with this acknowledgment; namely, these guidelines are primarily concerned with *highway* signage and will need to be revised and adapted when necessary for their application to on-premise signs.

Guidelines Based on Federal Sign Standards

The MUTCD addresses the requirements for a wide range of signs, including warning, regulatory, guidance, and Tourist-Oriented Directional Signs (TODS). The manual discusses sign shape, color, symbol and text, dimensions, and lettering. It also addresses standardization, uniformity, and the excessive use of signs. Although developed for highway signs, the criteria described in the MUTCD and supporting documents can be used to develop minimum size and proper placement guidelines for the design and installation of on-premise and other commercial signs.

Fulfill a need. The MUTCD requires that traffic signs fulfill a need, and it is important to recognize that all commercial signs, and particularly on-premise signs, also fulfill a need of drivers.

Command attention. Signs that command attention are safer as they increase the range of distance over which they may be read. Commanding attention does not mean the sign should have entertainment value (commercial signs should never compete with traffic control devices for attention), just that it can be noticed in time to be read where the information is needed. Remember, signs that fulfill a need require less conspicuity than other signs to be noticed.

Convey a clear simple message. Clear messages reduce the time to make decisions. Johnson and Cole (1976) conclude that, since reading a sign message requires a driver to remove his or her eyes from the road, the message should be as simple as possible, thus ensuring its rapid acquisition and minimizing the amount of time the driver must turn his or her eyes from events on the roadway. Additionally, simple messages may require fewer words, allowing larger letter size for a given sign face size, thereby increasing legibility and readability and reducing driver response time. Complicated messages may require very large signs, and excessive size may elicit conflict with citizens concerned about aesthetics. Finally, if a sign contains so much copy that it loses its information value (especially navigational value), requiring a driver to glance at it multiple times, conflicts may occur not only with control and guidance tasks, but also with the driver's attention to other on-premise signs that may have interest as well.

Give adequate time for proper response. Size and placement affect conspicuity, legibility, and readability, which, in turn affect the time that a driver has to read the sign and react safely to it. Site conditions play a major role in determining how much time is needed for a driver to have adequate time to respond to a sign. This issue is discussed in more detail below.

Command respect of road users. Drivers will respect signs if they meet the criteria described above because meeting those criteria will result in signs that meet the driver's expectations and fulfill the driver's need for information. Respect for signs gives users faith in the entire signing system, including on-premise, commercial signs.

Guidelines Based on the Positive Guidance System

The research findings about regulating attention, comprehension, response selection, and decision making are the basis for a number of general principles in the Positive Guidance approach to identifying information deficiencies.

Design for drivers and accommodate target groups. A sign system must meet the information needs of drivers and special groups like older drivers, truck drivers, non-English speaking, etc.

Be responsive to task demands. If the task demands that the driver look left, don't expect the driver to see your sign on the right. This requires proper site planning integrated with road geometry. Otherwise, provide advance information (e.g., an off-premise sign) to create proper expectancy. Traffic engineers use "Stop Ahead" and "Left Exit" signs to create expectancies.

Meet the driver's expectations for signage and avoid surprises. To avoid surprises, on-premise signing should make it clear where a business is and how to get there with a reasonable amount of advance notice. For example, a sign clearly indicating the distance to an entrance to a mall will help overcome problems caused by geometry and roadside design. Likewise, an off-premise sign should make it clear it is off-premises and that the business is somewhere else. Ambiguity will leave the driver bewildered and searching for the business.

Eliminate sources of information error and upgrade any deficient signing. The most obvious source of information error is a sign with incorrect information. A far more insidious source of information error is the absence of information needed to correct false impressions created by other highway features or expectancies. For example, a sign on the road may not provide the information that the business is to the rear of a shopping center and which entrance should be used. Or a group of signs may give the appearance that the businesses are adjacent to the sign when, in fact, access to them requires a turn at the next street and some additional wayfinding is warranted.

Avoid overload. The principles of primacy and avoiding overload are the reasons for numerous conflicts between traffic engineers, business interests, and sign regulators. The fact that advertising signs are sometimes placed where primacy suggests that they should not be placed is often the result of the restrictions on the placement of businesses in commercial districts where businesses benefit from proximity to one another but must also compete for attention. The design of the commercial district, including the design as it is affected by zoning regulations (e.g., setback, height, bulk, and landscaping regulations), is a factor in influencing the placement of signs. It is incumbent upon the urban planner, representatives of the business community, and traffic engineers to work together if overload is to be avoided and traffic safety enhanced.

Devices that have the potential to overload the driver include:

- moving or dynamic displays that may hold a driver's attention until the dynamic is concluded;

- changeable message signs that use a number of displays in sequence, making it difficult for the driver to know when the sequence is ended and not stressing the most relevant information; and
- signs with so much navigational information that the driving tasks of control and guidance are affected negatively.

Devices that are less likely to overload the driver include:

- signs that contain information that has nothing to do with navigation or guidance, such as a telephone number or address, which are likely to be ignored unless a driver is seeking it;
- coded information that can assist drivers in knowing what information is irrelevant to them (e.g., prices at gas stations are unlikely to be noticed unless a driver wants to buy gas); and
- information presented in small type may readily be discarded when the primary message is very legible (e.g., "Smith's Floral Shop" should be readable but secondary information, like "a dozen roses for $12," might be presented in small type that most drivers would ignore if they had no interest in purchasing flowers).

Apply primacy when information competes. On-premise signing should recognize the natural primacy of information affecting control (i.e., the driver's interaction with the vehicle and its controls and displays) and guidance (i.e., the driver's maintenance of a safe speed and proper path relative to roadway and traffic elements) and not attempt to interfere with the selective attention that primacy invokes. This principle requires cooperation and not finger pointing. While the driver can sometimes be expected to apply primacy when determining what information should be attended to, the number of signs and the amount of information on them may create information overload in some locations. It needs to be recognized, however, that sometimes traffic signs have less importance to the driver than an on-premise sign. Therefore, reducing the number of signs does not necessarily mean reducing only the number of commercial signs. It may mean removal of some unnecessary highway signs as well.

TOWARD AN EFFECTIVE AND SAFE SIGN SYSTEM

The principles articulated in both the Manual on Uniform Traffic Control Devices (MUTCD) and the Positive Guidance system make it possible to suggest some guidelines for the placement and design of on-premise, commercial signs. The following sections offer some observations and recommendations about sign density, information density, sign visibility, and sign design

Sign Density

Other than a general admonition against too many signs, the MUTCD does not offer any specific guidelines on sign density. Clearly, there should be fewer signs where vehicle operators may be overloaded with information from all roadside sources. As an example, consider that Johnson and Cole (1976) concluded that "such loading may occur in merging situations or at interchanges or within decision distances from formal traffic sign displays that present complex information and decisions to operators."

Planners could benefit from guidelines pertaining to the spacing of information on the highway. A number of techniques are available that may be used to limit the effects of sign density, including minimum spacing requirements and grouping signs for adjacent businesses on a single sign structure.

Spreading. Lower primacy information should be moved upstream or downstream to avoid conflicts with higher primacy information. The principle of spreading can be applied to on-premise signs in one of two ways. With new construction, care should be given to place entrances to shopping plazas so that on-premise signs do not interfere with higher primacy information. For example, entrances to business activity should be located as far from intersections and ramps as possible. Second, larger text can be used to move recognition of the most important information further upstream, and smaller text can be used to move less critical information downstream.

Coding. The use of graphics and icons reduces reading time and effectively increases the information processing capacity of the driver. Color and shape coding may be used to increase cognitive conspicuity (viz., conspicuity related to the information content of the sign and the psychological state of the observer) so that information density may be increased. While every sign cannot have the recognition of the Golden Arches, it is often possible to use a symbol of the service or product being offered to aid driver recognition and recall. For example, use of a symbol on an entry or exit sign for a parking lot to a franchise would be more conspicuous and deliver more information than the enter or exit sign alone. Maintaining sign space limits but using that space to deliver more conspicuous and more informative "copy" through coding could simultaneously benefit community aesthetics, business activity, and traffic safety.

Repetition. When possible there should be continuity of signing from billboards, Tourist-Oriented Directional Signs, and other advance signing to the on-premise sign and the specific business. A graphic on an advanced sign can help a driver better recognize sign content when that graphic is repeated on an on-premise sign.

Redundancy. Use redundancy to make certain that signs are visible to drivers from each approach or to reduce the chance of blocking or masking. A projecting sign is designed to be seen from upstream, from downstream, or across the street. For businesses that are setback from the street, a sign on the street and a high mounted sign over the building may be effective in helping the driver more easily find the business.

Information Density per Sign

In general, the more information on a sign, the greater the potential for the sign to distract drivers from other signs and highway information. This being said, there is no conclusive evidence that signs with more information are more distracting. Still, less copy on a sign permits more white space, which researchers believe increases drivers' attention or sign conspicuity. The United States Sign Council is currently funding research by The Pennsylvania State University to consider the benefits to business success of more empty space on signs. Empty space generally should result in less secondary copy. Empty space may also mean more aesthetically pleasing signs. This research may yield the first of many examples of how the interests of business, traffic engineers, the public, and planners may come together.

While more empty space and less secondary copy may best serve the needs of some businesses, other businesses may need to provide more secondary copy on their signs. This is not necessarily a problem for drivers since, as noted earlier, drivers filter out information that is not relevant to their needs. However it is easier for drivers to filter nonrelevant information if the primary navigational information is made highly legible. Therefore, secondary, nonnavigational information should not be the same size as the primary navigational message.

Douglas Mace

Signs that clearly and quickly identify the type of business allow drivers to ignore secondary information if they are not interested. In this case, a driver would need more than a quick glance at this sign to know that the business is selling ice cream.

Douglas Mace

The name of the business is clearly displayed on this sign, but only at the same legibility as all the secondary advertising copy. Although drivers can filter out nonessential information (in this case, the secondary ad copy), signage is more effective when the navigational information (in this case the Burger King logo) is larger than the non-navigational information ("Treat Yourself . . .").

Douglas Mace

Secondary information (e.g., the gas prices) presented in positive contrast (light against dark) is less likely to be noticed, thus drawing the driver's attention above to the primary message needed for navigation.

There are two issues here; one issue is to get the navigational information large enough to satisfy the information needs of motorists, the other is to find ways to code secondary information so that it is less distracting to drivers. The two issues are related. Signs that clearly and quickly identify the type of business allow drivers to ignore secondary information if they have no interest in that type of business. This should reduce the potential of unnecessary distraction. Gas stations and motels are two examples of businesses that quickly communicate their identity to drivers—gas stations because we are familiar with their names and logos; motels because the word motel is only five letters that is usually made highly legible.

In areas with high overload and information conflicts, the information density of the primary navigational message should be limited to a single glance. A simple message (i.e., one with few characters or elements) can be made larger, which allows it to be seen further upstream, possibly removing the recognition time from the area where the driver is heavily loaded. A simple message that a driver can recognize in a single glance consists of, at most, six words. Zwahlen (1989) deter-

mined that two seconds was the maximum amount of time a driver could take his eyes off the road and look at the dashboard without losing lateral control of the vehicle. This might be extended to three or even four seconds if the sign is in the cone of vision, allowing the driver to see the road in the periphery with some detail. Various reading time models (Mitchell and Forbes 1943, and Odescalchi et al. 1962) suggest that a driver can read anywhere from 1.5 to 3 words per second. Therefore, the primary navigational information (e.g., the description of the business) should be limited to a maximum of six words. In a separate analysis, Kuhn et al. (1998) suggested a maximum limit of five words. In general, large signs should be used to make information more visible and not just to increase the amount of information presented.

The sign in the photo at the top of page 28 is an example where the driver is forced to read all the text before finding out that the business sells ice cream. Unless familiar with "The Meadows," the driver looking for a particular type of business will have to make repeated glances at the sign until close enough to read the entire sign contents (i.e., all the secondary copy). This will consume the driver's time that could be devoted to the acquisition of other information. What makes a sign like this even worse is that, when the words "Ice Cream" are finally legible, the sign is probably outside the cone of vision, forcing the driver to take his eyes off the road. In this case the sign has taken a disproportionate amount of the driver's time, which could have been given to other on-premise signs, created an unsafe situation, and resulted in the loss of some business because some drivers will give up trying to read the sign and place their attention elsewhere.

The sign in in the middle photo on the opposite page clearly names the business but only at the same distance that all the secondary copy is legible. Depending on the approach speed, increasing the size of this sign so that the business was identified further upstream could benefit both the business and the driver. While everyone might benefit from increasing the size of the business name, the size of the secondary copy should not be increased. That way, drivers not interested in Burger King can easily ignore the secondary copy, and the potential distraction of the sign is reduced.

While it is best to have the primary navigational information visible upstream and recognized quickly, other methods of coding may also be effective. The sign in the photo at the bottom of the opposite page shows how information placed underneath in positive contrast (light against dark) is less likely to be noticed, which effectively draws the motorist's attention to the most critical navigational information. With effective coding methods, the secondary information is less likely to distract drivers or mask more important information. Forbes (1939) found that signs on top in a group had the highest priority value; that is, they were seen first and best. Others might argue that it is the white space surrounding the place name that draws attention. Certainly the gas prices appear to be less conspicuous. More research is needed to quantify the effect of these techniques on the driver's capacity to filter information.

Sign Visibility

Assuming that a commercial sign is providing a clear and simple message that is relevant to a driver's need for information and that the other issues (e.g., sign density) discussed above have been considered, sign regulators and business owners need to develop effective regulations for ensuring sign visibility. These issues include sign placement and sign design, which determines the conspicuity, legibility, and readability of the signs.

Sign placement that promotes visibility and readability. As objects move into the periphery of a person's field of vision, their images become less clear and eventually they are not seen at all. With respect to traffic signs, the first concern is that they not be placed outside the cone of vision where drivers may not notice them at all or may not be able to find signs they are looking for. The MUTCD requires signs to be placed so that they appear in the cone of vision. According to the American Association of State Highway Transportation Officials (AASHTO) (1994):

> Speed reduces the visual field, restricts peripheral vision, and limits the time available to receive and process information. Highways built to high design standards help compensate for these limitations by simplifying control and guidance activities, by aiding drivers with appropriate information, by placing this information in the cone of clear vision, by eliminating much of the need for peripheral vision, and by simplifying the decisions required and spacing them further apart to decrease information processing demands.

With respect to signs that are not in the cone of vision, the concern is not only that drivers may miss the sign, but that drivers will try to read these signs, forcing their eyes to leave the road to focus on the sign. When this happens, the road must be viewed peripherally, which creates an unsafe situation. It is in the interest of traffic safety that commercial signs providing necessary navigational information be placed in the cone of vision. Line of sight for commercial signs is essential to minimize conflict with public directional/informational or guidance/control signs that have higher primacy. Signs that must be read at large angles to the line of sight on the road risk not being read or result in unsafe driving behavior. Either the driver will skip the sign or have a very poor vision of the road while reading the sign. For the purpose of minimizing driver overload and improving traffic safety, placing on-premise signs in the cone of vision to the extent possible given factors such as building orientation, required setbacks, and roadway width, is equally as important as providing sufficient legibility.

There is no clear rule as to exactly what boundaries define the cone of vision. Pignataro (1973) regarded the most acute vision to be within a cone of 3 to 5 degrees and the limit of "fairly clear sight" to be within a cone of 10 or at most 12 degrees. Beyond this limit, vision becomes blurred. While peripheral vision determines the horizontal angle at which a driver can read a sign, the vertical angle is determined by the attenuation from the windshield, normally 5 to 7 degrees. In general, signs that can be seen only at horizontal angles greater than 10 degrees and vertical angles greater than 5 to 7 degrees are considered "out of view" for normal driver eye tracking of the road.

Garvey et al. (1996) provided the sign setback and mounting height requirements necessary to maintain a sign within this field of view. These specifications are a function of the required viewing distance, which is a function of speed. Table 2-1 provides the recommendations from their paper.

Placing an on-premise sign in the cone of vision and maximizing its legibility and recognition distance serves not only the interests of traffic safety, but the interests of business and the community as well. Drivers who did not notice or could not find the on-premise sign when it was placed outside the cone of vision will have a greater likelihood of seeing the sign when it is within the cone of vision. Assuming adequate conspicuity and legibility of the sign, and the business's ability to satisfy the needs of some drivers, the volume of business should increase and the likelihood of business failure should be reduced.

Table 2-1 suggests that the faster the speed, the longer the Minimum Required Legibility Distance (MRLD), and the longer the MRLD, the greater the setback and mounting height. While the data provided by Garvey et al. (1996) are useful as a frame of reference, there are several problems with their assumptions that must be considered.

First, in computing MRLD, they do not consider that drivers may need additional time and distance if they need to make a lane change or slow down to turn into a business. This would not make much difference at low speeds because their assumptions are generous, but more distance may be needed at higher speeds.

Second, while MRLD is the minimum required distance, there is no reason longer distances can't be used to increase setback and mounting height. A larger sign that can be read further away may be set back further. This assumes, however, that there is a line of sight to the sign. Buildings, trucks, or other signs will often prevent a line of sight to a large offset so that this advantage for large signs is not realized. Still, larger signs may be needed for adequate letter size, even if larger setbacks are not possible because of sight distance. Also, even if sight distance makes large setbacks and tall mounting heights possible, smaller setbacks and heights may be desirable because they make the sign readable over a greater distance.

Finally, the use of MRLD does not consider extra visibility distance to allow drivers time to notice the sign and begin to read it. Sign conspicuity may require a sign to be noticed (not the same as being recognized) further away than MRLD. The relationship between conspicuity, letter size, and MRLD is discussed in more detail below.

TABLE 2-1. THE RELATIONSHIP BETWEEN VEHICLE SPEED, LEGIBILITY DISTANCE, SETBACK, AND HEIGHT

Vehicle Speed		MRLD*	Setback	Mounting Height
in MPH	in feet per second	(in feet)	(in feet)	(in feet)
55	81	440	77	39
50	73	400	70	35
45	66	360	63	32
40	59	320	56	28
35	51	280	49	25
30	44	240	42	21
25	37	200	35	18

*MRLD is the minimum required legibility distance or the recommended distance at which a sign should be readable. Further discussion of MRLD is provided below in the section on sign design.

Source: Garvey et al. (1996)

When a sign is placed within the cone of vision, other factors can still affect its ability to be seen, recognized, and understood. Those factors are *angular presentation* (the viewing angle of the sign from perpendicular to the line of sight) and the sign's *surround*. Surround is the term used to describe the area around the sign viewed from the location where the sign should be detected. It is to be distinguished from the sign background, which normally refers to the area of the sign against which the letters are read. Therefore the background of a Stop sign is red, its surround is determined by whatever is in the visual field around the sign. The contrast of a sign with its surround determines detection, while the contrast of the letters and background determine legibility.

A sign may be mounted within the cone of vision but still be presented to the driver with a large *angular presentation*. Conspicuity is reduced by the visual distortion of the sign shape. Legibility will also be reduced because of distortion in the apparent shape of the letters. Garvey et al. (1996) recommend keeping this angle at less than 20 degrees. Also, for signs that are not internally illuminated, large viewing angles prevent headlights from effectively illuminating retroreflective signs. Replacing a wall sign with a projecting sign, for instance, might be one way of improving a sign's angular presentation.

Mace et al. (1982) found that, as visual complexity is increased, the effects of contrast with the *surround* are reduced. Visual complexity is multidimensional; namely, it is affected by the number of light sources, level of visual detail, and the demands placed on the driver. Signs will be more readily seen if placed to have maximum external contrast (meaning the luminance of the sign compared with the luminance of the area immediately surrounding the sign) in an area with low visual complexity.

Sign design that promotes visibility. The focus of this section will be on principles for designing signs to improve the visibility of on-premise and other commercial signing to promote safe wayfinding. Most of these principles are the same as those that govern all highway signs. Issues of sign design relate to many of the principles already discussed and have been summarized by several authors (see Schwab 1998 or Garvey et al.1996).

Mace et al. (1986) developed an analytic framework for evaluating the adequacy of any sign. The framework reflects the principles of supply and demand, and is based upon the simple observation that drivers need a minimum amount of time, and therefore distance, to process and respond to information. The supply of information refers to the sign design characteristics that provide conspicuity and legibility. Colors, materials, illumination and font, and letter size, for example, all have an impact on conspicuity and legibility. The most universal measure of this is detection and recognition distance; however, reaction time is also often used as an evaluation criterion. In general, it is the design of the sign, together with the method of lighting and its placement on the road that determines how much distance and, therefore, time that must be supplied to the driver.

The Minimum Required Visibility Distance (MRVD) model for estimating the minimum detection and legibility distances that drivers require incorporates the findings of numerous studies to make an estimate of the distance requirements for sign legibility and conspicuity (Paniati and Mace 1993). MRVD is a generic term to refer to both MRDD (minimum required detection distance) and MRLD (minimum required legibility distance). MRDD includes MRLD, but adds additional time and, therefore, distance to allow a sign to be noticed. It is assumed in this model that, depending on the type of sign, the driver may need time for some or all of the following: detect a sign, comprehend its message, make a decision, initiate a response, and implement or complete a vehicle maneuver (such as a lane change or deceleration) before reaching the sign.[4]

The following sections are directed at methods to increase the conspicuity and recognition of signs.

Conspicuity. A conspicuous object, according to Cole and Jenkins (1978) is one that will, for any given background, be seen with certainty probability ($p>.9$) within a short observation time ($t<.25$ s) regardless of the location of the target with respect to the line of sight. Hughes and Cole (1986) cite the work of Engel (1976), who drew attention to the sensory conspicuity of an object, which depends upon the prominence of its phys-

ical properties compared with its background, and cognitive conspicuity, which he saw as dependent on the information content of the sign and the psychological state of the observer. Mace and Pollack (1983) made a similar observation when they suggested that the conspicuity of a sign depends upon the motivation and expectancy of the driver, so that Stop signs following "Stop Ahead" warning signs are more conspicuous, as are all signs at intersections compared with those midblock. This is why Cole and Hughes (1986) found that the conspicuity of an object depended upon the instructions given to an observer, and this is why we have difficulty generalizing the results of previous research beyond the specific group of subjects and the instructions they were given.

Hughes and Cole (1984) discussed two kinds of conspicuity: *attention conspicuity*, which is the capacity of the target to attract attention when the observer's attention is not directed to its likelihood of occurrence, and *search, cognitive,* or *conspicuity*, which was defined as the accessibility of the target when the observer was explicitly directed to look for the object. Signs with advertising as their primary purpose seem to require attention conspicuity, and billboards, because of their size and location, are more likely to gain attention. Wayfaring signs seem suited to search conspicuity. Smiley et al. (1998) found that subjects' recall of the types of facilities listed on signs was poor except for the name they were explicitly instructed to search for. The data collected by Hughes and Cole (1986) suggest that traffic control devices are considerably less conspicuous in shopping center environments than on other types of roads and less conspicuous on arterial roads than on residential roads. Cole and Hughes (1984) argue that visual clutter is the most likely explanation for reduced attention conspicuity and not the added demands of the driving task.

Attention (sensory) conspicuity is determined by the physical prominence of an object's properties compared with its surround. It may be improved by an increase in the brightness of a sign or its contrast with its surround. Placing the sign in a less visually complex surround helps. The internal layout or graphic quality of a sign may also be a determinant of conspicuity. Just as white space gains attention in a newspaper, signs that have blank space are more easily noticed. Blank space may be obtained by making signs larger or by removing secondary copy that has no navigational value. A research study is currently being conducted by the Pennsylvania State University on the effectiveness of white space surrounding the text of on-premise signs.

Cognitive (search) conspicuity is dependent on the information content of the sign and the psychological state of the observer. Hungry drivers are more likely to notice restaurant signs. The more useful the information on the sign, the more likely it will be noticed. If drivers are looking for your business by name, then the name is important. If drivers are looking for your business by the type of product or service, then product or service name is most important. While basic research would suggest that sign conspicuity is greater if the sign has a distinctive shape compared with other signs, there has not been much research of this in a road environment. Distinctive shapes can yield recognition as is the case with the Stop and Yield signs and many commercial signs.

Some of the variables that affect attention conspicuity are discussed below.

Display message content. A number of researchers have speculated that the graphic content of a sign affects both conspicuity and recognition. Jenkins (1981) writes that one of the factors that affects conspicuity is "information content of the object including information arising from the unusual or unex-

pected character of the object." He further writes that the "exogenous control of visual selection will be primarily influenced by the design of the sign, its size, reflectivity, bold legend, and the background in which it is placed." Please note that Jenkins is referring to reflectivity as it relates to highway signs; "luminosity" would be the equivalent concern for on-premise signs. Hughes and Cole (1986) cite converging evidence that the bold internal graphics of symbolic signs contribute usefully to their conspicuity. Taken together, these references suggest that it may be possible to increase the conspicuity and/or recognition of signs by adding icons to the text. When the graphics used are not familiar and are not likely to become familiar through frequent encounters, the legibility of text may still have to be relied upon.

Beyond graphic content, other factors that can influence conspicuity and recognition include the border, color, shape, and size of a sign.

Border. A dark border around a light colored sign and a light border around a dark colored sign can aid conspicuity, particularly when the surround does not contrast well with the sign.

*Color***.** The evidence suggests that conspicuity is improved by both luminance and color contrast; however, as long as color contrast is maintained, there does not appear to be any advantage for any one color. Legibility can be mediated through either color or luminance contrast (Morales 1987). Cole and Jenkins (1978) and Mace (1983) found that white signs were detected less easily at night than signs of color. During daylight, signs of dark color are generally more noticeable because the backgrounds are normally light. At night, the reverse is likely to be true. The reader is advised that the relationship between color and conspicuity is a complex one. We recommend seeking the advice of an experienced professional sign designer and consulting the most recent traffic engineering research before making any regulation related to the use of color on signs.

Shape. Basic research suggests that sign conspicuity is greater if the sign has a distinctive shape compared with other signs. Distinctive shapes can increase recognition distance as is the case with the Stop and Yield signs or McDonald's golden arches.

Sign Size. The size of a sign affects its conspicuity as well as the size, spacing, and layout of message content. With respect to conspicuity, size can be minimized by attending to the issues of surround and luminance. The need for large on-premise signs may also be reduced by making effective use of symbols or by transferring some of the information to off-premise signing.

Legibility and Recognition

Legibility refers to the ability of the eye to clearly distinguish individual characters and numbers in an alphanumeric message. It is generally described in terms of visual acuity, which ranges from about 20/17 (young drivers) to 20/40, the minimum required for licensing. Recognition or readability refers to the ability of an observer to understand the meaning of an alphanumeric or graphic message. Words are often recognized without total legibility because of familiarity with the length of the word or the pattern of letters. Even when reading alphanumeric signs, recognition often results without legibility because, in any font, not all letters are equally legible. Some letters in the alphabet might have only half the legibility distance of other letters.

Factors that relate to recognition and legibility have been studied far more than the issue of conspicuity, and there is a large body of literature that addresses these issues. (See Garvey et al. (1996) for an annotated bibliography.) Of all the factors that affect legibility, the visual acuity of the observer, the font, and font size are the most critical. Other factors, such as spacing, contrast, background, luminance, and the use of lower case

have an effect, but nowhere near as great an effect as font and size. With regard to alphanumeric text, the required size depends on the required legibility distance, the acuity of the observer, and the font used.

Forbes and Holmes (1939) used the legibility index (LI) to describe the relative legibility of different letter styles (fonts) used on highway signs. The LI is the distance in feet at which a one-inch letter is legible for individuals with a specific level of visual acuity. LI changes as acuity changes. Multiplying the LI by the letter height in inches tells you the distance in feet at which a word or letter should be legible.

The legibility of a verbal message or recognition of symbols requires that the visual system resolve the critical detail of the key elements of the sign message content. The MRLD model may be used to determine either the required detection or legibility distance or the required LI for a sign based upon the required distance and the available letter height. The LI is important to the determination of the required size for a sign in a specific application. Mace (1988) noted the following relationships:

Required letter size = MRLD / LI

or

Required LI = MRLD / letter size

Either the letter size or the LI may be manipulated to satisfy the MRLD requirement. For any observer, LI is determined primarily by the font. While other factors, such as letter spacing and contrast have some effect, from the standpoint of sign maintenance, spacing and contrast cannot be expected to compensate for inadequate letter size. Therefore it is important to determine the required size at the time of sign installation. However, contrast and luminance will have an effect on the LI; therefore, the required letter size may depend on the method of illumination as well as other factors that determine legibility (e.g., letter spacing and the use of lower and upper case). Signs of adequate size should be installed so that daytime legibility is maintained and the luminance requirements for nighttime recognition are realistic.

Letter size. The formula above is an oversimplification in that it assumes that letter size is proportional to legibility distance and that the LI of a particular font remains constant over distance. Mace and Garvey (1993) show that beyond certain distances, which were shorter for older drivers, proportional increases in legibility distance did not occur under conditions of retroreflective sign illumination. The effect, which may be optical or atmospheric, has not been well quantified, and is generally inconsequential inside 500 feet. For long distances, a little extra letter size may be necessary. With other types of sign lighting, the effect may be quite different and further research is needed.

Still, as noted above, to determine the required letter size one needs to know the MRLD and the LI, which will depend on the font used and the acuity of the observer.

Several attempts have been made to determine the MRLD. The *Traffic Control Devices Handbook* (U.S. DOT 1983) assumes a minimum legibility distance of four seconds for an acceptable sign. The research by Garvey et al. (1996) assumed 5.5 seconds as the minimum requirement. A computer model that estimates a unique time and distance for most signs in the MUTCD was described by Paniati and Mace (1992). This approach allows the MRLD requirement to reflect differences in the amount of legend on a sign, the complexity of the decision the sign requires, and, most important, whether the driver needs to slow down or change lanes before reaching the sign. In a recent report to the American Association of State Highway and Transportation Officials (AASHTO), McGee and Mace (2000) recommended two sets of generic values based upon the MRLD

computer model. One set was to meet the MRLD requirements of signs requiring some maneuver before the sign, the other set requiring no maneuver.[5] Table 2-2 shows the MRLD for 4 seconds, 5.5 seconds, and the values recommended by McGee and Mace.

The 5.5-second values from Garvey et al. (1996) give lower values than the MRLD with maneuver from McGee and Mace (2000). Compared with the MRLD without maneuver from McGee and Mace, the values using either 4 or 5.5 seconds are very generous.

It should be noted that the values in the table are minimum values for most signs in most situations. Signs requiring greater legibility distance include:

- signs grouped in a cluster where there are several signs that must be read;
- signs that have more than six words to be read; and
- signs with a message that is not readily understood.

Acuity of observer. Given an MRLD, one still needs to know the LI of the font being used in order to determine the letter size needed. The LI of a font is dependent not only on the font, but the visual acuity of the observer. The LI for younger drivers with good visual acuity is much greater than the LI for older drivers. Also, the LI is 10 to 20 percent less at night than during daylight.

Under daytime conditions, highway series B, C, and D letters were reported to have an LI of 33, 42.5, and 50 feet per inch of letter height (Forbes and Holmes 1939). To find the legibility distance for these LI ratings, multiply the LI by the letter height (in inches); for instance, a sign using 10-inch-high letters for the D series, which have an LI of 50, would be legible at 500 feet and closer for a daytime driver with 20/40 vision. Forbes et al. (1950) found the wider, series E letters to have an index of 55. Over time, the value of 50 feet per inch of letter height has become a nominative, though arbitrary and disputed, standard. While these LIs may be reasonable for younger drivers, the LI of the series D letters for older drivers is closer to 40 and may be as low as 30 for some drivers.

Garvey et al. (1996) and Schwab (1998) based their recommendations for required letter height on drivers with the poorest (20/40) vision who still receive driver's licenses in most states. They also assumed that the font being used was equal to the visibility of the fonts used on highway signs. If we assume the use of a highway font, or equivalent, and an older driver with 20/40 vision just acceptable for a drivers license, the appropriate LI as used by these authors is 30. With this assumption, a 12-inch letter is legible at 360 feet and closer.

TABLE 2-2. MINIMUM REQUIRED LEGIBILITY DISTANCES IN VARYING SITUATIONS

Speed MPH	MRLD @ 4 seconds (in feet)	MRLD @ 5.5 seconds (in feet)	MRLD @ with manuever (in feet)	MRLD @ without manuever (in feet)
25-30	175	225	410	155
35–40	235	325	550	185
45–50	290	405	680	220
55–60	350	485	720	265
>65	385	525	720	280

A reasonable alternative would be to target drivers with 20/30 vision, which represents about 90 percent of the population and an even greater percentage of drivers. While not proven (another research need), drivers with the worst vision are assumed to adjust their driving behavior to match their abilities and are also more likely to know where they are going and not rely on signs. In our opinion, the cost to accommodate every driver is too great and probably would not be met. It is far better to use the 20/30 criteria and seriously attempt to meet the requirements of most drivers. The series D font would have an LI of 40 for drivers with 20/30 acuity and a 12-inch letter would provide them with 480 feet of legibility. Please note that the use of 30 as the LI of a highway font is a gross but conservative generalization. The different series of highway fonts have different LIs. And remember, LI is higher during daylight and is further increased by driver familiarity with the word.

Font. In addition to acuity, font is the other major factor in determining the legibility of a sign. The legibility of the font is best expressed by its legibility index (LI) for a driver with a specified acuity. This should be considered the reference LI for the font. As discussed below, other factors such as contrast and spacing can prevent a font from achieving its reference LI.

The research on the legibility of different fonts at long distances has been primarily funded by the government and limited by its desire to maximize legibility and to avoid artistic presentations and fonts with serifs. Kuhn et al. (1998) concluded that while an extensive font choice allows for creative designs, it creates problems for sign designers because there is virtually no legibility distance data for the vast range of fonts used in advertising signing.

While trying to obtain funding to perform this critical research for the on-premise sign industry, researchers at the Pennsylvania State University have begun the work (Zineddin, Garvey, and Pietrucha, under review). Using eye charts like the familiar Snellen chart, they have determined, for example, that the font displayed in the accompanying graphic has less than half the legibility of the highway series E font. Therefore, to have your sign readable at 400 feet will require a 20-inch letter with this font, where a 10-inch series E font would be readable at the same distance.

A font example with less than half the legibility of the highway series E font.

The design of on-premise signs must recognize that stylized fonts may be acceptable for pedestrian traffic, but some of these fonts severely reduce legibility for highway traffic.

Other factors affecting legibility. Other variables that will reduce the reference LI of a font are briefly summarized below.

Internal contrast and sign luminance. The luminance contrast of a letter against its background is necessary to accommodate the visual acuity of all drivers. While minimum luminance and contrast are necessary, excessive contrast created by too bright a background will reduce legibility. (Readers interested in the issue of luminance and contrast are encouraged to consult the *IES Sign Lighting Handbook*, 8th edition.) A minimum contrast ratio of 4:1 is recommended and 50:1 is considered too great (Mace et al. 1994).

Spacing of letters. Crowding letters reduces legibility. The spacing of letters following the MUTCD guidelines is recommended for all signs. While minimum spacing will allow a font to achieve its reference LI, this LI will not be increased by wider spacing (Mace et al. 1994).

Use mixed-case letters. Use of mixed-case letters does not provide consistently greater legibility (Mace et al. 1994) but may create recognition of a business name, product, or service before the words are legible. This is primarily effective with names and words with which drivers have famil-

iarity and that have an identifiable pattern in word length or the number of ascenders or decenders. Garvey et al. (1997) indicate the height of mixed-case letters may be reduced about 10 percent for equivalent recognition distance.

Contrast orientation. Positive contrast signs (light text on a dark background) are easier to read than negative contrast signs (dark text on a light background). The use of positive contrast may increase the LI of a font up to 30 percent.

Orientation of text. Horizontal text is easier to read then vertical text.

COOPERATIVE TRIANGULATION

Although additional research will certainly be beneficial, there is an abundance of information from which a design guide for quality commercial signs can be developed. Still, it will be difficult to fully implement these principles without the cooperative effort of all the stakeholders and other interested parties. The primary stakeholders include traffic engineers, business owners, sign manufacturers, city planners, elected officials, neighborhood and environmental groups, financial institutions and consultants, and learning and behavioral experts.

The interests of these and other groups seem to be focused on three issues: traffic safety, aesthetic achievement, and economic success. Cooperative triangulation is a method by which these stakeholders can find solutions that can result in success with regard to all three criteria. Firth (Transportation Research Circular, under review) reports success with this approach in his experience developing wayfinding systems in Pennsylvania.

A road map to achieve cooperative triangulation would be a project unto itself; however, a few first thoughts here may be helpful to initiate the process. First, the ways that each stakeholder can help the others must be identified. For example, Tourist-Oriented Directional signing is an

Visual acuity of observers, font, and font size are the most critical factors affecting sign recognition and legibility. Other factors such as contrast, sign spacing, background, luminance, and use of upper and lower case letters also have an effect. Shown below are two similarly situated signs with stark differences in legibility.

Marty Roupe

Marty Roupe

Marty Roupe

effort by highway agencies to aid navigation to businesses. Another step highway agencies could take is to enforce more self-discipline in the installation of unnecessary highway signs, particularly unnecessary changeable message signs (CMS), or lengthy CMS messages.

City planners need to understand the significance of primacy and how it relates to zoning and access to business and parking lots, and how good planning and well-designed on-premise signs can add to the economic vitality and aesthetic quality of their community. A traffic

engineering study, which looks at driver overload in the area and the required decision sight distance for on-premise information, should be part of each new business construction plan. An important part of this plan will be the recognition that adequate sign size that enhances conspicuity, legibility, and readability is important to business vitality and traffic safety.

Given traffic engineering input concerning where drivers should safely receive navigation information and an assumption that the necessary content will be six or fewer elements, an appropriate legibility distance can be determined. Given information regarding minimum required legibility distance and an assumption about the expected LI of the font to be used, a community could develop some guidelines about appropriate sign size. While maximum size could be regulated, the use of traffic engineering data would establish some guidelines about minimum size and height. The goal would be to develop a set of recommendations resulting in a sign system that would help motorists receive the information they need or want within sufficient time and distance.

While there is not a simple solution as to how these ideas may be implemented, this chapter, together with an opening dialogue among the stakeholders, could result in more communication and cooperative participation. A similar initiative was suggested by Cannon (1999), who urged "city planners and other municipal officials to work in creative collaboration with sign users and sign designers." He believes the result will be "a community in which the quality-of-life indicators would always be rising." Cannon sets out two goals: the need for retail merchants "to survive and succeed, producing prodigious tax revenues for the city" and for commercial signs to "visually unify the commercial areas, and at the very least, improve the appearance of commercial streets." He goes on to point out that "measurable success requires an honest equilibrium between the needs of all stakeholders." It is important to invite the traffic engineering community to join in this collaboration and see that the third leg of cooperative triangulation (traffic safety) is added to the common ground that everyone should be trying to perfect. There is nothing to be gained by ignoring the traffic safety problem and have city planners and sign users work alone.

NOTES

1. This discussion is concerned only with signs intended to be seen and read by drivers of moving vehicles and is not intended to be applied to signs intended only for pedestrians. We recognize that there are many commercial areas that are not automobile-oriented and that changes in demographics and planning policy may be increasing the number of commercial areas that are pedestrian-oriented. The expertise of the author, however, and the importance of this issue in crafting legal and effective regulation for signs led to an editorial decision to limit the discussion to traffic-oriented signs.

2. Some courts have, in fact, rejected these hypotheses because of a lack of evidence. Planners must, therefore, be extremely careful in crafting any sign regulation that would be based *solely* on the issue of traffic safety. Traffic safety is a legitimate purpose for sign regulations and should be addressed. There are legitimate prohibitions on signage that do not run afoul of First Amendment protections. For example, restrictions on advertising signs that have lighting, color, or movement that could make it more difficult to detect a sign that affects traffic safety (e.g., a flashing sign located in the same area of vision as a traffic light) can be regulated or prohibited. Readers of this report should review the chapter on legal considerations in drafting regulations and must consult their municipal attorney before attempting to write effective and legally defensible

regulations related to commercial signage and traffic safety. This chapter provides an understanding of how the principles that foster safety also serve the interests of business and the community. This information will not only serve to develop regulations that benefit everyone, but to encourage the voluntary development of better signage within the boundaries of regulations.

3. This section's focus on older drivers is consistent with the evolving concern of transportation officials with the diminishing capacities of an aging population whose demand for mobility has increased their rate of exposure in highway traffic. While there is a gradual deterioration of vision throughout life, visual deterioration generally becomes significant about the age of 50. It will be seen that older drivers not only need more time and therefore distance to access information from signs, but losses in visual capacity result in older drivers needing larger signs just to provide the identical time and distance that a younger driver would need for recognition of information. The concept of a legibility index is discussed in the chapter as the practical method by which the signing needs of older drivers can be met.

4. The Minimum Required Visibility Distance (MRVD) for older drivers may be considerably longer than for younger drivers because of diminished abilities to recognize and process information and to execute lane-changing maneuvers. Without reference to MRVD, one might think that the special needs of older drivers for conspicuity and legibility are based solely on visual impairment. The concept of MRVD makes it obvious that factors such as reaction time, decision making, and problem solving increase the distance needed by the older driver to detect and read signs, and that these factors can create visibility problems for the older driver even when visual impairment is not considered. In general, older drivers not only have problems seeing what younger drivers can see at a given distance, but they also need to recognize and be able to read signs at greater distances to provide them with the additional time they need to respond in a safe manner.

5. McGee and Mace have a third set of values for symbol signs not requiring a maneuver, but these values, which are higher, only apply for retroreflective signs being illuminated solely by headlamps.

REFERENCES

American Association of State Highway and Transportation Officials. 1994. *A Policy on Geometric Design of Highways and Streets*. Washington, D.C.: AASHTO.

Alexander, G.J., and H. Lunenfeld. 1975. *Positive Guidance in Traffic Control*. Washington, D.C.: Federal Highway Administration.

_____. 1990. *A Users' Guide to Positive Guidance*. 3rd ed. Washington, D.C.: U.S. Department of Transportation, Federal Highway Administration, Report No. FHWA-SA-90-017, 1-39.

Ball, K., and C. Owsley. 1993. "The Useful Field of View Test: A New Technique for Evaluating Age-related Declines in Visual Function. *Journal of American Optometric Association* 64, no. 1: 71-9.

Ball, K. Owsley, C. Sloane, M.E. Roenker, D.L. Bruni, J.R. 1993. "Visual Attention Problems as a Predictor of Vehicle Crashes in Older Drivers." *Investigative Opthalmology an Visual Science* 34, no. 11 (October).

Brouwer, W.H., W. Waterink, P.C. Van Wolffelaar, and T. Rothengatter. 1991. "Divided Attention in Experienced Young and Older Drivers: Lane Tracking and Visual Analysis in a Dynamic Driving Simulator." *Human Factors* 33, no. 5.

Cannon, J. 1999. "Sign Design and Community Aesthetics." National City Planners and Sign Users Conference. Cleveland, Ohio. 10 June.

Cole, B.L., and P.K. Hughes. 1984. "A Field Trial of Attention and Search Conspicuity." *Human Factors* 26, no. 30: 299-313.

Cole B.L., and S.E. Jenkins. 1978. *Conspicuity of Traffic Control Devices*. Australian Road Research Board, ARRB Internal Report AIR 218-1.

COMSIS Report. 1995. *Older Driver Perception-Relation Time for Intersection Sight Distance and Object Detection*. Vol. 1. Final Report, U.S. Department of Commerce.

Engel, F.L. 1976. "Conspicuity as an External Determinant of Eye Movements and Selective Attention." Thesis, Technische Hogeschool, Eindhoven.

Federal Highway Administration. 1996. "National Highway System Route Marker Study; Request for Comments." *Federal Register* 61 (August): 164.

Firth., R. (Transportation Research Circular, under review)

Forbes, T.W. 1939. "A Method for Analysis of the Effectiveness of Highway Signs." *Journal of Applied Psychology* 4, no. 23: 669-84.

Forbes, T.W., and R.S. Holmes. 1939. "Legibility Distances of Highway Destination Signs in Relation to Letter Height, Width, and Reflectorization." *Highway Research Board (HRB) Proceedings* 19: 321-26.

Forbes, T.W., K Moskowitz, and G. Morgan. 1950. "A Comparison of Lower Case and Capital Letters for Highway Signs." *Highway Research Board (HRB) Proceedings* 30: 355-73.

Garvey, P.M., B. Thompson-Kuhn, and M.T. Pietrucha. 1996. *Sign Visibility: Research and Traffic Safety Overview*. Bristol, Pa.: The United States Sign Council.

Garvey, P.M., M.T. Pietrucha, and D. Meeker. 1997. "Effects of Font and Capitalization on Legibility of Guide Signs." *Transportation Research Record* 1605: 73-79.

Hildebrand, E., and F.R. Wilson. 1990. "An Assessment of Elderly Driver Accident Patterns." Paper presented at the Transportation Research Board 69th Annual Meeting.

Hughes, P.K., and B.L. Cole. 1984. "Search and Attention Conspicuity of Road Traffic Control Devices." *Australian Road Research* 14, no. 1: 1-9.

_____. 1986. "What Attracts Attention When Driving?" *Ergonomics* 29, no. 3: 377-91.

International Commission on Illumination. 2000. "The Conspicuity of Traffic Signs in Complex Backgrounds," CIE Report 137. Vienna, Austria: The Commission.

Jenkins, S.E. 1981. "Consideration of the Effects of Background on Sign Conspicuity." *Proceedings of the Australian Road Research Board* 2.

Johnson, A.W., and B.L. Cole. 1976. "Investigations of Distraction by Irrelevant Information." *Australian Road Research* 6, no. 3: 3-23.

Kuhn, B.T., Garvey, P.M. & Pietrucha, M.T. 1998. "Sign Legibility: Impact of Color and Illumination on Typical On-Premise Sign Font Legibility." A Research Project of the United States Sign Council.

Mace, D. J. 1988. "Sign Legibility and Conspicuity." *Transportation in an Aging Society: Improving Mobility and Safety for Older Persons*. Transportation Research Board, National Research Council, Special Report 218, 270-293.

Mace, D.J., and P.M. Garvey. 1993. "The Effects of Increased Character Height on Sign Legibility." Paper presented at The Transportation Research Board 72nd Annual Meeting, Paper No. 931070.

Mace, D.J., P. M. Garvey, and R.F. Heckard. 1994. *Relative Visibility of Increased Legend Size vs. Brighter Materials for Traffic Signs*. U.S. Department of Transportation, Federal Highway Administration, No. DTFH61-90-C-00015 Final Report, 1-44.

Mace, D.J., R.S. Hostetter, L.E. Pollack, and W.P. Zweig. 1986. *Minimal Luminance Requirement for Official Highway Signs*. Washington, D.C.: U.S. Department of Transporation, Federal Highway Administration, Report FHWA/RD-86-151.

Mace, D.J., K. Perchonok, and L. Pollak. 1982. *Traffic Signs in Complex Visual Environments*. Washington, D.C.: U.S. Department of Transporation, Federal Highway Administration, Report No. FHWA/RD-82/102.

Mace, D.J., and L. Pollock. 1983. "Visual Complexity and Sign Brightness in Detection and Recognition of Traffic Signs." *Transportation Research Record* 904: 33-41.

Manual of Uniform Traffic Control Devices (MUTCD). 1988. Washington, D.C.: U.S. Department of Transportation, Federal Highway Administration.

McGee, H.W., and D.J. Mace. 2000. "Alternative Guidelines for Evaluating Sign Retroreflectivity." National Cooperative Highway Research Program (NCHRP) Project 20-7, Final Report, 1-36.

Mitchell, A. and Forbes, T.W. *1943, "Design of Sign Letter Sizes." Transactions of the American Society of Civil Engineers*, 108: 233-46.

Morales, J.M. 1987. "Retroreflective Requirements for Traffic Signs: A Stop Sign Case Study." *ITE Journal* 25-32.

Odesalchi, P., K.S. Rutley, and A. W. Christie. 1962. *The Time Taken to Read a Traffic Sign and Its Effect on the Size of Lettering Necessary*. Report No. LN/98/PO.KSR.AWC, Road Research Laboratory, Great Britain.

Paniati, J.F., and D.J. Mace. 1993. *Minimum Retroreflectivity Requirements for Traffic Signs*. Washington, D.C.: U.S. Department of Transportation, Federal Highway Administration, Report No. FHWA-RD-93-077.

Parasuraman, R., and P.G. Nestor. 1991. "Attention and Driving Skills in Aging and Alzheimer's Disease." *Human Factors* 33, no. 5: 539-59.

Pignataro, L.J. 1973. *Traffic Engineering Theory and Practice*. Englewood Cliffs, N.J.: Prentice-Hall Inc.

Sanders, A. 1970. "Some Aspects of the Selective Process in the Functional Field of View." *Ergonomics* 13: 101-17.

Schwab, R. N. 1998. *Design Considerations for On-Premise Commercial Signs*. The Signage Foundation for Communication Excellence, Inc. and the International Sign Association..

Shiner, D., and F. Schieber. 1991. "Visual Requirements for Safety and Mobility of Older Drivers." *Human Factors* 33, no. 5.

Smiley, A., C. MacGregor, R.E. Dewar, and C. Blamey. 1998. "Evaluation of Prototype Highway Tourist Signs for Ontario." Transportation Research Board 77th Annual Meeting.

Staplin, L.K., M.E. Breton, S.G. Haimo, E.I. Garber, and A.M. Byrnes. 1986. "Age-related Diminished Capabilities and Driver Performance." Federal Highway Administration Working Paper.

Staplin, L., and A.D. Fisk. 1991. "A Cognitive Engineering Approach to Improving Signalized Left Turn Intersections." *Human Factors* 33, no. 5: 559-71.

Stelmach, G.E., and A. Nahom. 1992. "Cognitive-motor Abilities of the Elderly Driver." *Human Factors* 34, no. 1: 53-65.

Transportation Research Circular. n.d. "The Role of Private Signing in Traveler Navigation and Wayfinding." Under review.

U.S. Department of Transportation, Federal Highway Administration. 1983. *Traffic Control Devices Handbook*. Washington, D.C.: Federal Highway Administration.

Zineddin, A.Z., P.M. Garvey, and Pietrucha, M. 2001. (Under review). "Legibility of Fonts for Use on Highway Signs." Washington, D.C.: Transportation Research Board.

Zwahlen, H. T. 1989. "Conspicuity of Suprathreshold Reflective Targets in a Driver's Peripheral Visual Field at Night." The 68th Annual Meeting, Transportation Research Board, Paper No. 880550, 1-31. Washington, D.C.: Transportation Research Board.

CHAPTER 3

Aesthetic Context:

Designing for Place

By Mark Hinshaw, FAIA, FAICP

As a discipline within the profession of planning, urban design has evolved significantly over the past several decades. Until the 1990s, most community plans emphasized policies associated with land use, transportation, housing, and public facilities. Policies were implemented by zoning regulations and capital improvement programs. When urban design efforts were included, they tended to be somewhat narrow in focus, dealing with downtowns or historic areas. And it was mainly in larger cities that urban design elements were addressed, if at all.

In 1972, the City of San Francisco published a landmark document, the *Urban Design Plan.* Led by Allan Jacobs, director of the planning department, this document demonstrated that urban design principles could be usefully applied to many aspects and geographic sectors of a community.

Particularly noteworthy was the attention it gave to respecting the unique character of San Francisco's neighborhoods, suggesting ways to ensure that new development was compatible. It remains a model for addressing urban design concepts on a citywide basis in a thorough, thoughtful, and graphically engaging manner.

In *Design as Public Policy* Jonathan Barnett (1974) presented a case for applying urban design principles in many aspects of city policies and regulations, and advocated design-oriented codes that would achieve public benefits through incentives offered to developers. While that book dealt principally with intense urban development, its basic approach has applicability to the regulation of signs.

In spite of these seminal pieces of work, community plans in the 70s and early 80s were viewed more as broad policy documents governing the location, intensity, and servicing of development rather than providing specific directions for its character and quality. Whether traditional comprehensive plans or longer-range strategic plans, they rarely concentrated on three-dimensional, visual aspects. This paralleled a shift in planning education away from physical planning toward skill sets associated with infrastructure, social needs, economic analysis, and demographic projections. In part, this movement was a reaction to the often heavy-handed and insensitive legacy of urban renewal when sweeping reconstruction was advanced as the way to improve communities.

While this trend had many merits, not the least of which was broadening the purview of planning in community development, the relative inattention to the physical environment has, over time, resulted in a degrading of the quality of many places. Rapid suburban expansion, linear development along commercial corridors, large-scale regional shopping centers, and look-alike apartment and office complexes have transformed hundreds of communities. Development standards have, in the past, emphasized the movement and storage of automobiles, often to the exclusion of other values. Development patterns have been transferred from one community to another with little deference to local history, climate, vegetation, or topography. Even older, more established metropolitan areas have seen new development that is more "suburban" than "urban" in character: large, boxy, freestanding buildings surrounded by expanses of asphalt. Finally, there has been a gradual shift in the retail sector toward national chains and franchises with uniform, "trademark" designs. The combined effect has been to produce places that look very much alike.

Communities have started to look at urban design techniques that can preserve, recapture, or establish a character to produce a sense of place. Communities of all types and sizes, from urban neighborhoods, to high-growth suburban centers, to small towns, are seeking out tools that address the form and quality of the built environment. There is an increasingly widespread desire for better compatibility between older and newer development, a greater sense of connectivity between developments, and a respect for established character. This is reflected in the growing interest in New Urbanism, with its emphasis on forms of development that are mixed use, compact, transit oriented, and walkable. Many communities—even those that are relatively well established—are beginning to look at ways of reflecting these principles.

Marya Morris

Marya Morris

The Macadam Corridor is one of several design overlay districts in Portland, Oregon, to which special sign, landscaping, and design guidelines apply. The primary objective of the overlay is to protect views of the Willamette River. Signs regulations for the corridor permit low-profile monument signs, awnings, and wall signs.

POLICIES

Increasingly, urban design is being addressed in adopted community plans, whether for cities as a whole or for smaller geographic units. In addition to the traditional settings, such as downtowns, historic areas, and waterfronts, urban design policies have been directed to shopping districts, commercial corridors, transit hubs, brownfield sites, and neighborhoods. Within these areas, urban design policies have been used to address many different subjects, including gateway treatments, view preservation, landscaping, tree preservation, streetscape character, building bulk and form, roofline treatment, and architectural scale. Comprehensive plans for mature cities like Portland, Oregon, emerging suburban centers like Bellevue, Washington, and smaller communities like Bozeman, Montana, contain sections that address substantive urban design issues.

Urban design has also found its way into other subjects. Corridor planning now typically includes an analysis of visual quality in addition to moving vehicles more effectively. Mixing uses together is often seen as accomplishing urban design objectives. Urban design is viewed as an important part of adaptively reusing older structures and neighborhoods. There is a renewed interest in creating or restoring public spaces to be safe, active, and appealing—clearly a purview of urban design. Care in the design of signs— both public and private—is seen as a part of a larger effort in improving the quality of various places within a community.

PROGRAMS

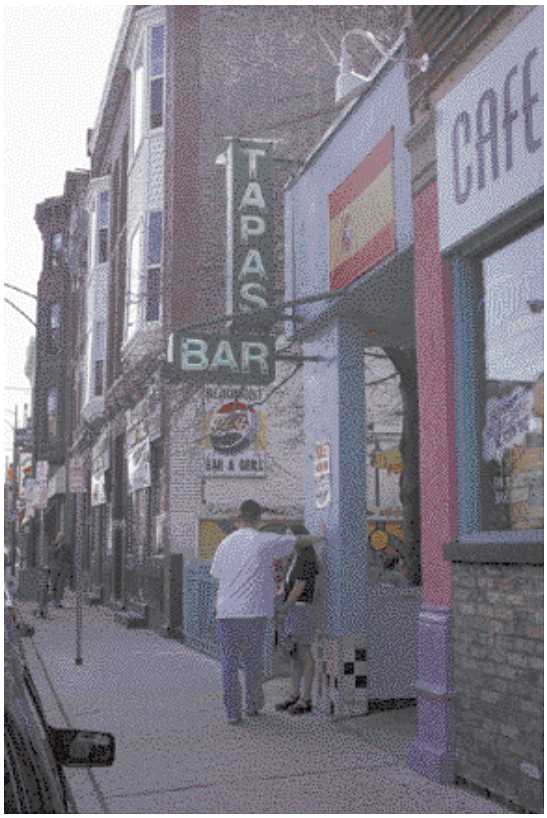
Of particular interest to planners and public officials is the desire to create districts and corridors that reflect a distinct character. In addition to fostering specific physical improvements, city officials have looked to regulations as a way of helping achieve this. Typically, this has translated into two related regulatory techniques: zoning regulations that are "tailored" to the characteristics of a given area and design guidelines that are intended to encourage compatibility and creativity.

The former technique often relies upon "overlay" districts to provide an added level of detail to regulations that may be applied in other districts. The latter technique differs substantially from conventional zoning in that a review process must be used to determine whether an individual proposal meets both the letter and the spirit of the guidelines.

Both of these tools have potential relevance to regulating signs in a manner that recognizes context. Several years ago, San Diego, California, recrafted its zoning regulations to “tailor” them to specific areas. More recently, Tacoma, Washington, has adopted location-specific regulations for what they call “X” districts, mixed-use centers with design standards attached. And the small town of Bainbridge Island, Washington, has been using overlay zones for its town center that include references to signs as part of a set of design guidelines.

Neither approach, however, need be overly complex or complicated to administer. Standards and guidelines should be described briefly in plain English with key terms defined. Illustrations are useful. Review processes can be administrative, although some communities prefer to use appointed boards. For the regulation of signs, it may be better to use an administrative approach since the issues are not as involved as with entire buildings. In addition, the need for timeliness in review so that a tenant can begin to operate usually precludes the use of a citizen board.

The objective is to produce signs that recognize context; this involves stimulating creativity as much as it involves checking for compliance with dimensional standards. Indeed, standards, by themselves, cannot



Marya Morris

Design guidelines for signs should promote creativity, not uniformity. They are inherently flexible in order to reflect the specific attributes of context. Shown here, varied signage in a mixed-use commercial/residential district on Chicago's north side.

Martin Ince

An attempt to create a unifying theme for signage in this strip mall has resulted in a bland lifeless commercial building that isn't serving customers or the business tenants well. Although the signage is legible, the excessive uniformity makes each business indistinguishable from the next.

produce good design. There needs to be a spirit of "collaboration" between the agency and the sign proponent to produce a result that benefits the community as well as the business.

Two caveats are necessary here. First, while the focus of this report is on signs, standards and guidelines need to be devised to address other issues, such as building orientation and form, the location and landscaping of parking lots, the provision of pedestrian-oriented features, and the design of public spaces. Signs are part and parcel of these subjects, and regulations governing them should be considered as a part of a larger package of tools that direct the quality of the environment. Second, it is important to recognize that guidelines are not the same as standards. They are intended to promote creativity, not uniformity. They are inherently flexible in order to reflect the specific attributes of context. They are also intended to frame decisions and limit individual, personal opinion. If guidelines are crafted to be clearly understood by users, they will have passed one of the tests to being legally defensible. (See PAS Report 454, *Design Review,* for a more detailed discussion of these issues.)

PROJECTS

Successful urban design involves the encouragement of projects that can enhance the physical setting. Streetscape enhancements, including landscaping, street furnishings, public art, and signage, can be powerful in establishing a sense of place. Public places, including sidewalks, schools, libraries, police and fire stations, and community centers, are increasingly being looked at to provide a focus for a neighborhood or district. Local government could combine the construction or renovation of public facilities with an areawide effort to enhance signage, both public and

private. Taking a holistic approach to all aspects of the built environment results in a place that many people can benefit from in tangible ways. When a place feels like it has been cared for, people enjoy spending time there, and purchasing goods and services. By the same token, businesses feel comfortable investing in such a location. In this sense, the issues of urban design in general and sign design in particular are not just aesthetic, but economic as well.

ENGAGING THE PUBLIC IN URBAN DESIGN

Planners frequently present regulatory issues in both verbal and graphic form within official meetings. Typically, this consists of a report prepared by staff or a consultant that is discussed and debated. However, this form of communication does not allow for much interaction or learning by various interested parties. While common, this manner of presenting a proposed set of regulations can lead to contention and polarization, with threats of legal challenge. Sometimes this conventional process works, but, increasingly, interested parties—the "stakeholders" associated with an issue—desire more involvement. Furthermore, urban design is concerned with subjects that benefit from an understanding of scale, views, topography, and the texture of a community, all of which are difficult to portray and discuss completely in a typical public meeting. Several other techniques can be used to result in a "mutual discovery" of contextual characteristics that are relevant to the design of signs.

Field Trips

Field trips can be enormously useful in allowing people from different perspectives to directly experience the full dimensions of a place. They can be useful in helping people to understand a problem as well as to learn from a successful example. It is often possible to find a nearby community that has grappled with the subject previously and to see the results on the ground. It is instructive to observe how people are actually using a place, rather than to imagine it in the abstract. It is also helpful to see what has happened over time—how businesses have adjusted and what other improvements or investments have been made. Signs cannot be separated from other aspects of the environment that can encourage—or discourage—economic activity.

The intent of a field trip, however, is not to copy someone else's approach, but rather to learn from successes and mistakes and to infuse a process with a sense of reality. Furthermore, few communities are "perfect"; there are often many lessons about what not to do as what to do.

Obviously, it is not possible for every interested party to be involved in a field trip. Therefore, it is necessary to compose a committee or task force representing a cross-section of community interests. It would, of course, be possible to merely indicate the example and have people visit the location individually. But this is not as productive as a collective experience. A designated group of people visiting another place has several important benefits. First, everyone sees and hears the same information. Second, there is an opportunity to exchange observations, which often leads to a discovery that there is more similarity than difference of opinion. Third, a collective spirit usually develops in which people drop their separate "labels." Finally, the potential resolution of the issues at hand seems more realistic and doable.

Field trips do, however, need to be managed and organized carefully. Much information needs to be transmitted in a short period of time. The route needs to be traveled and timed in advance, so time is not wasted. Representatives of local government and the business community should be sought out for personal "testimonials."

It is also useful to capture the key observations and conclusions as shortly as possible after a trip. One way of doing this is to have a quick "debriefing" at the conclusion of the trip in which the reactions of participants are recorded on flip charts. Another technique is to give the participants inexpensive, throw-away cameras, and to ask them to photograph examples that appealed to them and bring them to future meetings.

Field trips are an opportunity to convey an enormous amount of information in a way that is at once visceral, intellectual, and memorable. They can be very effective in focusing the effort of a select group of people.

Depictions and Simulations

It is not always practical to conduct field trips. Therefore, other techniques can be used to effectively communicate information about a place. One method is to take slide images, organizing them according to issue or location, and to present the findings in an illustrated narrative. (A variant on this is to use a video camera, but the difficulties of presenting information in this form to large groups often prevents its use.)

Graphic imagery is today aided by computer-based formats, such as PowerPoint. Images are scanned and combined with text to convey information and proposals in a compelling way. The technology associated with this form is becoming increasingly common as costs come down and earlier technical complexities are being resolved.

This form of presentation also has distinct advantage over slides in that the room need not be dark; discussion can be held so that people can see one another. The important role of text in a presentation cannot be overstated. Text placed next to images directs the audience's attention to the points being made. But, such text should be very brief, containing, typically, no more than three to five words for each point. Oral presentation can provide embellishments. There have been surveys conducted using slide images shown to viewers, asking for their reactions or numerical "ratings." Without verbal information to draw attention to particular themes, issues, or attributes, it is difficult to tell what people are actually reacting to. It is also possible for the person creating the images to bias (even unintentionally) the results by presenting "good" examples in a well-lighted and well-composed manner and "bad" examples in a poorer manner. In these visual surveys, there is also no opportunity for discussion. Information about the context can also be distorted by using a lens or photographic technique that exaggerates the situation, such as the often-used technique of the telephoto lens shot that compresses numerous signs together. For the discussion of the context to be useful and fair, images need to be as accurate as possible.

Hand-drawn renderings are useful in conveying certain types of information, especially broad concepts and diagrams. Renderings can help convey the essential idea of a proposal by giving it an appearance of being in a real context. However, renderings can also be deceiving. Renderers typically want to show subjects in the best light possible. Extraneous information is often omitted, when there may be important aspects of the surroundings that need to be known. For example, illustrations of signs typically focus upon the proposed sign and do not show other signs or structures that might be nearby that could be important in assessing the context. Worse are illustrations that show the subject from an angle not usually seen by a person, such as a "bird's eye" view. Finally, renderings are expensive to produce by hand. They are more useful for marketing purposes than for objective analysis.

Computer simulation has much to offer in portraying, economically and accurately, information about an issue or a proposal. Programs such as PhotoShop allow images of existing conditions to be modified to show

various "after" situations. The proposal can be "drawn" in, or similar examples can be inserted into an image. The result seems very real and all background information is intact and accurate. This method also allows for alternative proposals to be constructed and compared in a relatively quick and cost-effective way.

Workshops

Workshops take a wide range of forms. There are "passive" forms that demand little from the participants. These sometimes are called "open houses." Essentially they involve displaying information and proposals so that viewers can gain a quick overview. Displays typically are accompanied by staff or consultants who can answer questions from individuals. Sometimes, participants are invited to record comments on flip-charts, clipboards, or survey forms. The main advantage of this type of workshop is that it is a relaxed, one-on-one form of communication. It avoids the "soapbox" dynamic that sometimes occurs in meetings in which some vocal attendees with an agenda attempt to dominate the proceedings. It suffers, however, from the fact that participants cannot hear others' comments and questions.

A more interactive form of workshop is one that involves a selected audience. This can be a steering committee or a selected cross-section of people from the community. It is best to "empower" such a group through some official status so that the members feel that their time and contribution is valued. The group participates in a discussion of issues, with presentations of information and alternatives by staff or consultants. Maps, drawings, diagrams, and other materials are distributed in advance. Sometimes diagrams or simple sketches are prepared during the discussion. This type of workshop can benefit from being managed by a facilitator who focuses the discussion, makes sure that everyone has a chance to speak, and ensures that the agenda is followed.

An even more interactive workshop involves assigning a task force specific tasks to accomplish, with a timeline and regular meetings. This "working group" method usually requires a considerable amount of preparation by staff to ensure productivity at each meeting. In this case, a facilitator is definitely advisable, along with a person who can record the discussion and decisions. This method also requires participants to commit to devoting a considerable amount of personal time in attending meetings. It is common for such a working group to feel that it needs more time to work out certain issues, especially contentious ones. Rarely is the original, often ambitious, schedule maintained, as participants think of additional subjects or questions to pursue.

A term that is often confused with workshops is the "charette." This is a French word that derives from the behavior of architecture students in Paris who waited until the last minute to finish assignments. As the cart (charette) passed by to pick up their work, they would jump on to continue finishing. Today, the term charette refers to a group of people doing a lot of work very quickly. Most of the time charettes involve a group of professionals who are invited and assembled to address a specific issue and develop a proposal. Sometimes this process is open to public observation; sometimes they are closed to allow participants to focus more intensely without distraction. The advantage is that a considerable amount of creative work can be accomplished in a short period of time. The drawback is that, in the speed of work, problems or local situations can be misunderstood and impractical solutions can be advanced. One check on this approach is to have the charette team present preliminary findings to a committee or task force before they are released to broader public distribution.

RESEARCH ON SIGNS AND URBAN DESIGN

By Marya Morris

The lack of treatment of signage issues in urban design planning is reflected in the relatively small amount of research and critical thought by planners, architects, or designers on the role of signs in the built environment. The exception is the a multitude of studies on signage wayfinding systems for major institutions, such as campuses, hospitals, entertainment complexes, and other similar uses. Three major studies that address on-premise commercial signage are described here.

Signs in the City. A policy study conducted by Kevin Lynch et al., *Signs in the City* was intended to provide a basis for understanding the role of signs in the city's image, appearance, and design. The aim was to develop a public policy that coordinates all communication efforts "in the light of goals most desirable to sender, receiver, and city alike." The report was the first recognition by planners or architects of the role of signs in the city, and made the following specific recommendation:

> In order to be able to plan the improvement of communication flow in the city, it is necessary that the sign policy be coordinated with any plan which may exist for improving the physical design of the environment. The objectives of a sign policy should reflect the objectives of the comprehensive plan.

The study links signage to Lynch's five-element system of "imageability" developed to define the elements of urban form (Lynch 1961). The five elements are paths, edges, nodes, districts, and landmarks. Lynch's taxonomy was developed by surveying residents in three cities on their observations about the physical form of the city in which they lived.

> *Paths* are linear routes along which the people move and observe the city. Streets, sidewalks, transit routes, and expressways are typical paths.
>
> *Edges* are linear elements that form boundaries or borders. Walls, shorelines, and the city limits are all examples of edges.
>
> *Districts* are medium-to-large sections of a city, which a resident mentally "enters"; districts have an identifiable characteristic.
>
> *Nodes* are areas of concentration or intersection, such as a high-density commercial area or a juncture of two major transportation routes.
>
> *Landmarks* are external reference points, such as a monument, building, sign, or mountain. An observer does not enter a landmark as he or she does with a node or district, but instead uses it as a point of reference.

The positive and negative qualities of a city, as expressed in the five elements, and the complex interactions among them, are assessed to determine the desired attributes of community form. Design standards and guidelines are then used to support and reinforce the desirable attributes. *Signs in the City* makes specific reference to signage in three of these elements:

1. *Districts.* With regard to districts, Lynch recommended that sign controls be set up on a district-by-district basis. The districts would vary in intensity of signs, in types of messages, and in standards or orderliness and conformity. As an example, an entertainment district may allow stationary and moving signs of high intensity while a residential district may allow only low-intensity stationary signs. (Lynch defined "intensity" of a sign as the distance from which it can be read; therefore, signs with large letters are more intense.)

(continued)

2. *Landmarks.* With regard to landmarks, Lynch noted that there would be certain locations where high-intensity signs would be of assistance in city orientation and wayfinding. In such locations, "distinctive signs could be used to identify certain streets," and "roof signs could be used to locate certain nodal points in the city."

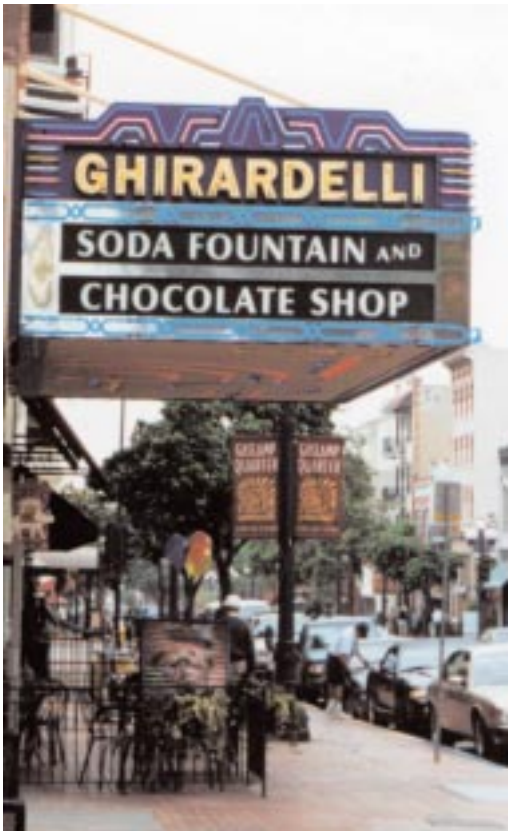
3. *Paths* (also referred to by Lynch as "sequences"). Lynch recommended that sign control be devised to result in "meaningful sequences." For example, sign intensity along a corridor could increase on approaching a business district. Also recommended is a system by which the density of signs would vary with the maximum permitted speed of the roadway.

Many of the ideas Lynch and Appleyard express in this document have found a place in modern sign regulations and design guidelines. They recommend, for example, that the artistic value of signs be improved and that there be a better relationship between signs and architecture. However, a major aspect of Lynch's recommended programs that has not stood the test of time was that signs should be classified and regulated according to message content.

Learning from Las Vegas. Viewing the Las Vegas strip as the archetype of the American commercial strip, architects Robert Venturi, Denise Scott Brown, and Steven Izenour (1996) inventoried and studied the elements of the built form of Las Vegas in the early 1970s. Eyeing the strip as the quintessential main street USA, the study concluded that modern architecture should be more responsive to the needs and activities of "common" people and reflective of our automobile-dominated culture. *Learning from Las Vegas*, the book that resulted from that study, deals extensively with signs and addresses their functions as roadside communication devices, art, sculpture, and a form of hyperbolic expression not just by the casinos and hotels but also by everyday businesses like gas stations, supermarkets, and restaurants.

City Signs and Lights. *A* policy study led by architect Stephen Carr for the Boston Redevelopment Authority (1971), analyzed the problems and potential of all signs and lights, both public and private. *City Signs and Lights* recommended a system of "information zoning" in which, for the purposes of signs and lights, the city would be divided into three zones: special information districts, general information districts, and local information districts. Special information districts are areas of high population density and economic activity or of specific historic, environmental, or other significance. Such districts would be "few in number" and the city would exercise central control over the area but would work with the affected groups in each area to develop special guidelines, incentives, prototype designs, and review procedures. General information districts would comprise almost all other parts of the city. These areas would be subject to "a simple code, easily administered with a minimum of discretionary review." And, finally, the study recommends the formation of local information districts in which a neighborhood organization or planning council would be given discretion to develop a subset of guidelines for signs and lights that would be applicable to that area.

The BRA study was ahead of its time in that it recommended a content-neutral approach to sign regulation. It also advocated for the involvement of all parties who either send or receive information from signs in the process of regulating them. Although the recommendation that local information districts be formed has not been realized, the role of neighborhood planning groups in developing design guidelines for specific areas has certainly become commonplace.



Katherine Haak

Photos that depict positive and negative examples of signs can help participants in an ordinance revision process to define problems with an existing ordinance and craft new regulations or design guidelines. Positive examples would include signs that are well designed graphically and are creative in composition and artistry (above). Negative examples would include signs that are blocking other signs or are overly dominant in their location, such as these signs below.

Bob Brown

A variation on the charette approach is to reverse the roles of the professional group and the citizen committee. In this form, the citizen group (some members of which may have technical expertise) is assembled, given information, and assigned a set of tasks. The professionals observe and are available for assistance. At the conclusion of the work by the citizen group, a presentation is made to the professionals, who critique it and add suggestions. Refinements are made and a proposal is released to the public. This approach has the advantage of building an advocacy group within the community who can present and explain the proposal to the legislative body. The disadvantage is that citizens participating in such efforts have widely varying levels of interest and expertise; the groups can sometimes be dominated by individuals with specific agendas. Regardless of the form, charettes are very labor intensive, require a considerable amount of advance and ongoing staff work, and almost always require a facilitator to manage.

ESTABLISHING A FOUNDATION FOR SIGN REGULATION

When developing any regulation, it is important to establish a rationale that is based on an analysis of existing conditions, a definition of the problem, and a description of how the regulations will address the issues. Moreover, having policies relating to the quality and character of development and specific areas of the community is important to provide legal underpinnings for the regulations. This part of the process not only assists in the defensibility of any standards, but offers a focus for directions. Often, the comfort level of legislative decision makers is increased when there is a foundation of analysis to support any new or revised regulations.

Sign regulations can be seen as one of a number of ways to imple-

ment urban design policies relating to neighborhoods and commercial corridors. The enhancement of pedestrian environments, the creation of attractive gateways, and the strengthening of the overall economic vitality and image of the community are all helped by adopting a good set of sign regulations. Sign regulations can help revitalize historic areas by ensuring the advertising and business identification are done in ways that are sympathetic to the architecture. Finally, the identity and economy of many communities are related to natural features and views that produce a unique setting valued by residents and visitors alike. Sign regulations can ensure that these public amenities are protected.

A number of tasks that can help provide a good foundation for code provisions are described in the following paragraphs.

Assess the Existing Character

There are several steps to assessing community character. First, assuming there are current regulations of some sort, it would be useful to highlight the major provisions that determine the number, location, and size of signs. If these provisions are resulting in signs that seem to be out of scale or intrusive within their surroundings, examples should be documented. Photographs of these examples should be annotated with the provisions (or the absence of provisions) that are causing the situation.

Next, a general visual assessment of the community (or district or corridor, if the problem is specific to a location) should be prepared. This need not be a complicated exercise. Existing land-use maps can serve as the base of information. Areas that have some degree of distinct identity should be delineated, perhaps with broad, dashed lines. Important public buildings and places should be noted. The approximate location of street trees should be indicated. Photographs showing representative buildings, landmarks, landforms, and views down major streets should be placed around the perimeter of the map or contained in subsequent pages with location keys. Captions for photographs should summarize problems, such as signs that are:

- blocking public views or landmarks;
- out of scale with surroundings;
- blocking other signs;
- incompatible with the architectural features of the buildings on which they are mounted;
- overly dominant due to location, shape, color, or movement; and
- inconsistent with the quality of other development (including signs).

Photographs should also depict positive examples of signs that:

- are well designed graphically;
- reflect or enhance surrounding character;
- are creative in composition and artistry;
- indicate the character of the business;
- convey references to local history or include local materials; and
- reinforce the design of the buildings to which they are attached.

If sufficient positive examples cannot be found within the community itself, it may be necessary to find examples in other communities. It is best if these are found in places within the same region. Only rarely should

examples from distant locations be used. Too many factors, such as costs, climate, local economic conditions, and the type of community, can be different. Usually there are nearby jurisdictions that have revised their regulations and can serve as a source to see the effect over time. But best of all is for examples to come from the community. Doing so suggests that good sign design is possible and that some businesses are already moving in that direction.

Another task might be useful. This would involve researching or being mindful of the historic attributes of the community like major events, landmarks, and influences on commerce and culture. Such research can offer an interesting perspective on ways of using signs to tie a community to its roots. For example, in one western mountain community, proposed sign regulations would have made nonconforming a sign in the shape of a three-dimensional horse located at a major intersection. By considering the city's history, a provision was added to allow for special landmark signs of a unique character.

Finally, some communities place very high value on natural features like mountain ranges, river valleys, shorelines, ridgelines, forestlands, farmlands, greenbelts, and wetlands. These features should be noted, indicating where the public has views of them. If it appears that such features could be potentially damaged by signs, it may require a special technique (e.g., design review to ensure an appropriate location and size). Usually there are ways of accommodating the needs of businesses without devaluing public amenities. Both Boulder, Colorado, and Flagstaff, Arizona, are examples of communities that have crafted their regulations and guidelines to protect important natural features.

Determine Issues and Attitudes

Sometimes planners can make the mistake of projecting their own values onto a community. While there is certainly a professional responsibility to propose ways of enhancing a community, it is nevertheless hazardous for a planner to assume that he or she knows what the community values. Determining the values and preferences of a community can inform the content of a code and can support legislative changes. Therefore, an effort should be made to assess community attitudes.

This could be done during a workshop, such as those described above. It could also be accomplished through a survey. Surveys can be expensive if they are conducted scientifically to ensure accurate, reliable responses. Perhaps a more cost-effective method is to rely upon the views of a committee to serve as an indication of local opinion. The key to the success of a committee is to ensure that its members represent a true cross-section of the community—not just business people and sign company representatives—however important their representation may be. Civic groups, neighborhood associations, design professionals, merchants, and residents should have voices in such a group. In larger communities, there may be a need to include representatives from different geographic areas, especially if there are varied cultural populations. A reasonable size for a group is at least 7, but no more than 13. This should allow for differing perspectives without being unwieldy. Chapter 7 contains case study examples of effective sign ordinance committees.

Planners should also enlist the involvement of the local media at the outset, rather than waiting for news stories associated with likely controversies over proposed codes. Letting a reporter know what the process and issues are, and who the key contacts are, is useful to setting the stage for even-handed reporting. Planners should also realize that reporters always look for opposing views, so it is necessary to be prepared for critical quotes. But at least informing the press in advance establishes a background that can make the subse-

quent reporting more balanced. Furthermore, newspapers are often willing to run special features that can do a more in-depth job of highlighting issues and potential solutions. It may be useful to prepare a fact sheet with names and numbers of key contact persons.

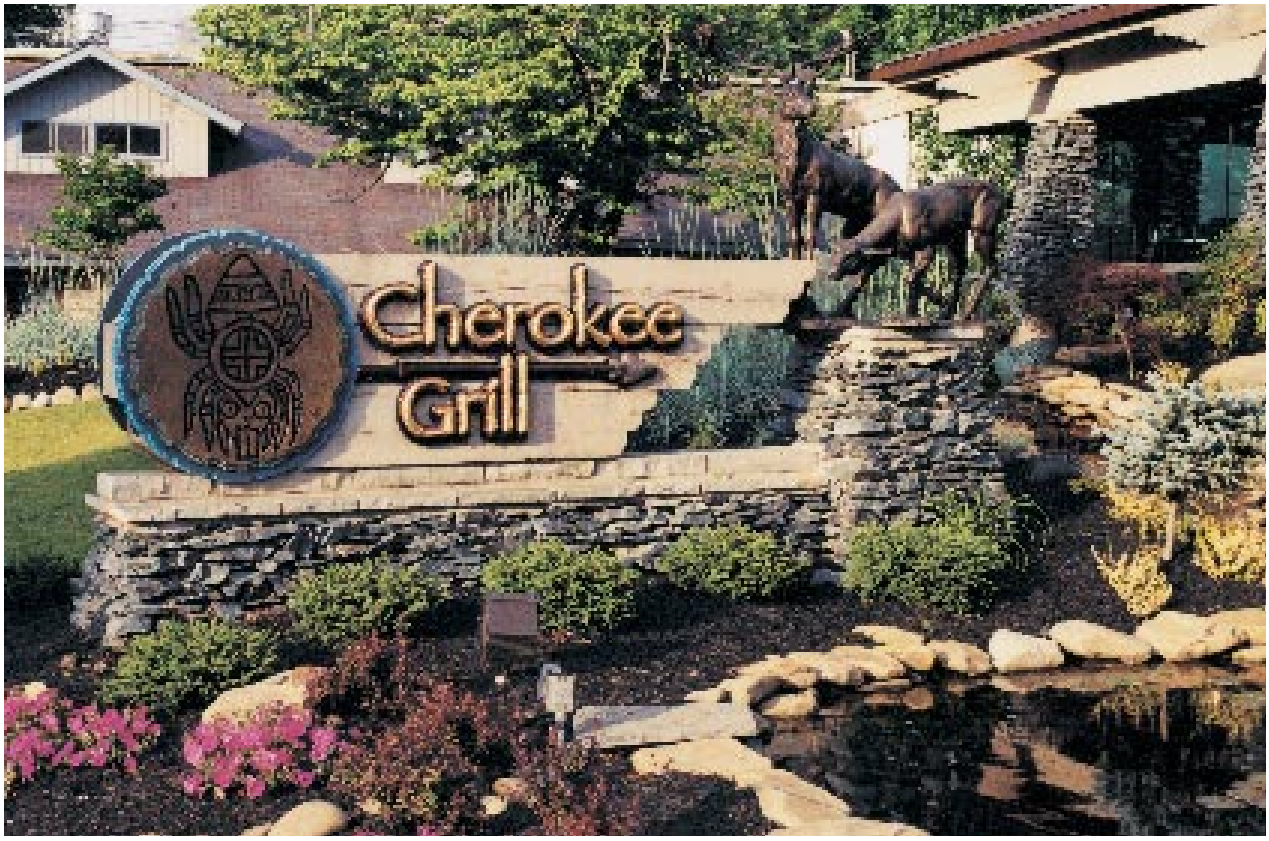
Many larger communities have standing boards or commissions that could provide valuable comments and ideas. In addition to the usual planning commissions, there may be landmarks boards, arts commissions, and design commissions. For a code revision project, one city drew from each of its standing commissions and added people from various community and commercial organizations to create a special task force.

Jay Ogle

Sign regulations should be based on clearly articulated objectives. Protecting views of natural features (such as the Great Smoky Mountains, above) and being supportive of local businesses are two very common objectives. Encouraging businesses to use signs made of natural materials native to the region, such as this sign in Gatlinburg, Tennessee, (below) is an increasingly common objective as well.

Developing Broad Objectives

Before launching into the details of a code, it is useful to take stakeholders through a process of agreeing upon underlying objectives. This establishes a common



Jay Ogle

yardstick by which to measure subsequent proposals. That way, when individuals express reservations about provisions, it is possible to recall the agreed-upon objectives. Sometimes it is even useful to post these objectives in the room where the committee meets so that they can be continually reminded of the overarching themes.

The first step in this process is to develop a short list of very broad objectives. These should be relatively few in number—no more than a dozen—and should be concise and directive. While these objectives would differ for every community and should evolve out of a collective discussion, the following are offered as examples.

- Sign regulations should be user friendly and easy to understand and apply.
- Sign regulations should support the local economy.
- Sign regulations should help nurture small businesses.
- Sign regulations should be consistently administered to ensure fairness.
- Sign regulations should strengthen the identity of the community and its neighborhoods.
- Sign regulations should encourage creative design that adds character to streets and districts.
- Sign regulations should protect historic areas, landmarks, and public views or vistas.
- Sign regulations should recognize the needs of various types of businesses.

These broad objectives might at a later point be translated into a preamble to the code provisions to establish intent.

Establishing Design Principles

Out of the broad objectives, a set of guiding principles could be crafted. These would not be the regulations but would help frame them. The principles can address particular issues, geographic areas, unique attributes of the community, the needs of certain types of businesses that are found in the community, neighborhood characteristics, and aspects of the local economy or culture. They could be illustrated with photographs or simple diagrams. The principles should be fully discussed and agreed upon by the working group. Once there is consensus, the precise code language could be left to staff or consultants to develop.

Some examples of design principles include the following.

- Within pedestrian-oriented shopping districts (generally those in which buildings abut the sidewalk and drivers are not using signs to identify businesses), signs should be located and sized to be viewed by people on foot.
- Retail businesses should be encouraged to use signs in a creative, even whimsical manner, to identify the goods or services they offer.
- Signs should not be allowed to dominate the skyline of the city center; instead, architecture should define the image of a downtown.
- Small businesses should be nurtured through sign regulations that allow them to compete with national brands and corporate chains whose identifying symbols are well known.

- Signs mounted on buildings should be designed to complement the architecture rather than obscure it.
- Sometimes, blending with architectural features is appropriate; others times, breaking free from the architecture can allow the signs and the building to be read individually.
- The design of freestanding signs should recognize that they are a part of the landscape. The use of low mounting walls, masonry bases, shrubs and ground cover, and seasonal plantings can help integrate these signs with their sites.
- For commercial areas that primarily serve travelers, signs should be bold and prominently located so that customers can easily identify choices and desired destinations.
- Incentives should be offered to encourage better design of signs.
- Certain areas within the community, such as historic districts and scenic corridors, should be governed by a special set of sign standards (and possibly a special review process) to ensure appropriate location and compatible design.
- Sign standards should be clear and easy to understand, requiring few interpretations. Illustrations and diagrams should be used to help explain the standards.
- Signs should contribute to building the image of the community by conveying quality and distinctive character.

UNDERSTANDING THE COMPONENTS OF CONTEXT

Developing sign regulations that reflect the context of a community requires an understanding of three aspects of the context: the regional setting, the community setting, and the business setting. Each of these brings different factors to bear upon the appropriate type, location, and design of signs. All three elements are important; the challenge is to respect and balance the influences, not allowing one to override the others. This understanding is important to ensure that regulations "fit" the context. Regulations cannot be merely transplanted from one place to another but must grow out of an understanding of the blend of contextual attributes.

The Regional Setting

Communities do not exist in isolation; they are part of a larger culture of communities that occupy a region. Each of these areas possesses a set of characteristics that set it apart from other places. Some regions have robust economies, with growing populations, while others are more stable and established. Some regions have a delicate ecological setting, marked by natural resources that have a strong economic value. Some regions are very urban, with a wide variety of communities, cultural groups, and intensities. Others are more monocultures, with patterns and traditions that are deeply held. The design of signs should reflect aspects of these regional qualities so that the individual character of each is strengthened.

This regional differentiation, of course, is counter to the trend over the past several decades in which various regions seem more and more alike, with corporate symbols and identities dominating the landscape. As firms like McDonald's have learned (and other chains are learning), it is possible to modify standard templates to reflect local conditions and context.

Jay Ogle

The Bearskin Lodge sign in Gatlinburg, Tennessee, is reflective of that region's aesthetic context as a woodsy natural setting and its economic context as a major tourist destination.

Countering the trend toward uniformity is an increasing desire in some communities and regions to maintain individuality. After all, people choose to live in a place because it offers an environment that appeals to them in comparison to others.

People within regions often share similar values, whether this involves the protection of the natural environment, access to water, cultural choices, proximity to recreational amenities, availability of good educational facilities, or other attributes. Sometimes these values are expressed in the form of public policy, such as environmental laws, growth management acts, taxation, and the funding of programs or physical improvements. Other times, these values are evident in the built environment itself or the type and intensity of commercial activity, such as is found in resort areas. Both Orlando, Florida, and Aspen, Colorado, have structured their codes to reflect the unique settings and roles with their regions. Regional differences can be still seen in the different types of products, or brands, that are available, which stand for certain types of choices or qualities of good and services (although widespread national franchising has certainly blurred these distinctions). Supermarkets and department stores are good examples of this, where local consumers know the nature of the merchandise offered. Certain businesses even can symbolize the region, such as the Bass Pro Shops do in areas where outdoor recreation is prominent.

Regions also differ in the forms of settlement. There are denser, urbanized areas in which communities seem to flow into each other. Many of these contain older, established centers that developed during the street-

car suburb era and exhibit concentrations and a mixing of uses that support the conduct of commerce on foot. Other areas are more dispersed, where the dominant type of commercial area is a strip of businesses set back from the road, separated from residential areas, and served principally by automobile. Yet other regions have a general pattern of dispersion but contain within them nodes of higher-density, compact development that is more urban in nature.

One of the challenges facing planners is how to accomplish a graceful transition from one pattern of development to another. A growing number of regions are attempting to transform themselves from a relatively dispersed pattern toward a more concentrated one. The management of patterns of growth is intended to reduce outward expansion into farm lands or forest lands and to provide a more cost-effective servicing with utilities and transit. The dilemma for people involved in both the provision of and the regulation of signs is what to do with areas that will undergo change as a result of changes in public policy. For example, a commercial strip might now have stores set behind parking lots, while policies and codes suggest a future pattern that is more pedestrian-oriented. Conflicts arise when signs are designed for an older pattern of development that does not comport with the intended new vision for an area.

In addition, planning policies across the country are addressing a fundamental restructuring of patterns of development to reflect regional differences. A growing number of places are no longer tolerating businesses that subject them to standardized, corporate symbols, whether in architecture or signage. Even places that are not resort or regional destinations are trying to attain or retain a sense of character. All sorts of businesses are beginning to respond to this growing trend by both differentiating themselves from competitors and providing something that speaks to local identity. This may be even more important in the future if many goods and services bypass physical enterprises in favor of commerce conducted through the Internet. It may be necessary for businesses to develop unique, user-friendly, "home-grown" imagery and advertising in order to survive this massive shift in the marketplace, although the true impact of e-commerce on stores and other outlets is yet to be realized.

Consumer behavior can differ quite widely from one region to another. In some regions, residents rely upon shops and services in their own immediate neighborhoods, patronizing them on a frequent basis, often walking. In other regions, the dominant consumer behavior involves driving once a week to scattered locations for bulk purchases. In some regions, both types of consumer behavior are present. One of the hallmarks in regions throughout North America is multidirectional traffic congestion as people attempt to reach scattered concentrations of single-purpose business activity. Again, a dilemma arises when planning policies suggest a preference for mixed-use concentrations in which people find a multitude of choices within a small area despite the fact that the existing pattern is one of scattered, single-use businesses.

Clearly American consumers have a strong preference for the car. (This preference to a large extent has been shaped by development patterns that have provided nothing other than automobile-dominated shopping districts, but that is a topic for other PAS Reports.)There is evidence to suggest that consumers appreciate having multiple options within a walkable area containing amenities. Publications, from the *Wall Street Journal*, to the *New York Times*, to *Newsweek*, have reported a growing trend toward aging baby-boom-era households preferring to live in close proximity to a variety of goods and services. Studies in 1999 by the Maine Office of

State Planning and the Pennsylvania Environmental Council both found that there is significant unmet demand for tight-knit, traditional neighborhoods where homes, stores, and places of employment are in close proximity to one another. During the past several decades, however, the predominant consumer behavior has been one of driving to widely dispersed locations. The implication for sign regulations is that it will be necessary to recognize that shifts in consumer behavior are slow. Eventually, there will likely be demands for more locally oriented concentrations of commercial uses in which signs can be more pedestrian oriented. In the meantime, however, many commercial areas will continue to be marked by wide streets, large parking lots, and big buildings set back from the street. Where these situations exist, signs need to be sized appropriately to communicate to the driving public.

Mark Hinshaw

American consumers clearly have a preference for cars. Thus most signage is designed and placed with drivers in mind. But as unplanned growth and urban sprawl have become a key concern in many regions, planners have begun to redirect their attention to improving and revitalizing both existing commercial arterial streets and older downtowns. Signs can play a role in these revitalized areas by introducing a sense of identity. Shown here: Anytown, USA, in this case, Spokane, Washington.

Finally, one of the consumer trends that is already occurring is the revitalization of older commercial areas—places that languished during the post-war decades when shopping centers and strip malls gradually dominated the marketplace. Many people—particularly inner-city residents—are rediscovering these places. Investments are being made in commercial businesses, such as restaurants and services, as well as in the renovation or infill development of housing. Some of these places qualify for designation as historic districts or conservation districts (districts with a distinct character that the community finds worth preserving but do not meet historic district requirements). In these areas, new sign regulations can be a tool to help reintroduce a sense of identity. Such districts benefit greatly from having a cohesive set of standards that can ensure that new investment will be protected. Special regulations and review procedures for signs may be warranted so as to not undercut the broader goal of the design standards.

The Community Setting

One of the common errors made by public officials in the adoption of sign codes is to copy one used by another community. While this is not unique to sign regulation—zoning codes have been widely copied—it is hazardous in that communities can vary widely in their attributes. What makes sense in one location may not be workable at all in another. It is better to attempt to discover the characteristics of the community that

will drive a particular regulatory response and then craft provisions that can be responsive to these characteristics. It is certainly possible to learn from the experiences of other communities, but copying can produce some inappropriate results. For instance, some people are intrigued by the very restrictive design regulations associated with resort communities, such as Park City, Utah, or places that have, over time, developed a one-of-a-kind ambiance, such as Carmel, California. While it is tempting to see these places as models, most American communities are very different in character from those communities. While they may aspire to create a character similar to such a community, a transformation such as that would take time, political will, and community consensus.

Sign regulations, indeed most land-use regulations, need to recognize the basic structure of a capitalist economy in which an individual entrepreneurial spirit needs to be nurtured. It is a rare community that has achieved agreement on severely restrictive sign standards. Most communities recognize a need for balancing aesthetic goals with businesses' communication needs, and it is possible to craft regulations that will improve the appearance of the community while encouraging a vibrant local economy.

It is wise to assess the degree of heterogeneity within a community. Sometimes this can be deceptive, as in the case of a community that has been dominated by one cultural group. Increasingly, our communities are becoming more diverse with regard to ethnic composition. People from different backgrounds bring with them different needs and expectations when it comes to information conveying the availability of goods and services. For example, in Seattle there is a district that is several blocks long and has been attracting businesses catering to Vietnamese customers. It shops display a plethora of boldly lettered signs with few graphics. To an outside eye, this may seem unkempt and chaotic, but it reflects a manner of conducting commerce in that particular culture. It would be unfortunate if restrictive sign regulations were to drain this district of its lively character.

A commercial environment that is visually appealing can attract both customers and businesses so that everyone benefits—more choices, more activity, more income for businesses.

Katherine Haak

The economic complexion of a community can be a factor in context-sensitive sign regulations. The example of a specialized economy (resorts) has been mentioned. But the general vitality (or lack thereof) can be a factor. When businesses are struggling to attract customers, it is difficult to propose standards that might seem to exacerbate the situation. On the other hand, it is possible to consider the appearance of the community as fundamentally related to its economic health. A commercial environment that is visually appealing can attract both customers and businesses so that everyone benefits—more choices, more activity, more income for businesses. Even communities with long-term sluggish local economies contain pockets of vitality where people have recognized the importance of and reinforced a good collective image. Signs that are sensitive to nearby noncommercial uses, that respect the scale and proportion of buildings, and that contribute to the ambiance of a place can help secure and maintain a healthy economic climate.

It is also necessary to recognize the political will of a community. Some legislative bodies are greatly influenced by commercial interests who can conduct effective lobbying. Smaller communities are often dominated by a few families or strong individuals whose opinions have a great deal of weight. It is sometimes difficult for elected representatives to take a broader, longer view. There might also be a predisposition against regulation in general: sign regulation may seem like an infringement on individual choice. And there may be a sense that regulations reflect "personal" preferences regarding aesthetics. In these situations, it is probably difficult to persuade the legislative body to enact much more than basic standards.

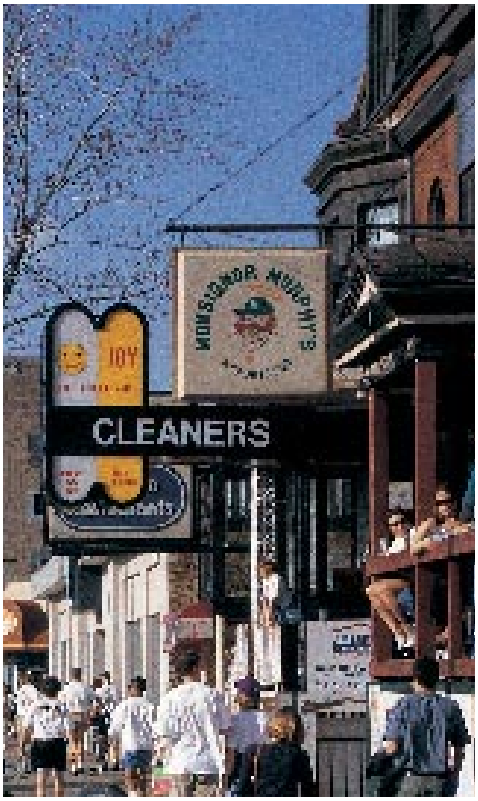
In many communities, there are civic and business organizations that play roles in improving the general quality of a community. The local chapter of the American Institute of Architects may take an interest in advocating sign regulations. The Chamber of Commerce can be worked with to develop codes that meet both broader community objectives and business interests, as was the case in Georgetown, Texas, described in Chapter 7. The chamber's involvement in such cases may lead to an alliance between the business interests and community groups.

The local sign industry itself has an interest in consistent and effective enforcement and certain types of regulations that prevent cheap, "fly-by-night" companies (that do not take out sign permits) from inundating the market. The sign industry can be an effective partner in crafting regulations that are technically correct, practical, meet a variety of business needs, and respect the context. Working with such organizations, rather than viewing them as adversaries, can be useful in bolstering political will.

The physical character of a community is a very important issue. Larger communities often contain many types of districts that might suggest sign regulations that acknowledge diversity, while smaller communities may need only a simple code. Denser communities often have people living in close proximity to businesses, and the complexity of mixed use, whether "vertical" or "horizontal," should be reflected in the sign code. Some communities are rich with historic buildings in which signs must be carefully located and sized to respect the architectural character. Again, many communities have pockets that are older than others, and this may suggest an overlay approach that tailors certain standards to the location. Finally, communities can vary widely in spatial form. In some, commercial districts are spread along corridors where most shopping is done by car, traveling from one destination to another along the route. In other communities, businesses districts are compact and contain a mixture of uses that can be reached on foot. Awkward results can occur when regulations

devised for strip commercial areas are applied to a downtown, and vice versa.

Finally, it is important to recognize that most communities have neighbors. There are instances in which one jurisdiction has radically different standards than the abutting one, with the consequence that businesses can threaten to leave for the less restrictive location. Moreover, both communities can suffer from the sudden, jarring discontinuity in appearance that can be evident. It is important, therefore, to also work with adjacent communities to identify common problems and potential solutions. Another interesting approach involves interlocal agreements. Again, cooperating with other entities can be effective in presenting a coordinated, widely supported package of codes to a city council.



Marya Morris

Communities can vary widely in the nature of businesses, and sign regulations need to recognize the local commercial climate. A typical urban neighborhood commercial street will contain a mix of locally owned outfits with a greater or lesser number of national franchises and chains, depending on the market.

The Business Setting

The third major component of context for regulations involves the structure of economic activity within the community. Communities can vary quite widely in the nature of businesses, and sign regulations need to recognize the local commercial climate.

Some communities are dominated by corporations, with brand-name general merchandising or "big-box" retailers dominating the marketplace. Often these businesses are located within sites that are largely surface parking, with the buildings set well back from the roads. The adjacent roads themselves are typically multilane arterials, with fast-moving traffic. Signs associated with this pattern often need to be large to be visible. Freestanding signs mounted on poles typically announce the name of the place and its key tenants. Sometimes, signs mounted on buildings are made large enough to be seen from the roads. In other communities, commercial streets are marked by numerous

Marya Morris

Marya Morris

franchise retailers offering food service, gasoline, vehicle maintenance, appliances, furniture, clothing, music, books, and personal services. These are often contained in nonenclosed, “strip” malls. There may be a single sign identifying the name of the mall, with individual signs being more visible and readable once the parking lot is entered. In these two cases, design of signs is related to the national or regional identity of companies that rely on easy customer recognition. Finally, some communities have a number of neighborhood-scale shopping districts that contain both franchise businesses and locally owned stores and services. In this case, the locally owned businesses often look for ways to distinguish themselves from the others in order to attract customers who may tend to gravitate toward widely known names.

In fact, many communities have all three types of business environments. There might be one or more, older, established commercial districts with a multitude of small businesses, sometimes in an arrangement that lends itself to walking between businesses. There might be one or more streets that are lined with franchise operations, sometimes close to a freeway interchange. And one or more expansive sites that hold large, single-story buildings containing nationally known businesses. When several types are present within a community, it is important to not have a "one size fits all" sign ordinance.

Another factor in the business climate is the degree of competition. Some businesses cater to a large trade area, spanning a whole community—or even multiple communities. A community may have a limited number of choices of business available to residents. These businesses, which tend to dominate an area, may not actually require as much signage as those competing in a more complex setting. They may tend to rely on other forms of advertising than signs to attract customers. But they will nonetheless have a need to make their location and access visible.

Yet another aspect of the business setting is the varying need for identification. Some businesses offer very specialized goods and services; there may perhaps be only one such store in an entire community. In these cases, while signage is still important, the address may be more so. But many businesses do compete with others offering similar goods and services. There is often a desire to differentiate what is offered through highly individualized signs. Customers who are not already familiar with the business may be attracted to those with signs that convey a distinct and atypical message. There are also consumers who want to compare the price and quality of goods and services, and look for clues that indicate that a similar business is nearby. One of the recent phenomena in this vein is the growing number of businesses serving espresso drinks. They will often locate near one another and rely upon signs including some version of a steaming cup of coffee, the word "espresso" in neon tubing, or a simple, recognizable logo. Finally, some business settings are dominated by consumers who are family-oriented and are seeking places offering fast service at a low price. Other business settings that are dominated by young professionals exhibit more of a casual ambiance, with signs that convey upscale sophistication. The signs serving each may be quite different.

Signs are not the only means that a business has of attracting customers. Advertising in the local media is effective, although the expense of advertising though broadcast media is out of the reach of most smaller businesses. The Internet is a growing method of offering goods and services to customers but is expected to account for only a small portion of sales even as it gains in popularity. Some small, locally owned businesses depend upon newspaper ads to attract customers or remind them of the continued presence of the business. Even so, in order for customers to actually reach a busi-

ness, on-site signage must be clear and visible. There are also indications that newspapers are losing readership. And, as described in Chapter 4, due to the nature of how papers are circulated, a lot of newspaper advertising is essentially wasted on readers outside the typical trade area range of a business.

Different business areas may have quite different locational characteristics. In some, businesses may be packed tightly together on small lots or with several businesses in a building. Large signs positioned in close proximity can block one another. In this case, businesses often will look for more subtle approaches with special lighting, unusual typefaces, or other physical features to distinguish themselves. Another location attribute involves vegetation. Many communities in the last several decades have instituted extensive street tree planting programs or require them in new development. It is necessary to ensure that sign regulations work to complement other public actions. There is also a growing concern among many communities with unique natural features that signs detract from the visibility and importance of these prominent and important landmarks. It is possible to craft regulations that recognize the needs of businesses while at the same time protecting major visual assets that define the place.

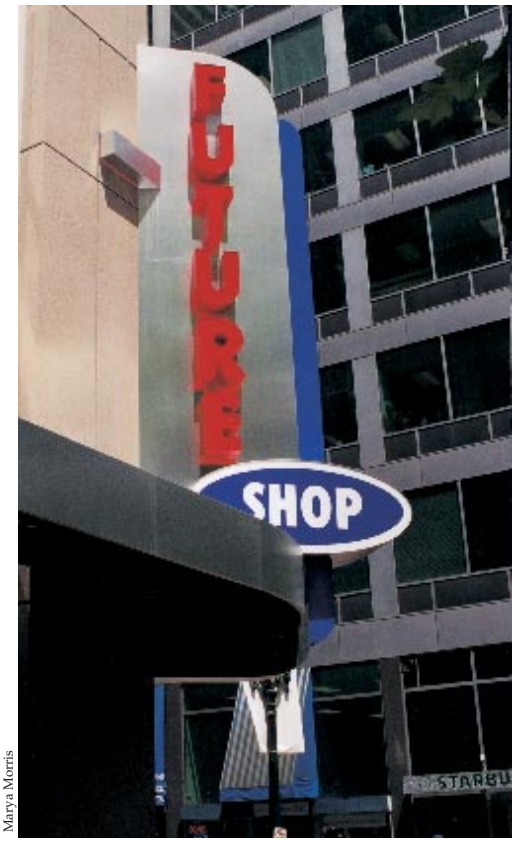
Many state-of-the-art land-use regulations include tools such as "view corridors," "scenic corridors," "conservation districts," and "sensitive area overlays" to ensure that natural values are maintained. Typically these provisions do not prevent the use of signs, but the allowable size, location, and design may be tempered to recognize the importance of protecting the larger economic generator. Many businesses, in fact, benefit from the presence of these amenities; it is the collective self-interest of businesses to ensure that everyone benefits.

All of these factors suggest an approach to sign regulations that recognizes the differing needs of particular settings. Before attempting to craft or fine-tune regulations to be related to specific places, it is necessary to first assess the type and character of the setting.

EVALUATING THE PLACE—A TYPOLOGY

Signs are used in many areas of a community. In office parks, signs announce the overall development as well as individual businesses. In these types of developments, which are frequently master planned, the design of signs can be governed by lease agreements to ensure consonance with a particular corporate image. Within industrial areas, signs are often much simpler in form, as their intent is not to attract customers as much as to merely identify the businesses. In residential areas, the use of signs is sharply limited, but there can be real estate signs, signs marking apartment buildings, schools, and churches, and even signs denoting small businesses. None of these settings is the subject of this chapter.

Rather, the focus is on the larger, more complex, and intense commercial areas of a community where signs are found in great numbers. While issues can arise in the other areas mentioned above, it is generally the commercial districts and corridors where conflicts arise between business interests and governmental regulation, and where communities are concerned about their image and character. In the development of sign regulations that reflect the surrounding context, it is useful for planning agencies to assess the attributes of the commercial areas they contain. We are suggesting a typology that could help in sorting out the various issues to be addressed by sign codes and guidelines. It should be recognized, however, that this typology is somewhat abstract and idealized; many districts are combinations or hybrids of these forms. The following designations do, however, represent most, if not all, of the major types of commercial areas.



Marya Morris

Within downtowns, signs are most useful to potential customers when placed between the sidewalk and the second floor. Viewing distances are relatively short, largely limited to what can be seen within a block.

Type 1: Downtowns

Downtowns tend to have most, if not all, of the following characteristics that can have an influence on the location, size, and form of signs:

- Short Blocks (200 ft. - 600 ft.)
- Narrow Streets (60 ft. - 80 ft.)
- Generous Sidewalks (8 ft. - 16 ft.)
- On-Street Parking
- Variety of Street Furnishings (trees, lights, benches, bus shelters, trash containers, directional signs)
- Taller Buildings (from two to many stories)
- Many Goods and Services in Close Proximity
- Multiple Storefronts per Block
- Commercial Uses on the Sidewalk (vendors, newsracks, phones, moveable signs)
- Buildings Remain, while Tenants Change

Smaller downtowns can be a few blocks in size; some are arranged along one or two streets. Medium-size downtowns usually cover five to 10 blocks in two directions, although they may still likely have one or two principal retail streets. Larger downtowns can be comprised of dozens or even hundreds of blocks; some are large enough to contain several distinctly different districts each with their own principal street. At the smaller end of the spectrum, the regulation of signs should be kept fairly simple, perhaps responding to historic character if it is prevalent.

Mid-range downtowns might have sign standards tailored to different areas, but this should be done only after an analysis suggests that there is enough variation in character. Larger downtowns almost always benefit from having standards that recognize the different character of districts, so that each can convey a unique image.

By their nature, most downtowns have a greater intensity of use than other parts of a community. There is a greater mixture of uses. Frequently, buildings are set close to the street, and facades are composed of windows and entrances relating to pedestrian movement along sidewalks. Parking is found in shared facilities, such as lots, garages, and on-street stalls. The behavior of people using downtown for commerce is dominated by movement on foot; the car (or transit) may be used to reach downtown, but within the downtown setting, people tend to walk between destinations. Furthermore, the visual environment is largely comprised of streets and sidewalks framed by architectural forms. Viewing distances are relatively short, largely limited to what can be seen within a block.

Since people must interact with many more physical features on a downtown street (e.g., regular crosswalks, street trees, storefronts, poles, benches, and other objects in the sidewalk) as well as the movement of other people, attention is often focused on what is visible within the width of the sidewalk and the first floor or two of a building. Physiologically, humans tend to look straight ahead and slightly downward, scanning the space ahead in a horizontal manner; looking up is not a typical movement. Therefore, within downtowns, signs are most useful when placed within the envelope of space between the sidewalk and the second floor. Often it useful to have signs that project out over the sidewalk so that they can be more easily seen. It is

often possible to integrate projecting signs into canopies, awnings, and overhangs, and to locate them on a column line or corner of a building. And, because people also scan across a downtown street for potential destinations, signs mounted flat on facades, windows, or projections are also useful.

Downtown commercial settings are dominated by retail storefronts that follow a loose set of rules that have worked successfully for many decades. Transparent glass windows and doors comprise most of the sidewalk-level facade. Entrances are often recessed, allowing for display windows to turn into the depth of the shop. (Occasionally the depth is great enough to produce showcase windows that flank the entry.) Windows rarely extend all the way to the ground; there is usually a low wall or "kick-plate." The bays of sidewalk-oriented retail space are typically higher than floors above. This allows daylight to penetrate through glass at the top of the storefront into the depth of the space and to project a "larger than life" ambiance toward the street. Some retail uses place a mezzanine level into the rear part of the high bay for storage or service functions. This basic arrangement is found in downtowns of all sizes.

Many downtown districts had their origins in pre-twentieth century eras, before the influence of the automobile. Consequently, they are generally compact and walkable. However, even with relatively established downtowns, buildings have been demolished and replaced with buildings that break the historic pattern. Or streets have been widened and sidewalk space has been reduced. In addition, the outer edges of some downtowns are "ragged" and contain land uses that are more conducive to business by car than on foot.

Michael Davidson

Older established businesses in downtowns, like the Berghoff Restaurant in the Chicago Loop, often play host to the most interesting and historic signs in a community. These signs function as important visual landmarks for multiple generations of residents and visitors.

A number of communities have been trying to repair these conditions through codes and design guidelines that redirect new development to support pedestrian activity. Over the last 20 years, Bellevue, Washington, has put in place numerous standards and design guidelines to rearrange the form and appearance of new development, moving it away from the previous suburban pattern. Similarly, Montgomery County, Maryland, has used innovative codes to alter previously car-dominated places like Bethesda and Silver Spring. Sign regulations have played a role in these efforts. For example, in the mid-80s, Bellevue took down the last "high-rise" sign within its newly urbanized downtown. One of the challenges is how to make the transition to a more compact and contiguous arrangement of businesses. The scale of detailing of signs can contribute to this by reinstilling an emphasis on walking. In such a situation, there may be an awkward period in which there is a mixture of larger, simpler signs aimed at customers in cars and smaller, more detailed signs aimed at customers on foot.

There are a number of downtowns that developed in the post-World War II era. Some of these types of downtown districts are attempting to redirect the form of development to acquire attributes of a more traditional downtown. Schaumburg, Illinois, Tustin, California, and West Milford Township, New Jersey, are all prime examples. In such places, sign regulation is difficult and sometimes controversial because of past patterns that were the result of an emphasis on automobile circulation. In these cases, more effort will need to be devoted to achieving community consensus; change will need to occur incrementally.

Type 2: Commercial Districts

Commercial districts exhibit most, if not all, of the following characteristics:

- Longer Blocks (400 ft. - 1,000 ft.)
- Wider Streets (80 ft. - 100 ft.)
- Midrange Sidewalks (6 ft. - 10 ft.)
- On-Street Parking
- Some Street Furnishings (typically trees and lights)
- Low Buildings (1 to 3 stories)
- Variety of Goods and Services
- Multiple Stores per Block
- Mixtures of Older Buildings and Newer Buildings
- Occasional Jarring Discontinuities (continuous storefronts interrupted by a freestanding building)

Many commercial districts seem similar to downtowns. But such districts are frequently surrounded by lower-density residential development. Indeed, sometimes the commercial uses in such districts only extend to an alley beyond which is a single-use residential district. As a consequence, the disparity in the intensity of activity, hours of activity, and levels of lighting, as well as traffic movement and parking spillover can be the source of conflict between residents and businesses. Signs can play a role in either strengthening and tying together an area as a whole or, alternately, creating an environment that the neighboring uses turn away from.

Mark Hinshaw

Commercial districts come in many shapes and sizes. They can be relatively high density, with a mix of shops, restaurants, and offices, serving pedestrians and drivers, or lower-profile clusters of stores separated by parking lots, landscaping, and streets. The scale of buildings, street width, and primary audience are key considerations when deciding what constitutes appropriate signage in such districts. Shown here are two variations on the commercial district theme, both in Bellevue, Washington.

Mark Hinshaw

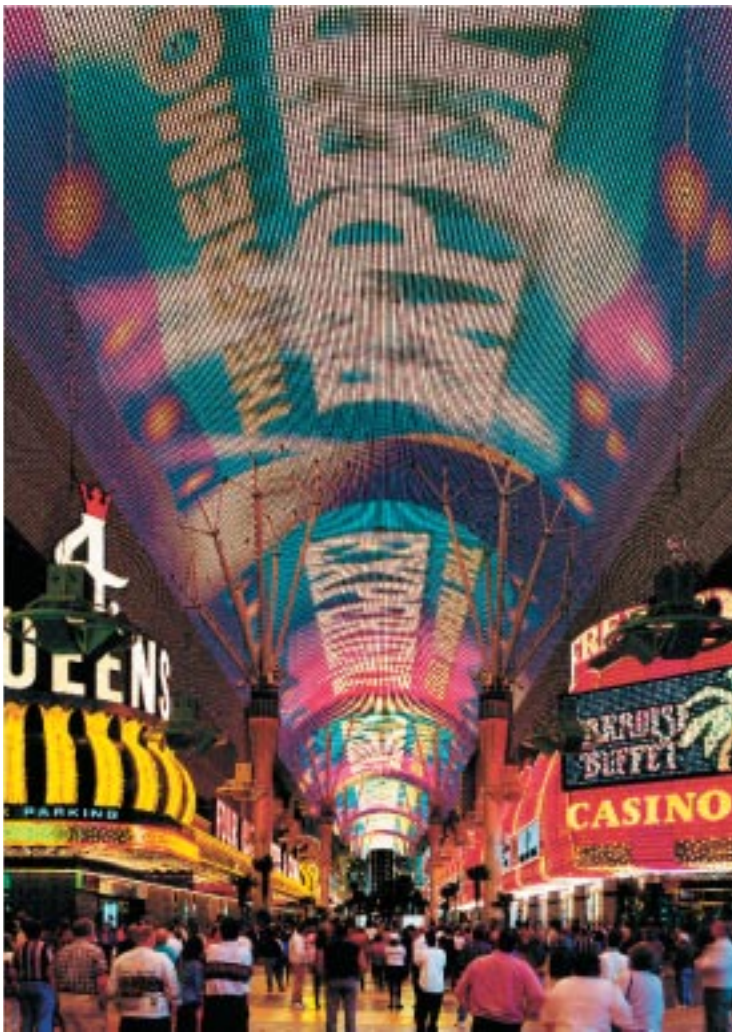
Because the integration of residential and commercial uses is difficult to leave to individual private-sector actions, commercial districts often benefit from a master planning effort that can identify improvements, guidelines, and programs to soften the relationship. For example, residential parking sticker programs can prevent commercial customers and employees from invading a neighborhood with their vehicles. With respect to signs, signs might be limited to those mounted on buildings and to facades that face the commercial street in order to reduce the appearance of commercialism. Other enhancements, including directional and interpretive signs, can instill a sense of character for the area as a whole, such that surrounding residents can feel that this is their "town center."

Many commercial districts could also benefit from an emphasis on a particular attribute, such as history or culture. Throughout the country, even in midsize cities, districts have emerged that reflect goods and services offered by particular ethnic groups, types of restaurants, or nightlife venues. These districts can add richness to a community. Sign regulations can encourage creative designs that reinforce the character and help achieve a unique ambiance.

Many commercial districts principally serve a defined trade area. But some offer activities that attract customers from elsewhere in the city or the region. While it is important to allow businesses to expand their reach, it is also necessary to examine the impact on nearby residents who must live with added intensity. For example, large, flamboyant signs can set up an expectation that the district is more of a high-traffic commercial district or entertainment center than a mixed-use neighborhood. Ensuring that the atmosphere of commercial districts is compatible with nearby residential areas is an issue that is more appropriately addressed through basic land-use regulations that might, for example, establish a maximum building size, set a maximum number of movie screens, or disallow certain types of entertainment uses altogether.

Type 3: Entertainment Districts

A number of larger communities, and even some moderate-size ones, are finding that certain commercial areas are appropriate for major entertainment uses. These typically draw from a large trade area. They can range from family-oriented amusement parks to malls that contain large national brand bookstores, multiscreen movie theaters, restaurants, and game stores, to more adult entertainment, such as casinos, taverns, and dance clubs.



Young Electric Sign Company

The Fremont Street Experience, the ultimate sign in the ultimate entertainment district, Las Vegas. (Designed and Fabricated by Young Electric Sign Co., Las Vegas Division.)

Entertainment districts are frequently characterized by the following attributes:

- Long Blocks (400 ft. - 1,200 ft.)
- Wide Streets (80 ft. - 100 ft.)
- Narrow Sidewalks (5 ft. - 8 ft.)
- No On-Street Parking
- Low Buildings (1 or 2 stories)
- Limited Range of Goods and Services
- Smaller Number of Larger Buildings Containing a Few Large Tenants
- Freestanding Buildings

Clearly, this type of district is intended to capture customers arriving by automobile. The architecture tends to be larger than life, perhaps with contrived or exaggerated facades. This is a case where large, more visually aggressive signs can be appropriate. The ambiance tends to rely upon light, movement, action, and a sense of fun. Unfortunately, some sign codes treat this type of area the same as other commercial areas and force signs to be smaller or tamer in appearance. The result is signs that are not very interesting. Users may try to employ jarring colors or glaring lights to attract attention. Instead, a jurisdiction might craft regulations for such a district that encourage whimsical designs with a lot of theatrical flourishes. New York City pioneered this idea in recent zoning for Times Square that actually requires large, flamboyant signs. Usually the buildings are not particularly interesting; the use of the area will be more during the night. Accordingly, signs that are expressive of their name or purpose might be a better fit with context than trying to tame them to conform to a preconceived notion of appropriate decorum. Many cities could, in fact, benefit from having a district that provides a concentration of lively commercial recreation. However, it is understandable that some legislative bodies might be reluctant to have an area that is considered tawdry, with garish signs. One solution might be to allow larger and more complicated signs if the proponent uses a graphic designer. This has a parallel in other types of code provisions in some communities in which, for example, a licensed landscape architect must stamp a landscape plan. Many communities within Washington State and California have this requirement. This does not necessarily ensure superior design, but at least someone trained in the art of design must be involved.

Type 4. Commercial Arterials

Commercial arterial streets are characterized by the following:

- Long Blocks (600 ft. - 1,200 ft.)
- Wide Streets (80 ft. - 100 ft.)
- Narrow Sidewalks (6 ft. - 8 ft.)
- No On-Street Parking
- Few Street Furnishings (e.g., street lights, bus shelters)
- Low Buildings (1 to 3 stories)
- Many Choices in Goods and Services
- Multiple Stores per Block
- Relatively New Buildings
- Combination of Freestanding Uses and Multitenant Buildings

Commercial arterial streets, with varied building sizes, types, and setbacks, and a wide range of business types, tend to generate the most disagreement on the appropriate location, size, and form of signs. Plans for signage in such districts need to be done in concert with an overall streetscape and public improvement program for the area. Twenty-five years ago, car-intensive Bel-Red Road in suburban Seattle was redesigned to include trees and sidewalks. Signs were lowered and landscaping was added. Today the corridor is thriving economically and the freestanding signs are visible under the canopy of mature trees.

Mark Hinshaw

Mark Hinshaw

Commercial arterials are often referred to as "strip commercial." Buildings are set well back from the street behind parking lots. It is necessary to drive from one to the other as pedestrian connections are minimal. Newer development tends to have site landscaping, while older development often includes little or no landscaping.

This is a form of commercial development that tends to most often generate disagreement on the appropriate location, size, and form of signs. Because of the often discordant arrangement of buildings and parking, and the distance of the buildings from the road, commercial users employ larger and/or more signs to attract customers. Cities sometimes wish to change the character of the corridor so that it might become more oriented to pedestrian movement. Some cities have begun to alter aspects of the land-use regulations to allow, encourage, or even require new buildings to be set close to the street, using overlay zoning for traditional neighborhoods or flexible planned unit development standards that allow substantial deviation from conventional commercial development standards. They are installing sidewalk improvements, decorative lighting, and street trees in an effort to diminish the extent of "commercialism."

Signs can play a role in transforming districts such as this, but several conditions should exist. First, there should be a comprehensive set of changes and enhancements that are developed with involvement of both the community and the business sector. Second, there should be a method for phasing-in changes over time. And, third, the jurisdiction may want to expedite this process by offering incentives in the form of business improvement loans for facade and site improvements, or grants for frontage enhancements. Acceptance of financial support could include an agreement to redesign signs.

Twenty-five years ago, Bellevue, Washington, completed a streetscape project for the arterial connecting it with neighboring Redmond to the east. The project included closely spaced evergreen street trees along with a meandering sidewalk. This was done at the same time that new sign standards were adopted that lowered the maximum height of freestanding signs to five feet. Most of the businesses then—as today—were auto oriented (strip malls, car washes, tire stores, and roadside cafes). The result today is that businesses are thriving with freestanding signs that are entirely visible below the canopies of the now mature trees. And Bel-Red Road is one of the most handsome green streets in the entire region, despite its intensely commercial nature. Clearly, it is possible to accommodate commercial, environmental, and aesthetic values.

Unless a community is willing to engage in a holistic approach to the improvement of a commercial corridor, it may be difficult to persuade businesses to abandon the usual request for larger and more numerous signs. Even in such cases, it should still be possible to craft regulations that require or encourage freestanding signs to include low plantings and building-mounted signs to be within a particular size. It should be recognized that signs alone—now matter how limited they may be—do not determine the character of a commercial corridor. If an improved character is desired, other tools will need to be brought to bear.

Type 5. Main Streets

Main Streets are the principal commercial streets of small and midsize towns. They exhibit the following qualities:

- Short Blocks (200 ft. - 400 ft.)
- Narrow Street Widths, generally (60 ft. - 80 ft.)
- Midrange Sidewalks (6 ft. - 12 ft.)
- On-Street Parking
- Street Furnishings (e.g., trees, lights, benches, trash containers)
- Low to Midrise Buildings (1 to 5 stories)
- Limited Range of Goods and Services in Close Proximity
- Multiple Storefronts per Block

Main Streets in most cases are no more than five or six blocks in length, given that it is hard to sustain more commercial activity in a small town setting. Occasionally, there is a cross street that is a secondary Main Street. Main Streets typically retain some aspect of an earlier era in history, such as rows of older commercial buildings, a city hall, post office, or county courthouse. Main Streets are frequently held in high regard by the local residents as the center of home grown, locally owned businesses and face-to-face neighborliness.

The vitality of many Main Streets declined during the 60s and 70s as shopping malls, chain stores, and freeway construction drew customers away. In the last 15 years, there has been a resurgence of interest in Main Streets as residents appreciate the community values represented by these places. Thanks to national and state Main Street revitalization programs, many of these places are strong, vibrant centers. Their renewed health is in part due to aging and younger households who choose to live near a concentration of shops, services, cultural activities, and the character that Main Streets convey.

Mark Hinshaw

Big box retail stores, such as Wal-Mart, Target, and Home Depot, have become a flashpoint for citizens concerned about the economic impact of large multinational retailers on small local businesses and the aesthetic impact of warehouse-type buildings on the character of commercial districts and arterial streets. Increasingly communities have had success in getting the stores to alter their prototype exterior appearance by adding pitched roofs, brick exteriors, neutral or natural colors, and to also incorporate the signage into the architecture, as in this example from Woodinville, Washington.

Marya Morris

Signs for Main Streets are a more delicate proposition than for other commercial settings. There is often a historic building pattern, and shops and storefronts tend to be small, locally owned, and geared primarily towards pedestrians and slow-moving traffic. The sign ordinance should allow for creativity and encourage compatibility with building architecture.

Sign regulations for Main Streets are a much more delicate proposition than for other types of settings. There is often a historic pattern. The scale of buildings and storefronts is smaller. Businesses are predominantly local; attempts by franchises and chains to locate on Main Streets are often met with stiff resistance. Most businesses choosing to locate on Main Streets are small, family-owned enterprises with their own personalized way of operating.

This social context offers a community an opportunity to develop signs that are home-grown and unique. A number of Main Streets have nurtured a cottage industry of sign makers who enjoy the craft of producing one-of-a-kind signs. Some of these can be very artistic, using fanciful brackets to support projecting signs. Some make use of graphic symbols to convey the nature of the shop. Signs painted on storefront windows display fonts and flourishes that recall earlier eras of fine craftsmanship. For a community with a Main Street, it is imperative to ensure that the sign code allows for and even rewards creativity. In addition, this type of environment may well warrant the use of a design review process to

make sure that one person's sensitive investment is not jeopardized by an insensitive addition.

Type 6. Neighborhood Shopping Streets

Neighborhood shopping streets can have many of the same attributes as a Main Street. Some are simply small versions of such streets, even though they are found within a larger city. Some of these streets may have actually been the main street of a village or town that was absorbed into the larger community. They typically involve only a few blocks. As is true for businesses on a Main Street, it is important to allow the character of individual businesses on a neighborhood street to be conveyed through their signs. But, again, it is worth considering the use of tailored standards and design review to ensure that no one enterprise's sign breaks the overall character of the other signs on the street.

Type 7. Special Districts

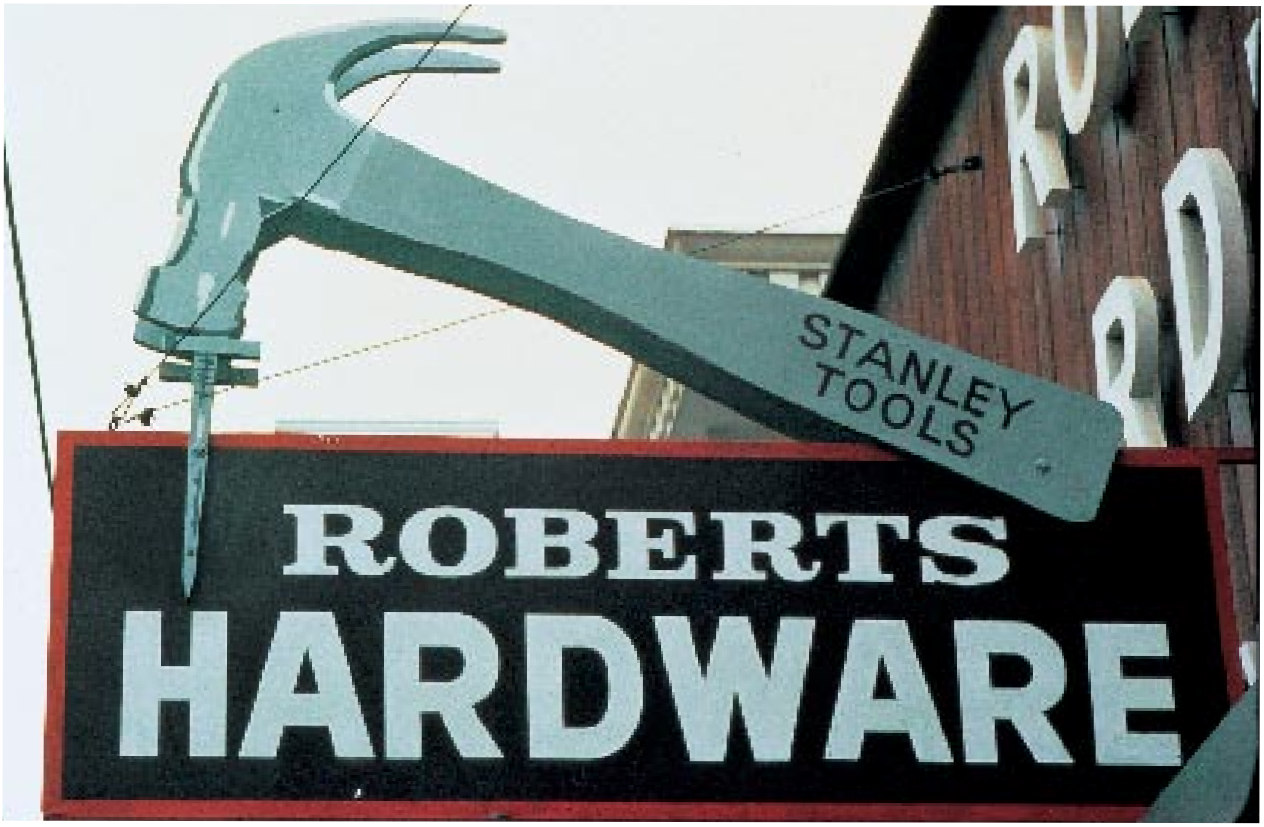
Special districts include a host of unusual or unique settings, such as historic districts, conservation districts, cultural districts, and scenic corridors. The characteristics of each vary greatly. These districts are also very delicate; their economic value derives from maintaining a particular identity. To adequately direct the location, size, and design of signs in these places almost always requires a form of design review that looks in detail at the specific site conditions. It is possible to establish a number of basic standards and guidelines, but to effectively manage signs in these places requires an ongoing, hands-on effort. Some communities make use of special commissions to make sure that signs are thoughtfully designed and placed. In these instances, details such as color and lighting can be particularly important in protecting what is seen as a community treasure.

Mark Hinshaw

Neighborhood shopping streets are similar to Main Streets, although they typically are a few blocks long and often have a mix of national franchises and locally owned businesses. Some also have auto-oriented uses, such as banks or fast-food drive-through restaurants interspersed with small storefronts that abut the sidewalk.

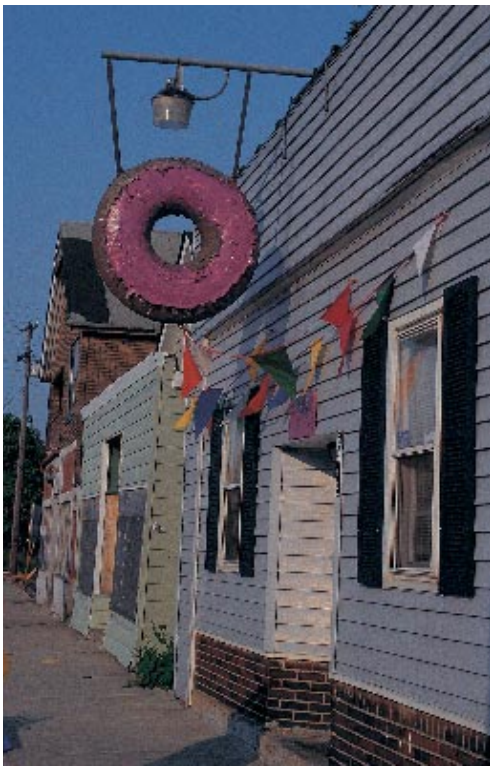
Marya Morris

Signs in historic districts must fit with the historic architecture and character of the buildings. Many communities have enacted design guidelines for signs in historic districts that stipulate appropriate sign types, materials, fonts, and colors.



National Main Street Center

Roadsides, Main Streets, and entertainment districts all provide businesses and the community in general an opportunity to be inventive and playful with signs. Fun signs often become local visual landmarks that make people smile. And is there any doubt what these two businesses are selling?



Marya Morris

CHARACTERISTICS OF PLACES

In each of the types of districts just described, there are six measures that can be used to determine and direct the character of development and signs within various districts: quality, urban form, streetscape, architectural character, natural features, and landmarks.

Quality

Fitting individual districts and corridors into a typology is only one aspect of evaluating the setting. The quality of a place is very important in determining and directing its character. This is also a double-edged sword, for some districts are so well established and mature that the principal concern is to preserve the character, while other districts are raw and rough edged, and the major concern may be how to alter character. Nonetheless, different qualitative attributes will likely generate different responses and regulatory approaches.

Urban Form

The size, height, intensity, and complexity of districts and corridors can vary greatly. A commercial district comprised mainly of 10-story, widely spaced buildings, is quite different in quality than a commercial district comprised of two-story, adjacent buildings. The former might suggest an approach to signage that relies more upon well-landscaped freestanding signs, while the latter would potentially prohibit such signs in favor of building-mounted flat or projecting signs. Similarly, the degree of diversity within a setting can suggest alternative approaches. If all uses are retail with large floor areas, the approach might involve treating building facades as large "signs," combining architectural forms, color, and text in a composition that is visually interesting. This has been done in some recent centers in which architecturally designed towers combine names of businesses, dramatic lighting, and sculptural shapes to create a marker, a unique ambiance, and announce the businesses to customers. On the other hand, a setting that contains numerous small-scale, individually owned businesses might benefit from more intimately scaled, hand-crafted signs that convey the special goods and services offered. In both cases, the design of signs derives from an understanding of the context and a desire to display a craft, rather than merely to erect a generic sign that could be found anywhere. With this attitude toward sign design, signs can be a powerful way of strengthening the character of individual places.

Streetscape

The streetscape is often a major determinant of the type of sign that might be most appropriate. Very wide arterials carrying fast-moving traffic suggest an attitude of "roadside architecture" in which forms, color, and lighting are bold and larger than life. Again, the dilemma for many communities is that these places are treated as interchangeable with corporate and franchise signs and very nondescript signs dominating the landscape. This is an opportunity to encourage playfulness. And this does not necessarily mean gaudiness. We have a great tradition of fascinating roadside signs—giant milk bottles, ice cream cones, hot dogs, animal figures, and the like. In one community, a roadside café was designed like a large hamburger with a tan, bun-shaped roof, a green corrugated metal awning to resemble lettuce, and dark tinted windows that looked like a meat patty. In effect, the building was the sign. This kind of expressiveness in sign design, while inappropriate in a dense urban setting, may be entirely appropriate in low-density setting.

One of the most important factors in determining the appropriate approach to signage is where buildings are relative in relationship to the street. Buildings fronting on sidewalks typically create an envelope of space bounded by the street and the flanking buildings in which the entire setting is perceived as a unit. Individual businesses with their separate signs contribute an additional layer to the texture of the district, but customers will often view the larger place as a destination. In this case, they will often park and reach their various destinations on foot. Signs will therefore be most effective when aimed at pedestrians. On the other hand, when buildings are pushed back from the street substantially, there is very little pedestrian movement on the sidewalks. Signs would need to be larger, simpler, and less refined in detail. Again, this does not mean that the signs must be the generic, internally lighted metal and acrylic boxes that are so often seen along arterial streets. There are many opportunities to be distinctive, dramatic, and even whimsical.

Architectural Character

Cities typically contain one or more districts with a collection of older buildings. Some are true historic districts, others are neighborhood conservation districts, while others may have no designation at all. Regardless, sign design must respect the fundamental components, composition, and character of the building they are mounted on. Obscuring windows, cornices, canopies, and major details of a building smacks of a disrespect for the neighborhood, an attitude that advertising is more important than a community's heritage. There are many examples of signs that respect the character of a structure and that are also effective in communicating the identity and nature of a business. These aspects are not mutually exclusive. Having signs that fit into the geometry and proportions of a building can enhance the visual effectiveness of both the sign and the building.

Sign companies often employ designers who can carefully fit a sign onto a building in a way that enhances its innate qualities. Architects can also find ways of working signs into the arrangement of a facade. There is also a growing field of "environmental graphic design" that addresses the integration of signs into architectural forms.

Natural Features

For many communities, the natural environment serves as a defining element in their character. This can manifest itself in many ways:

- Trees, both in natural stands and in stately, planted rows along streets
- Terrain, such as valleys, ridges, mountains, and bluffs
- Water, such as lakes, shorelines, rivers, wetlands
- Views of landforms, panoramic vistas, landmarks, mountains
- Unique ecologies, such as deserts or bayous

These features hold great meaning to residents of an area. They shape the nature of a locale and distinguish it from others. They also can hold real economic value and are an attraction to visitors.

Signs must be designed so that they do not damage these places. It may mean that signs are restricted in size, location, and height in order to preserve these collective assets. But it should still be possible to design signs that are effective. In most cases, it should be possible to incorporate some reference to the natural feature, such as using "forest green" as a color in an area dominated by trees or "monument" signs that maintain views of a mountain range.

Landmarks

Most communities contain buildings, structures, or unusual land forms that are seen a symbols of pride, identity, and the heritage of a place. Commercial signs must respect these "sacred" places. This may necessitate special review procedures to ensure that businesses within a certain distance temper their size, location, or lighting. Communities across the country are lamenting the loss of their individual identities and fear that their character is being usurped by interchangeable corporate symbols. Sensitively designed signs can meet the needs of businesses as well as reinforcing the distinctive character of a community.

IMPLICATIONS

In considering all of the factors associated with different physical settings, a number of questions arise that could be helpful in framing an appropriate set of regulations:

Sunmaster of Naples, Inc.

Awning signs are used often on historic buildings, such as this restaurant in Naples, Florida. They provide businesses with identification and visibility, and meld nicely with the historic building forms.

1. *Uniformity vs. Variety:* Would a setting benefit from having strong continuity in the types of signs or would it benefit more from diversity of expression?
2. *Predictability vs. Flexibility:* Should standards be strict, precise, and quantitative, or should there be room for solutions that meet more general performance criteria or guidelines?
3. *Continuity vs. Creativity:* Is having a continuous set of repetitive and similar signs appropriate? Or, instead, should a considerable amount of creativity be allowed and encouraged?
4. *Detailed vs. General:* Should standards attempt to address every possible proposal and condition or, instead, establish larger concepts and principles that can be satisfied many ways?
5. *Ministerial vs. Discretionary Review:* Should the decision be "black and white," following exact standards or formulas, or should the decision involve judgment by an administrative or appointed body?
6. *Single Approach vs. Multiple Approach:* Is the community simple enough to have a uniform regulatory approach, or is it sufficiently complex to warrant different approaches for different settings?
7. *Simplicity vs. Complexity:* Given the type of users, how complicated can the regulations be? Similarly, given the type of administration, how complex should the regulations be?

In conclusion, there are many types of settings, with different characteristics. If we are to pursue context-sensitive sign regulations, we must be prepared to understand the nature of these areas and tailor standards, guidelines, and procedures to reinforce their respective qualities.

CHAPTER 4

The Economic Context of Signs:

Designing for Success

By Marya Morris, AICP

The economic well-being and fiscal health of a community depend to a significant degree on the success of its commercial districts. Retail and service businesses provide jobs and income for residents. They also contribute to the property and sales tax base, which, according to common wisdom, translates to revenues for the local government from a source other than residential property taxes, thereby helping to reduce or stabilize property tax bills of homeowners and businesses. This chapter describes the role on-premise business signs play in the success of retail and service businesses. It begins with an assessment of the function of on-premise signs as identification and advertising devices. The chapter also addresses the relationship between sign economics and sign appearance, and how the economic context of signs can vary between communities and among districts within a single community. Further, it presents information from the three primary sources of research on sign value, which are industry-sponsored studies, appraisals and evaluations of on-premise signage, and nonscientific studies by sign makers and sign users. Finally, the chapter addresses the changes in the retail environment that affect signage, including new trends in consumer behavior, the increased domination of national and regional chains, and the unique signage needs of small independent businesses.

SIGNS AS IDENTIFICATION, ADVERTISING, AND WAYFINDING DEVICES

The primary function of a sign is to provide identification for a business. By helping consumers recognize that they have arrived at their intended destination or by triggering an impulse to make a purchase, signs help facilitate consumer transactions that allow businesses to be successful. Successful businesses make for vital local economies and a stable tax base. Using color, light, and visually interesting symbols, letters, logos, and other information, signs can enliven commercial areas and make them attractive places to shop. Signs also function as cost-effective advertising by making potential customers aware of the business and the products or services offered. As advertising mechanisms, signs facilitate competition among businesses, which, in turn, can benefit consumers by providing more information about products and services, which can lead to lower prices. Finally, signs function as a wayfinding device. They help people find their way to a specific business, trigger their ability to recall the location of a business, and function as a marker, telling people where they are in relation to where they are going.[1]

There are two schools of thought on how best to balance a sign's function as an identification mechanism with its role as an advertising medium. One school of thought suggests that signage should be limited to the amount necessary to provide conspicuous and legible identification for a business or activity, and that no greater allowance (in the way of increased size, number, or illumination) should be made for the purposes of advertising.[2] The other school of thought is that on-premise signs serve equally as a means of identification and as "place-based" advertising.

Healthy economies are dependent on the success of retail and service businesses, and that success is to some degree attributable to the advertising function of on-premise signs. In the view of many sign makers, in communities where a healthy local economy is a primary goal, sign codes that subordinate the advertising functions of a sign may undermine the ability of businesses to reach customers, to compete effectively, or to maximize their potential. Allowing businesses and sign designers greater latitude, it is thought, can result in increased sales for some businesses and help establish a more colorful and interesting streetscape. Providing sign regulators with flexibility to approve innovative and creative designs can also help businesses succeed and commercial districts to develop and thrive. Furthermore, some independent merchants believe that restrictive sign codes may be a contributing factor in providing an advantage to national franchises and chains over locally owned independent proprietors, particularly very small stores in automobile-oriented commercial areas. Using widely recognized colors and corporate logos, on-premise signage for franchises reinforces a national advertising campaign; for an independent retail or service business, an on-premise sign may be the sole point of external contact with potential customers. And so it follows that the less visible and readable the sign of a small business is, the less effective it is as an advertising tool, which may hinder the ability of the business to compete. On the other hand, a commonly intended purpose of sign code provisions that limit the size and number of signs—including signs with recognizable corporate logos—is to level the playing field for all businesses. Local businesses also ultimately bear responsibility to spend time, effort, and money to make their signage and store appearance interesting and unique in order to compete more effectively with the national chains.

THE COMPLEX RELATIONSHIP BETWEEN ECONOMICS AND AESTHETICS

For planners, balancing economic and aesthetic concerns in a community is a complex endeavor, with no clear-cut formula. Signs are just one of many factors that determine whether a district or community will succeed or fail. On the positive side, high-quality architecture and building materials, well-designed streets with clearly defined routes, professionally produced signs, street furniture, and lighting and other pedestrian amenities all contribute to a high-quality environment where business can succeed and people want to go. On the negative side, vacant storefronts, marginal businesses, illegal or poorly maintained signs, crumbling infrastructure, rampant disinvestment, and illicit activity can individually or collectively create negative commercial environments that are difficult to turn around. Because this is a study of appropriate regulation of on-premise signs, the focus here is on balancing three "needs":

1. The needs of a business to identify itself and attract customers
2. The needs of a citizen to be able to locate a business and find a desired product
3. The needs of a community to create or preserve a visual environment that is in keeping with the professed preferences of its citizens and business community

Bob Brown

Marya Morris

In drafting a sign ordinance, planners should work with businesses to decide how much and what type of signage is appropriate for businesses in a district, given building setbacks, street width, traffic speeds, and other factors. In the picture above, the minute, monochromatic signage afforded each tenant in this Cleveland strip mall does not serve the businesses or their customers well at all. In contrast, the relatively minimal signage in the strip mall in a Chicago suburb, below, where tenants are allowed to use colors and logos, works effectively, both in terms of its fit with the architecture and the building setbacks.

There are five issues that must be considered in an effort to understand this balancing act.

First, although a form of constitutionally protected free speech, signs exists in the public realm.[3] This distinguishes signs from most other actions of free enterprise and many other expressions of speech because, in the public setting, they are subject to public opinion and local regulation—the legitimacy of which has been upheld in courts on both safety and aesthetic grounds.

Second, there is a common but often incorrect assumption that the tradeoff between economic value and aesthetic quality (as expressed through sign codes) is direct and automatic (i.e., smaller signs always have less advertising value; large signs are always less attractive). The real question should be how much and what type of signage is appropriate for businesses in a given district given both the economic and aesthetic contexts of the area. (See Chapter 3 for a discussion of a "typology" for districts and signage.)

Third, it is difficult to pinpoint a threshold above which the cumulative impact of too many large signs (all of which are working individually to provide identification and advertising for the business on the premises) results in a confusing, unattractive streetscape that creates an undesirable place to do business. Sign codes enacted to set broad limits on the size and number of signs to try to solve the clutter problem may have the effect of limiting a sign's utility to a business and its customers, and the business's ability to compete in the marketplace. In fact, it is possible to err in both directions. Regulations that mandate fewer signs, small signs, or both may not necessarily create an attractive commercial district and can result in an economic detriment to businesses. On the other hand, overly permissive regulations that allow many large signs that compete with one another can essentially negate the identification and advertising value of any one sign. Collectively, such clutter can create a haphazard, unpleasant commercial scene.

A fourth issue, examining the business's legitimate need to identify itself and a community's desire for aesthetic quality, also requires consideration of how sign guidelines are created in a community. For most planners, the ideal process is one that engages businesses, sign makers, and citizens in determining what a community should look like—the outcome being a sign ordinance and/or design guidelines that are fair, enforceable, and politically supportable. Of course, this is not always the case. Some sign ordinances are enacted without the benefit of the involvement of those most directly affected. Furthermore, in some communities, design guidelines are allowed to exist essentially in the minds of design review board members and planning staff. This latter scenario is what has led many sign manufacturers and business owners to conclude that "the functional value of signs is usually ignored when it comes to the matter of zoning ordinances. Function is often abandoned in favor of the amorphous subject of aesthetics as perceived by some small group within a given community" (Anderson 1983, 2).

And, finally, a fifth issue is the role signage plays in affecting the economic value of a district or commercial corridor, as that value is expressed through declining, stable, or rising property values. Three scenarios or contexts that illustrate this point are discussed in the following sections.

Sign Blight

A proliferation of decrepit, illegal, and poor-quality signage can be a key indicator that a community or district is economically distressed. Signs are such a vital component of the public face of a business district that when, collectively, their appearance is poor, they can exacerbate the negative image of an area and actually contribute to its decline.

Laissez-faire Approach

There is also value created in certain types of districts when local government takes a hands-off approach to regulation or when signs are allowed to exceed the typical size, placement, and illumination levels. Some of the most vibrant and exciting commercial districts came about before there was any control on development. The many Chinatowns and other ethnic commercial districts in North America, with neon signs, projecting signs, banners, sidewalk displays, open doors, and crowded passageways are illustrative of sense of place that is born out of disorder and an absence of regulation (Anderson and Bunster-Ossa 1993). Another example is entertainment districts (the Las Vegas Strip and Times Square being the clearest examples) that use spectacular signs—where the sign literally is the building—to define the space and to draw people in. Although such areas are tightly regulated by complex regulations intended to encourage large, flamboyant signs in particular locations, the no-holds-barred visual effect of the signage in such areas is what attracts people.

Value Added By Design Planning and Regulation

In a district or community that has imposed extensive restraints on the use of signs and created guidelines for their size, materials, and illumination (as well as architectural guidelines), the result can be the creation of a specific and, in both an economic and aesthetic sense, a desirable atmosphere. Some of the most successful districts and commercial corridors in the country have the most restrictive controls on design and signage. There are some very clear examples, including Santa Fe, New Mexico; Hilton Head, South Carolina; Galveston, Texas; Santa Barbara, California; and Leavenworth, Washington, to name a few.

The use of design review tools to create a sense of place is no longer limited to only affluent communities and tourist destinations. Places as diverse as Henderson, Nevada, Mesa, Arizona, and Georgetown, Texas, have taken strides towards raising the bar for community appearance. Such controls are most effective when they are used in tandem with a commitment of public money to improve commercial streetscapes, including improvements to parking, landscaping, traffic circulation, and lighting, as well as storefront and facade programs.

Numerous communities are using sign and design controls to create places where people will want to live, invest, visit, shop, buy real estate, etc. Citizen surveys on design and quality-of-life issues in Lubbock, Texas, and Baldwin County, Alabama, have been used to demonstrate the positive impacts on business of sign control (McMahon 1996-1997). In general, the presence of sign controls and architectural standards are rarely a deterrent to new investment. Entrance into a profitable trade area is a far more important issue in business decision making than is having to adhere to local design, landscaping, or signage requirements. Sign controls also may have the effect of attracting higher-quality investment by ensuring that efforts by one business are not thwarted by another.

The positive (or at a minimum, neutral) impact of historic district designation and design standards on property values has been well documented in numerous studies (New Jersey Historic Trust 1998; GFOA 1991; Kotler et al. 1993; Rypkema 1997). The relevance of such studies to the economic impacts on sign control is that such districts are subject to design standards and review. Such studies compare the growth in property values in historic districts with growth in adjacent or comparable areas within the same community that do not have historic designation. While there are limitations on what a property owner is permitted to do to his or her sign, building, or site, the net economic effect is by and large

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In the early 1990s, the city of Anaheim recognized it needed to make improvements to the Anaheim Resort District if it was to increase tourism business and attract private development. At the same time, the Walt Disney Company was looking to improve and expand its facilities in Anaheim to better compete with other tourist destinations. The city needed money for public improvements and Disney needed the city's support for its expansion plans. A major problem was that Anaheim's aging commercial areas in the district didn't contribute to the look of a world-class destination. In November 2000, the city and the Walt Disney Company completed the public works portion of a $2 billion public-private project to revitalize a 2.2-square-mile district that includes

positive for the individual owner and for the community tax base. It can be argued that the intent of the historic district controls and sign controls are quite similar; namely, to create a sense of place and character that promotes a district identity for an area or even a specific building. It is that identity that appears to contribute to economic success.

The revitalization of Lower Downtown Denver (known as LoDo) provides a general example of the positive effect of design review (and sign control) on property values and business success. The Denver City Council designated the LoDo warehouse and manufacturing district as a historic district in 1988. At the same time, the city of Denver committed financial resources to improve the streetscape and provided financial assistance to start-up businesses in the district.

Prior to historic designation, the building vacancy rate in the district was 40 percent, and 30 percent of the properties were in foreclosure. More than 75 percent of the area's property owners initially opposed the historic district. They feared a loss of property rights and a further erosion of property values.

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Disneyland, the Anaheim Convention Center, and the surrounding environment. Katella (above, left) and Harbor (above, right) boulevards, two major public arterial streets adjacent to the Disney property, were rebuilt. Utility wires were put underground, sewers were upgraded, 15,000 trees were planted, and more than 140 pole signs were replaced with sidewalk-level monument signs. In 1999, the Disneyland Resort and convention center generated $17 million, or 12 percent of the city's general fund revenues. Upon completion of the resort expansion and public improvements, the district is expected to provide $23 million, or 16 percent, of those revenues. (See "Anaheim's Excellent Adventure," by Charles Lockwood, Planning, December 2000.)

But just the opposite happened. Between 1987 and 1990, 114 new businesses located in LoDo. During that period, it was the only part of downtown Denver where new office space was being constructed. By the summer of 1995, vacancy rates in LoDo had dropped to less than 10 percent. The last foreclosed property was sold to a private developer in 1993. The area is now home to 55 restaurants and clubs, 30 art galleries, and 650 new residential units. Property values have doubled and private investment, not including Coors Field—the new home of the Colorado Rockies baseball team—has exceeded $75 million (Wyatt 1991; McMahon 1996). Although much of the success of the district is now attributed to Coors Field, the district was well on its way to recovery before the site for the stadium was announced in 1992 and opened in 1995. Sales tax revenues increased from $10 million to $12 million between 1991 and 1994. As a proportion of all sales tax revenues in downtown Denver, the district contributed 13.8 percent in 1991, 21.5 percent in 1994 (the year before the stadium opened), and 39.1 percent in 1997 (Downtown Denver Partnership 1999).

According to community design expert Edward McMahon, design review and historic designation help improve property values in primarily two ways: scarcity and certainty (McMahon 1999). What was scarce in Lower Downtown Denver in the late 1980s was turn-of-the-century warehouse and manufacturing buildings available for conversion to loft apartments, condominiums, and art galleries. Certainty was created through plans and design standards giving developers assurance that, if they invested millions in a property in adherence with the standards, the owners of neighboring properties would be held to the same standards and would ultimately produce a high-quality development that enhanced the district. Certainty that the historic fabric and design of the district would remain intact was a key catalyst in the district's rapid turnaround. The city of Denver also contributed to the identity, viability, and liveliness of the district by making a number of streetscape enhancements.

Planning and zoning and development controls, including sign controls, can be used in newly developing communities or in distressed districts to communicate to consumers, visitors, and business people that the community cares about how it looks and that its standards are high. The challenge arises in achieving consensus on sign issues so that the needs of any one part are not wholly sacrificed to those of another.

THE ECONOMIC CONTEXT OF SIGNS

The aesthetic context of signs was addressed in Chapter 3. Signs also have an economic context that can vary between commercial areas within a single community and among communities as a whole. Recognizing and supporting the economic context of signs means several things. First, it means providing and permitting signs that are appropriate to the function of each area within a community. In other words, a one-size-fits-all approach is usually not feasible. Second, it means understanding and acknowledging the role signs play in supporting local economies. Signs and sign regulations should be reflective of the varying needs of businesses in each type of community and each type of commercial district, including developing suburbs, historic towns, or large cities, as well as in various commercial settings, including strip commercial corridors, main streets, neighborhood commercial districts, contemporary shopping centers, mixed-use and transit-oriented districts, specialty retail areas, tourist locales, entertainment districts, and lands adjacent to highways.

The information presented in the subsequent sections of this chapter on the economics of signage is relevant primarily to automobile-oriented areas, such as commercial corridors and districts and highway nodes. The target audience for signage in such areas is passing motorists who are traveling typically at speeds of 25 miles per hour or faster. Key factors that allow businesses to succeed are the visibility and readability of their signs, which must be conspicuous enough to allow drivers time to read the message and exit the roadway safely. Where franchises and chains are concerned, outright visibility and the viewer's ability to recognize the sign's corporate logos and colors are also important.

The economics of signage in other types of commercial areas, such as central business districts in midsize and large cities, main streets in older or historic towns, or neighborhood commercial districts, are somewhat different than in automobile-oriented areas. Businesses in such areas also need adequate signage to identify themselves and attract customers. But the target audience of these businesses is

motorists driving at slow speeds or pedestrians. In these settings, the primary signage issues from the standpoint of planners are compatibility with the architecture and character of the building and the district, size and scale, and orientation. In tourist areas and neighborhood commercial districts, the aesthetic context essentially drives the economic context—uniform appearance, adherence to historic sign types and styles, and generally lower-profile signage are part of what can make the district succeed economically.

Specific design considerations for signage in pedestrian-oriented areas, such as downtowns and tourist or historic areas, are addressed in Chapter 3. Briefly, in many major downtowns, retail businesses at the street level of newer office towers, as well as major tenants on upper floors, are most likely subject to covenants or master signage programs that dictate the type, size, appearance, and location of signage. As with strip centers and major shopping centers, the standards imposed by the property owners of major downtown buildings are often more stringent than what is permitted by the local sign code. Circumstances are different in older downtowns, where building owners have little or no influence on the signage used by their tenants.

RESEARCH ON THE ECONOMIC VALUE OF SIGNAGE

There is a lot of industry-generated data and information about the effect of sign codes on marketability and sales that planners should consider when making decisions about signs. Ideally, a planner or sign code administrator who is more fully aware of the potential economic effect of sign regulations will take these effects into account when drafting, amending, or implementing regulations.

Information about the economic value of signage has been targeted primarily at small businesses that purchase and use signs, and, to a lesser extent, at public officials involved in signage issues. There are three principal sources of information. First, sign manufacturers and the trade associations that represent them have conducted and sponsored many sign value studies. The purpose of many of the studies was to compare the relative cost-effectiveness of signs, radio, newspapers, and television as advertising media. A second body of information on signage value has been developed by real estate appraisers. At least two real estate appraisers in the U.S. are currently applying standard real estate appraisal techniques to ascertain the portion of a site's value that can be attributed to its on-premise signage. These studies have been used to make the case to property owners, regulators, and courts of law that the value of a sign is far greater than the replacement value of the sign structure. And third, over the years, many sign companies have conducted surveys of customers of small businesses to determine the extent to which signage is a factor in their decision to patronize an establishment. These surveys have also been used to gauge public opinion about the nature and quantity of signage in their community. Sign manufacturers have also routinely asked businesses who purchase or lease signs to write testimonials about the effects of new or replacement signage on sales. There is an absence of independent research on the economic effects of signage in the literature on retailing and marketing.

Studies of Sign Value

A major, multipart study, "Research on Signage Performance," conducted between 1995 and 1997 by the University of San Diego[4] looked at the effects of on-premise signage on the financial performance of retail sites.

The overarching conclusion of the study was that "on-premise signage has a statistically significant and financially substantive impact on the revenues of a site" (CESA 1997, 20).

Part 1 of the study was a multiple regression analysis of a group of variables, including signage, on sales at 162 Southern California locations of a major fast-food chain. Signage variables included the total number of signs on a site, the cumulative square footage of all signs, the height of signs, and the presence of specific types of signs, including monument signs, directional signs, pole signs, building (e.g., wall or fascia) signs, and drive-thru menu boards. Other variables included the value of owner-occupied housing within 1.5 miles, median rents within 0.5 miles, building size, hours of operation, and other local geographic characteristics. The summary report of the results indicated that there was not a lot of variation in the data from one site to another, which required the researchers to, in their words,"tease out" the effects of each signage variable using data that was fairly uniform from one site to another.

University of San Diego researchers note that multiple regression analysis relies on variation in data to illustrate relationships. Given the standardized types of signage used by a national franchiser, there is not a lot of variation in the independent sign variables. The lack of variation in the data on the amount, type, and placement of signage that existed from one site to another was considered by the researchers to be a substantial methodological shortcoming. Wide variations in data are important in a regression analysis to be able to determine the individualized effects of a group of variables. The data did not contain adequate variation because sound business decision making would preclude a national fast-food chain from building a store on a site that, for whatever reason, would not be allowed some minimum level of signage.

Each variable was tested at every location to predict the effect on (1) annual sales dollar revenues; (2) the annual number of transactions at a site; and (3) the average dollar amount spent per transaction. The results indicate that the number of signs at a particular site has a significant positive impact on both the annual sales revenue and the number of annual customer transactions. For example:

- The model predicted that, on average, one additional sign installed on a site would result in an increase in annual sales in dollars of 4.75 percent at that site. This translates to a $23,750 increase for one additional

A study by the University of San Diego School of Business found that the addition or replacement of wall signs at 21 Pier 1 Imports stores resulted in an increase in weekly sales per store of 1 to 5 percent from the year prior to the signage changes.

Marya Morris

sign at a typical store with annual sales revenue of $500,000. The research gives no indication of the effect on sales of the addition of more than one sign.

- One additional sign installed at a site is projected to increase the annual number of transactions by 3.93 percent. This translates into more than 3,900 additional transactions for a store with an annual average of 100,000 transactions.
- The impact on the average dollar amount spent per transaction as the result of additional signs ranged from $0.06 per transaction where one additional 36-square-foot wall sign was added, up to $0.78 per transaction where one additional 144-square-foot pole sign was added.

It should be noted that an increase in sales at a given site represents an increase or retention of market share at that particular location. It does not indicate an increase in total spending or consumption across the board in the area. In other words, dollars spent at a location that has added signage are dollars that are not being spent at another location in the same trade area. If the study's findings hold true for all businesses, it is not clear if that advantage would be maintained if, for instance, a neighboring fast-food business also added a sign. Further, an increase in sales does not correspond dollar-for-dollar with an increase in profitability.[5] But the very narrow profit margins of retailers (see Table 4-1 below) make it imperative for planners, sign code administrators, and the businesses themselves to ensure that the signage is placed in a way that exposes the business to the greatest number of potential customers and hence the greatest potential profit.

Common sense suggests that a business would spend money only on additional signage if it was expected to increase revenue. In other words, in a perfect world, the only signs a business would add would be those that would positively affect revenue. There are many businesses, however, that are not fully aware of how much signage is appropriate or what the optimal placement is for their signage. For that reason, businesses need to work with sign companies to help maximize the use of their allowable signage, and planners need to work with signage experts to ensure that sign ordinances don't unnecessarily limit the effectiveness of signs and, hence, profitability of businesses.

The second part of the University of San Diego study combined a multiple regression analysis and a time-series analysis of seven years of weekly sales data for Pier 1 Imports home furnishing stores to measure the effects of modifications, additions, or removal of on-premise signage on sales performance over time. For the multiple regression analysis, data from 100 stores were used; for the time-series analysis, data from 50 stores were used. Researchers attempted to find sites that were not subject to other major events that could affect sales performance, such as building remodeling, shopping center remodeling, severe weather, or road construction.

The results were grouped according to the effects on sales performance of (1) a change to building signage; (2) a change in pole or plaza identity signs; or (3) the addition of new directional signage. The results bore out a strong correlation between new signage and increased sales.

- Changes to building signage (e.g., the addition or replacement of wall signs) resulted in an increase in weekly sales per store of 1 to 5 percent from the prior year. The building signage change variables included the replacement of aging signage, the addition of new signage to previously unsigned building faces, and the replacement of existing signage with larger signage. The increases to weekly sales at the 21 sites that experi-

TABLE 4-1. RETAIL ECONOMICS

Retailers	Number of Firms	Net Sales	Gross Profit (before Overhead)	Operating Expenses (Overhead)	Operating Profit
		(total sales)	(expressed as % of sales)		
Family Clothing	138	$4,807,056,000	38.1	34.8	3.4
Men's and Boy's Clothing	147	3,602,835,000	43.1	40.0	3.1
Shoes	134	2,509,527,000	39.6	36.0	3.6
Women's Ready to Wear	147	4,686,272,000	43.0	40.6	2.4
Autos: New and Used	3,064	107,430,625,000	12.1	11.1	1.1
Gasoline Service Stations	743	26,114,455,000	18.8	17.1	1.8
Books	90	1,231,470,000	38.9	35.7	3.2
Stationery and Office Supplies	123	1,109,302,000	34.9	32.5	2.4
Hardware	377	3,954,153,000	33.6	31.2	2.4
Department Stores	65	6,141,348,000	35.2	30.3	4.9
Drug Stores	245	6,404,262,000	28.8	26.3	2.5
Convenience Food Stores	291	15,690,996,000	21.6	20.2	1.4
Groceries and Meats	762	43,600,840,000	23.1	22.0	1.1
Restaurants	1,651	23,393,540,000	57.1	52.5	4.6
Furniture	596	8,723,294,000	39.2	36.4	2.8
Jewelry	299	3,725,932,000	44.1	39.2	4.9
Simple Average					**2.9**

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enced changes to building signage ranged from 0.3 percent to 23.7 percent. The store that experienced a less than 1 percent increase was noted to have atypically high sales for the chain, and, therefore, a large increase was not expected as a result of the signage change. The store that experienced the 23.7 percent increase was noted to have atypically low sales, resulting in a large percentage increase, although the increase in terms of dollars was comparable to other sites.

- The addition of pole signs and plaza identity signs (e.g., a multitenant sign with Pier 1 Imports identified as a tenant) resulted in a 4 percent to 12 percent increase in weekly sales at the nine sites on which those two types of signs were added. Researchers attribute the increase to the advertising impact on passing traffic.

- The addition of small directional signs indicating ingress and egress routes resulted in weekly sales increases ranging from 4 percent to 12 percent. Researchers attribute the increase in these cases to the signs' ability to guide a site-bound shopper more than any specific advertising effect (CESA 1997, 35).

The Pier 1 Imports signage study concludes that "on-premise signage is a significant constituent of the factors causing the success of a retail endeavor" (CESA 1997, 36). It noted that the "advertising effect" of addi-

tional building, pole, or multitenant sign can be credited with a 5 to 10 percent increase in a site's revenues. The ability of directional signs to guide customers to a site can be credited with approximately a 10 percent addition to site revenues. The noted increases in revenues as a result of signage can have a dramatic positive effect on profitability at a specific site given that normal profits in the retail industry are approximately 1 to 3.5 percent (Robert Morris Associates 1998). Again, it is not clear from the San Diego study what effect there would be if all similar, nearby businesses followed suit and also added signage. Presumably given such narrow profit margins in retailing, a reduction in signage could also negatively affect profitability at a given site within a trade area.

In sum, research on the impact of additions or changes to signage at fast-food and home furnishing stores indicate that increases in the total amount of signage or the number of signs on a site can have a positive impact on the annual revenues at a site. The studies did not measure the impact on annual revenues of relatively small additions to the total amount of signage on a site (i.e., modest increases in letter height or overall size of existing signs). Conducting such research can be problematic in that most of the sites that are studied have at least the minimal amount of signage necessary to succeed.

Studies on Signs vs. Other Media

A common technique used to illustrate the value of a sign to a business is to compare a sign's effectiveness as an advertising medium to other advertising media, such as television, radio, and print.

Advertising effectiveness is typically measured in terms of the reach, frequency, and exposure of an ad message. "Reach" means the percentage of a target market that is exposed to an ad in a four-week period. "Frequency" is the average number of times that people in the target market are reached in that time span (Ziccardi and Moin 1997). “Exposure” means the number of people who could have seen an ad whether or not they are part of the target market. Other measures include readership of a message, which is the number of people who watch, read, or listen to a message. Cost per 1,000 exposures of a message is a standard measure of the cost of various media.

Sign economists measure the cost per 1,000 exposures of an on-premise sign by dividing the monthly cost of the sign (e.g., a monthly lease or mortgage payment) by the number of vehicles that pass each sign face each month.

A study by 3M Corporation for the National Electric Sign Association (now the International Sign Association) presented comparisons of the usefulness to a small independent business of on-premise signage versus print and broadcast advertising (Anderson 1983). The study asserts that newspaper advertising helps small businesses reach between 24 and 65 percent of their target market. This reach depends on the size of the metropolitan area and the circulation and distribution of the newspaper. The example offered in the study shows that an independent business in Orange County, California, that advertises in the *Los Angeles Times* will gain advertising exposure to only 24 percent of its target market; if it advertises in a local newspaper it can reach 65 percent of its target market.

A more effective means, according to the study, is to use on-premise signage to attract potential customers who drive by the store everyday or from time to time. The study refers to passersby as the "primary mobile market." The primary mobile market is measured by using average daily traffic counts for the arterial road on which a business is located and then relating that figure to a number of households represented in that traffic stream. (The

average vehicle occupancy is 1.5 persons. This figure is also used by the outdoor advertising industry to determine the number of individuals who are exposed to a message on a billboard. The number of exposures is the key determinant of billboard rental rates.) The study also makes the assumption that every passerby is a potential customer, hence it considers the reach and exposure of an on-premise sign to the primary mobile market to be 100 percent (compared with the 24 to 65 percent reach of the newspapers).

The study concludes that independent businesses get the most advertising per dollar from an on-premise sign, which provides exposure to all potential customers in their trade area. Newspaper ads that reach only a portion of a business's target market will not draw customers from other parts of the metropolitan area who would most likely do business in their own trade area.

In sum, there is evidence to suggest that on-premise signage provides retail and service businesses with a low-cost form of advertising. Most of this information comes from studies sponsored by the sign industry because, it contends, small businesses do not have the resources to study the effectiveness of their signage or may be unaware of its value beyond an identification device. That said, the importance of signage to a business's success is a message that, perhaps, has not been effectively received or shared by business owners.

A survey conducted by Arthur Andersen (1994) of small stores (an average of 11 employees) in Illinois on the tools they use to communicate their image to customers, store signage ranked seventh behind (in descending order) store ambiance, visual merchandising, advertising, depth and breadth of merchandise, employee communications, location, and store location, in that order. Employee attire, price, direct mail, and public relations were considered less important mechanisms for conveying a business image than signage (Arthur Andersen 1994).

The Arthur Andersen survey also indicated that retailers spend just 3 percent of their advertising budget on signage, but it was unclear if this accounted for the cost of a new sign capitalized over a period of years, a sign lease, or all signage, including window and interior signage. The only parts of the survey in which signage issues were raised were on questions relating to advertising expenditures and store image. According to the study's project manager, Gary Rebejian, vice president of marketing and communications for the Illinois Retail Merchant's Association (the study's sponsor), the study and his experience working with small retailers indicates that "signs are an important player in building business image, but businesses are made by the things they sell and the services they provide" (Rebejian 1998).

Appraisal of On-Premise Signs

In a typical commercial corridor, commercially zoned parcels that are visible and easily accessible from the roadway command higher rents and land values than do parcels that lack visibility and access. This added value has been termed the visibility component of the site by signage researchers, whose contention is that the ability of potential customers to see an on-premise sign increases the value of the site; lack of visibility decreases the value of the site overall.

In the last several decades, on-premise sign researchers have applied standard real estate appraisal techniques to the process of evaluating and quantifying the portion of the visibility component that is attributable to on-premise signage. Essentially, the technique applies a methodology that is used in the outdoor advertising industry to set lease rates for billboards to determine the value to a business of its on-premise signage.

Data from such appraisals has been used primarily in two ways. First, it has been used to measure the economic impact on businesses of acts of local government, including sign code provisions that limit a business's visibility by restricting the size and number of on-premise signs, and in amortization and eminent domain cases in which signage was required to be modified or removed. Second, it has been used by retail tenants in shopping centers and on other sites whose lessors restrict the amount or type of signage allowed per each business.

In Florida in 1996, a signage appraiser conducted an economic analysis of the impact of a newly installed, on-premise, freestanding sign that identifies a men's clothing store located in Sarasota Quay, a mixed-use retail, office, and restaurant complex (Bass 1997). Prior to the installation of the new sign, the retailer had no external visibility from either of the major arterial streets adjacent to the mall.

The analysis compared store sales from the first six months (January to June) of 1995 with the first six months (January to June) of 1996. The new sign was installed in December 1995. The appraiser also looked at other nonsignage factors that could have had an impact on sales during study period, including roadway improvements, presence of competitors, the addition of other major draws to the center; he found that there had been no significant changes due to these factors.

According to the appraiser's evaluation, sales at the store showed a net increase of 4 percent from 1995 to 1996. Also, the store owner was able to reduce his expenditure on print advertising from $24,000 in 1995 to $13,000 in 1996 as a result of the increased advertising effect of the on-premise sign. Two other small retailers in the same complex that did not add signage went out of business, and another relocated during the period of time the signage effect was studied.

Ultimately, these types of appraisals could be used to appraise the value of signage in amortization cases. The extent to which formal appraisals or evaluation studies of on-premise signs become accepted will continue to be decided in the courts. It is important to note, however, that such analyses do not account for the myriad of other non-site-specific factors (e.g., regional or national retailing trends, the U.S. economy overall) that can contribute to a business's success or failure. Hence, information garnered from such studies should be considered but should not be viewed in isolation. Finally, most of these appraisals and valuations conclude that a sign's worth is much higher than the value of the sign structure alone. This type of finding also commonly comes from billboard owners who are seeking cash compensation to remove nonconforming billboards. To the extent that such appraisals can be regarded as legitimate measures of property value, local tax assessors should take note that some commercial properties may be underassessed for tax purposes.

Surveys and Studies by Sign Manufacturers

Other than the advertising analyses and appraisal work described above, the majority of the research on the value of signage has been by sign manufacturers themselves or by businesses that use signs. Over the years, some sign companies have taken the initiative to survey their clients on the usefulness of their signs in attracting customers. Sign companies may also ask their customers to write testimonials describing the before-and-after effects of new signage on their bottom line. While the methodology is not statistically rigorous, it does point to certain important trends, about which more research is needed.

In 1988, a survey of citizen preferences about automobile dealership signage was conducted by market researchers at the University of San

Diego (Brown 1988). The City of San Diego had just enacted new restrictions on the size and placement of automobile dealership signage. The purpose of the study was to ascertain citizens' opinions about the signage. Survey questions about signage were embedded in a broader market survey of 350 customers visiting the service departments of eight San Diego automobile dealerships. Respondents were queried on how they became aware of the service department at the dealership. The highest percentage of respondents (35 percent) learned about the service department when they purchased a car, 29 percent had heard about it through word of mouth, and 18 percent of customers became aware of the service department when they saw the sign. More than 68 percent of respondents believed that signage was important in helping them locate the dealership. Most of respondents (76 percent) indicated that the signs were fine at the present size (which reflected the new stricter size requirements), while 22 percent thought the signs should be larger. Researchers concluded that there was no evidence to suggest that a significant group of people thought that automobile dealership signage should be removed or reduced in size.

As an off-shoot to its economic study with the University of San Diego, the California Electric Sign Association solicited testimonials from several national and regional franchise clients describing the before-and-after effects of a change in signage (CESA 1997). In a letter to the CESA Sign Guidelines Committee in March 1996, a Jack-in-the-Box restaurant executive indicated that the addition of a new pylon sign at one store resulted in an 8.8 percent increase in weekly sales at that store in 1992. A control group of 15 Jack-in-the-Box stores at which there were no signage changes experienced an average 4.9 percent increase in sales during the same time period.

A letter from the marketing department of the Motel 6 chain described an increase in rooms rented as a result of new signage. In December 1994, a Motel 6 outlet increased the height of its pole sign from 45 feet to 75 feet. The new sign height was necessary to increase visibility to motorists and to avoid an obstruction from trees. The number of rooms sold increased 19 percent from 1994 to 1995. The letter notes that no other changes were made to the interchange or the adjacent roadway.

In the early 1990s, the owner of the California-based Do-it Center chain of home improvement stores analyzed the impact of exterior store remodeling on sales at four store locations in four southern California cities. Two of the four cities, Simi Valley and Thousand Oaks, had enacted sign regulations that required the Do-it Centers to reduce their total amount of signage when they remodeled. The stores in the other two cities, Crescenta Valley and Valencia, were allowed to keep the same amount of signage as they had had prior to remodeling. The sales impact of the remodeling showed a 25 percent increase at the Simi Valley store and a 15 percent increase at the Thousand Oaks store despite the strict sign regulations. However, sales jumped by 45 percent in Crescenta Valley and 35 percent in Valencia where the stores were allowed to keep the same amount of signage (Ruf 1996). Although the purpose of the analysis in the case was to provide evidence of the deleterious effect of restrictive sign code on store sales, the fact that the two stores that were required to reduce the amount of signage also experienced increased sales after remodeling (albeit to a lesser degree) suggest that design and building improvements generally have a positive effect but that limitations on signage can dampen that effect.

Customer surveys and retailer's testimonials have been one of the primary sources of information for sign makers on the usefulness of signs to

customers and to businesses that purchase or lease signs. For the very smallest of retailers, such as hair salons, specialty stores, and restaurants, signage and word of mouth may be the sole means of reaching new customers. In many communities, small retail businesses are a chief source of employment for entrepreneurs and new business start-ups. They are a key point of entry for women, minorities, and new immigrants into the workforce. Sign regulations should be responsive to the unique needs of small businesses by permitting signs to be visible and readable (which does not necessarily mean more numerous or larger) by the targeted audience, thereby helping such businesses succeed. Many small, ethnic businesses could benefit from professional design advice that would help them capitalize on their cultural attributes. Generic signs, whether large or small, that are generic, do not project an image of a unique product or service. Today, many customers are looking for unique products as well as the personal attention and skill that is more likely to be found in individually or family-owned businesses.

Other Research on Signage as Advertising

The literature on retailing and advertising written by academics or advertising experts contains very few references to the advertising utility of on-premise signage for retail and service businesses (Ziccardi 1997; Peterson 1992). Most discussions about signage as an advertising mechanism in that body of literature mention only billboards and transit advertising, and thus ignore on-premise signage altogether. The few texts that address on-premise signage mention it only as a component of a retail store's overall image, which also includes interior store signage, merchandise mix and display, and window displays. Most major retailers and service providers, such as Wal-Mart and McDonald's, have indeed conducted studies on the value of signage. But because interior and exterior signage systems are an integral part of a business's marketing and image-building strategy, corporations are reluctant to provide their competitors or the public with data on the success or failure of a particular strategy. Unlike major retailers, small businesses simply do not have the resources to conduct major research on the value of signage and thus tend to rely on the type of information described above.

THE SIGNAGE NEEDS OF RETAIL AND SERVICE BUSINESSES

The signage needs of various businesses are best viewed on a continuum. On one end, a service-oriented business (such as a dentist's office) that has an established clientele and has been in the same location for many years can function with only an identification sign on the door to the office. Longstanding customers can find their way to the office without the visual cues provided by a sign. New customers become aware of the business through personal or professional referrals, the yellow pages, or other forms of communication. Offices in high-rise towers, for example, rely solely on methods other than signs for attracting customers.

On the other end of the continuum, there are businesses that rely almost entirely on a sign visibility to stay in business. The clearest examples of this are highway-oriented businesses, such as gas stations, fast-food restaurants, and lodging, whose customers are sometimes completely dependent on aerial and wall signs, logo signs, and off-premise advertising to indicate where to get needed services. According to Richard Wolf, senior counsel for Cendant Corporation (which owns Avis Rent-a-Car, Days Inn, Knights Inn, Howard Johnson, and many other service brands whose franchisees use on-premise signage), fewer than one-half of patrons at national roadside lodging facilities have made reservations prior to visiting the motel or hotel

(Wolf 1997). In other words, the majority of customers need and expect to see signs and advertising for motels that will indicate to them where such services are available. While a highway-oriented business, such as a motel may be able to attract some customers without a sign, in all likelihood the business would eventually fail without some visibility from the roadway. In the context of land-use planning and sign regulation, effort should be made to ensure that land adjacent to roadways that is zoned for commercial use should be allowed to function to its greatest potential. In other words, ancillary zoning and land development regulations, including the sign code, parking, and circulation standards, should be designed to support the commercial uses in order to help individual businesses and commercial districts as a whole succeed.

Visibility from the roadway for highway-oriented business does not only come in the form of freestanding on-premise signs. Section 131 of the Highway Beautification Act of 1965 provided for states to use tourist-oriented directional signage (TODS) and specific-service signs (commonly referred to as "logo" signs) to guide motorists to travel-related services. Thirty-nine states now use logo signs, which are the blue highway signs that contain corporate logos and other business identification for gas, food, lodging, and camping facilities that are located near interstate or state highway interchanges. Fifteen states permit TODS to identify tourist-oriented businesses and can include corporate logos. The standards for the appearance of these signs and general policies for their use and placement are set forth in the *Manual on Uniform Traffic Control Devices* (U.S. Department of Transportation 2000). Each states' Department of Transportation determines exactly under what circumstances they are used.

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Thirty-nine states use tourist-oriented directional signage (TODS) to provide roadside businesses with exposure to passersby. TODS are sometimes used in lieu of high rise on-premise signs (below), although some states permit high-rise signs and use TODs as well.

The Highway Beautification Act's authors recognized the need to replace the information sources for drivers that would become significantly reduced through implementation of outdoor advertising controls stipulated in the act. Accordingly, the authorization for the logo and TODS programs was incorporated into the act. To help meet aesthetic objectives, several states, including New Hampshire and Colorado, prohibit advertisers from having a billboard within three to five miles of a logo sign. Many states also prohibit advertisers from participating in the logo sign program if they have illegal billboards (Vespe 1998). With regard to on-premise signage, in Washington State, businesses that participate in the TODS program must enter into an agreement with the Washington Department of Transportation to limit their on-premise sign to a point where the bottom of the sign is no higher than 15 feet from the roof of the establishment. Also, logo signs and TODS in Washington are not installed to direct motorists to activities that are visible for at least 300 feet in advance of at-grade intersections (Ensley 1998).

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THE SIGNAGE NEEDS OF NATIONAL CHAINS VERSUS SMALL INDEPENDENT BUSINESSES

Small independent businesses—particularly those that offer products and services that are also offered by regional or national chains and franchises (e.g., pharmacies, auto repair shops, toy stores, and restaurants)—have become increasingly and understandably concerned over the last several decades about their ability to remain competitive in a consumer era dominated by large corporations. Planners, too, are concerned, as the consolidation of retail outlets by large chains in many sectors has resulted in the closing of many independently owned and operated stores. These trends have threatened the viability of main streets, central business districts, and older strip shopping centers and commercial districts as retailers con-

tinue to build more, modern facilities on the urban fringe. Many consumers have an emotional preference for shopping at independent businesses, which are often owned and operated by individuals who support local charities and political activities, and who are active in the community. However, as discerning customers, they are drawn to national chain stores by price, convenience, and an assurance of quality and consistency. As the new millennium begins, it is estimated that as few as 30 or 40 retailers will be setting the competitive agenda for the entire retail industry. This is reflected in the fact that, in 1992, multiunit chains accounted for approximately 50 percent of all retail sales (Peterson 1992, 244-5).

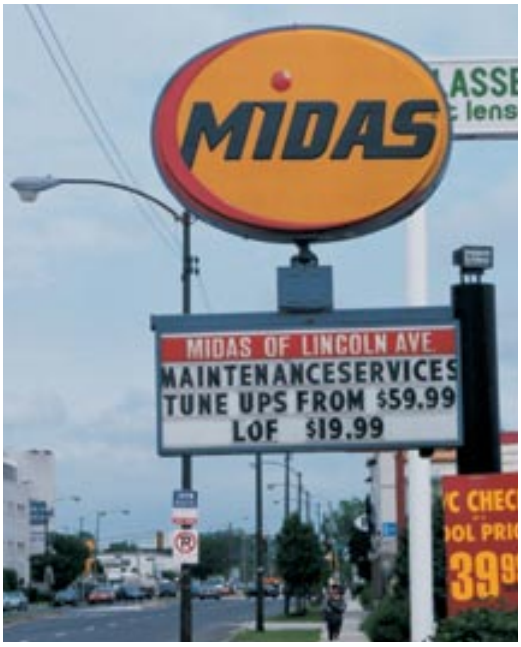
Given these continuing changes, small independent retailers have had to become more innovative and find ways to position themselves positively in the minds of customers. Many have responded by focusing on personalized service and maintaining inventory that is tailored specifically to geographic and ethnic preferences. In the last several decades, local chambers of commerce and national clearinghouses like the National Main Street Center have also focused on supporting the needs of independent businesses. Planners too have to rethink regulations and policies that either directly or indirectly put small businesses at a disadvantage and consider what countervailing actions may be appropriate to help strengthen the position of such businesses in the market place.

The effect of a sign code that restricts the size, materials, and location of signs is one of the concerns for small retailers trying to compete in the chain-dominated market. Local affiliates of national franchises are provided with signage and site-based graphics systems that have been developed by the franchiser. Logos and colors used by national chains are developed by top designers and are subject to thousands of dollars of market testing to ensure a positive response from potential customers. Franchises and national chains use television, radio, direct mail, and other printed media to establish an image in the minds of their customers of their business and products. A major objective of national advertisers is to have customers immediately associate certain products or services with their business. This is called "top-of-the-mind awareness." National chains spend millions of dollars on advertising and media campaigns trying to place their products at the top of the mind of their customers.

Take, for example, a driver passing a Midas muffler shop. He or she can glance at the yellow and black sign and instantly know that muffler and brake work is done at that location. For some drivers, a quick look at the colors of the sign is enough to trigger recognition of the brand. The driver may choose to turn in immediately for service or to make a mental note to return to that or another Midas location at a later date. As with many means of advertising, the driver may or may not be cognizant that he or she has absorbed the information on the sign. This process is known as location recall.

The use of a sign and the experience of passersby of an independent brake and muffler repair shop is much different than that described above. There is no national advertising campaign to trigger the customer's recognition of the products or services offered. Indeed, as chains become more and more prevalent, it becomes less likely that an independent business will be at the top of the mind of most customers in their trade area. Instead, the shop will have to rely more heavily on a variety of advertising, including on-premise signage and word of mouth. This will require them to be more creative in the use of their signage.

The success of the on-premise sign in attracting new business is directly tied to its visibility, readability, and the nature of the information being displayed. Where the yellow and black trademark colors and typeface of Midas are enough of a key for many customers to recognize the business,



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For franchises and chains, such as Midas, an on-premise sign is an extension of a national advertising campaign. Most customers would only need to glance at the sign to know what products and services are being offered. Independent operators, like Tuffy's, have to rely much more on their on-premise sign, as well as local advertising and word of mouth to build a customer base. Note also, given that several national muffler and brake chains use black on gold (or yellow) for their logos and trademarks, many independent shops smartly capitalize on that color combination as well.

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Tuffy's auto shop may also need to display hours of operation, special sales, and other products. Tuffy would also benefit from using a qualified sign designer that can counsel him on easy-to-read colors, materials, and typefaces to maximize the usefulness of the sign.

The above discussion pertains mostly to independent businesses that offer products and services that are increasingly being provided by national or regional franchises and chains. Circumstances are quite different for small specialty retailers who typically offer products or services that are unique or more personalized than what is offered by franchises or chains. Almost every midsize or tourist-oriented city has one or several shopping districts that contain such specialty stores. Many of these districts also increasingly are home to high-end national chains as well. The signage of businesses in such districts, however, tends to be understated in design and lighting, pedestrian-oriented, and most likely subject to either local design review or self-policing guidelines provided formally or informally by a local merchant's associations. Businesses in such areas concentrate on the products they offer, developing a regular clientele, and crafting a distinct image through storefront, window, and in-store displays more so than attempting to capture customers from passing automobile traffic.

So what is the implication for sign codes, given the varying signage needs of widely recognized chains and independent businesses? From a legal standpoint, a sign code cannot differentiate between various types of businesses. A more workable approach might be to structure a system of sign area bonuses based on discretionary design review that awards unique customized signs and thereby makes it more difficult for "stock" corporate signs to qualify.

From the point of view of national chains and franchises, the chief concern about sign codes is the extent to which they interfere with the customers' ability to recognize corporate identifiers, such as logos and colors. They are also in competition with each other and local independent businesses. It is the opinion of franchisees and sign makers that "sign restrictions which interfere with or restrict the use of these uniform graphics limit the value of the dealership, franchise operation, chain store or similar national/regional business" (Anderson 1983, 6). This is why attempts by planners to persuade national chains or franchisees to adhere to sign code provisions that regulate the size, height, setbacks, and illumination, or, in some communities, to alter corporate prototypes as a means of respecting local architectural and design ideals, are often met with resistance.

There are, however, many instances in which franchises or national chains have willingly adhered to local design guidelines in historic districts or areas with distinctive architecture (Fleming 2002). It is often citizens, wielding political and economic clout, who insist upon preserving or enhancing a district's or neighborhood's character by creating and enforcing such guidelines. Franchises agree to conform principally because their interest in tapping into the market outweighs any resistance they may have to sign or architectural controls, and frankly, they often know it is in their best interest to be a good neighbor.

The Planners' Challenge

Planners and communities have a difficult decision to make when writing or amending a sign code that may have an effect on competition between independent businesses and franchises.

On the one hand, as noted above, sign makers and some researchers assert that a sign code needs to be less restrictive for independent businesses to compete with franchises. But a less restrictive sign code would apply to franchise signage as well. Indeed, the University of San Diego

research cited in this chapter documented the competitive advantage of additional signage to a fast-food franchise and the Pier 1 Imports chain. On the other hand, restricting signage may be a problem if the community wants to encourage or accommodate the siting of franchises within the community. As Anderson (1983) states, some chains would be less likely to site in a community where the sign code was perceived to be less favorable to the success of that operation. Conversely, if a community's principal goal is to find way to help local businesses compete effectively, it might be better served to create a design review process that forces franchises to comply with a communitywide business signage standard or go elsewhere. Indeed, market forces (e.g., the franchisee or corporation determines that, even with the restrictions, the location will be profitable) will then more likely dictate whether a franchise still wants to be an entity in the community (Fleming 2002).

The bottom line is that a sign code's effect on competition between independent businesses and franchises is a consideration that can be addressed through meetings and input from the community's business owners, citizens, and planners. All need to be aware of the effects of signage in the competitive battle between businesses within the community as well as between businesses from the community and those from the neighboring community. While the research here can help inform those decisions in some ways, it does not clearly point to a solution suitable for all communities.

CONCLUSIONS

On-premise signs perform a major role in the success of retailers and local economies in their capacity as identification, advertising, and wayfinding devices. As an advertising medium, signage can make or break a business's ability to be competitive. For very small businesses, signage is often the most important means of communicating with potential customers. Using well-crafted and fairly administered design standards, a community can encourage signage that creates a sense of place and economic identity in central business districts, neighborhood commercial areas, entertainment districts, tourist destinations, and commercial corridors.

In considering the economic context of signs in a community, planners need to consider what types, sizes, and number of signs work best for business, for citizens in each district or area of a community, and for the community as a whole, both aesthetically and economically. Where areas of a community are zoned for commercial use, it should naturally be a goal of the community to do as much as possible to ensure that businesses that choose to locate in the commercial zones are able to succeed. This includes familiarizing policy makers with the signage needs of businesses in various commercial zones. There is research to support the conclusion that improvements in building signage and appearance have a positive effect on sales. But the research also shows that the economic effect of subtle changes in the allowable size of signs—which is the issue where perhaps the greatest difference of opinion arises between sign industry representatives and planners who administer sign codes—is difficult to measure. This must also be taken into account when signage policy decisions are made.

Allowing businesses to maximize the utility of their signage is not a call for a laissez-faire approach in which each business is allowed to have as much signage as it deems necessary. Instead, it calls for a common sense approach that recognizes the consumer's need for information, the business's need to identify itself and to advertise its goods and services, and the community's demand for aesthetically pleasing commercial districts that enhance or at least do not detract from the desired character of the community. Where sign codes are concerned, the goal should be to give

businesses the opportunity to have maximum success at their location by permitting signs to be placed where they will be seen by their intended audience while still respecting the aesthetic standards of the people of the community.

NOTES

1. The concept of wayfinding was pioneered by Lynch (1960). See also Arthur and Passini (1992).

2. Mandelker and Ewald (1974) use the term "street graphics" (which is also the title of their book) to describe all forms of communication visible along streets and highways, including on-premise signs, billboards, banners, and traffic and directional signs. They describe the role of signs as identifiers in the following way:

> The primary purpose of street graphics is to index the environment—that is, to tell people where they can find what. Selling is a subordinate purpose to be tolerated, but *selling* is auxiliary to indexing. (Emphasis in original.)

Street Graphics is credited with introducing the concept that signs should serve only as identifiers and that sign regulations should strive to reduce clutter. There are many sign codes that are not based on the *Street Graphics* model that either implicitly (through size or quantity limits) or explicitly (through a statement of purpose in the code) seek to limit signage to the amount necessary to identify a business. But the majority of sign codes are silent on the issue of identification vs. advertising. The notion of limiting the size of the sign to the amount necessary to identify a business should not be construed to suggest that such regulations are necessarily dictating the content of the sign by requiring that the establishment use its allotted signage space to identify itself. In fact, a business may use the allotted space for whatever sign copy it sees fit, but presumably it would choose to put the name of the establishment on the permitted area. Sign codes and design guidelines that do dictate the allowable content of a sign by requiring a business to use its allotted sign area to identify itself are unconstitutional.

3. According to a 1973 study for the Boston Redevelopment Authority, the public nature of signs is what necessitates government intervention:

> Private signs and lights transmit messages using the public environment as a medium; in this respect, they resemble broadcasting stations. However, whereas people can turn off electronic messages, the flow of information from signs and lights can be neither controlled nor ignored by the individual receiver. Policies for private signs and lights should give priority to the needs of people living in and visiting cities over those of commercial senders of information, while protecting legitimate rights of identification (Carr 1973).

The 1994 U.S. Supreme Court decision in *Ladue v. Gilleo* also reaffirmed that signs have unique characteristics that distinguish them from other forms of speech:

> While signs are a form of expression protected by the Free Speech Clause, they pose distinctive problems that are subject to municipalities' police powers. Unlike oral speech, signs take up space, distract motorists, displace alternative uses for land, and pose other problems that legitimately call for regulation.

For a discussion of the ambiguities of defining the public versus the private realm, see Lang (1994, 187-9).

4. The Research on Signage Performance by the University of San Diego School of Business Administration was sponsored by the California Electric Sign Association (CESA), the International Sign Association (ISA), the Sign User Council of California, and the Business Identity Council of America. A summary of the findings appeared in *The Economic Value of On-Premise Signage*, a compendium of research results and articles on sign amortization and copyright and trademark protection. The booklet was published jointly in 1997 by CESA and ISA.

5. The issues of the use of advertising as a mechanism for increasing competitive advantage for a business and the relationship between sales and profitability were confirmed for the author by Professor Neil M. Ford, Chair, Marketing Department, University of Wisconsin School of Business, via e-mail received June 8, 1998.

REFERENCES

Anderson, Raymond T. 1983. *The Economic Values of On-Premise Signs.* Alexandria, Va.: National Electric Sign Association.

Anderson, William, and Ignacio Bunster-Ossa. 1993. "Planning Ethnic Commercial Districts." *PAS Memo* (October).

Arthur Andersen & Co., SC. 1994. *Small Store Survival.* Chicago: Illinois Retail Merchants Association.

Arthur, Paul, and Romedi Passini. 1992. *Wayfinding: People, Signs, and Architecture.* New York: McGraw-Hill Book Company.

Barnett, Jonathan. 1974. *Urban Design as PublicPolicy: Practical Methods for Improving Cities*. New York: Architectural Books.

Bass, Richard W. 1998. "What's a Sign Worth?" Paper presented as a session proposal for the American Planning Association National Conference, Boston, Massachusetts, April 5-10, 1998.

Brown, Jacqueline J. 1988. "Mission Valley Automobile Dealers' Marketing Research Project." In *The Economic Value of On-Premise Signage.* California Electric Sign Association and International Sign Association, 1997.

Carr, Stephen. Project Director. 1973. *City Signs and Lights.* Cambridge, Mass.: MIT Press.

CESA (California Electric Sign Association) and (ISA) the International Sign Association. 1997. *The Economic Value of On-Premise Signage.* Malibu, Calif., and Alexandria, Va.

Douglas, Frank F., and Jim Alderman. 1997. "Destination Downtown: Developing an Environmental Graphics System." *Main Street News* 128 (January).

Downtown Denver Partnership. 1999. "Downtown Denver Market Data." Available at www.downtowndenver.com/data/retail.htm., 12 April.

Ellis, Seth R., and Robert Johnson. 1997. "Research on Signage Performance." In *The Economic Value of On-Premise Signage.* Malibu, Calif. and Alexandria, Va.: California Electric Sign Association and the International Sign Association.

Ensley, Lloyd. Traffic Regulations Specialist, Washington State Department of Transportation. 1998. Conversation with author, 22 June.

Fleming, Ronald Lee. 2002. *Saving Face: How Corporate Francshise Design Can Respect Community Identity.* Revised edition. Planning Advisory Service No. 503/504. Chicago: American Planning Association. June.

Frerichs, Ben. Principal, Economic Consulting Services, Seattle, Washington. 1999. Telephone conversation with author, 6 May.

GFOA (Government Finance Officers Association) and NTHP (The National Trust for Historic Preservation. 1991. *The Economic Benefits of Preserving Community Character, A Case Study: Fredericksburg, Virginia.* Chicago and Washington, D.C.

Hyder, Zakia. 1998. "Defeating a Sign Code." *Signs of the Times* 220, no. 5 (April).

Jones, Ken, and Jim Simmons. 1990. *The Retail Environment.* New York: Routledge.

Kotler, Philip, Donald H. Haider, and Irving Rein. 1993. *Marketing Places: Attracting Investment, Industry, and Tourism to Cities, States, and Nations.* New York: The Free Press.

Lang, Jon. 1994. *Urban Design: The American Experience.* New York: Van Nostrand Reinhold.

Lynch, Kevin. 1961. *The Image of the City.* Cambridge, Mass.: Harvard University Press.

Lynch, Kevin, and Donald Appleyard. 1963. *Signs in the City*. Cambridge, Mass.: MIT Department of City and Regional Planning.

Mandelker, Daniel, and William R. Ewald. 1974. *Street Graphics.* Chicago: American Planning Association.

McGuire, Meg, Ray Foote, and Frank Vespe. 1997. "Beauty as Well as Bread." *Journal of the American Planning Association* 63, no. 3: 317-28.

McMahon, Edward. Director, American Greenways Program, The Conservation Fund. 1999. Telephone conversation with author, 9 April.

_____. 1996 -1997. "Sign Regulation." *Planning Commissioners Journal* 25 (Winter).

_____. 1996. "Historic Districts and Property Values." *Planning Commissioners Journal* 23. (Summer).

New Jersey Historic Trust. 1998. *Partners in Prosperity: The Economic Benefits of Historic Preservation in New Jersey*. Trenton, New Jersey.

Peterson, Robert A. ed. 1992. *The Future of U.S. Retailing.* New York: Quorum Books.

Rebejian, Gary. Vice President of Marketing and Communications, Illinois Retail Merchant's Association. 1998. Conversation with author. 27 May.

Robert Morris Associates. 1998. Retail Economics table. Unpublished data provided by Robert Morris Associates of Philadelphia to the Signage Foundation for Communication Excellence, Inc.

Ruf, Jess. Chairman of Do-It Center, Inc., Van Nuys, California. 1996. Presentation made at sign industry representative meeting, Cleveland, Ohio. February.

Rypkema, Donovan. 1997. *Preservation and Property Values in Indiana*. Indianapolis: Historic Landmarks Foundation of Indiana.

Signage Foundation for Communication Excellence, Inc. 1997. "A Challenge to Sign Regulation." Letter to the Editors, *Journal of the American Planning Association* 64, no. 1: 88-93.

U.S. Department of Transportation, Federal Highway Administration. 2000. *Manual on Uniform Traffic Control Devices.* Available at: mutcd.fhwa.dot.gov

Urban Land Institute. 1985. *Shopping Center Development Handbook.* Washington, D.C.: The Urban Land Institute.

Venturi, Robert, Denise Scott Brown, and Steven Izenour. 1996. *Learning from Las Vegas*. Revised edition. Cambridge, Mass.: MIT Press 1996.

Vespe, Frank, Vice President for Policy and Communications, Scenic America. 1998. Memorandum to author, 19 June.

Wolf, Richard. Senior Counsel, Cendant Corporation. 1997. Presentation at a forum on signage and First Amendment issues. Cleveland, Ohio, July 25.

Wyatt, Carol. 1991. "The Impact of Landmark District Designation on Property Values." Chicago: Landmarks Preservation Council of Illinois.

Ziccardi, Donald, with David Moin. 1997. *Masterminding the Store.* New York: John Wiley & Sons, Inc.

CHAPTER 5

Design Review, Permitting, and Recordkeeping

By Mark Hinshaw, FAIA, FAICP

The local government permitting process for signs is not dissimilar to the permitting process for other objects in the built environment, except that signs, as a form of speech, are entitled to protection under the First Amendment. The purpose for requiring a sign permit is the same as for other permits: to ensure that the construction meets code requirements that address issues of the safety, health, and general welfare of the public. Signs, like buildings, can present hazards if not located and designed to recognize current practices in structural and electrical fabrication. Signs that are poorly placed, too large, or too small can affect the circulation of traffic, turning movements, and pedestrian activity.

Building and land-use regulations are also intended to ensure visual and construction quality so that community property values and investments are protected. As with all codes, these regulations are numerically oriented, *quantitative* standards that can be applied objectively. Increasingly, however, communities are adopting and applying *qualitative guidelines* to ensure that changes in the physical environment recognize site-specific conditions that cannot be addressed adequately by a mechanistic, formulaic approach. Discretionary decisions have been added to the sign permitting toolbox to allow more flexibility and to encourage creativity. Many jurisdictions have learned that applying a "one size fits all" set of standards does not produce results that reflect the history or context of an area.

Design review for signs, as with any other form of development, however, must be done in a manner that is legally defensible. Criteria for decision making must be clear, specific, and available in advance. Applicants can not be made to guess at what a permitting agency or board wants. (See PAS Report 454, *Design Review,* for a more complete discussion of this tool and its legal imperatives, as well as Chapter 6 of this report, which addresses the limits of local government discretion.) While site-specific design review might not be practical for all communities or all areas within a community, it is a good idea to consider using it in geographic areas where either increased quality in the visual environment is desired or where the existing context and character is well established and could be threatened by incompatible additions.

Permitting also has another more mundane purpose—maintaining records about the built environment. Thus, sign permitting can be tied to recordkeeping for places of business within a community that collects taxes on operations or revenues.

Records also establish a history, so that changes can be tracked over time. This may be important to distinguish between older signs and newer signs, should codes change or amortization periods be established. Commercial sign users often need to modify signs for new tenancies or even reconstruct them entirely. Such changes, if they meet the thresholds established by the community (e.g., a change to the sign structure), can be used to trigger compliance with new standards. Records provide necessary information over time so that the review and permitting process is easier and more expeditious.

Good recordkeeping has other benefits as well. It can help with code compliance issues. Many jurisdictions rely on complaints from citizens or even other businesses to point out code violations. A search of records can indicate whether there have been complaints about a given sign. Having good, clear records can build a comprehensive set of interpretations of the code, which are inevitable, regardless of the best efforts to craft language. It is even possible to publish a set of interpretations so that future applicants can better understand the code. This is useful because decision makers, whether administrators or appointed boards, come and go. From a legal standpoint, consistency of code application is important in that it provides equal treatment to all applicants.

The collection of fees for sign permits can offset the administrative costs associated with review and can help fund enforcement efforts to ensure that legitimate, code-compliant signs are not undermined by the presence of shoddy, illegal signs. Established sign companies that provide services in accordance with local laws have a right to demand that enforcement be diligent and rigorous. Most businesses do not mind rules, as long as those rules are uniformly applied so that competitors do not have an unfair advantage.

THE SIGN PERMITTING PROCESS

Sign permitting processes vary depending on local practice, though there are some common steps applicable in all communities. Regardless of the specifics, a sign permitting process should be as uncomplicated as possible and expeditious. There are also legal issues (known as "prior restraint" issues) with respect to requiring permits for lawful activities, such as installing a sign, and what fees can be charged. Chapter 6 contains extensive details on the prior restraint issue.

The sign permitting process is typically enacted through several standard provisions in the sign ordinance.

1. *Activating the ordinance.* A simple statement is included in the ordinance indicating that a permit is required to erect, move, replace, suspend, or attach a sign. Some cities require a permit when a sign is altered or when there is a change of use on the property.

2. *Additional permits required.* The ordinance may also state that a building permit and an electrical permit are also required for certain types of signs. For example, a freestanding electrical sign would typically be required to have a sign permit and an electrical permit for the sign cabinet.

3. *Administrative designee.* The sign ordinance designates which local government representative—the city building official, city planner (or planning director), code enforcement officer, or a designee of any of the above—-is assigned the responsibility of administering and enforcing the ordinance.

4. *Required information.* A list of documents to accompany the application is provided. At a minimum, applicants are normally required to submit the following information with the application:

   - The property address where the proposed signage will be erected.
   - A simple sign ordinance may require drawings or photographs of the property where the signage is proposed. More commonly, applicants are required to submit a formal site plan (or plot plan) showing locations of all existing and proposed signs and sign elevations for freestanding signs and building elevations for wall signs. The site plan also is typically required to show: property lines, parking lots, adjacent streets, driveways, landscaped areas, a north arrow, dimensions of street frontages, and setbacks.
   - Computation of total area and dimensions of proposed signage.
   - The type of sign or sign structure as defined in the ordinance.
   - Signatures of the applicant and property owner authorizing placment of the signage.
   - A check or money order for the application fee (see below). The general rule of thumb in assessing sign permit fees is that the cost must have a direct relationship to the local government's expenses incurred in reviewing the application and administering the ordinance generally. (This is true for all local government permit fees.) The cost of conducting site visits after a sign is installed and inspecting signs would be considered in the general administration of the ordinance.

     A review of fees done for this report found most fees range from $25 to $100. Additional fees are also assessed for electrical permits, which are necessary for most types of electric signs, and clearly can raise the total cost of sign approval. A survey and report on sign permit fees in 22 communities conducted by the National Electric Sign Association (NESA) notes four basic methods for calculating sign fees (Jones 1994).

     Set fee: A flat fee for all signs.

     Valuation: The fee is based on the value of the sign.

     Sign size: Fees increase as the area or height of the sign increases.

     Hybrid: A combination of the valuation method and the sign size method.

According to the NESA study, sign permit fees average $110 for small signs, $148 for midsize signs, and $272 for the largest signs.

5) *Additional drawings.* Also often required are drawings of structural and electrical details, including side sectional views of the sign showing wiring and electrical components, construction, attachments, and footings.

6) *A list of exemptions from the sign permit requirements.* The general rule of thumb regarding exemptions is the fewer the better. Rather than exempting a long list of signs, a preferred option is to allow small signs in all districts without requiring a permit for such signs (Kelly 1998, Sec. 53.10(4)). Such an allowance is inclusive of real estate signs, political signs, and other incidental signs. This method allows local governments to retain the right to regulate such signs as to their size, location, and design, and enforce the code in the event of a violation (e.g., placement of Open House signs in the public right-of-way). But it does not burden the property owner or local government with a permit process for incidental signs. This method provides a much stronger legal position than a code that exempts signs that meet certain conditions (Kelly 1998, Sec. 53.10(3); 53-146). Code language that can be problematic, for example, would contain provisions that:

   - exempt real estate signs from permits but require that they be removed in a certain number of days after the house is sold;
   - mandate the removal of political signs after a certain number of days after an election; and
   - provide for special treatment of signs identifying certain "preferred" land uses, such as schools and churches.

   The longer the list of such exemptions, the greater the likelihood the local government will get itself into trouble with content-based regulations. Signs for which an exemption can safely be provided include public notices and traffic signs on private property.

7) *A time line for the permit to be issued.* Some ordinances include a "completeness determination" and a "required decision" time frame. A completeness determination binds the local government to notify the applicant that his or her application is complete and that a review is underway. If the application is incomplete, the local government must notify the applicant what information needs to submitted before the application can be reviewed and a permit issued. A decision time frame, which averages five to 14 days in most communities, is the period of time the local government has to either approve or deny the application. Such time frames apply only to signs that are subject to administrative review by the planner or code enforcement officer. Such time limits do not, of course, preclude a sign permit from being issued on the spot with the applicant present if the administrator determines that the application is complete and in compliance with the sign code.

Sign permitting decisions that are to be reviewed by a design review board—such as master sign plans for shopping centers or planned unit developments (PUDs), or for signs in a special design district—will typically take longer than one to two weeks, especially where committee review and public hearings are involved. Unreasonable delay, which can lead to legal challenges, should be avoided.

Master Signage Plans

Master sign plans are a common component of sign ordinances. In most communities they have helped simplify the permitting process. Under such provisions, major commercial properties must submit a master sign plan that indicates the type, construction, location, and height of each proposed sign on the site. Approval of the master sign plan would be required before issuance of the first sign permit for the property (Kelly 1998, Sec. 53.10(9)). Depending on the type, size, and location of the development for which the signage is proposed, permits for master sign plans may be issued administratively or the decision may be referred to a design review board. Shopping centers, office parks, and other multi-tenant buildings are typical candidates for master sign plans.

There are four primary benefits of a master sign plan (Kelly 1998, Sec. 53.10(9)).

1. It encourages property owners or developers to plan for signage.
2. It provides a context for computation of total number and area of signs on the property.
3. It can be integrated into the local site plan review or PUD process.
4. Over time, local governments can use the plans to generate a database of all existing and proposed signage in the community.

Tags or Medallions

Once a permit has been issued for a sign—either through administrative review by a planner or after a design review process—the sign is regarded as legal and in conformance with the ordinance. Some large cities now affix permanent medallions or badges on signs that have received permits. Such a system is useful to future business owners and code enforcement officers in that it provides certainty that the sign met all applicable standards at the time it was installed. Small cities may not be able to afford the administration of such a system. The use of such medallions is generally encouraged by the industry.

On-Line Sign Permits

Cities now commonly post sign permit application forms and procedures on the local government's web site. Cities can post frequently asked questions, step-by-step guides to the permitting process, and even photographs and drawings of what it intends to accomplish with the sign ordinance. And, increasingly, communities are developing sign permit applications that can be submitted electronically, with supporting information submitted as electronic attachments. While this may reduce the often valuable, one-on-one interaction that sign company representatives and business people have with local planners, overall it will be more convenient and efficient for sign permit applicants who will be able to submit the application from their desk rather than standing in line at the counter. The full text of the sign ordinance is also commonly found online now as well, usually as one of the municipality's complete code of ordinances. On-line access to the sign ordinance by applicants can make it easier to comply with the regulations inasmuch as full information about what is required is available to the applicant without either purchasing a hard copy of the ordinance or visiting the permit counter in person.

ADMINISTERING DESIGN REVIEW FOR SIGNS

Agencies that do sign permitting will need to take into account the aesthetic and economic context for the sign under review. Consequently, the

administration of the permitting process is likely to be more complex, time consuming, and demanding of expertise than is the typical processing of permit paperwork. Training is advisable. If a board is used, it must be staffed. It will likely be necessary to publish guidebooks or flyers to explain the review process and criteria. Accordingly, it would be wise to carefully consider the scope of application, given that costs and time could increase beyond what is acceptable to elected officials.

Design review, along with associated standards and guidelines, can be applied in a range of situations.

Citywide Application

Given that there may be a large number of signs covered by applying context-sensitive review to all signs within a city, this approach may be most useful in smaller communities not experiencing significant growth and change. Larger places, where the economy is vigorous, will probably generate a higher turnover of businesses and therefore a significant number of applications that must be processed. It might be possible to have very simple standards, such that the review is expeditious. But too few standards might also defeat the intent of ensuring that signs are sensitive to their surroundings. Conducting a thorough review requires a commitment of time and resources to apply standards and guidelines to a proposal. Furthermore, revisions to proposed designs will often be required, along with meetings to discuss the application and interpretation of criteria. Applying a design review process to signs on a citywide basis demands a major commitment of staff and budget. Some communities are prepared to do that; some are not.

Design review could be a requirement associated with specific zoning districts, as in San Diego's North Park commercial district, or it could be accomplished through an "overlay" approach in which design review is triggered only in portions of a district.

Special Districts and Overlay Districts

For most jurisdictions, a more practical approach than a citywide design review process is to select certain areas for review. These areas might be

City of San Diego

SAN DIEGO SPECIAL SIGN DISTRICTS

Section 104.0100.2 and .4

For the purposes of Chapter X, Article 4 of this Code, Special Sign Districts shall mean any single, legally described area within the City of San Diego which has been designated a Special Sign District by the City Council. The district, including subdistricts, if any, shall be within the boundaries of a community plan or plans adopted by the City Council and on file in the office of the City Clerk. The plan shall be in such detail as is necessary to permit the evaluation of the proposed sign regulations for the Special Sign District.

San Diego: Section 104.0100.4

In a Special Sign District, the Planning Commission shall approve regulatory provisions for all signs permitted on either a district-wide basis or on a subdistrict basis. The following regulatory provisions for signs may be established within a Special Sign District:

A. Number.

B. Maximum height.

C. Maximum gross area.

D. Maximum display area.

E. Type.

F. Relationship to street frontages.

G. Interrelationships between signs.

H. Permitted copy provided that public interest messages shall be permitted. [*Editor's note: This is a content-based regulation that should not be used.*]

I. Residential proximity.

J. Minimum clearances.

K. Relationships to public rights-of-way.

L. Rotation and other forms of movement.

M. Illumination.

N. Animation and other visual effects.

O. Temporary signs.

P. Flags, banners, pennants, and other similar devices.

Q. Any other regulatory provision necessary to the effectuation of the adopted community plan or plans covering the area which the Special Sign District is a part.

particular districts that the community is most concerned about, such as a downtown or historic area. Or they could be transitional areas, such as a commercial district that is adjacent to a residential district. Or they could include an area, such as an entertainment zone, that the community could exempt from some of the requirements applicable elsewhere.

Design review could be a requirement associated with specific zoning districts, or it could be accomplished through an "overlay" approach in which design review is triggered only in portions of a district. The advantage of an overlay approach is that the overlay could encompass several districts or an area containing a number of different districts. San Diego, California, has established Special Sign Districts, while Cleveland's ordinance contains a section that requires special review in a number of designated design review districts. (See a number of examples in the sidebars on this page and the following pages.)

It is more conventional to apply specific standards and procedures to specific districts than to use the overlay approach. Some city attorneys are

even uncomfortable with the overlay approach. Overlays add a degree of complexity that may not be desired. Regardless of the exact approach, however, it will be necessary for the jurisdiction to develop illustrated standards and guidelines so that the community's expectations are clear to the applicant. Signs are graphics, and sign codes should contain examples that illustrate size and dimension standards, methods of sign measurement, and the types of signage that the community has agreed will meet its objectives.

Salt Lake City, Utah, has incorporated a number of drawings into the definition section of its sign ordinance. Such drawings assist enormously in helping users distinguish one type of sign from another. That city's ordinance also contains charts that specifically indicate the types, sizes, heights, and number of allowable signs. While detailed and thorough, the ordinance tries to cover every possible situation with numerical or quantitative standards, without much flexibility. This approach has merit in less complex settings, such as a small town, but a complex urban environment like Salt Lake City that has a mix of uses and building forms may be better suited to a context-sensitive approach.

Yonkers, New York, uses an ordinance that recognizes the delicate nature of urban settings. (See the drawings on the opposite page.) That city has gone to great lengths to "teach" sign applicants how to respect older buildings with established character. Its clearly illustrated code includes the concept of a "signboard" on a building that allows signs to fit into the proportions, details, and arrangement of facades. Yonkers' code is also very user friendly, limiting "codified language" and legal jargon that might be opaque to small merchants. It is almost a handbook on good design, with principles that can be readily grasped by a wide variety of users.

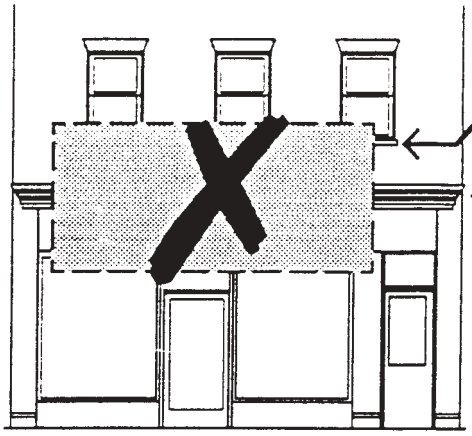
While considerably more complicated than either Salt Lake City or Yonkers regulations, the sign regulations for Flagstaff, Arizona, benefit from having illustrations sprinkled throughout the text. (See below.) Another important feature of the Flagstaff code is that it requires comprehensive sign programs for multitenant developments. This is where the intent of many codes gets defeated; individual tenants hire separate sign companies who all want to design something differently. The result is rarely sympathetic to either the building design or the neighborhood.

The Flagstaff code also contains an interesting feature in that it recognizes "historic" and "unique" signs that may not be allowed under the terms of the current code but which nevertheless contribute to the character of the community. That city—located on old U.S. Route 66—still has a number of very tall, elaborately constructed signs left over from the early era of automobile travel. While not necessarily pretty, they are important landmarks and provide a vital link to the city's past. Finally, the Flagstaff code does a great job of defining signs that are intended to be read by pedestrians. Projecting signs, wall signs, and even freestanding signs are kept small in size and height within the downtown. Nonetheless, merchants have been very creative in finding signs that are unique and visually interesting. Numerous storefronts are embellished with signs that are carefully crafted compositions, incorporating whimsical brackets and details. This is sign design at its best: signs that convey information in a fashion that reflects both the character of the business and the neighborhood. It is hard to imagine anyone trying to insert a generic, plastic-faced "sign box" into this environment. And the code appears to have nurtured a small cottage industry of innovative sign makers.

WALL SIGNS AS DESCRIBED IN YONKERS, NEW YORK, SIGN GUIDELINES

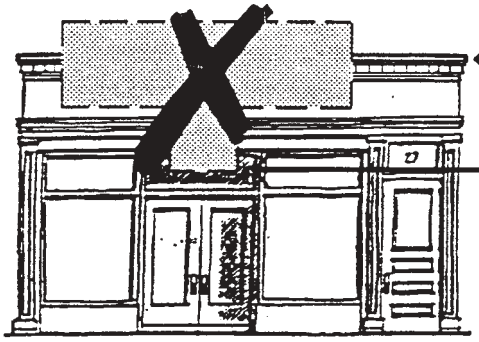
A wall sign is placed flush against the wall of a building.

The following restrictions apply to wall signs:



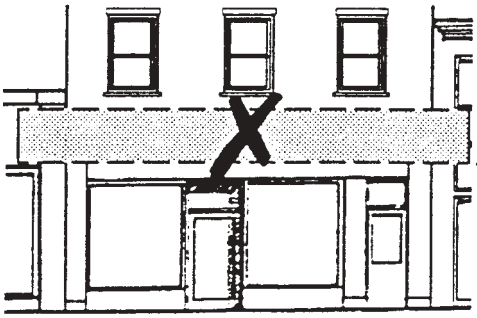
The top edge of the sign must not project above the lower edge of the second story window sills.

The sign must not cover or obscure any architectural feature or detail of the building on to which it is placed. (Architectural features or details may not be removed from a building to accommodate a sign without the permission of the Planning Bureau.)

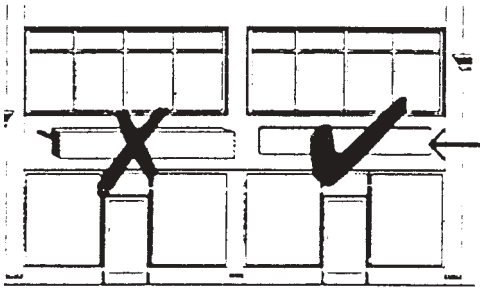


The top edge of the sign must not project above the top of the building.

The bottom edge of the sign must be positioned at least 8 feet above grade level and the top edge of the sign must be higher than 10 feet from the top of the storefront's entrance and display windows but in no event is the wall sign to project below or above the signboard area of a building.



The sides of a sign must be positioned so as not to extend past the length of the storefront area.



The sign must be placed flush against the facade of the building and may not project more than one foot from the surface of the wall onto which it is mounted.

CLEVELAND'S DESIGNATED DESIGN REVIEW DISTRICTS

Section 350.16 Signs in Design Review Districts (December 20, 1990)

For permit applications within Landmark Districts, Public Land Protective Districts or Business Revitalization Districts, the Landmarks Commission or City Planning Commission, as applicable, may authorize the Commissioner of Building and Housing to issue a permit which requires adherence to standards which are either less strict or more strict than the standards otherwise required by the Chapter, if such action by the applicable Commission is in accordance with the following standards:

(a) Design Compatability. Regulations of this Chapter may be varied only if such variation will result in signage which is better suited to the design of the subject property or nearby properties or architectural or historic significance.

(b) Design Guidelines. Any variation from the regulations of this Chapter shall be approved only in accordance with applicable design guidelines adopted by City Council or adopted by the applicable commission pursuant to an ordinance of City Council.

(c) Minimum variation. Any variation from the regulations of this Chapter shall be the minimum necessary to ensure design comparability.

(d) Written record. In the record of its proceedings, the applicable Commission shall specifically identify any regulation of this Chapter which is not met by an approved application and shall explain the necessity for granting such variation from the regulations.

(e) Final Action. An application which fails to meet any regulation of this Chapter shall be approved only by direct action of the applicable Commission.

Corridors

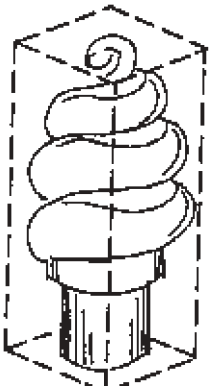
Certain streets are critical to maintaining and enhancing the image of an area or an entire city. Sign standards and guidelines can be tailored to establish and enhance the visual nature of these linear environments. For example, if a city were concerned about the "gateway" arterials leading from major freeways, an overlay could be established to cover all development within 300 feet of the right-of-way, regardless of what the underlying zoning might be.

Matthews, North Carolina, for example, has established Special Sign Corridors, along with accompanying review procedures and standards. Built into the ordinance is a provision that allows standards to be modified under certain conditions to better reflect the context.

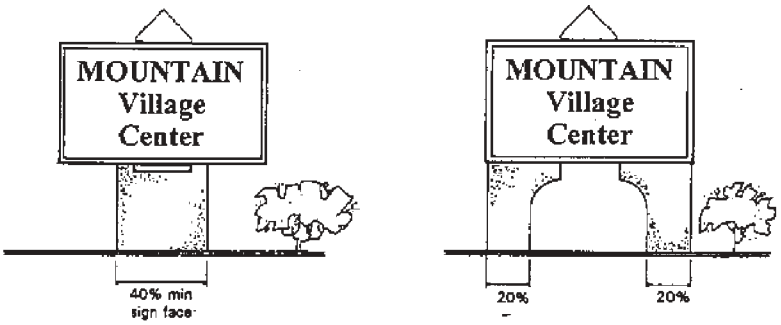
Bainbridge Island, Washington, includes a handful of guidelines specifically addressing signs in the design guidelines for its town center. In some corridors, where the historic context is well established, signs are kept relatively small and made of materials that are compatible with the building materials. In other corridors, signs are encouraged to be graphic and whimsical. The town center is divided into relatively small corridors and subareas, each with its own guidelines to reinforce the particular context. It is also an example of a set of regulations in which signs are not addressed just by themselves, but as part of an overall structure that covers site design and building design. The intent is to persuade merchants to think of their buildings as entire compositions involving many aspects of design.

Bozeman, Montana, has designated seven arterial streets as "entryway corridors." Guidelines addressing site design, building design, and sign design are tailored for each. The city also offers design expertise from the reviewing board to assist small merchants in exploring creative solutions to signage in sensitive areas.

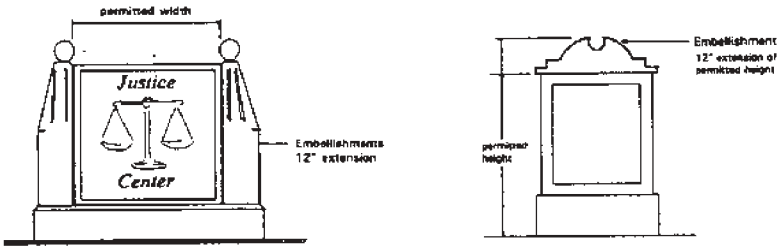
EXCERPTS FROM FLAGSTAFF, ARIZONA, SIGN ORDINANCE



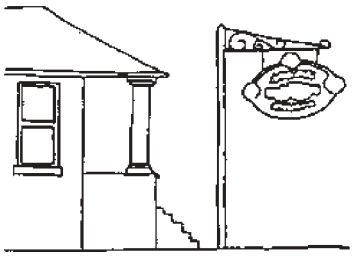
Section A(1)(e): Spherical, free-form, sculptural, or other non-planar sign area is 50 percent of the sum of the areas using only the four vertical sides of the smallest four-sided polyhedron that will encompass the sign structure. Signs with more than four faces are prohibited.



Section 2(f)(6): The permanent sign base of a freestanding sign shall have an aggregate width of at least 40 percent of the width of the sign cabinet or face.



Section 2(f)(9): Freestanding sign structures may extend above the allowable height and/or permitted horizontal dimension for the purposes of sign structure enhancement or embellishment, provided such extension does not exceed a maximum of 12 inches on any side.



Section 4(b)(1)(b): [Individual signs of Historic or Cultural Significance, within the Flagstaff Central Area District of Special Designation], a freestanding suspended sign consisting of a vertical pole, a horizontal decorative sign support, and a suspended sign, is permitted. Such signs are permitted to be constructed of wood, metal, and may be illuminated with external, down-directed, and shielded fixtures only. Freestanding suspended signs are permitted at a maximum of 18 square feet in area and 10 feet in height to the top of the sign pole.

MATTHEWS, NORTH CAROLINA, SPECIAL SIGN CORRIDORS

Sections 2115.1 Special Sign Corridors Created (Enacted October 25, 1993)

Certain geographic corridors exhibit, or have the potential of exhibiting, unique signage needs due to the higher speed and high volume of traffic generated by major highways. Special sign corridors may be established with differing regulations from the rest of the jurisdiction in order to establish, enhance, and preserve the property values and economic viability of such corridors. Such special sign corridors shall meet the following:

1. The area shall follow on each side of a major highway carrying average daily traffic in excess of 30,000 vehicles.
2. The boundaries set for the special sign corridor shall include only those properties whose visibility is directly impacted by the major highway. These boundaries shall be established at the time the special sign corridor is adopted, and the criteria for inclusion into the special sign corridor shall be clearly defined.
3. The Board of Commissioners shall determine, upon recommendation by Planning Board, that the corridor exhibits unique signage needs related to the speed and volume of traffic which makes it different from other commercial or industrial corridors in the jurisdiction. In making such determination, these findings should be made:
   a. that the proposed special sign corridor will preserve or enhance the special character of the corridor;
   b. that the modifications to sign regulations will follow the spirit and overall intent of the chapter on signs, as given in Section 2100.1; and
   c. that the provisions in the special sign corridor will not cause a disturbance or economic hardship to neighboring property outside the proposed district.
4. Regulations which may be modified shall take into considerations those factors causing the unique signage needs, including but not limited to: horizontal distance of the affected property from the major highway right-of-way, natural and man-made topography and road grade changes, road overpasses and underpasses, limited access for drivers, the greater than normal length of road frontage and/or building frontage along the major highway, the total building area covered by a single use or group of uses on a property, and the average speed of vehicles traveling on the major highway.

THE ORDINANCE

There are two types of ordinances that address signs. The first type is embedded within the zoning or land development code, with sign regulations described for various districts. This requires definitions for each sign type to be placed within the overall set of zoning terms and definitions typically found in the beginning sections of a zoning ordinance. It may also require a section that addresses signs in a general way with respect to citywide standards and submittal requirements. The advantage of this method is that all (or at least most) of the development requirements for individual districts are found in one code. The disadvantage is that there may be some redundancy in the code.

The other type of sign ordinance is a freestanding one that addresses signs only. All information needed by a sign permit applicant and the sign code administrator is found together. This allows for amendments to be made that are independent of the bulk of the zoning code. A stand-alone ordinance also has the advantage of being aimed at an industry that is, more often than not, disconnected with the development of buildings.

Most signs that are produced are for tenants who occupy a building; signs typically do not trigger the application of other development standards. A freestanding document can also be formatted in a way that is user-friendly for merchants.

Either type, however, can be workable, and presented in a way that communicates both the letter and the spirit of the regulations. Both can be liberally illustrated and arranged in an easily accessible manner.

For a sign ordinance to be legally defensible, it must be based upon a clear connection to broader public policies. This connection could be made in a general chapter of a comprehensive plan that addresses community appearance or urban design. Policies relating to signs could also be placed in plan sections dealing with sub-areas, neighborhoods, or corridors. To establish an adequate foundation may not require much language, but it is useful to have a policy basis for the regulations to establish consistency between overall community goals and sign regulations.

Sign regulations are, of course, related to land-use regulations. Signs are a form of land use and can be treated in the same way as many forms of development, including allowable and prohibited types, standards, and review procedures. Signs can also be subject to supplemental design guidelines to ensure their compatibility with objectives for specific geographic areas. Some stand-alone sign ordinances include references to other documents that govern the quality of development. The land-use code for Bainbridge Island, Washington, focuses on numerical standards and refers the reader to a set of design guidelines for qualitative measures.

Elizabeth Longley

Elizabeth Longley

Bainbridge Island, Washington, has separate design guidelines for several corridors within its town center. In some corridors, signs are kept relatively small and integrated with the building architecture, (above, and left). In another corridor, the signs are encouraged to be graphic and whimsical, like the exterior signage for this hardware store.

Elizabeth Longley

Martin Ince

Martin Ince

Martin Ince

The Flagstaff sign ordinance contains sign performance standards that give businesses an opportunity to increase the allowable sign size if the sign design incorporates raised letters, uses native or natural materials, is well integrated with building architecture, is reduced in height, or has a simplified letter or logo design.

FLAGSTAFF, ARIZONA, CITY COUNCIL

Section 10-08-001-0001 (April 29, 1997)

The City Council finds that the natural surroundings, climate, history, and people of the City of Flagstaff combine to provide the Flagstaff community with unique charm and beauty. This Division has been adopted to assure that signs installed in the City of Flagstaff are compatible with the unique character and environment of the community.

The purpose of this Division is to promote the public health, safety, and welfare through a comprehensive system of reasonable, effective, consistent, content-neutral, and nondiscriminatory sign standards and requirements. It is further determined the provision of this Division cannot achieve the end result desired unless the community voluntarily cooperates in upholding these provisions.

With these concepts in mind, this Division is adopted for the following purposes:

A. To preserve and protect the public health, safety and welfare of the citizens on the City of Flagstaff.

B. To promote and accomplish the goals, policies and objectives of the Flagstaff Growth Management Guide 2000.

C. To balance public and private objectives by allowing adequate signage for business identification.

D. To promote the free flow of traffic and protect pedestrians and motorists from injury and property damage caused by, or which may be partially attributable to cluttered, distracting, and/or illegible signage.

E. To prevent property damage and personal injury from signs which are improperly constructed or poorly maintained.

F. To promote the use of signs which are aesthetically pleasing, of appropriate scale, and integrated with the surrounding buildings and landscape, in order to meet the community's expressed desire for quality development.

G. To protect property values, the local economy, and the quality of life by preserving and enhancing the appearance of the streetscape which affects the image of the City of Flagstaff.

H. To provide design standards which are consistent with the Flagstaff Development Lighting Regulations, and other applicable provisions of the Flagstaff Land Development Code.

It is the intent of this Division to:

A. Provide functional flexibility, encourage variety, and create an incentive to relate signing to basic principles of good design.

B. Assure that public benefits derived from expenditures of public funds for the improvement and beautification of streets, and other public structures and spaces, are protected by exercising reasonable controls over the character and design of sign structures.

C. Provide an improved visual environment for the citizens of, and visitors to, the City of Flagstaff, and to protect prominent view sheds within the community.

D. Provide cost recovery measures supporting the administration and enforcement of Division 10-08-001, Sign Regulations.

Finally, the design of signs often includes issues of structural stability and electrical safety. Such issues are typically dealt with in building and electrical codes, not land-use codes. It is useful to cross-reference the other codes, however. One issue that arises in sign review is whether the electrical parts of a sign are UL-rated (Underwriter's Laboratory is a national organization whose marker indicates compliance with safety codes). There are sign companies who do not necessarily use available and recognized "best practices." An agency may want assurance that a sign will not cause a fire or safety hazard.

Intent Section

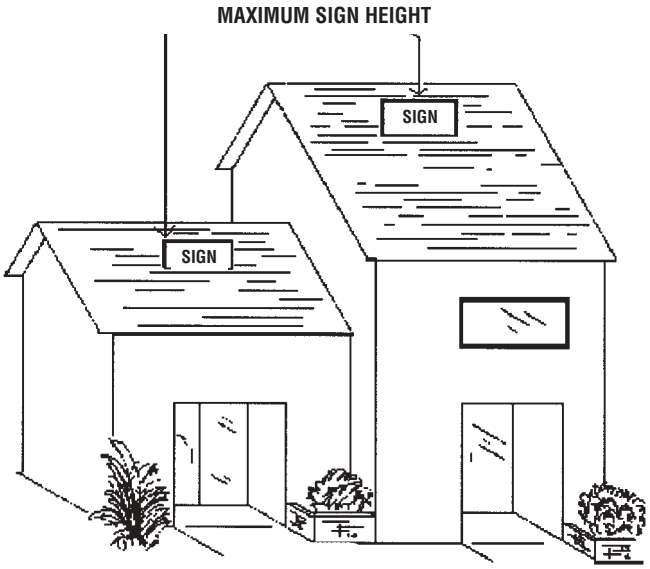
As with all ordinances, it is imperative to have a section that describes the intent. This should, at the very least, link the ordinance to the comprehensive plan. But it can also highlight the broad public purposes to be achieved by the code. Typically, this consists of brief statements that convey important objectives.

Standards

The real meat of any code is found in the section dealing with standards. Standards typically address the following:

- Size of signs, including methods of measuring size
- Height of signs, including the lowest and highest points of measurement, and any exclusions
- Location of signs, including setbacks and sight visibility angles
- Prohibited signs
- Illumination, including treatment of electronic message boards and permissions and prohibitions (where appropriate) of certain kinds of illumination
- Types of permitted signs. Examples include:
  - projecting signs;
  - wall signs;
  - canopy signs;
  - roof signs;
  - monument signs;
  - pole signs;
  - suspended signs;
  - window signs;
  - political signs; and
  - temporary signs.
- Special districts
- Supplemental standards
- Design guidelines (for any discretionary processes).

MESA, ARIZONA, SIGN ORDINANCE PROVISIONS ABOUT SIGN HEIGHT
Revised December 21, 1992
Section 4–4–35 Appendix (excerpt)

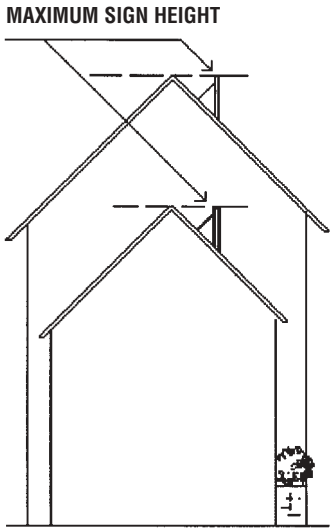


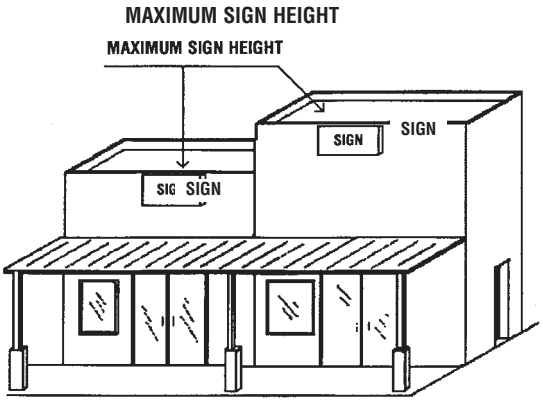
[Text] **Section 4–4–30(I):** Roof signs are permitted in all Commercial Districts and Industrial Districts provided:

(1) Signs shall not exceed height of 30 percent of the height of the building on which said sign is located.

(2) Signs shall be installed in such a manner that there are no visible angle iron supports, guy wires, braces, or secondary supports. Signs shall appear to be an architectural or integral part of said roof.

(3) No portion of such sign shall extend above the highest portion of the building or roof where said sign is attached.





Illustrations

In the past, sign codes did not contain illustrations. Words were relied upon to convey the standards. This may have been, in part, due to city attorneys who worry that illustrations might contradict or confuse the language of the code. It is true that the words in the code should include all pertinent standards. There is a growing trend, however, to help explain codes by including simple diagrams, elevation drawings, and even perspectives. This can contribute to making a code more user friendly. Pictures can sometimes convey information more clearly than elaborately drafted paragraphs.

Some communities compile a photo catalog of signs that meet the code. Ideally, these are signs found within the community, so that applicants can view them as models. Such a catalog would be separate from the actual code and should be kept up to date. For discretionary review, design guidelines can include both illustrations and photographs.

Definitions

Definitions are very important to a code. A set of well-described terms can avoid much argument and interpretation. Definitions can also be illustrated. Definitions are often contained in the front a code, but, for enhanced usability, it is best to place them in a concluding section.

Submittal Requirements

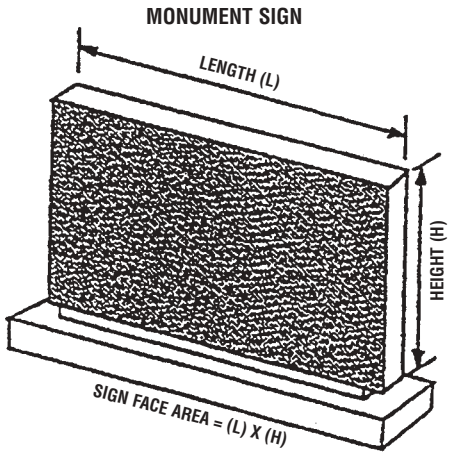
It is very important to set forth what kinds of materials need to be submitted for an acceptable application for a permit. Review is not possible without understandable, accurate information. Applications not containing all required information should be rejected without further review until they are complete; partial information should not be accepted. Cleveland, Ohio, requires a good package of information, including the following:

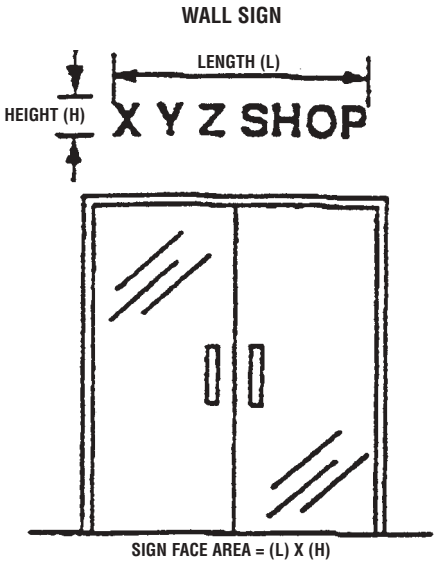
- Site plan at a minimum scale of 1″= 50′
- Elevation drawings, to a scale
- All sign dimensions and height
- Placement of signs in relation to building features and site features
- Construction materials, including the method of attachment
- Type, intensity, location, and shielding of lighting

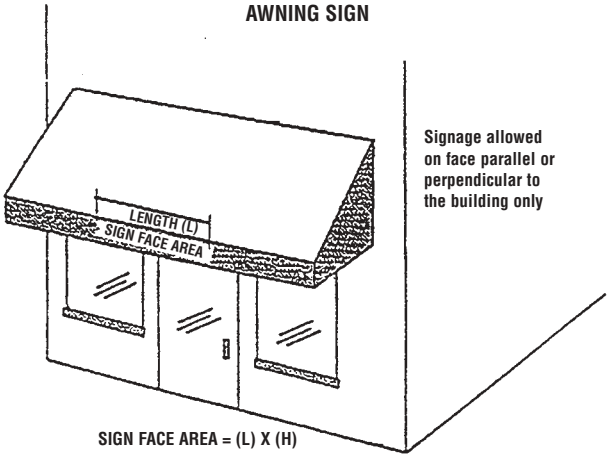
It is also useful and fairly standard for local governments to require a few photographs that show the existing conditions of the site.

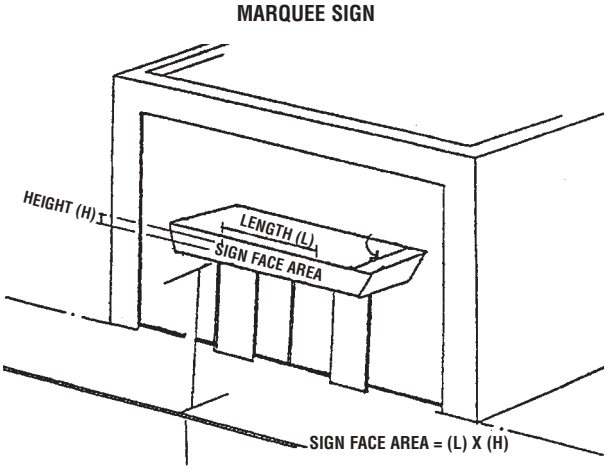
SALT LAKE CITY, UTAH, ILLUSTRATIONS OF SIGN TYPES

Chapter 21A–23 (excerpt) December 12, 1995









Administrative Decision Making

By far, the most common method of issuing decisions regarding signs is an administrative decision by a planner. Typically, this involves a staff person charged with reviewing signs being given the authority by a department head to approve (or deny) applications. Quantitative, numerical standards and formulas are established, and there is no discretion. If a proposal meets the standards, it is approved. This ministerial approach is the method of choice, in large part, because of the sheer volume of such permits. For larger jurisdictions, it would be impractical to require a more elaborate review.

Even if a community wants to apply a discretionary design review process, this could be done administratively. Court decisions on design review insist that the most important aspect of decision making is that of having clear standards; an administrator can apply the standards just as effectively as a board or commission. Regardless of who makes the decision, it is critical to not allow individual opinions to determine the acceptability of a sign proposal.

If a discretionary, administrative process is used, it is also important to establish a record, in case of an appeal of a decision. This record could consist of a brief staff report that describes how the proposal complies (or not) with the criteria and what conditions may be necessary to make it comply. To simplify and expedite the review, a checklist or template could be provided.

Boards or Commissions as Decision Makers

Some communities place a great deal of importance on the details found within the built environment. They view even relatively small changes as either contributing to or detracting from the community's image. Resort communities fall into this category, as do towns of unique historic value. These places will often use a board or commission to review signs. Boards meet and hear a proposal (sometimes with a formal hearing) and decide whether to approve it, modify it, or deny it.

A variation on this approach involves a "threshold" point. Signs that are relatively small or in certain locations receive administrative review, while larger signs or signs in more sensitive areas are reviewed by a board.

If a board is used, it is important to ensure that the review is as fair and objective as possible. Already mentioned is the need for decision-making criteria, often expressed as design guidelines. In addition, it is important to ensure that the board is qualified to conduct the review. The inclusion on the board of professionals associated with design, particularly graphic design, is key. It is worth including someone who has been associated with the sign industry, if possible. Finally, lay citizens who sit on a board can offer great perspectives, but they should not dominate the make-up.

Bozeman, Montana, makes a novel use of its design review board. In addition to making decisions, the board is willing to sit separately with an applicant to help think through the appropriate design. (This is usually a subcommittee and is a service mainly offered to people who have no professional help.) The result has been a much more collaborative attitude between the city and the private sector.

Appeals

Invariably, there will be disputes over sign denials and even approvals. Appeals could come from neighbors. Assuming there is a notification and comment process, however, most appeals will likely originate with an aggrieved applicant. The hearing body for an appeal can vary widely and

is affected by state enabling legislation. In some jurisdictions, appeals are to a board of appeals; in others it could be to a hearings examiner. Some communities make the city council an appeals body. Finally, in some cases, the appeal would be directly to the courts.

Courts will look very carefully at the procedures in a design review process to make sure that the permitting process does not have the potential to impermissibly restrict freedom of expression. In particular, courts will want to be sure that the process contains clearly defined standards that limit the discretion of the official or board administering the review and that a decision to grant or deny a permit is rendered within a determined, short period of time with provision for an automatic and swift judicial review of any denial. Cities should also have an administrative appeals process so that issues may be resolved without going to court and to comply with their obligation to provide for due process as discussed earlier.

Enforcement

As with any law, enforcement can make all the difference in whether the law is effective. It does little good to have ordinances on the books if the city ignores violations. Therefore, it is important to devise sections of a sign code that address a number of elements, including:

- removal of nonconforming signs;
- removal of prohibited and otherwise illegal signs;
- removal of discontinued signs;
- citations for violations;
- penalties for violations, especially for repeat offenders;
- penalties for construction or installation without a permit;
- revocation of permits; and
- restrictions on transferability of permits.

Of course, it is necessary for any jurisdiction to have sufficient funds to pay for enforcement. The cost of this may be partially offset by the collection of fees for signs.

"Optional" Design Review

Many communities are reluctant to move into a design review system, fearing that it will be overly complicated and add a layer of bureaucracy or a time element that is not desirable. It is possible to adopt an optional design review process, one that is voluntarily entered into by applicants.

This process involves the applicant making choices: either design a sign strictly according to numerical standards (which sometimes are very restrictive) or go through a design review process that allows for large signs, more flexibility, or both. In the latter case, a board or staff applies additional criteria to the established numerical standards to ensure a superior result.

For example, the numerical standard for a projecting sign might consist of a maximum allowable area of 10 square feet. This would probably produce a simple, rectangular sign, maximizing the copy area. Such a sign might say "Sam's Seafood." Under an optional design review process, the sign area could be doubled. But the sign would need to include a unique, eye-catching logo, such as a jumping fish, that would add liveliness to the streetscape. Such a method rewards both merchants and sign producers for creative efforts.

REFERENCES

A Guideline Sign Code For the Municipal Regulation of On-Premise Signs. 1991. Second Edition. National Electric Sign Association.

Jones, David. 1994. *Sign-Permit Fees: How Much is Too Much?* Alexandria, Va.: National Electric Sign Association.

Kelly, Eric Damian. 1998. "Provisions for the Regulation of Signs." Chapter 53 in *Zoning and Land Use Controls,* vol. 2, edited by Eric Damian Kelly. New York: Matthew Bender.

CHAPTER 6

Legal Issues in the Regulation of On-Premise Signs

By Alan Weinstein

This chapter examines the major legal issues that arise when local government enacts or enforces sign regulations. In the early years of sign regulation, a period that runs from approximately 1900 to 1960, the major legal question was whether the government's police power could be exercised to achieve aesthetic purposes. By the 1960s, this question had been answered in the affirmative by an overwhelming majority of states. Subsequently, the focus of judicial inquiry turned to three other legal issues that are possible when considering the validity of particular sign regulations:

(1) First Amendment or free speech issues

(2) Takings issues as defined by the Fifth Amendment or various state statutes

(3) Enforcement and flexibility provisions within the regulation

These concerns remain the focus of most legal challenges to sign regulation.

We examine each of these issues in turn and then offer an analysis of the specific problems that may develop from the regulation of commercial on-premise signs. The chapter concludes with a discussion of how local governments might resolve these problems in ways that would address the needs of both government and businesses.

SIGN REGULATION AND POLICE POWER

Although local governments have regulated signs for more than a century, early sign cases focused on whether sign regulation was a valid exercise of the police power by local government. The first reported cases upholding local government regulation of signs appeared at the turn of the century, with decisions coming from both large cities (e.g., Chicago and St. Louis) and small towns (e.g., Windsor, Connecticut). These early decisions focused on the legitimacy of traditional police power rationales, such as the endorsement of public safety and the preservation of property values because the courts were troubled by the idea that aesthetic concerns could provide an adequate basis for sign controls.

Beginning in the 1940s, courts in several states, including California, Florida, and Louisiana, argued that sign regulations could also be justified by local interest in the promotion of tourism for economic advantage. Because this interest was intertwined with aesthetics, controlling signs, especially billboards, made an area more visually attractive to tourists. It helped push courts towards an acceptance of the modern idea that sign regulation could be justified primarily on aesthetics grounds.

Meanwhile, U.S. Supreme Court decisions on the extent of local governments' zoning and eminent domain powers provided support for the view that aesthetic and other "environmental" considerations provide a sufficient basis for government regulation. The Court gave aesthetics its first judicial recognition in *Village of Euclid v. Ambler Realty Co.,* 272 U.S. 365 (1926), which upheld the right of municipalities to enact zoning ordinances for the purpose of promoting health, safety, moral, and general welfare objectives. In this landmark decision, the Court acknowledged that apartment houses could be excluded from single-family residential districts because their negative effects on the availability of sunlight and open space made them almost nuisance-like. Three decades later, in *Berman v. Parker,* 348 U.S. 26 (1954), an urban renewal case involving the power of eminent domain, the Court expressed very strong support for aesthetics-based regulations:

> The concept of the public welfare is broad and inclusive. The values it represents are spiritual as well as physical, aesthetic as well as monetary. It is within the power of the legislature to determine that the community should be beautiful as well as healthy, spacious as well as clean, well balanced as well as carefully patrolled (348 U.S. at 33).

Later, in *Metromedia, Inc. v. City of San Diego,* 453 U.S. 490 (1981), seven justices of the Supreme Court agreed that San Diego's interest in avoiding visual clutter was sufficient to justify a complete prohibition of commercial off-premises signs. The Supreme Court's support for aesthetics-based sign regulations was reaffirmed in *Members of the City Council v. Taxpayers for Vincent,* 466 U.S. 789 (1984), in which the Court upheld a ban on posting signs on public property.

Meanwhile, similar developments were occurring in state courts so that, today, the courts in most states hold that aesthetics alone will support an exercise of the police power. Further, many state courts have made such rulings in regards to sign regulation, including California, Florida, Georgia, Illinois, Massachusetts, New Jersey, New York, and North Carolina.

An example of how much leeway such decisions extend to local government can be seen in *Asselin v. Town of Conway,* 628 A.2d 247 (N.H. 1993), where the New Hampshire Supreme Court upheld an ordinance that prohibited new signs that were internally illuminated, while "grandfathering" existing internally illuminated signs, based solely on aesthetic values.

The legal issues regarding sign regulation in most states, therefore, no longer involve questions of whether regulating signs for aesthetic purposes is within the police power, but whether the regulations comport with the First and Fifth Amendments and other constitutional and statutory constraints.

SIGN REGULATION AND THE FIRST AMENDMENT

First Amendment law is quite complex because the Supreme Court has not developed a single standard of scrutiny or analytical "test" for deter-

mining when government regulation of "speech" violates the Constitution. Rather, the Court will review government regulation of speech using several different "tests" that apply standards ranging from moderate to strict scrutiny. Thus, the Court would, for example, apply different tests to determine the constitutionality of each of the following local government sign regulations:

1. A ban on all on-premise commercial signs
2. A ban on only on-premise noncommercial signs
3. A rule limiting on-premise commercial signs to one per building
4. A rule imposing no specific limits in regard to on-premise commercial signs but requiring the property owner to submit a "signage site plan" for approval by a planning or design review committee
5. A rule obliging the property owner to submit the proposed sign "copy" for approval by a planning or design review committee

After examining the most important legal issues that arise under the First Amendment in the context of sign regulation, we discuss the changes that courts are currently making in their view of commercial speech regulation and discuss the effect these changes will have on the validity of the most common forms of local regulation of commercial on-premise signs.

Basic First Amendment Principles

Although the First Amendment speaks in absolute terms—"Congress shall make *no law* abridging the freedom of speech . . ." (emphasis added)—the Supreme Court has rejected a literal reading of the text. While government may not normally impose direct restrictions on the communicative aspects of speech, the Court has adopted the view that, under very limited circumstances, speech may be subject to narrowly proscribed regulations. As noted previously, there is no single test that the Supreme Court employs to determine how much government regulation of speech may be tolerated; rather, the Court chooses its analysis based on the manner in which government is attempting to impose regulations on speech protected by the First Amendment. Recent Court decisions have shown, however, that attempts to regulate the content of speech in any context will trigger the highest level of scrutiny. Thus, the question of whether a regulation is "content-neutral" has become the paramount concern of courts.

Content-neutrality, and other aspects of a regulatory scheme that are important in a court's choice of which type of analysis to apply, and the nature of the various analyses are discussed below.

Is the regulation "content-neutral"? This is the single most crucial question that courts ask about any regulatory scheme affecting expression protected by the First Amendment. A content-neutral regulation will apply to a particular form of expression (e.g., signs or parades) regardless of the content of the message displayed or conveyed. The most common form of content-neutral regulation is so-called "time, place, or manner" regulation, which, as the name suggests, does no more than place limits on when, where, and how a message may be displayed or conveyed.

An example of a Supreme Court case involving a content-neutral time, place, or manner regulation is *Ward v. Rock Against Racism,* 491 U.S. 781 (1989), which upheld a New York City ordinance regulating concerts at a

band shell in Central Park. This case involved a regulation the city had enacted after receiving numerous complaints from concert goers about poor sound quality, and from other park users and nearby residents about excessive noise. The city found that a combination of inadequate sound equipment and incompetent sound "mixing" was the cause of both the poor sound quality and excessive noise. It determined that the best solution was to require the city's Department of Recreation to provide the equipment and sound technicians for all concerts.

In judging the validity of this requirement, the Court stated that "[t]he principal inquiry in determining content neutrality, in speech cases generally and in time, place, or manner cases in particular, is whether the government has adopted a regulation of speech because of disagreement with the message it conveys." Stated another way, "[t]he government's purpose is the controlling consideration" in determining whether an ordinance really is content-neutral (491 U.S. at 791).

Marya Morris

Courts do allow local governments to distinguish between on-premise and off-premise signs, even allowing local governments to ban new off-premise signs entirely so long as on-premise signs are not restricted only to commercial messages. But regulations that differentiate among signs on the basis of the ideas or viewpoints communicated, or on sign content in general, are subject to strict scrutiny.

An example of an unconstitutional content-based regulation can be found in *Boos v. Barry,* 485 U.S. 312 (1988), where the Supreme Court struck down a District of Columbia regulation making it unlawful to display any sign that tended to bring a foreign government into "public odium" or "public disrepute" within 500 feet of a foreign embassy. This regulation was clearly unconstitutional, the Court found, because it sought to restrict "the direct impact of the speech on its audience" based solely on whether that speech was favorable or critical of the foreign government.

Courts are particularly hostile to content-based regulations that are also "viewpoint-based." The regulation struck down in *Boos* serves to illustrate the distinction between content-based regulation and viewpoint-based regulation in First Amendment law. The critical distinction in the *Boos* decision is based on the fact that the ordinance regulated the "viewpoint" to be communicated: *pro*-foreign government signs were permitted, but *anti*-foreign government signs were prohibited. By contrast, a hypothetical content-based regulation would have prohibited all political signs or all signs making any reference to the foreign government, within 500 feet of the foreign embassy. Such a regulation would be "viewpoint-neutral," but not "content-neutral," since signs with nonpolitical messages could be displayed.

While some content-based regulations of speech are permissible, the Supreme Court has indicated that viewpoint-based regulations will rarely, if ever, be upheld. For example, in *Metromedia, Inc. v. City of San Diego,* 453 U.S. 490 (1981), seven members of the Court agreed that San Diego could prohibit "commercial" billboards but not "noncommercial" billboards, a distinction that is obviously content-based. But, in *R.A.V. v. City of St. Paul,* 505 U.S. 377 (1992), the Court invalidated a "hate speech" ordinance that made it a misdemeanor to knowingly display a symbol or message that "arouses anger, alarm or resentment in others on the basis of race, color, creed, religion or gender." As written, this ordinance made it a crime to engage in "hate speech" directed at some individuals or groups (e.g., Catholics, Asians, or women) but imposed no penalty for "hate speech" directed at others (e.g., homosexuals, communists, or "militias"). In the Court's view, because only certain "hate speech" viewpoints were criminalized, the ordinance went "beyond mere content discrimination, to actual viewpoint discrimination." The Court argued, "[t]he First Amendment does not permit St. Paul to impose special prohibitions on those speakers who express views on disfavored subjects" (505 U.S. at 391).

When will the courts apply strict vs. intermediate scrutiny? Normally, any time government makes regulatory distinctions based on the "content" of the regulated speech, courts will apply a very demanding analysis, known as "strict scrutiny." By contrast, if the regulatory distinctions are "content-neutral," a somewhat less-demanding analysis, known as "intermediate scrutiny," applies.

The strict scrutiny test requires that a content-based regulation of speech must be justified by a *compelling* governmental interest and be *narrowly tailored*, sometimes stated as "use of the least restrictive means," to achieve that interest. Moreover, a content-based regulation of speech is presumed to be unconstitutional (i.e., the normal presumption that a local government regulation is constitutional is reversed), so that government, rather than the party challenging the ordinance, bears the "burden of proof" and must affirmatively justify the regulation to the court's satisfaction.

The intermediate scrutiny test requires that a content-neutral regulation of speech must be justified by a *substantial*—not a compelling—governmental interest and must be "narrowly tailored" to achieve that interest; however, the narrowly tailored requirement is not to be equated with the "least restrictive alternative" requirement sometimes applied in the strict scrutiny test. As stated by the Supreme Court in *Ward v. Rock Against Racism,* 491 U.S. 781 (1989): "Lest any confusion on the point remain, we reaffirm today that a regulation of the time, place or manner of protected speech must be narrowly tailored to serve the government's legitimate content-neutral interests but that it need not be the least restrictive or least intrusive means of doing so" (491 U.S. at 798). Finally, the regulation must leave open "ample alternative avenues of communication."

The strict scrutiny standard is applied, however, when a content-neutral regulation imposes a total ban on speech. Courts will apply strict scrutiny even to content-neutral regulations when the regulation imposes a total ban on a category of speech protected by the First Amendment. For example, in *City of Ladue v. Gilleo*, 512 U.S. 43 (1994), a unanimous Supreme Court ruled that an ordinance banning all residential signs, except for those categories of signs falling within 10 exemptions, violated the First Amendment rights of homeowners because it totally foreclosed their opportunity to display political, religious, or personal messages on their own property.

The* O'Brien *standard for "incidental restrictions" on speech. Intermediate scrutiny has also been applied to regulations that are directed at the noncommunicative aspects of speech but, in addition, have an indirect effect on the message being communicated. In such cases, the courts apply a four-part test formulated by the Supreme Court in *United States v. O'Brien*, 391 U.S. 367 (1968), to balance the government's interest in regulating the noncommunicative aspect of speech against any incidental restriction on freedom of expression. The *O'Brien* test permits a government regulation that incidentally restricts speech if:

(1) such regulation is within the constitutional power of government;

(2) it furthers an important or substantial government interest;

(3) the government interest is unrelated to the suppression of free expression; and

(4) the incidental restriction on expression is not greater than what is essential to the furtherance of that interest.

As can readily be seen, the *O'Brien* test for incidental restrictions on speech and the intermediate scrutiny test for content-neutral time, place, or manner restrictions are almost identical, a fact that was formally recognized by the Supreme Court in *Clark v. Community for Creative Non-Violence*, 468 U.S. 288 (1984), and reaffirmed in *Ward v. Rock Against Racism*, 491 U.S. 781 (1989).

The "secondary effects" doctrine. Courts often apply the *O'Brien* test to judge the constitutionality of zoning ordinances that regulate sexually oriented businesses more severely than other, similar businesses. But what is the courts' rationale for using the *O'Brien* test, rather than strict scrutiny, to judge an ordinance that appears to make content-based distinctions, such as zoning a cabaret presenting sexually oriented entertainment (e.g., topless dancing) more stringently than a cabaret featuring dinner theatre? The answer can be found in the so-called "secondary effects" doctrine, first announced by the Supreme Court in *Young v. American Mini-Theatres*, 427 U.S. 50 (1976), which approved a Detroit "adult business" zoning ordinance that the city claimed sought to deter the negative secondary effects of sexually oriented adult businesses, such as neighborhood deterioration or crime.

Eric Damian Kelly

Because local governments have fairly broad discretion in regulating sexually oriented businesses under the "secondary effects" doctrine, courts have generally upheld greater than normal restrictions on signs identifying adult businesses.

In *Young*, the Court found that Detroit had demonstrated both that its ordinance was based on a substantial governmental interest unrelated to the suppression of speech and that sufficient alternative locations for sexually oriented businesses remained available. The Court reinforced its approval of the secondary effects doctrine 10 years later, in *City of Renton v. Playtime Theatres*, Inc., 475 U.S. 41 (1986), declaring that the doctrine was "completely consistent with our definition of 'content-neutral' speech regulations" (475 U.S. at 48).

In the wake of the Court's strong endorsement of the secondary effects doctrine, as applied to sexually oriented businesses, there were numerous attempts by local governments to justify a variety of restrictions of speech, including sign regulations, on the ground that the real aim of the regulation was control of negative secondary effects. One such effort, noted above, was the restriction on anti-foreign government signs that the Court struck down in *Boos v. Barry*, 485 U.S. 312 (1988). There, the District of Columbia argued that the restriction was enacted to prevent the secondary effect of violating "our international law obligation . . . to shield diplomats from speech that offends their dignity" (485 U.S. at 321). The Court disagreed that such a secondary effect could qualify as content-neutral because the government's "justification focuses only on the content of the speech and the direct impact that speech has on its listeners" (485 U.S. at 320).

While *Boos v. Barry* shows that the courts will carefully examine a purported secondary effects rationale to see if it disguises content-based regulation of speech, governments continue to argue that content-based sign regulations should be upheld under the secondary effects doctrine.

When does a regulation impose a "prior restraint" on speech? "Prior restraint" is the legal term for any attempt to condition the right to freedom of expression upon receiving the prior approval of a governmental official. In the context of land-use regulation, a prior restraint may take the form of requiring an applicant to obtain a permit, license, or conditional use approval as a condition to displaying or conveying a message. Such attempts are seen as posing a particularly serious threat to the values embodied by the First Amendment and will receive the strictest judicial scrutiny. As with other forms of strict scrutiny, when a court finds a prior restraint, it will reverse the traditional presumption of validity

afforded to the actions of government and presume that the prior restraint is unconstitutional.

In order to overcome the presumption that a prior restraint is unconstitutional, government must show that the licensing or permitting scheme:

(1) is subject to clearly defined standards that strictly limit the discretion of the official(s) administering the scheme, and

(2) meets stringent procedural safeguards to guarantee that a decision to grant or deny the license is rendered within a determined and short period of time, with provision for an automatic and swift judicial review of any denial.

In the context of sign regulation, it would seem logical that requiring any type of permit, license, or conditional use approval as a prerequisite to engaging in activity protected by the First Amendment would be a prior restraint, but, until 1990, the Supreme Court limited the prior restraint concept to permit or license schemes that constitute a "content-based" regulation of expression. That year, in *FW/PBS v. City of Dallas*, 493 U.S. 215 (1990), a case involving a sexually oriented business licensing ordinance, the Court extended a somewhat lessened form of prior restraint protection to speech that was viewed as content-neutral because of the application of the secondary effects doctrine. The Court has, however, not yet applied the prior restraint doctrine to commercial speech.

Is the regulation "void for vagueness" or "overbroad"? Even where a government regulation of speech is otherwise valid, it may be struck down if a court finds the language so vague that it is unclear what type of expression is actually regulated, or it is so broadly worded that it has the effect of restricting speech to an extent that is greater than required to achieve the goals of the regulation. These two principles—termed "void for vagueness" and "overbreadth"—seek to ensure that government regulation of expression is sufficiently precise so that individuals will know exactly what forms of expression are restricted, and that laws which legitimately regulate certain forms of expression do not also include within their scope other types of expression that may not be permissibly regulated. These two principles are quite closely related, and courts often find that an ordinance violates both; however, the Supreme Court has not, to date, ruled that overbreadth is applicable to commercial speech.

The Changing First Amendment Status of Commercial Speech

Historically, local regulation of commercial on-premise signs has rarely raised significant First Amendment issues. In recent years, however, the Supreme Court has dramatically increased the degree of First Amendment protection afforded to commercial expression, and this change is beginning to influence the way that lower federal and state courts view the treatment of commercial on-premise signs in local ordinances.

Although the Court has been expanding the constitutional protection given to most forms of expression for the past 80 years, its broadened protection of free speech rights has only recently been extended to "commercial speech," such as advertising and signs. Prior to 1975, the Court had maintained the position, first announced in *Valentine v. Christensen*, 316 U.S. 52 (1942), that commercial speech is not fully protected by the First Amendment. In *Bigelow v. Virginia*, 421 U.S. 809 (1975), however, the Court seriously questioned its decision in *Valentine,* and, one term later, in *Virginia State Board of Pharmacy v. Virginia Citizens Consumer Council*, 425 U.S. 748 (1976), it finally acknowledged that even if speech did "no more

than propose a commercial transaction," it was still entitled to some degree of protection under the First Amendment.

In the last few years, the Court has increased the degree of protection afforded commercial speech to the point where many scholars and jurists now argue that truthful commercial speech should receive the same degree of First Amendment protection as speech. Although *Bigelow* and *Virginia State Board* did not deal directly with regulation of on-premise commercial signs, they appear to affect the way that state courts and the lower federal courts view such regulations. By reducing the distinctions between commercial speech and noncommercial speech, these decisions can encourage courts, under appropriate circumstances, to apply the legal doctrines developed in cases involving noncommercial speech to regulation of commercial speech.

The* Central Hudson *"intermediate scrutiny" test for commercial speech. In *Central Hudson Gas & Elec. Corp. v. Public Service Comm'n*, 447 U.S.557 (1980), the Court announced a four-part test to determine when government regulation of commercial speech was valid. First, a court must ask whether the commercial speech at issue concerned "lawful activity" and was not "misleading." If so, it was protected by the First Amendment. Second, the court must ask if the government interest served by the regulation was substantial, because free speech should not be limited for insubstantial reasons. If the answer to both of the first two questions was positive, the court "must determine whether the regulation directly advances the governmental interest asserted, and whether it is not more extensive than necessary to serve that interest" (447 U.S. at 566).

Although the language of the *Central Hudson* test differs somewhat from the intermediate scrutiny test used for time, place, or manner regulation, or the *O'Brien* test for regulations that incidentally regulate speech, it is clearly similar to both. All three impose a lesser standard than the strict scrutiny tests for content-based regulations or restrictions on speech that amounted to a prior restraint, but they are also far more stringent than the deferential standards—"reasonableness" or "rationality" or "not arbitrary and capricious"—normally applied to test the validity of governmental regulations of purely economic interests.

Katherine Haak

The Metromedia *court was unanimous in finding that a community could permit on-premise commercial signs while prohibiting off-premise commercial billboards as a basic part of local efforts to reduce sign clutter and promote traffic safety. Shown here: On-premise commercial signs in the LaJolla district of San Diego.*

The* Metromedia *decision and the on-premise/off-premise distinction. The Supreme Court had its first opportunity to apply the *Central Hudson* analysis to the regulation of commercial signs in *Metromedia, Inc. v. City of San Diego,* 453 U.S. 490 (1981). Here the Court considered the constitutionality of a San Diego sign ordinance that regulated on-premise signs while banning off-premise billboards. San Diego's effort to treat on-premise signs more leniently than off-premise billboards is not unusual. Because of the practical and commercial necessity of allowing signs identifying the location of a business, on-premise signs are often regulated but never completely banned. By contrast, off-premise signs are frequently deemed to be merely another mode of advertising and, particularly in the case of large outdoor billboards, are often criticized as significantly degrading the attractiveness of communities. Thus, communities often seek to ban off-premise signs. On-premise signs, on the other hand, are an accessory use.

The Court struggled in *Metromedia* to agree on a workable accommodation between First Amendment guarantees, now extended to commercial speech, and the deference normally granted to a municipality's exercise of the police power, producing five separate opinions. There were some issues, however, where the justices could agree. First, the Court was unanimous in finding that a community could permit on-premise com-

mercial signs but prohibit off-premise commercial billboards as a basic part of local efforts to reduce sign clutter and promote traffic safety. Next, seven justices agreed that, based on the *Central Hudson* four-part test, San Diego's interest in promoting traffic safety and avoiding visual clutter was substantial enough to justify a complete prohibition of off-premise commercial billboards. Finally, although the Court ruled 6-3 that the San Diego sign ordinance was unconstitutional, the six justices disagreed on the reason why the ordinance was flawed.

Two justices simply found that the San Diego ordinance failed the *Central Hudson* test because the city had not conclusively shown that off-premise commercial signs actually impair traffic safety or that the city's interest in aesthetics was substantial enough to justify a prohibition on signs in commercial and industrial areas. The other four justices joined in a plurality opinion that found two flaws in the San Diego ordinance. First, the ordinance favored commercial over noncommercial speech because commercial speech could be displayed on on-premise signs while noncommercial speech could not. Second, San Diego's treatment of off-premise signs was invalid because the ordinance chose among various noncommercial messages by creating exceptions for some, but not all, noncommercial messages on off-premise signs.

The three dissenting justices in *Metromedia,* while writing separate opinions, agreed that the city could ban all off-premise billboards based on its interests in traffic safety and aesthetics. Since the plurality also approved of some content-based regulation of commercial speech—"the city may distinguish between the relative value of different categories of commercial speech . . ." (453 U.S. at 514-15)—seven members of the *Metromedia* Court had signaled their willingness to allow municipalities some degree of freedom in applying content-based regulations to commercial speech, so long as these were not also viewpoint-based. Thus, for example, while the Court could uphold a ban on all off-premise commercial signs, it would not allow an exception to that ban for commercial billboards that advertised "products made in America" because this would be seen as viewpoint-based.

The "reasonable fit" requirement for regulation of commercial speech. The Court subsequently provided further guidance concerning the application of the *Central Hudson* test in two cases that address government regulation of commercial speech in contexts other than sign regulation. *Board of Trustees of State University of New York v. Fox*, 492 U.S. 469 (1989), and *City of Cincinnati v. Discovery Network*, 507 U.S. 410 (1993), both discuss the burden placed on government to establish a "reasonable fit" between the government's ends and the means chosen to achieve those ends.

The *Fox* case involved the legality of a state university's ban on commercial solicitation, in this case a Tupperware party, in school dormitories. The Supreme Court used this case to specify more precisely the standard required by the third part of the *Central Hudson* test: regulation of commercial speech must be "no more extensive than necessary to achieve the substantial governmental interest." The Court reiterated that regulation of commercial speech did not have to meet the least restrictive means test required by strict scrutiny, but that something more than mere reasonableness was required: "a 'fit' between the legislature's ends—a fit that is not necessarily perfect, but reasonable; that represents not necessarily the single best disposition but one whose scope is in proportion to the interest served; that employs not necessarily the least restrictive means but . . . a means narrowly tailored to achieve the desired objective" (492 U.S. at 480).

In *Discovery Network*, the Supreme Court rejected a claim that Cincinnati's legitimate interests in the safety and attractive appearance of its streets and sidewalks justified the city's ban on commercial newsracks. The Court, noting that the ban would remove only 62 commercial newsracks while leaving 1,500-2,000 newsracks in place, agreed with the lower courts' findings that the benefits to be derived from the ban were "minute" and "paltry," given the city's primary concern of achieving a reduction in the total number of newsracks.

In reaching this conclusion, the Court rejected the city's contention that the "low value" of commercial speech justified the city's selective ban on commercial newsracks and held that Cincinnati had failed to establish the necessary "fit" between its goals and the means chosen to achieve those goals:

> In the absence of some basis for distinguishing between "newspapers" and "commercial handbills" that is relevant to an interest asserted by the city, we are unwilling to recognize Cincinnati's bare assertions that the "low value" of commercial speech is a sufficient justification for its selective and categorical ban on newsracks dispensing "commercial handbills" (507 U.S. 410, at 428).

The Court also discussed the reasonable fit test to be applied to regulation of commercial speech in more general terms, noting that:

> [the] regulation need not be absolutely the least severe that will achieve the desired end, but if there are numerous and obvious less-burdensome alternatives to the restriction on commercial speech, that is certainly a relevant consideration in determining whether the "fit" between ends and means is reasonable (507 U.S. at 418 n.13).

The Court also found that the Cincinnati ban could not be considered a valid content-neutral regulation of the time, place, and manner of speech because the very basis for the regulation was the difference in content between commercial and noncommercial newsracks.

***The Court elevates the status of commercial speech in* 44 Liquormart.** The decision of the Supreme Court in *44 Liquormart, Inc. v. Rhode Island,* 517 U.S. 484 (1996), is the most significant pronouncement on the status of commercial speech since *Bigelow v. Virginia* established that commercial speech was protected by the First Amendment. In this case, the Court struck down a state law that prohibited the advertising of retail liquor prices except at the place of sale. Although the justices found it difficult to agree on the reasoning to support their decision, the various opinions, taken together, are evidence of a profound change in how the Court views the status of commercial speech. In brief, a majority of the Court expressed a willingness either to apply a more stringent test than *Central Hudson* or to apply *Central Hudson* with "special care" to judge the constitutionality of regulations that impose a ban on the dissemination of truthful information about lawful products.

44 Liquormart thus announced the Court's intent to apply a standard reasonably close to strict scrutiny in judging the validity of content-based bans on commercial speech. This would nearly equate the First Amendment status of commercial speech with that of noncommercial speech in cases involving a regulation that seeks to impose a content-based prohibition on communication. Further, in the Court's most recent commercial speech decision, *Lorillard Tobacco Co., et. al. v. Reilly*, 121 S.Ct. 2404 (2001), Justices Thomas, Kennedy, and Scalia expressed their continuing concern that the *Central Hudson* test gives insufficient protection to commercial speech.

Michael Davidson

In City of Cincinnati v. Discovery Network *, 507 U.S. 410 (1993), the court found that there was not a reasonable fit between the city's desire to improve community appearance and safety and its ban on commercial newsracks. The ban would have removed just 62 newsracks while leaving 1,500 to 2,000 in place.*

RECURRING PROBLEMS IN LOCAL GOVERNMENT REGULATION OF SIGNS

Although this chapter focuses on the regulatory treatment of commercial on-premises signs, below we briefly discuss some of the general problem areas that many communities encounter in their sign regulations.

Regulating "Too Much" vs. Regulating "Too Little"

As stated previously, regulations that distinguish signs by their subject matter or ideas raise First Amendment concerns because people fear that government will use its regulatory powers to restrict, censor, or distort speech. For this reason, a regulation that differentiates among signs on the basis of the ideas or viewpoints communicated is subject to strict scrutiny, as are regulations that differentiate by content (i.e., subject matter) rather than viewpoint. Thus, for example, regulations that restrict election signs to endorsements of major party candidates (viewpoint-based) and regulations that ban all election signs (content-based) are both highly suspect. In order to sustain such content-based regulations, government is required to show that the regulation is necessary to serve a compelling governmental interest and that it is narrowly drawn to achieve that interest.

Communities argue, however, that, since they can't prohibit and don't want to allow all signs, a sign ordinance needs to make distinctions among various categories of signs to achieve aesthetics, traffic safety, or other goals. The crux of the sign regulation problem is the courts' seeming inability to articulate a rule or standard that provides an adequate degree of predictability in judging the validity of ordinances that characterize signs by their content or ideas in order to differentiate their regulatory treatment.

The latest Supreme Court guidance on this dilemma comes from *City of Ladue v. Gilleo*, 512 U.S. 43 (1994), where a unanimous Supreme Court ruled that a ban on all residential signs, except for those falling within 10 exempted categories, violated the First Amendment rights of homeowners, because it totally foreclosed their opportunity to display political, religious, or personal messages on their own property. Despite the numerous exceptions in the ordinance, the Court, for the sake of argument, accepted the city's contention that the ordinance was a content-neutral time, place, or manner regulation, but still struck down the ordinance because the city had foreclosed an important and distinct medium of expression—lawn signs—to political, personal, or religious messages and had failed to provide adequate substitutes for such an important medium.

Justice Stevens' opinion in *Ladue* began by reviewing the Supreme Court's three previous sign cases—*Metromedia, Vincent,* and *Linmark Associates, Inc. v. Willingboro,* 431 U.S. 85 (1977)—and then noted "[t]hese decisions identify two analytically distinct grounds for challenging the constitutionality of a municipal ordinance regulating the display of signs" (512 U.S. at 50). Such a measure may be challenged either because it "in effect regulates *too little* speech because its exemptions discriminate on the basis of the signs' messages," or "[a]lternatively, such provisions are subject to attack on the ground that they simply prohibit *too much* protected speech" (512 U.S. at 50-51, emphasis added).

Thus, Justice Stevens clearly recognized the bind that communities are in when regulating signs: an overly restrictive ordinance risks prohibiting too much speech, but any effort to avoid that result, by creating exemptions from the general ban, may result in restricting too little speech (i.e., the exemptions suggest that government is impermissibly favoring certain messages over others). Conversely, any attempt to cure the defect of regulating too little speech by simply repealing all the exemptions raises anew the likelihood that the ordinance prohibits too much speech. This choice, between all or nothing, when it comes to sign regulations had also been recognized 10 years earlier in Justice Burger's dissent in *Metromedia.*

Marya Morris

In Ladue v. Gilleo, *the court made it clear that attempts to prohibit noncommercial residential signs are unlikely to survive even minimal scrutiny. Shown here: A traffic safety sign for family pets in Provincetown, Massachusetts.*

Although *Ladue* had argued that its sign ordinance implicated neither of these concerns because it was directed only at the signs' secondary effects, Justice Stevens expressed skepticism about the city's secondary effects rationale for its particular exemptions, and noted that exemptions may be generally suspect for a reason other than the concerns over viewpoint and content discrimination: "they may diminish the credibility of the government's rationale for restricting speech in the first place," citing *Cincinnati v. Discovery Network, Inc.* Unfortunately, for our purposes, after making this point, Justice Stevens turned away from any further analysis of either the too little vs. too much dilemma or the secondary effects question, and focused the remainder of his opinion on the issue that most concerned the plaintiff: Did she have a constitutional right to display an antiwar sign at her own home?

Not surprisingly, to pose the question in this way is to answer it. The fact that the ordinance struck at the very core of the First Amendment no doubt explains why Stevens at this point chose to treat the Ladue ordinance, despite its various exemptions, as being free of any impermissible content or viewpoint discrimination. By treating the ordinance as content-neutral, Stevens could easily show that a prohibition on noncommercial speech at one's own home could not be sustained under even a minimal level of scrutiny.

Stevens claimed, however, that invalidating Ladue's ban on almost all residential signs did not leave the city "powerless to address the ills that may be associated with residential signs," expressing confidence that the city could find "more temperate measures" to satisfy its regulatory goals. But the opinion provided scant guidance as to what such measures might entail, noting only that "[d]ifferent considerations might apply" if residents attempted to display commercial billboards or other types of signs in return for a fee and mentioning that "individual residents themselves have strong incentives to keep their own property values up and to prevent 'visual clutter' in their own yards and neighborhoods—incentives markedly different from those of persons who erect signs on others' land, in others' neighborhoods, or on public property" (512 U.S. at 50).

When the Supreme Court agreed to decide *Ladue*, expectations were raised that the Court would issue its first major pronouncement on local sign regulations in a decade. The Eighth Circuit Court of Appeals had found that the ordinance was a content-based regulation of speech

because the city favored commercial speech over noncommercial speech and favored some kinds of noncommercial speech over others. Observers hoped that the Court might clarify whether cities had any latitude in crafting exceptions to their sign regulations.

There was good reason to expect much from *Ladue*. In the decade since *Vincent*, the Court had addressed several First Amendment issues with implications for sign regulations. *Ladue* presented the court with an opportunity to clarify one or more of the following issues:

1. The secondary effects doctrine, first fully articulated in *Renton* and then clarified in *Boos v. Barry*
2. The reasonable fit requirement between legislative means and ends, stated first in *Fox* and reiterated in *Discovery Network,* both dealing with regulation of commercial speech
3. The standards for judging time, place, or manner restrictions elaborated in *Ward*
4. The possibility, suggested in the *Discovery Network* case, that the Court was prepared to reconsider the lesser standard of review it applied to commercial, as compared to noncommercial, speech

Expectations were also raised in *Ladue* because there seemed so little at stake were the Court to rule only on the narrow issue raised by the prohibition of Margaret Gilleo's signs. While it is pointless to speculate why the Court declined the opportunity to make *Ladue* its instrument for a definitive statement on sign regulation, we can productively discuss what implications the Court's decision does have for sign regulation.

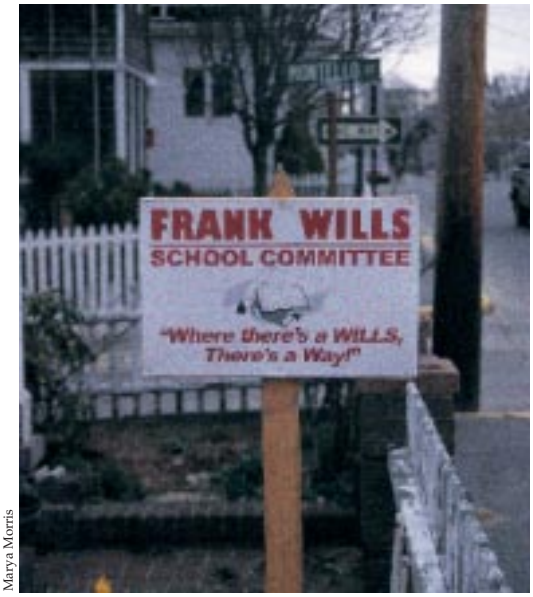
Ladue certainly makes clear that attempts to prohibit noncommercial residential signs are unlikely to survive even minimal scrutiny. The decision also shows that a community cannot successfully assert the secondary effects doctrine to justify sign prohibitions unless the secondary effects of the prohibited signs differ significantly from those of permitted signs in ways that are substantially related to the goals to be achieved by the prohibition. In other words, local government must be able to demonstrate that the secondary effects of the signs it seeks to regulate contribute far more significantly to the problem(s) it seeks to remedy than the secondary effects of the signs it is willing to permit. Finally, nothing in *Ladue* disturbs the rule, derived from the plurality opinion in *Metromedia,* that communities may prohibit off-premise commercial billboards but permit on-premise signs so long as on-premise signs are not restricted only to commercial messages. But, short of the invalidity of a ban on noncommercial residential signs, there is little in Justice Stevens' opinion to guide local officials attempting to maneuver between the Scylla of too much and the Charybdis of too little sign regulation.

Regulation of Political Signs

A sign ordinance, prohibiting political or election signs, is clearly unconstitutional and courts have struck down prohibitions on political signs that applied in both residential and other districts. For examples, see R*unyon v. Fasi*, 762 F.Supp. 280 (D. Hawaii 1991) and *Fisher v. City of Charleston*, 425 S.E.2d 194 (W.Va. 1992). Courts have also struck down sign ordinances that discriminated among different political messages. For example, in *City of Lakewood v. Colfax Unlimited Ass'n,* 634 P.2d 52 (Colo. 1981), the Colorado Supreme Court invalidated an ordinance that restricted the content of political signs to the candidates and issues being considered at an upcoming

election. The court construed the ordinance as prohibiting all ideological signs other than those concerning election matters, thus violating the principle that "[g]overnment may not set the agenda for public debate" (643 P.2d at 62).

Ordinances that place unreasonable limits on the number of political signs that may be displayed or that impose restrictive time limits only on political signs have also been struck down. For example, in *Arlington County Republican Committee v. Arlington County*, 983 F.2d 587 (4th Cir. 1993), the federal Fourth Circuit Court of Appeals invalidated a sign ordinance that imposed a two-sign limit on political signs. There are numerous other decisions invalidating time limits for political signs.[1] Some of the cases have suggested, however, that time limits on political signs might be permissible if they are part of a "comprehensive" program to address aesthetic issues. Thus, in *Collier v. City of Tacoma*, 854 P.2d 1046 (Wash. 1993), the Washington Supreme Court invalidated an ordinance that restricted the display of political signs in residential areas to the 60 days before and 7 days after an election but imposed no time restrictions on other temporary signs. This was done on the grounds that the city could not impose time restrictions on political speech to advance aesthetic interests until it could show that it was seriously and comprehensively addressing aesthetic concerns. Similarly, in *Tauber v. Town of Longmeadow*, 695 F.Supp. 1358 (D. Mass. 1988), a federal district court suggested that time limits may be valid if supported by a demonstration that the enacting government is seriously and comprehensively addressing aesthetic concerns in the community. Note, however, that these cases provided little guidance on how comprehensive the government program must be to justify the restrictions on political signs.



Marya Morris

Courts will support reasonable time limits on temporary political signs in residential areas, but such signs can not be subject to any greater restrictions than other temporary commercial or noncommercial signs in those areas.

Courts have also upheld content-neutral time limits placed on all temporary signs. For example, in *City of Waterloo v. Markham*, 600 N.E.2d 1320 (Ill. App. 1992), a state appellate court upheld an ordinance limiting temporary signs to 90 days against claims that the ordinance unnecessarily restricted political speech and favored commercial over noncommercial speech. The court, applying the *Ward* tests for time, place, or manner restrictions found that the 90-day limitation was constitutional.

Finally, while the Supreme Court, in *Members of the City Council v. Taxpayers for Vincent*, 466 U.S. 789 (1984), approved a government's prohibition of the posting of all signs, including political signs, on public property, an ordinance prohibiting the posting of any sign on public property without the written consent of the town board was struck down as an unconstitutional prior restraint on speech by a federal trial court in *Abel v. Town of Orangetown*, 759 F.Supp. 161 (S.D.N.Y. 1991), because the prohibition could be selectively applied to ban only those signs carrying messages disfavored by the board.

Distinguishing Between On-Premise and Off-Premise Signs

Local sign regulations often distinguish between on-premise and off-premise signs in an effort to restrict the location and number of commercial off-premise signs (i.e., billboards); however, such efforts often lead to serious legal problems because the regulations have the unintended and unconstitutional effect of placing greater restrictions on noncommercial signs than on commercial signs. Such regulations are discussed here because it is their effect on noncommercial signs that is the critical issue.

On-premise signs advertise goods or services offered on the site where the sign is located, while off-premise signs advertise products or services not offered on the same premises as the sign. Although this distinction is con-

tent-based, courts, including the Supreme Court in its *Metromedia* decision, accept it as being rationally related to valid police power objectives. Courts accept as rational a local determination that on-premise signs are an inseparable part of the business use of a piece of property, while off-premise advertising is a separate use unto itself that may be treated differently.

For example, in *National Advertising Co. v. Village of Downers Grove,* 561 N.E.2d 1300 (Ill. App. 2d Dist. 1990), *appeal denied,* 567 N.E.2d 333 (Ill. 1991), *cert. denied,* 501 U.S. 1261 (1991), the plaintiff challenged the validity of an ordinance permitting on-premise advertising but not allowing advertisement of off-premise businesses. It argued that "since the content of the sign determines whether it is permissible, i.e., a sign in an on-premise district must advertise the business on the premises or a non-commercial message, the ordinance is not a neutral time, place and manner restriction." The court disagreed: "The distinction between on-site and off-site advertising is not aimed toward the suppression of an idea or viewpoint." The court sustained the ordinance, concluding that it "furthers a substantial governmental interest, no greater that necessary, and is unrelated to the suppression of speech."

Banning or Restricting "Off-Premise" Signs

There is little question that local government may lawfully enact a ban limited to off-premise commercial signs. *National Advertising Co. v. City of Denver,* 912 F.2d 405 (10th Cir. 1990), a decision of the federal Tenth Circuit Court of Appeals, is one of the many cases upholding such an ordinance. Regulations have also been upheld that limit the height, size, and/or number of off-premise signs or that restrict their location, whether limited to commercial signs or including both commercial and noncommercial signs.

In *National Advertising Co. v. City of Raleigh*, 947 F.2d 1158 (4th Cir. 1991), for example, the federal Fourth Circuit Court of Appeals argued that, even if a municipal ordinance's size restrictions on outdoor off-premises advertising effectively prohibited all such advertising, it did not warrant a finding that the ordinance was overly broad or was not a substantial promotion of legitimate state interests if it was enacted to promote aesthetic and safety concerns—a legitimate state objective. Other cases have upheld various time, place, or manner regulations on off-premise signs.[2]

Off-premise sign regulations have been struck down, however, for a number of reasons. The plurality in *Metromedia, Inc. v. City of San Diego*, 453 U.S. 490 (1981), found San Diego's ban on off-premise signs to be invalid because exceptions to the ban were made for some, but not all noncommercial messages. Exempt signs included:

- government signs;
- signs located at public bus stops;
- signs manufactured, transported, or stored within the city, if not used for advertising purposes;
- commemorative historical plaques;
- religious symbols;
- signs within shopping malls;
- For Sale and For Lease signs;
- signs on public and commercial vehicles;
- signs depicting time, temperature, and news;
- approved temporary, off-premises subdivision directional signs; and
- temporary political campaign signs.

Thus, under the San Diego ordinance, an off-premise sign relating to a political campaign would be allowed, but one expressing a general political belief that did not pertain to a campaign would not be. The *Metromedia* plurality said, "With respect to noncommercial speech, the city may not choose the appropriate subjects for public discourse: 'To allow a government the choice of permissible subjects for public debate would be to allow that government control over the search for political truth'" (453 U.S. at 515).

Courts have followed *Metromedia* by striking down both off-premise sign regulations that make distinctions among forms of noncommercial speech and those that allow exceptions for certain commercial messages but not a general exception for noncommercial messages.[3] In contrast, regulations that exempt all noncommercial speech from a general ban on off-premise signs, have been upheld (see, e.g., *Major Media of the Southeast v. City of Raleigh*, 792 F.2d 1269 (4th Cir. 1986)) as have those where the definition of off-premise signs has been found not to include noncommercial messages (e.g., *City of Cottage Grove v. Ott*, 395 N.W.2d 111 (Minn. Ct. App. 1986)).

Off-premise sign regulations have been found invalid where the local government failed to show the interests it is seeking to promote through the regulations. While most courts merely require that the interests be mentioned in the ordinance, and then defer to the governing body's determination that the regulations substantially promote those interests (e.g., *National Advertising Co. v. Town of Babylon*, 703 F.Supp. 228 (E.D.N.Y. 1989), *aff'd in part* and *rev'd in part*, 900 F.2d 551 (2d Cir. 1990)), other courts have required a higher level of substantiation of the interests involved and the regulations' relationship to them. For example, in *Bell v. Stafford Township*, 541 A.2d 692 (N.J. 1988), the New Jersey Supreme Court struck down a prohibition on off-premise signs because the city failed to provide "adequate evidence that demonstrates its ordinance furthers a particular, substantial government interest, and that its ordinance is sufficiently narrow to further only that interest without unnecessarily restricting freedom of expression" (541 A.2d at 699-700).

Restricting the Content of Signs to "On-Premise" Commercial Messages

As discussed, the *Metromedia* plurality found fault with San Diego's allowing on-premise signs to contain commercial but not noncommercial messages. Since *Metromedia*, lower courts have routinely struck down local ordinances that do not allow on-premise signs to display noncommercial messages, while upholding ordinances that allow on-premise signs to display both commercial and noncommercial messages.[4] In some cases, courts have accepted the inclusion of the following or similar language as solving this problem: "Any sign authorized in this chapter is allowed to contain noncommercial copy in lieu of any other copy."[5]

Regulating Portable Signs

Local governments often enact special restrictions and prohibitions on portable signs based on the argument that the haphazard use of these signs is detrimental to several legitimate governmental interests, including aesthetics, traffic safety, electrical hazards, and hazards to persons and property during high winds because of insecure placement. Several courts have upheld stringent regulation of portable signs because they found that the restrictions were a reasonable approach to dealing with these risks.[6]

Regulations on portable signs have been struck down, however, when a court found they were irrational or overly stringent. In *Dills v. City of*

Marietta, 674 F.2d 1377 (11th Cir. 1982), for example, the federal Eleventh Circuit Court of Appeals affirmed an injunction against enforcement of an ordinance that placed time restrictions on the use of portable signs. The court found that the time restrictions would not further the city's claimed interest in traffic safety since the effect of the ordinance would be to exacerbate the distracting quality of portable signs: motorists would tend not to ignore portable signs when they appeared because they would learn that such signs were displayed for only a brief period, so they were used only to advertise something special.[7]

Despite these cases striking down regulation of portable signs, the trend of decisions has moved towards acceptance of such restrictions, if reasonable, on the ground that local government does not have to undertake a comprehensive approach to achieve aesthetic objectives but has the flexibility to regulate selectively (e.g., by restricting portable signs) in order to partially achieve the objective. For example, in *Lindsay v. City of San Antonio* , 821 F.2d 1103 (5th Cir. 1987), the federal Fifth Circuit Court of Appeals stated that cities can pursue the "elimination of visual clutter in a piecemeal fashion."

Bob Brown

Several courts have upheld stringent regulations—including outright bans—on portable signs, finding such regulations a reasonable approach to dealing with the negative impacts of such signs on community appearance and safety.

Regulating Real Estate Signs

In *Linmark Assocs., Inc. v. Township of Willingboro,* 431 U.S. 85 (1977), the United States Supreme Court held that a local government may not prohibit the use of temporary real estate signs in residential areas because such a prohibition unduly restricts the flow of information. While courts have upheld the imposition of reasonable restrictions on the size, number, and location of real estate signs in furtherance of legitimate interests (e.g., aesthetics), such restrictions, because they are content-based, are suspect and have been invalidated where the government has failed to convince the court that its regulations were necessary to achieve a legitimate governmental interest or were not aimed at curtailing information.

In *South-Suburban Housing Center v. Greater South Suburban Bd. of Realtors,* 935 F.2d 868 (7th Cir. 1991), *cert. den. sub nom. Greater South Suburban Board of Realtors v. City of Blue Island,* 502 U.S. 1074 (1992), for example, the federal Seventh Circuit Court of Appeals upheld restrictions on the size, placement, and number of realty signs to protect the aesthetic interests of a wooded semi-rural village. By contrast, in *Citizens United for Free Speech v. Long Beach Twp. Bd. of Comm'rs*, 802 F.Supp. 1223 (D.N.J. 1992), a federal trial court invalidated an ordinance in this resort community that permitted For Sale signs, but prohibited For Rent signs, during certain periods, on the grounds that the community presented no evidence to justify that the ordinance would achieve its claimed interest in aesthetics.

In a federal Sixth Circuit Court of Appeals case involving this issue, *Cleveland Area Bd. of Realtors v. City of Euclid*, 88 F.3d 382 (6th Cir. 1996), an organization of real estate brokers challenged a city ordinance permitting real estate signs only in windows as opposed to the more normal placement of the front yard. The Sixth Circuit viewed the ordinance as a content-neutral regulation but still struck it down based on the finding that the ordinance was neither narrowly tailored to achieve its claimed interest in aesthetics nor did it provide an adequate alternative channel of communication.[8]

While local government may not prohibit temporary real estate signs on private property, in *Members of City Council v. Taxpayers for Vincent,* 466 U.S. 789 (1984), the Supreme Court held that government may totally prohibit the posting of signs on public property. Thus, local government may prohibit the posting of real estate Open House directional signs in the

public right-of-way or attached to public property, such as street and traffic lights, as part of a total prohibition on posting signs in these public locations. A prohibition that applied only to the posting of real estate signs in the public right-of-way would, however, be viewed as a content-based restriction and be subject to strict scrutiny, with government facing the difficult task of justifying such a partial ban. Finally, local government may totally prohibit posting real estate Open House directional signs on private property since such signs are merely another form of commercial off-premise sign.

Where ordinances *allow* temporary real estate signs in residential areas, while *prohibiting* political and other noncommercial temporary signs, courts will declare the ordinance invalid, both because they restrict the free speech rights of property owners without providing an alternative channel of communication and grant more favorable treatment to commercial than noncommercial messages.[9]

The upshot of these rulings is that temporary signs containing both noncommercial and commercial on-premise messages must be allowed in residential areas. The reasoning of these rulings would apply as well to nonresidential areas. For example, in *Gonzales v. Superior Court*, 226 Cal. Rptr. 164 (Cal.App. 1986), a state appellate court invalidated an ordinance prohibiting the placement of temporary noncommercial signs on vehicles while permitting vehicles to display temporary commercial signs.

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Local governments have alternately given real estate signs preferential treatment by allowing them to be posted indefinitely while imposing strict time limits on noncommercial signs, such as campaign signs. Other local governments have tried to ban real estate signs entirely. Courts have invalidated total prohibitions on real estate signs and directed local governments to permit small temporary signs of any type on private property in residential areas.

THE TAKINGS ISSUE: REQUIRING THE REMOVAL OR AMORTIZATION OF ON-PREMISE COMMERCIAL SIGNS

The Fifth Amendment to the U.S. Constitution contains two separate guarantees for property rights: the due process clause and the "takings" clause. The due process clause—"No person shall . . . be deprived of life, liberty, or property, without due process of law"—safeguards citizens from government action that arbitrarily deprives them of fundamental rights and may be applied both to the substance and procedures of governmental actions. The takings clause—"nor shall private property be taken for public use, without just compensation"—was "designed to bar Government from forcing some people alone to bear public burdens which, in all fairness and justice, should be borne by the public as a whole."[10] In this century, the U.S. Supreme Court has interpreted the due process clause of the Fourteenth Amendment as making these two provisions of the Fifth Amendment, along with certain other constitutional guarantees, applicable to the actions of state and local government and has developed a variety of takings tests to judge the constitutionality of government regulations that affect property interests.[11]

Takings claims may arise in the context of regulation of on-premise signs whenever government requires the removal of a sign. Government may lawfully require the removal of illegal or unsafe signs without raising significant takings issues because in such cases the sign's owner either never acquired a property right in the first place (illegal signs) or has a property right that may be terminated because it constitutes a nuisance (unsafe signs). However, requiring the removal of a lawfully erected and well-maintained sign that has simply become nonconforming as a result of regulation enacted after the sign was erected can give rise to a takings challenge because the sign owner's property rights are being infringed upon to some degree. Amortization, permitting a nonconforming sign to remain in use for a period long enough to allow the owner to fully depreciate his investment, is a technique often used by government to defeat such takings claims.

Removal of Unsafe and Illegal Signs

Local government may require the immediate removal of any sign that poses a hazard to the safety of the public because no one has a right to maintain a dangerous condition on their property. Similarly, since no one has a right to maintain an illegal use on their property, cities may also require the immediate removal of signs that are illegal, rather than merely nonconforming.[12]

Removal of Nonconforming Signs

Although some state zoning enabling laws prohibit the forced termination of a lawful nonconforming use (e.g., Ohio and New Hampshire), a local government may, as a general matter, require timely compliance with all land development regulations, so long as this does not so diminish the value of the property as to constitute a taking. Thus, sign ordinances often contain provisions requiring the removal of nonconforming signs. In practice, this usually means that a sign that is smaller in area and/or lower in height than the existing sign will replace the nonconforming sign. Cities that have adopted such provisions argue that nonconforming signs, because they are larger or taller, have greater negative aesthetic and traffic safety impacts. Cities also argue that, because nonconforming signs are usually larger, a business with a smaller conforming sign may be put at a competitive disadvantage compared to a business with a larger nonconforming sign that has been "grandfathered."

Must a city compensate the sign owner for lawfully requiring the removal of a nonconforming sign? The answer depends on whether there is a state statutory requirement mandating compensation, or, in the absence of such a requirement, whether the removal constitutes a compensated taking under the federal or state constitutions. Thus, for example, several cases have held that a local government may require the removal of a nonconforming sign that has been poorly maintained since it has little monetary value.[13] As a general matter, it has proved quite difficult for the owner of a nonconforming on-premise commercial sign to prove that requiring removal of the sign constitutes a taking, particularly where the ordinance provides for an amortization period. (See the section on amortization of nonconforming signs below.)

Requiring Compliance With Current Zoning Standards

Courts have also generally agreed that local governments may require owners of nonconforming structures and uses to bring them into compliance upon the happening of prescribed events. For example, conformity with the sign ordinance may be required as a precondition to expanding the nonconforming sign, as a precondition to reconstruction of the sign after its substantial destruction, before taking action that would extend the life of the nonconforming sign, or after the sign has been abandoned.[14]

This is an area, however, where the Supreme Court's expanded protection of commercial speech may be changing the way lower federal and state courts view certain attempts to require conformance. For example, in *Kevin Gray-East Coast Auto Body v. Village of Nyack,* 566 N.Y.S.2d 795 (N.Y. App. Div. 1991), a local business changed hands and the new owner wanted to reflect this with a new name for the business. A village ordinance allowed nonconforming commercial signs to remain in place so long as the copy on the signs was not changed. The court held that the ordinance failed First Amendment scrutiny by prohibiting the owner from changing the copy on the sign. "Generally, absent a showing that the predominant purpose of an ordinance is not to control the content of the message . . ., such truthful commercial

speech may not be prohibited on the basis of its content alone." Thus, the sign could remain in place after the new owner changed the copy to reflect the change in ownership. This case casts doubt on any regulation that prohibits changing the copy of a nonconforming sign.[15]

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Many large and tall signs become nonconforming when a sign ordinance is revised. Some states require local governments to pay sign owners cash compensation for the removal of nonconforming signs, particularly for off-premise billboards. However, a majority of courts that have considered amortization provisions—through which a sign owner is required to remove noncompliant signs that have depreciated in value after a prescribed number of years—have found they are a constitutionally acceptable method for compensating owners for the removal of nonconforming signs.

Amortization of Nonconforming Signs

Amortization is another widely used technique to effect the removal of nonconforming signs. Amortization provisions permit a nonconforming sign to remain in place for a period that a local or state government has judged to be sufficient to allow the owner to recoup the cost of the sign before requiring its removal. In the absence of an express statutory requirement that "just compensation" be paid, the majority of courts that have considered such amortization provisions (in most cases as applied to off-premise signs) have found them to be a constitutionally acceptable method for achieving the removal of nonconforming signs.

Where amortization has been allowed, the general rule is that the amortization period must allow the owner of the sign a reasonable amount of time to recoup his investment. The courts have looked to several factors to determine reasonableness, including the:

1. amount of initial capital investment;
2. amount of investment realized at the effective date of the ordinance;
3. life expectancy of the investment;
4. existence of lease obligations, as well as any contingency clauses permitting termination of such leases;
5. salvage value of the sign, if any; and
6. extent of depreciation of the asset for tax and accounting purposes.

In most cases, courts have not required governments to produce an economic analysis to prove that the owner's investment has been fully recouped over the amortization period. This position is based on a leading case from the New York Court of Appeals, *Modjeska v. Berle,* 373 N.E.2d 255 (N.Y. 1977), which held that complete recovery of the amount invested is not necessary and comports with the principle that some uncompensated economic loss is constitutionally allowable as a consequence of beneficial police power regulation. There are, however, a growing number of cases in which courts have required that local governments present evidence addressing the economic value of off-premise billboards in order to determine whether an amortization period provides reasonable compensation by allowing the owner to recoup his investment. At issue is the life of a billboard and whether allowing a billboard to stand for a certain number of years provides reasonable compensation relative to the value of the billboard at the end of its life.

In *Naegele Outdoor Advertising, Inc. v. City of Durham,* 803 F.Supp. 1068 (M.D.N.C. 1992), *aff'd*, 19 F.3d 11 (4th Cir.), *cert. den*. 513 U.S. 928 (1994), for example, the federal district court undertook a detailed factual inquiry of the city's virtually complete ban on commercial billboards before finding that the five-and-one-half-year amortization period did not deny Naegele the economically viable use of its property. The federal Fourth Circuit Court of Appeals then affirmed this finding on appeal.

Listed in the sidebar on page 140 are state and federal court decisions from jurisdictions that have upheld statutes or ordinances with amortization periods ranging from 10 months to 10 years. Unless otherwise

indicated, the amortization provision upheld in these decisions was applied to off-premise signs. It is important to note, however, that none of these decisions should be interpreted as affording local governments in any of these jurisdictions unquestioned authority to enact an amortization provision, even one equal in duration to the one approved in the cited case. The reasonableness of an amortization provision is decided on a case-by-case basis. The fact that a particular amortization provision was found to be justified based on the evidence presented in a given case does not mean that a similar provision could be found to be reasonable under different circumstances.

The decision in *Northern Ohio Sign Contractors v. City of Lakewood*, 513 N.E.2d 324 (Ohio 1987), is a good example of this need for caution. Because the Ohio statutes ban amortization of nonconforming uses, courts in that state require that a nonconforming sign be a nuisance or a safety hazard before local government may force its removal. In *Northern Ohio Sign Contractors,* although the Ohio Supreme Court ruled that "sign blight . . . is the functional equivalent of a public nuisance" and allowed nonconforming signs to be amortized, the ruling was a 4-3 decision, with the dissenters arguing strenuously against the majority position on the ground that the facts presented simply did not support the ruling. In light of this dissent and the unique facts in the case (there was a heavy concentration of signs in an urban area that the federal Department of Housing & Urban Development had declared "blighted"), a local government in a more suburban setting could find that a court would reject *Northern Ohio Sign Contractors* as authority for an amortization provision targeting a few widely scattered freestanding on-premise signs.

Also listed in the sidebar are decisions from jurisdictions that have prohibited the amortization of signs based either on state statutory or constitutional limitations. These decisions are the "mirror image" of those from the pro-amortization jurisdictions listed above them in that they should not be interpreted as absolutely prohibiting any local government in that jurisdiction from enacting an amortization provision. For example, in several of the cases involving state laws, the statutory prohibition on amortization is limited to signs located within a specified distance from a federal highway.

SIGN INDUSTRY PERSPECTIVE ON AMORTIZATION

Amortization is a method used by some local governments to eliminate nonconforming signs within a proscribed period of time, typically following the enactment of a new sign ordinance. The rationale for affecting such a taking of private property without paying cash compensation is that signs are typically depreciated over five years for tax purposes and financed by banks for comparable periods. The table on page 140 indicates which state courts have supported the use of amortization and which have rejected it. The sign industry feels strongly that amortization should be avoided and has worked actively to dissuade local governments from using it for several reasons. First, in many instances, a survey of existing signs prior to a sign ordinance revision can reveal that the "problem" signs (in other words, those that have prompted the city to revise the ordinance) may have been installed illegally in the first place and could be removed using standard enforcement measures. Second, the sign indiustry believes that amortization provisions in a sign ordinance simply send the wrong message to businesses; that is, if the prospect exists that a business may be forced to remove its signage, it will have little incentive to install signs that are well crafted and aesthetically pleasing. Local governments considering amortization should be aware of the sign industry's objections to the technique and should work collaboratively with local sign makers and businesses toward a resolution of how best to deal with illegal and nonconforming signs.

PROVISIONS FOR ENFORCEMENT

Relationship to Code Enforcement

A requirement that no sign may lawfully be displayed without first obtaining a permit can greatly assist local governments in achieving the goals stated in their sign ordinances. The permitting system can prevent the erection of illegal signs and also create an inventory of lawfully erected signs, which assists government in identifying any signs that are being displayed illegally. A further requirement—that the permit must be renewed at specified intervals—can serve to identify and require the repair, replacement, or removal of signs that have become either unsafe or unsightly due to inadequate maintenance and repair. Enforcement of such a permit system is greatly enhanced by a requirement that each sign carry on its face a "stamp" or other mark indicating that the sign is currently in compliance with the permit requirement.

Permit Fees

Local government may lawfully charge a sign permit fee so long as the amount of the fee is reasonably related to the costs actually incurred in the administration and enforcement of the permit system. In other words, it

CASES ACCEPTING AMORTIZATION OF SIGNS

Federal:	*Naegele Outdoor Advertising, Inc. v. City of Durham*, 19 F.3d 11 (4th Cir. 1994), *affirming* 803 F.Supp. 1068 (M.D.N.C. 1992)(8 years); *Art Neon Co. v. City & County of Denver*, 488 F.2d 118 (10th Cir.1973), *cert. denied*, 417 U.S. 932 (1974)(5 years); *E.B. Elliot Advertising Co. v. Metropolitan Dade County*, 425 F.2d 1141 (5th Cir. 1970)(5 years); *Brewster v. City of Dallas*, 703 F. Supp. 1260 (N.D. Tex. 1988)(10 years for on-premise signs)
Arkansas:	*Donrey Communications v. City of Fayetteville*, 660 S.W.2d 900 (Ark. 1983)(4 years); *Hatfield v. City of Fayetteville*, 647 S.W.2d 450 (Ark. 1983)(7 years for on-premise auto dealership sign)
Connecticut:	*Murphy v. BZA of Town of Wilton*, 161 A.2d 185 (Conn. 1960)(2 years)
Delaware:	*Mayor & Council of New Castle v. Rollins Outdoor Advertising*, 475 A.2d 355 (Del. Super. Ct. 1984)(3 years)
Florida:	*Lamar Advertising v. City of Daytona Beach*, 450 So. 2d 1145 (Fla. 5th DCA 1984)(10 years); *Webster Outdoor Advertising v. City of Miami*, 256 So.2d 556 (Fla. 3d DCA 1972)(5 years)
Georgia:	*City of Doraville v. Turner Communications Corp.*, 223 S.E.2d 798 (Ga. 1976)(2 years)
Illinois:	*Village of Skokie v. Walton on Dempster, Inc.*, 456 N.E.2d 293 (Ill. App. 1983)(7 years for on-premise auto dealership sign)
Maine:	*Inhabitants of Boothbay v. National Advertising Co.*, 347 A.2d 419 (Me. 1975)(10 months)
Maryland:	*Donnelly Advertising Corp. of Md., v. City of Baltimore*, 370 A.2d 1127 (Md. 1977)(5 years)
Michigan:	*Adams Outdoor Advertising v. East Lansing*, 483 N.W.2d 38 (Mich. 1992)(8 years, but subsequently extended to 12 years)
New York:	*Syracuse Savings Bank v. Town of DeWitt*, 436 N.E.2d 1315 (N.Y.1982)(4 years and 9 months); *Suffolk Outdoor Advertising v. Hulse*, 373 N.E.2d 263 (N.Y. 1977)(3 years with opportunity for extension); *Modjeska Sign Studios, Inc. v. Berle*, 373 N.E.2d 255 (NY 1977)(6 years)
North Carolina:	*R.O. Givens, Inc. v. Town of Nags Head*, 294 S.E.2d 388 (N.C. Ct. App. 1982)(6 years); *County of Cumberland v. Eastern Fed. Corp.*, 269 S.E.2d 672 (N.C.App. 1980)(3 years)
North Dakota:	*Newman Signs, Inc. v. Hjelle*, 268 N.W.2d 741 (N.D. 1978)(5 years)
Ohio:	*Northern Ohio Sign Contractors v. City of Lakewood*, 513 N.E.2d 324 (Ohio 1987)(5 1/2 years applied to on-premise signs)
Texas:	*City of Houston v. Harris County Outdoor Advertising*, 732 S.W.2d 42 (Tex.App. 1987)(6 years); *Lubbock Poster Co. v. City of Lubbock*, 569 S.W.2d 935 (Tex.App. 1978)(6 1/2 years)
Vermont:	*State v. Sanguinetti*, 449 A.2d 922 (Vt. 1982)(5 years)

CASES REJECTING AMORTIZATION OF SIGNS

California:	*Patrick Media Group v. California Coastal Commission*, 6 Cal.Rptr.2d 651 (App. 1992)(state law)
Colorado:	*City of Fort Collins v. Root Outdoor Advertising*, 788 P.2d 149 (Colo. 1990)(state law)
Georgia:	*Lamar Advertising v. City of Albany*, 389 S.E.2d 216 (Ga. 1990) (unconstitutional taking)
Maryland:	*Chesapeake Outdoor Enterprises v. City of Baltimore*, 597 A.2d 503 (Md.App. 1991)(state law)
New Hampshire:	*Dugas v. Town of Conway*, 480 A.2d 71 (N.H. 1984)(unconstitutional taking)
New Mexico:	*Battaglini v. Town of Red River*, 669 P.2d 1082 (N.M. 1983)(state law)
Tennessee:	*Creative Displays v. City of Pigeon Forge*, 576 S.W.2d 356 (Tenn.App. 1978)(state law)

is legal to require sign owners to pay all reasonable costs incurred by a local government associated with the operation of a sign permitting requirement. For example, this includes the administrative costs for processing and reviewing applications and renewals, and the cost of inspections, such as the salaries of inspectors. Note, however, that if a sign permit fee is challenged, local government will bear the burden of proving that the fee charged bears a reasonable relationship to the actual costs of administering the permit system. If the fee has been calculated properly, this is not a problem, but courts will invalidate sign permit fees if a local government fails to show that the fee was reasonably related to the costs of enforcement.[16]

Prior Restraint Issues

As previously discussed, any regulation that makes the right to communicate subject to the prior approval of a government official is presumed to be a prior restraint on freedom of expression. In the context of sign regulations, any type of permit, license, or conditional use approval that is a content-based regulation of expression (e.g., requiring permits only for political signs) is clearly a prior restraint. Such a regulation would not be permissible unless government could show that the licensing or permitting scheme:

(1) is subject to clearly defined standards that strictly limit the discretion of the official(s) administering the scheme; and

(2) meets stringent procedural safeguards to guarantee that a decision to grant or deny the license is rendered within a determined, short period of time with provision for an automatic and swift judicial review of any denial.

The U.S. Supreme Court has, however, not yet applied the prior restraint doctrine to content-neutral time, place, or manner regulations outside the context of zoning restrictions on adult entertainment businesses. Even so, it is doubtful that any court would uphold a time, place, or manner permit or licensing system that placed unfettered discretion in the hands of a government official to deny a sign permit. Thus, a court would strike down a permit system in which the only standard for approving the location of a sign was "The Building Inspector finds the location acceptable." For example, in *Desert Advertising, Inc. v. City of Moreno Valley,* 103 F.3d 814 (9th Cir. 1996), *cert. den. sub. nom. City of Moreno Valley v. Desert Advertising, Inc.* 522 U.S. 912 (1997), the federal Ninth Circuit Court of Appeals struck down an ordinance where the only standards for granting a sign permit were [the sign] "will not have a harmful effect upon the health or welfare of the general public" and "will not be detrimental to the aesthetic quality of the community." Similarly, in *North Olmsted Chamber of Commerce v. City of North Olmsted,* 86 F.Supp.2d 755 (N.D. Ohio 2000), a federal district court stuck down the city's sign code in part because of the broad discretion it granted the code administrator to grant or deny a permit.[17]

Conditional Uses

The critical legal issue raised when signs are treated as conditional uses (also known as special uses or special exceptions) is the prior restraint question discussed above in relation to permits and licensing schemes. Since courts make no fundamental distinction whether a sign permit or a conditional use requirement imposes the prior restraint, the legal analysis above may be applied equally to conditional uses.

PROVISIONS FOR FLEXIBILITY

The most common approach to sign regulation is the specification of standards that determine the number, size, height, and location of various types of signs in business and other districts. In such a "standards" ordinance, flexibility may be achieved through variance provisions, creating either special districts or overlay districts, or by building flexibility into the standards themselves.

Variances

Variances are constitutionally mandated flexibility devices included in zoning ordinances to ensure that an ordinance, as applied to a particular use or property, is not arbitrary or unreasonable or does not effect a taking of private property. There are two types of variances:

1) a use variance, which, if granted, allows a property owner to maintain a use that is not allowed in the zoning district in which the property is located; and

2) an area variance, which, if granted, accords a property owner relief from the application of some dimensional restriction, such as minimum lot or building size, height limits, or setback requirements.

While use variances were a much-needed device three or more decades ago, as zoning ordinances were first being introduced into many communities, they have, more recently, become strongly out of favor in most jurisdictions as communities have enacted more sophisticated flexibility devices, such as conditional uses and overlay zones. The legal standard for granting a use variance, generally termed "unnecessary hardship," is extremely stringent and intended only for situations where the failure to provide relief from the terms of the zoning ordinance would leave no viable economic use for the property. Area variances, in contrast, remain a much-needed element of even the most skillfully drawn zoning ordinance since no generally applicable standards can accommodate a property with unique dimensional and/or topographic peculiarities. The legal standard for granting an area variance, generally termed "practical difficulties," is less demanding than that for a use variance.

The application of sign regulations to specific properties will often give rise to requests for an area variance due to the peculiarities of the property involved. A common situation is when adherence to the sign code would seriously compromise the visibility of a sign and thus potentially harm the economic viability of the business. This situation can occur, for example, where a significant grade difference exists between the property and an adjacent or nearby street or highway from which the business is expected to draw significant vehicular traffic and with a business sign limited to the height, type, or location, permitted by the ordinance that would not be visible from that street or highway. In such cases, there is little reason why a variance should not be granted.

In California, the problem posed to businesses by the situation described above was recognized by the state legislature in enacting California Business and Professions Code Section 5499, which states:

> Regardless of any other provision of this chapter or other law, no city or county shall require the removal of any on-premises advertising display on the basis of its height or size by requiring conformance with any ordinance or regulation introduced or adopted on or after March 12, 1983, if special topographic circumstances would result in a material impairment of visibility of the display or the

> owner's or user's ability to adequately and effectively continue to communicate with the public through the use of the display. Under these circumstances, the owner or user may maintain the advertising display at the business premises and at a location necessary for continued public visibility at the height or size at which the display was previously erected and, in doing so, the owner or user is in conformance.

A recent appellate decision, *Denny's Inc. v. City of Agoura Hills,* 66 Cal.Rptr.2d 382 (Cal.App. 1997), illustrates how this provision operates. Several businesses that drew a significant amount of their business from the nearby Ventura Freeway were faced with the obligatory removal of their freestanding signs after the city enacted an ordinance that made all freestanding and pole signs nonconforming, and mandated their removal at the expiration of an amortization period. The affected businesses requested variances from the ordinance. Their requests were denied by the zoning board and again on appeal to the city council. The businesses then sued the city under the California statute.

At trial, the court found that each individual business met the statutory test—that "special topographic circumstances would result in a material impairment of visibility of the display or the owner's or user's ability to adequately and effectively continue to communicate with the public through the use of the display"—because a sign in conformance with the ordinance would either not be visible at all from the freeway or not be visible in time for drivers to exit safely at the off-ramp. As a result, there would be "a material impairment in the commercial effectiveness of a conforming sign" because each of the businesses relied on its existing sign to attract a substantial proportion of its customers from the highway. The appellate court affirmed these findings, and the businesses were permitted to retain their signs as conforming uses.

Common examples of when a variance is likely to be appropriate include allowing larger signs on buildings that are so far from the street that a conforming sign cannot be read from the street, and allowing an additional sign on corner buildings that front on two main streets when the code limits signs to the building façade fronting on a single street.

Special Districts and Overlay Districts

The unique signage needs of particular areas can be accommodated by drafting district-specific standards that take into account the area's regulatory and economic development goals. Such differences in regulatory treatment may be justified based on a clearly articulated plan for a special district that is designated on the zoning map (e.g., a historic district, a downtown business district, or an entertainment district). Another approach to accommodating specific signage needs is the creation of an overlay district that can be applied on an as-needed basis depending on the planning and economic development goals of the community. (See Chapter 3 for additional information on overlay districts and flexible standards.)

"Flexible" Standards

It is also feasible to build significant flexibility into the standards themselves. This can be accomplished, for example, by stating certain location choices, constraints, and the maximum square footage for signs, but allowing the size, number, and precise location of the signs to be determined by the property owner or tenant. Another way to add flex-

ibility to standards is to allow planning department staff to grant "administrative variances" from the sign ordinance within a specified range of discretion.

Design Review

In a design review sign ordinance, the appearance and location of signs in some or all districts is subject to aesthetics-based review by a special board or commission or by an existing body, such as a planning commission. Design expertise may be provided by the members of the board/commission, or by a design professional hired as staff to the board/commission. A complete discussion of the issues raised by the use of design review to achieve a community's aesthetic goals as they relate to signs may be found in Chapter 3.

COMMERCIAL ON-PREMISE SIGNS AND THE FIRST AMENDMENT

Local regulation of commercial on-premise signs primarily takes the form of content-neutral, time, place, or manner controls that apply to signs classified by structure or location, such as freestanding, wall, or roof signs. It is not unusual, however, to find that a local government has also imposed prohibitions on certain types of signs (e.g., pole or freestanding signs, neon signs). Most courts that have considered First Amendment challenges to such regulations have applied the *Central Hudson* analysis or some other form of intermediate scrutiny to test their validity. Further, the majority of courts have applied intermediate, rather than strict, scrutiny even where regulations categorize commercial signs for differing regulatory treatment based on their content or appear to impose a prior restraint in the form of licensing or permitting requirements. As noted previously, this is because the Supreme Court has to date not applied the prior restraint doctrine to time, place, or manner regulations and signaled that it would permit some limited types of content-based regulation of commercial signs.

On the other hand, when local governments actually attempt to censor the content of the messages displayed on commercial signs (e.g., by prohibiting the display of gasoline prices at service stations), courts have applied strict scrutiny and struck down the regulations. Further, in the past few years, several courts have struck down local regulation of commercial on-premise signs as in violation of the First Amendment because they viewed certain provisions, which fell short of actual censorship, as still imposing unlawful content restrictions. Because many of these cases involved regulations that "prohibited," rather than regulated, certain categories of signs, their application may be limited to situations involving "content-based prohibitions" of certain categories of commercial signs.

Other cases, however, do involve regulations that government contended were content-neutral time, place, or manner restrictions but which courts struck down as invalid content-based restrictions. It is not yet clear if these decisions signal the beginning of a movement towards closer judicial scrutiny of commercial sign regulations. A note of caution must also be sounded in regards to the decisions that come from state trial or intermediate appellate courts, since many of these opinions exhibit confusion in addressing complex and rapidly evolving First Amendment doctrines.

TIME, PLACE, OR MANNER REGULATION OF ON-PREMISE COMMERCIAL SIGNS

The Reasonableness Standard

Historically, courts have been very deferential to local government when they reviewed time, place, or manner restrictions on commercial signs, and only strike down limits on the number, size, height, and location of signs if they

find them to be arbitrary or irrational. For example, in *Rhodes v. Gwinnett County,* 557 F.Supp. 30 (N.D. Ga. 1982), a federal trial court invalidated a county regulation that allowed only one sign per premises but placed no controls on the size of that sign on the grounds that this regulation neither promoted traffic safety nor improved the appearance of the community because "any imaginable aggregation of signs, no matter how offensive or distracting, would likewise be permitted . . . so long as each of the component signs were pieced together to form a single whole" (557 F.Supp. at 33).

On occasion, a court applying this reasonableness standard would also note the First Amendment implications that resulted from arbitrary regulations. For example, in *State v. Miller,* 416 A.2d 821 (N.J. 1980), a case involving a noncommercial sign, the New Jersey Supreme Court, after announcing a general rule that size limits would be considered arbitrary if they did not "permit viewing from the road, both by persons in vehicles and on foot," also noted that "Inadequate sign dimensions may strongly impair the free flow of protected speech . . . " (416 A.2d at 828).

Approval of Legitimate Time, Place, or Manner Regulations

When local governments enact sign regulations that are entirely content-neutral, regulating only the size, location, type, and number of signs, courts have little difficulty in upholding the ordinance. For example, in *Bender v. City of St. Ann,* 816 F.Supp. 1372 (E.D. Mo. 1993), *aff'd* 36 F.3d 57 (8th Cir. 1994), federal trial and appellate courts rejected due process, equal protection, and First Amendment challenges to an ordinance regulating the size, type, and number of wall signs. On the First Amendment claim, the court held that the ordinance, which did not distinguish between commercial and noncommercial signs, satisfied *Central Hudson*. It allowed a variety of sign options and directly advanced the city's substantial interests in eliminating visual clutter and distractions to traffic.

Wilson v. City of Louisville, 957 F.Supp. 948 (W.D. Ky 1997), provides another example of how the courts treat a legitimate time, place, or manner regulation. There, a federal trial court had little trouble upholding an ordinance that reduced the maximum allowable size of both commercial and noncommercial "small freestanding signs." Applying the *O'Brien* standard, the court found that the city had a substantial interest in safety and protecting the community from visual nuisances. It also agreed that the ordinance directly advanced those interests and was no broader than necessary. There was no evidence that users of larger portable signs could not adequately convey their messages on smaller portable signs or by other means. A similar ruling was made by a state appellate court in *Atlantic Refining & Marketing Corp. v. Board of Commissioners,* 608 A.2d 592 (Pa. Commw. Ct. 1992), where the court had no trouble rejecting a First Amendment challenge to an ordinance that merely restricted the height of commercial signs.

Restrictions on Sign Illumination

Although decisions are split in their treatment of regulatory prohibitions for particular types of illumination for signs, courts have been consistent in requiring that local government demonstrate that the prohibited type of illumination has a direct, specific, negative impact upon the aesthetic goals of the ordinance. For example, in *Asselin v. Town of Conway*, 628 A.2d 247 (N.H. 1993), the New Hampshire Supreme Court upheld an ordinance that prohibited new internally lit signs but allowed the "grandfathering" of existing internally illuminated signs when there was expert testimony stating that internally illuminated signs appear as disconnected squares

Local governments that prohibit certain types of sign illumination, such as neon, to achieve aesthetic or safety goals, should be prepared to prove why such lighting has a greater negative impact than other forms of sign lighting.

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of light, which, in the aggregate, create a visual barrier to the natural environment. The court stated:

> The evidence supports a finding that the restriction on internally lighted signs is rationally related to the town's legitimate, aesthetic goals of preserving vistas, discouraging development that competes with the natural environment, and promoting the character of a country community (628 A.2d at 250-51).[18]

In one recent case, *State v. Calabria, Gilette Liquors*, 693 A.2d 949 (N.J.Super. L.D. 1997), a state appellate court struck down a prohibition of neon signs. Although the court mislabeled the standard it applied (the court stated it was analyzing the prohibition on neon as a total ban, but its approach appears to be that used to analyze the reasonable fit question for commercial speech), both its application of the standard and the outcome of the decision are correct. In this case, a local government prohibited the use of neon in signs as one aspect of its regulating the size, placement, lighting source, and degree of illumination of commercial signs to prevent the look of "highway commercial signage." The court found, however, that the local officials could not demonstrate how the ban advanced the community's interest in aesthetics:

> The record is devoid of evidence, facts or analysis why the mere existence of neon is offensive to that goal. There is no evidence that there are unusual problems in the use of neon that cannot otherwise be regulated as other

> forms of lighting, specifically, as to degree of illumination; amount of light used within a given space or size of structure; direction of the light; times when the light may be used; or number of lights used on the interior of the store. It is apparent that the appearance of the commercial district may be enhanced by limiting forms of lighting, but it is not apparent as a matter of experience—or of fact—that a complete elimination of one form of lighting has any impact on the undesirable "highway" look of the town. There is no evidence that neon is, in and of itself, inconsistent with careful design or tasteful presentation of advertisements, the general goal of aesthetic restrictions. In fact, [the town's expert] acknowledged that electronically lit gasoline station signs "very well may" give an appearance of highway commercial signage; that "brightly lighted signs" or signs "thirty to forty feet high" or "massive signs in terms of area" may give that appearance. Indeed, even the illuminated signs allowable under the ordinance could constitute the look of a highway commercial zone. "It all depends," [the expert] states. If it all depends, then it can otherwise be regulated, rather than banned (693 A.2d at 954-55).

WHEN IS A SIGN REGULATION CONTENT-BASED?

In *North Olmsted Chamber of Commerce v. City of North Olmsted,* 86 F.Supp.2d 755, (N.D. Ohio 2000), a federal trial court ruled that a sign ordinance that not only classified signs by their structure (wall, pole, etc.)—which is clearly not a content-based classification—but also by their use ("identification sign," "information sign," etc.) was content-based because "the classifications by use section categorizes, defines, and/or limits signs by their content. The content of a sign determines whether it is allowed to be erected in a business district" (86 F.Supp.2d at 770). The decision provided several examples about the way the use classifications categorize, define, and/or limit signs by their content. One example noted that a "directional sign" in front of a business could contain words such as "Enter Here" or "Entrance," but could not display the McDonald's "golden arches" logo or the words "Honda Service." A second described how an "identification sign" could include only the "principal types of goods sold or services rendered" but "the listing of numerous goods and services, prices, sale items, and telephone numbers" was prohibited; thus, a Dodge dealership's sign could display its name—Great Northern Dodge—but was prohibited from displaying the "Five Star Dealer" designation it had been awarded by the Daimler-Chrysler Corporation.

The court ruled that such content-based regulations of commercial speech should receive "intermediate scrutiny with *bite* under the four-part *Central Hudson* test . . . " (at 769, emphasis added). Applying this test, the court found that the city was unable to provide "any evidence to show why their content-based restrictions directly and materially contribute to their goal of safety and aesthetics. In fact, many of the City's content-based restrictions fail to contribute to safety and aesthetics and seem to be unrelated to these goals" (at 773). The court concluded that the sign ordinance, as a whole, lacked rationality and was unconstitutional.

In another case, *Citizens United for Free Speech II v. Long Beach Township Board of Commissioners,* 802 F.Supp. 1223 (D.N.J. 1992), a federal trial court applied strict scrutiny in striking down a township ordinance that placed restrictions on real estate signs, including a ban on certain types of For Rent signs. The ban prohibited in-ground For Rent signs, although allowing window signs, from June 1st to October 1st because the mayor and council thought the abundance of For Rent

signs during the summer vacation season made this resort town undesirable. A federal trial court held that the ordinance constituted content-based regulation of commercial speech, triggering strict scrutiny, and then found the township could not demonstrate that the ordinance served a compelling governmental interest.

The court's ruling on this point is instructive. Although the township's lawyers claimed that the ordinance had been enacted to serve its interests in aesthetics, traffic safety, and maintaining property values, the court found that the township could only produce evidence supporting the interest in aesthetics and, further, that the township's evidence concerning aesthetics lacked any specificity. Moreover, the township could not show how the seasonal ban on For Rent signs, while permitting For Sale signs, would achieve the desired aesthetic goals. The court found these evidentiary failings to be critical in light of the Supreme Court's admonition in *Metromedia* that "aesthetic judgments are necessarily subjective, defying objective evaluation, and for that reason must be carefully scrutinized to determine if they are only a public rationalization of an impermissible purpose" (453 U.S. 490, 510).

Significantly, as a result of the township's failure to establish either the precise nature of the aesthetic interest to be served or how it would be served by the seasonal ban on For Rent signs, the court also noted that this regulation would not have survived the less-demanding *Central Hudson* test for a content-neutral regulation of commercial speech. Because the city's asserted interests in aesthetics was not a "substantial" interest under part two of that test and there was no evidence to suggest the ordinance would advance this interest or that it was not more extensive than necessary, the ordinance could not even pass intermediate scrutiny.

In another case, *Village of Schaumburg v. Jeep-Eagle Sales Corp,* 676 N.E.2d 200 (Ill.App. 1996), a state appellate court considered a sign regulation that limited commercial uses and auto dealerships to the display of no more than three "corporate or official flags" and prohibited all other flags or banners. While the city attempted to justify the sign ordinance as a content-neutral "effort to control visual clutter, preserve aesthetics and prevent traffic problems," the court found this to be an impermissible content-based restriction on expression because it discriminated between official and corporate flags and all others flags and banners. In the court's opinion: "Because the permissibility of a flag is dependent upon the nature of the message conveyed, the sign ordinance must be deemed content-based" (676 N.E.2d at 204).

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Regulations that make content-based distinctions regarding flags (e.g., permitting government flags but prohibiting commercial flags) will be subject to strict scrutiny by courts. Size limits on flags are constitutional.

A similar result was reached in *Dimmitt v. City of Clearwater,* 985 F.2d 1565 (11th Cir. 1993), where the ordinance regulated the display of signs, flags, and other forms of graphic communication but exempted government flags (i.e., state or federal flags). In this case, the federal Eleventh Circuit Court of Appeals ruled that the "meager evidence" that the restriction on graphic expression advanced the city's interests in aesthetics and traffic safety was insufficient to justify exempting only government flags from the permit requirement.

These decisions show that courts are likely to be very critical of any provision in a sign ordinance that uses content as the basis for prohibiting certain types of commercial signs. A community that seeks to impose a content-based prohibition on commercial signs must be prepared to defend the prohibition by providing competent and specific evidence to the court that, at minimum, can meet a stricter form of *Central Hudson* intermediate scrutiny. Further, it is increasingly likely that any content-based prohibition will be subjected to strict scrutiny. As the cases in the three following sections show, courts will be extremely critical when government goes beyond content-based prohibitions on types of signs and attempts to prohibit the display of truthful information on commercial signs.

Prohibitions on Posting Price Information

Several examples of unlawful content-based ordinances involve regulations that ban the display of gasoline prices on signs at service stations. The leading case is *People v. Mobil Oil Corp.,* 397 N.E.2d 724 (NY 1979), where New York's Court of Appeals, the state's highest court, held that a county law banning all signs on or near service stations that referred directly or indirectly to the price of gasoline, other than certain required uniform price signs on gasoline pumps, was an unconstitutional content-based regulation of commercial speech. Interestingly, aesthetics was not one of the governmental interests supporting the ordinance in this case. The county argued that the regulations served to focus consumers' attention on the actual price posted at the pump rather than other, potentially misleading signs, such as Mobil's "Check Our Low Low Low Prices" sign. The court noted, however, that aesthetics could not support a law "that prohibits only gasoline price signs and none other, no matter how blatant or bizarre."

In another New York case, *Zoepy Marie, Inc. v. Town of Greenburgh,* 477 N.Y.S.2d 411 (App. Div. 1984), a state appellate court had no trouble finding that a sign restriction that banned advertisement of gasoline prices but not other commercial signs was an impermissible content-based restriction on the dissemination of truthful commercial speech. And, in *H&H Operations v. City of Peachtree City,* 283 S.E.2d 867 (Ga. 1981), *cert. den.* 456 U.S. 961 (1982), the Georgia Supreme Court ruled that an ordinance permitting signs that stated the name of the business and category of products available but prohibiting the posting of the prices of such products was an invalid restriction on a gas station operator's right to engage in commercial speech. In this case, the city had cited aesthetics as the substantial governmental interest served by the ordinance, but the court ruled that numbers were not aesthetically inferior to the letters forming words, and thus the ordinance did not serve to achieve that interest.

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Restrictions or prohibitions on the display of prices are regarded by courts as content based, and therefore subject to scrutiny. The leading cases in this area involve gasoline price signs.

Prohibition on Changing Sign Copy

In *Kevin Gray-East Coast Auto Body v. Village of Nyack,* 171 A.D.2d 924, 566 N.Y.S.2d 795 (N.Y. App. Div. 1991), a local ordinance provided for variances allowing nonconforming commercial signs to remain in place but prohibited the owner from changing the copy on the sign. A state appellate court held that this provision was an unlawful content-based regulation, noting that "truthful commercial speech may not be prohibited on the basis of its content alone."[20]

Regulations Prescribing the Content of Signs

In an unusual case, *Asian American Business Group v. City of Pomona,* 716 F.Supp. 1328 (C.D. Cal. 1989), a federal trial court struck down an ordinance that required all commercial or manufacturing establishments with on-premise signs containing advertising copy in foreign languages to devote at least half of the sign area to advertising copy in English. The court found that the speech restricted was an expression of national origin, culture, and ethnicity, and that the ordinance therefore impermissibly imposed content-based restriction's on noncommercial speech. The court also found that the ordinance was not narrowly tailored to accomplish any compelling governmental interest. Importantly, the court also found that, even if the restricted speech was considered to be commercial speech, the ordinance would still fail because it was more restrictive than necessary to serve the government's stated purpose of ready identification of commercial structures for reporting emergencies.

A federal trial court in California struck down an ordinance that required all commercial or manufacturing establishments with signs containing foreign language advertising copy to devote at least half of the sign area to advertising copy in English.

Michael Davidson

Regulation of Cigarette Advertising

Beginning in the mid-1990s, a number of local and state governments sought to regulate signs advertising cigarettes or other tobacco products based on public health concerns, particularly as related to the role of such advertising in inducing children to begin smoking. These efforts quickly led to court challenges by various tobacco companies which argued that such regulations were preempted by the Federal Cigarette Labeling and Advertising Act (FCLAA)[21] and also violated their First Amendment rights. By 2000, these challenges had been decided by five different federal Circuit Courts of Appeals, all but one of which upheld the tobacco advertising regulations against both the preemption and First Amendment challenges.[22] In early 2001, however, the U.S. Supreme Court indicated that it would examine this issue when it agreed to review a decision from the First Circuit Court of Appeals that upheld a Massachusetts regulation barring the display of tobacco advertising on billboards, on-premise signs, and in-store signs visible from the street, located within 1,000 feet of any elementary of secondary school or public playground.

In *Lorillard Tobacco Co., et. al. v. Reilly*, 121 S.Ct. 2404 (2001), the Court struck down the Massachusetts law, ruling that the 1,000-foot ban, as applied to cigarette advertising, was barred by the explicit preemption provision in the FCLAA and that the application of that same ban to other forms of tobacco violated the First Amendment. Applying the *Central Hudson* test for regulation of commercial speech, the Court acknowledged that Massachusetts had a "substantial, and even compelling" interest in preventing underage tobacco use, but found that the regulations failed to meet *Central Hudson*'s "reasonable fit" requirement because the state's effort to discourage underage tobacco use unduly impinged on advertisers' "ability to propose a commercial transaction and the adult listener's opportunity to obtain information about products."[23]

Sign Regulation and the Federal Lanham Act

Several recent federal court decisions have considered whether the federal legislation protecting trademarks, the Lanham Act, prohibits the enforcement of local sign regulations that would require the "alteration" of a federally registered trademark. All of these cases turn on the interpretation of 15 U.S.C. Section 1121(b), which provides in pertinent part that "[n]o state . . . or any political subdivision or agency thereof

may require alteration of a registered mark. . . ."

In the first cases addressing this issue, two decisions from the Western District of New York relied extensively on legislative history in concluding that the Congress never intended that 1121(b) would interfere with uniform aesthetic zoning requirements; rather, the provision was aimed solely at prohibiting state and local government from requiring actual alteration of the trademark for all purposes within the jurisdiction.[24]

Subsequently, in *Lisa's Party City, Inc. v. Town of Henrietta,* 185 F.3d 12 (2d Cir. 1999), the Second Circuit affirmed one of the earlier trial court rulings from the Western District of New York, arguing that "local uniform aesthetic and historic regulations simply limit color typefaces and decorative elements to certain prescribed styles [and thus] [t]hese regulations have no effect on businesses' trademark. They limit only the choice of exterior sign at a particular location. As such, though entirely disallowing the use of a registered trademark in carefully delimited instances, these regulations do not require 'alteration' at all" (at 15).

But, in *Blockbuster Videos, Inc. v. City of Tempe,* 141 F.3d 1295 (9th Cir. 1998), a split panel of the Ninth Circuit held that application of a municipal zoning ordinance to require changes in the coloring of a registered trademark on a sign in a shopping center constituted an alteration of the mark in violation of 1121(b).[25]The majority opined, however, that its ruling would not bar a local government from "prohibiting" the display of the mark entirely but failed to discuss whether such a prohibition could withstand scrutiny as a content-based prohibition on lawful commercial speech, and a discussion of this issue was also absent from the Second Circuit's opinion.

Marya Morris

Court decisions are mixed as to whether local governments can require a business to alter its federally registered trademark (as displayed on on-premise signs) to conform to the sign ordinance.In Blockbuster Videos, Inc.v. City of Tempe, *a split panel of the Ninth Circuit held that the application of a zoning ordinance to require changes in coloring of a sign for a Blockbuster video store constituted an alteration of the trademark in violation of the Federal Lanham Act. But a case in the Second Circuit involving a Party City store in New York ruled that Congress never intended for the Lanham Act to interfere with municipal aesthetic regulations. Stay tuned.*

Marya Morris

Regulations That Impose a Total Ban

Regulations that impose a complete ban on a type of commercial sign, based on the sign's content, will be struck down. For example, in *Outdoor Systems, Inc. v. City of Atlanta,* 885 F.Supp. 1572 (N.D.Ga. 1995), a federal trial court invalidated Atlanta's 1994 "Olympic Sign Ordinance," which created a five-member committee to recommend Concentrated Sign Districts within the city where only those signs that promote an Olympic or Olympic-related event of some kind would be permitted. Applying the *Central Hudson* test, the court found that, while the ordinance directly served a substantial governmental interest in promoting Atlanta's hosting of the 1996 Olympic Games, it was more extensive than necessary to serve that interest because it imposed a "blatant content-based restriction" prohibiting all forms of commercial speech other than those advertising the Olympics. In another case, *Pica v. Sarno*, 907 F.Supp. 795 (D.N.J. 1995), a federal trial court struck down a municipal ban on "temporary signs, or lettered announcements used or intended to advertise or promote the interests of any person," as a content regulation banning "an entire category of speech, inconsistent with *Ladue.*"

A total ban of a different sort, that is prohibition on certain commercial signs in residential districts, has been upheld. For example, in *City of Rochester Hills v. Schultz,* 592 N.W.2d 69 (1999), *rev'ing*, 568 N.W.2d 832 (Mich.App.1997), the Michigan Supreme Court reversed a state appellate court ruling which found that an ordinance imposing a total ban on home occupation signs displayed in single-family residential districts was an unconstitutional content-based restriction of protected commercial speech.

The Prior Restraint Question

In *Purnell v. State,* 921 S.W.2d 432 (Tex. App. 1996), a state appellate court upheld an ordinance that prohibited the use of a sign without a prior permit against a challenge brought by a local business. The court held that the permit requirement did not constitute an unlawful prior restraint because "the Constitution accords lesser protection to commercial speech," citing *Central Hudson.* The decision stressed that the city "does not have unlimited discretion to grant or deny permits," but was limited to such content-neutral matters as design, construction, and size. The court also found that the government interest in safety and the "beauty of public thoroughfares" to be substantial and the ordinance to be narrowly drawn and a "permissible regulation of commercial speech."

In *North Olmsted Chamber of Commerce v. City of North Olmsted,* 86 F.Supp.2d 755 (N.D. Ohio 2000), a federal district court took a differing view of the prior restraint issue, however. In this case, the court argued that because the sign ordinance requires the permitting official to consider a number of content-based factors, including the design and color of a sign, and was granted broad discretion to grant or deny a permit, the sign code constituted an impermissible prior restraint on expression.[26]

The "Reasonable Fit" Issue

In *Flying J Travel Plaza v. Commonwealth,* 928 S.W.2d 344 (Ky. 1996), the Kentucky Supreme Court reversed a lower court decision that had upheld a state statute prohibiting signs near highways "containing or including flashing, moving, or intermittent lights except those displaying time, date, temperature or weather. . . ." The sign in question contained an electronic message board that was intended to attract the attention of drivers on I-75 by displaying such information as welcome

messages, time, date, temperature, weather, and information regarding various local activities and events in addition to the prices of products sold on the premises.

The business owner argued that the statute was not a "reasonable fit" under *Central Hudson* because commercial speech was prohibited while several noncommercial categories were not, even though the effects of the messages on aesthetics and traffic safety were identical. While acknowledging that "the sign may be an irritation and an annoyance," the court held that the state could not demonstrate a reasonable connection between the statute and the ends of highway safety and aesthetics. The court stated: "the most telling factor in this case, which is fatal to the [government's] position," was its failure to demonstrate that the restrictions "advance a legitimate governmental interest." There simply was no "offer of any proof in the trial court, either by expert testimony or otherwise," that the content restrictions on the electronic billboard display "have anything to do with highway safety or aesthetics." In contrast, the court noted that "regulations regarding time limits and the number of electronic cycles displayed, as distinguished from content, could have some bearing on highway safety." The court also held that the restrictions were an impermissible content-based limitation on noncommercial speech, placing "greater value on information relating to time, date, temperature, and weather than is placed on other noncommercial forms of speech."

Another decision striking down an ordinance for failure to achieve a reasonable fit between regulatory ends and means is *In re Gerald B. Deyo,* 670 A.2d 793 (Vt. 1995). There, the Vermont Supreme Court struck down an ordinance that banned on-premise real estate signs based on a finding that, by permitting other types of signs that are distracting to motorists, the traffic safety benefits of the ordinance were undermined. The court also concluded that a more finely tuned ordinance would serve the government's interest in preventing the proliferation of signs while allowing limited forms of real estate advertising. After weighing the cost of the sign ban to owners of real estate in the town against the traffic safety and aesthetic benefits derived from the sign ban, the court concluded that the appellant had failed to affirmatively establish the reasonable fit required by the *Central Hudson* test.

RECOMMENDATIONS AND GUIDELINES

In the past few years, courts have become increasingly critical of local government sign regulations that distinguish among various categories of commercial on-premise signs based on the content of the messages displayed on such signs. While such criticisms are common when content is the basis for "prohibiting" certain messages or categories of signs, they have also appeared when content-based distinctions are used merely to apply differing time, place, or manner restrictions to different types of signs. When such distinctions are used, courts are now more likely to demand that government justify the "reasonable fit" between these regulatory distinctions and the government's claimed interests in aesthetics and/or traffic safety.

As a result, a local government should avoid enacting or retaining sign regulations that go beyond time, place, or manner restrictions on the height, area, number, and location of commercial signs unless it is able to answer, with specificity, the following questions: What substantial government interest would be served by the regulation? and Is there a "reasonable fit" between the regulation and the interest to be served by the regulation?

Local governments also need to be aware that they face significant potential liabilities if they are unable to justify their sign regulations. Plaintiffs who challenge sign regulations on constitutional grounds normally bring their claims under a federal civil rights statute, 42 U.S.C., Section 1983, which allows a plaintiff to sue local government for any actual money damages and, more importantly, makes local government liable for a successful plaintiff's attorneys' fees under a companion statute, 42 U.S.C. Section 1988. Such fees can be substantial: plaintiffs' attorneys received fee awards of more than $300,000 in the *City of Euclid* case and more than $200,000 in the *North Olmsted* case.

Below, are several guidelines for local government sign regulations based on decisions of the U.S. Supreme Court and lower state and federal courts:

1. Commercial signs are a form of constitutionally protected speech, the regulation of which will trigger heightened scrutiny by courts.

2. Commercial signs should never be treated more favorably than noncommercial signs.

3. Government may ban commercial off-premises signs, while allowing noncommercial off-premise signs and both commercial and noncommercial on-premise signs.

4. Government must normally maintain content-neutrality in regulating noncommercial signs, with any exemptions or exceptions subject to strict scrutiny by the courts.

5. Government should normally maintain content-neutrality in regulating commercial signs, with any exemptions or exceptions subject to intermediate scrutiny "with bite" by the courts.

6. Government may not ban residential signs that carry political, religious, and personal messages.

7. Government may not prohibit real estate signs.

8. Government may prohibit the posting of all signs on public property but will be subject to heightened scrutiny for any exceptions or exemptions.

9. Government may not impose time limits solely on political signs.

NOTES

1. See, for example: *City of Painesville v. Dworkin & Bernstein*, 89 Ohio St.3d 564, 733 N.E.2d 1152 (2000), invalidating an ordinance limiting the display of political signs to 30 days before and 7 days after an election; *Whitton v. City of Gladstone*, 54 F.3d 1400 (8th Cir. 1995), affirming 832 F.Supp. 1329 (W.D. Mo. 1993), which invalidated an ordinance limiting the display of political signs to 30 days before and 7 days after an election; *McCormack v. Township of Clinton,* 872 F.Supp. 1320 (D.N.J. 1994), enjoining an ordinance stating that "no political sign shall be displayed more than ten (10) days prior to any event or later than three (3) days after the event;" *Collier v. City of Tacoma*, 854 P.2d 1046 (Wash. 1993), invalidating an ordinance limiting the display of political signs to 60 days before and 7 days after an election; *City of Antioch v. Candidates Outdoor Graphic Service,* 557 F.Supp. 52 (N.D. Cal. 1982), invalidating an ordinance that banned political signs except for a period beginning 60 days before an election, but placed no time restrictions on other types of noncommercial signs, such as those advertising upcoming charitable or civic events; and *Orazio v. Town of North Hempstead*, 426 F.Supp. 1144 (E.D.N.Y. 1977), invalidating an ordinance that limited the posting of "political wall signs" to the six weeks prior to an election.

2. For example, see: *National Advertising Co. v. Village of Downers Grove*, 561 N.E.2d 1300 (Ill. App.1990), upholding size and height limits for billboards in certain districts; *City of Sunrise v. D.C.A. Homes, Inc.,* 421 So. 2d 1084 (Fla. 4th DCA 1982), upholding an ordinance restricting off-premise signs to one per subdivision; *Outdoor Systems, Inc. v. City of Mesa*, 997 F.2d 604 (9th Cir. 1993), upholding an ordinance restricting off-premise signs to certain designated locations; *Messer v. City of Douglasville, Ga.*, 975 F.2d 1505 (11th Cir. 1992), upholding an ordinance barring billboards in historic district; and *Rzadkowolski v. Village of Lake Orion*, 845 F.2d 653 (6th Cir. 1988), upholding the restriction of off-premise signs to industrial zones.

3. For example, *National Advertising Co. v. Town of Babylon*, 900 F.2d 551 (2d Cir. 1990), struck down an ordinance that impermissibly discriminated against noncommercial speech, and the court in *National Advertising Co. v. City of Orange*, 861 F.2d 246 (9th Cir. 1988) struck down an ordinance as applied to noncommercial messages, but left the ban on off-premise commercial signs in place.

4. For example, in *Union City Board of Zoning Appeals v. Justice Outdoor Displays, Inc.,* 467 S.E.2d 875 (Ga. 1996), the Georgia Supreme Court struck down an ordinance limiting on-premise signs to "messages advertising a product, person, service, place, activity, event or idea" directly connected with the property as "effectively ban[ning] signs bearing noncommercial messages in zoning districts where a sign . . . may display commercial advertisements." Similar decisions were handed down by federal courts in *National Advertising Co. v. Town of Niagara*, 942 F.2d 145 (2d Cir. 1991) and *Revere National Corp., Inc. v. Prince George's County*, 819 F.Supp. 1336 (D. Md. 1993).

5. For examples, see: *Major Media of the Southeast v. City of Raleigh*, 792 F.2d 1269 (4th Cir. 1986) and *City of Salinas v. Ryan Outdoor Advertising, Inc.*, 234 Cal. Rptr. 619 (Cal. Ct. App. 1987).

6. For examples, see: *Messer v. City of Douglasville*, 975 F.2d 1505 (11th Cir. 1992); *Don's Porta Signs v. City of Clearwater,* 829 F.2d 1051 (11th Cir. 1987); *Lindsay v. City of San Antonio*, 821 F.2d 1103 (5th Cir. 1987); *Harnish v. Manatee County*, 783 F.2d 1535 (11th Cir. 1986); *Falls v. Town of Dyer,* 756 F.Supp. 384 (N.D. Ind. 1990); *Mobile Sign v. Town of Brookhaven*, 670 F.Supp. 68 (E.D.N.Y. 1987); *City of Hot Springs v. Carter*, 836 S.W.2d 863 (Ark. 1992); and *Barber v. Municipality of Anchorage*, 776 P.2d 1035 (Alaska 1989).

7. See also *All American Sign Rentals, Inc. v. City of Orlando,* 592 F.Supp. 85 (M.D. Fla. 1983); *Signs, Inc. v. Orange County*, 592 F. Supp. 693 (M.D. Fla. 1983); *Rhodes v. Gwinnett County*, 557 F. Supp. 30 (N.D. Ga. 1982); and *Risner v. City of Wyoming*, 383 N.W.2d 276 (Mich. Ct. App. 1985).

8. The *Cleveland Board of Realtors* decision distinguished the *South–Suburban* case by observing that Euclid's decision to restrict lawn signs was not motivated by a desire to improve the physical appearance of residential neighborhoods, as was the case in *South–Suburban*, but rather was principally intended to curtail the negative messages that are often associated with the proliferation of real estate signs in neighborhoods. See also *Sandhills Assoc. of Realtors, Inc. v. Village of Pinehurst*, 1999 WL 1129624 (MDNC 1999).

9. For example, see, *National Advertising Co. v. Town of Babylon*, 703 F.Supp. 228 (E.D.N.Y. 1989), *aff'd in part* and *rev'd in part*, 900 F.2d 551 (2d Cir. 1990).

10. *Armstrong v. United States,* 364 U.S. 40, 49 (1960).

11. The Court's taking tests range from per se categorical rules: *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419 (1982), holding that any physical occupation and/or invasion by or on behalf of government is always a taking and *Lucas v. South Carolina Coastal Council*, 505 U.S. 1003 (1992), holding that regulation that eliminates all economic value is a taking unless the same result could have been reached under the common law of nuisance or some other common law property rule); to "nexus" tests *Nollan v. California Coastal Comm'n,* 483 U.S. 825 (1987), holding that government must demonstrate that there is an "essential nexus" between a regulation and its goal (i.e., a regulation that does not substantially advance a legitimate state interest is a taking), and *Dolan v. City of Tigard*, 512 U.S. 374 (1994), holding that government must meet a "roughly proportional" standard for the "nexus" (i.e., connection) between a regulation and the state interest it seeks to substantially advance; to ad-hoc multifactor balancing with a focus on diminution of value:

Penn Central Transp. Co. v. New York City, 438 U.S. 104 (1978), holding that court must look at a number of factors including "character of the governmental action" and the economic impact of the regulation, with particular concern for whether the regulation interferes with "distinct investment backed expectations"); to a "two-factor" test: *Agins v. City of Tiburon*, 447 U.S. 255 (1980), a regulation is a taking if it does not substantially advance a legitimate state interest or denies all economically viable use of property. Needless to say, such a disparate variety of tests has not made for doctrinal clarity. *[Editor's note: In May 2002, the U.S. Supreme Court ruled in* Tahoe Sierra Preservation Council v. Tahoe Regional Planning Agency*, 216 F.3d 764 (2002), that local government use of moratoria, in this case as part of the planning process, does not constitute taking of property requiring compensation to the landowner.]*

12. For examples, see *Burns v. Barrett*, 561 A.2d 1378 (Conn. 1989) and *Carroll Sign Co. v. Adams County Zoning Hearing Bd.,* 606 A.2d 1250 (Pa.Cmwlth.1992).

13. For examples, see: *Goodman Toyota v. City of Raleigh*, 306 S.E.2d 192 (N.C. App. 1983) and *Hilton v. City of Toledo*, 405 N.E.2d 1047 (Ohio 1980).

14. For examples, see: *Outdoor Systems, Inc. v. City of Mesa*, 997 F.2d 604 (1993); *National Advertising Company, Inc. v. Mount Pleasant Bd. of Adjustment,* 440 S.E.2d 875 (S.C. 1994); *Miller's Smorgasbord v. Dept. of Transportation*, 590 A.2d 854 (Pa.Cmwlth. 1991); and *Camara v. Bd. of Ajustment of Twp. of Belleville,* 570 A.2d 1012 (N.J. Super. App. Div. 1990).

15. See also *Budget Inn of Daphne, Inc. v. City of Daphne*, 2000 WL 1842425 (Ala.), striking down a similar provision as unconstitutional based on a substantive due process analysis; *Motel 6 Operating Ltd. Partnership v. City of Flagstaff*, 195 Ariz. 569, 991 P.2d 272 (1999), ruling owners' proposed sign face changes were reasonable alterations to their legal, nonconforming signs; *Rogers v. Zoning Bd. of Adjustment of the Village of Ridgewood*, 309 N.J.Super. 630, 707 A.2d 1090 (App.Div.1998), *aff'd*, 158 N.J. 11, 726 A.2d 258 (N.J.1999), holding that change of sign to indicate new owner of nonconforming building does not cause the sign to lose its protected status; *Ray's Stateline Market, Inc. v. Town of Pelham*, 140 N.H. 139, 665 A.2d 1068 (1995), replacing plastic face panels of two signs in store's exterior with face panels advertising doughnut franchise would not result in impermissible change or extension of store's legal nonconforming use, as lettering changes to existing signs would not affect signs' dimensions.

16. For examples, see *South Suburban Housing Center v. Greater South Suburban Bd. of Realtors*, 935 F.2d 868 (7th Cir. 1991) and *City of Dellwood v. Lattimore*, 857 S.W.2d 513 (Mo. App. 1993)

17. The code permitted the administrator to "consider" any "facts and circumstances related to" the city's standards, criteria, purpose, and intent of the sign code, and a sign could be prohibited based upon its "visual impact and influence" (86 F.Supp.2d at 776, referencing Magistrate's Report & Recommendation at 17-21). See also *North Olmsted Chamber of Commerce v. City of North Olmsted*, 108 F.Supp.2d 792 (N.D. Ohio 2000), denying plaintiff's motion for clarification of the court's decision on the prior restraint issue and holding that the city's permit scheme was an unconstitutional prior restraint.

18. For similar rulings, see *Central Advertising Co. v. Ann Arbor,* 218 N.W.2d 27 (Mich. 1974); *Schaffer v. Omaha,* 248 N.W.2d 764 (Neb. 1977); and *Hilton Head Island v. Fine Liquors, Ltd*., 397 S.E.2d 662 (S.C. 1990).

19. The opinion noted that "the Supreme Court's recent cases have given extra bite to the intermediate scrutiny review of *Central Hudson*."

20. See note 15. See also *Budget Inn of Daphne, Inc. v. City of Daphne,* 2000 WL 184245 (Ala.), striking down a similar provision as unconstitutional based on a substantive due process analysis.

21. 15 U.S.C. § 1331 *et seq*.

22. The First, Second, Fourth and Seventh Circuits upheld such regulations, while the Ninth Circuit struck them down on preemption grounds. *Penn Advertising v. Mayor and City Council of Baltimore*, 101 F.3d 332 (4th Cir. 1996), *Federation of Advertising Industry Representatives, Inc. v. City of Chicago*, 189 F.3d 633 (7th Cir.1999), *Greater New York Metropolitan Food Council, Inc. v. Giuliani*, 195 F.3d 100 (2d Cir.1999); *Lindsey v. Tacoma-*

Pierce County Health Dept., 195 F.3d 1065 (9th Cir. 1999), and *Consolidated Cigar Corp. v. Reilly*, 218 F.3d 30 (1st Cir. 2000). See also *Anheuser-Busch, Inc. v. Mayor and City Council of Baltimore*, 101 F.3d 325 (4th Cir. 1996), *cert. den.* 520 U.S. 1204 (1997), upholding an ordinance banning billboard advertising of alcoholic beverages.

23. 121 S.Ct. at 2427. The Court noted that "In some geographical areas, these regulations would constitute nearly a total ban on the communication of truthful information about smokeless tobacco and cigars to adult consumers" (at 2425).

24. *Lisa's Party City, Inc. v. Town of Henrietta*, 2 F.Supp.2d 378 (W.D.N.Y. 1998) and *Payless Shoesource, Inc. v. Town of Penfield,* 934 F.Supp. 540 (W.D.N.Y. 1996).

25. The opinion of the dissenting Circuit Court Judge was in line with that of the Second Circuit in *Lisa's Party City, Inc.*

26. See also *North Olmsted Chamber of Commerce v. City of North Olmsted*, 108 F.Supp.2d 792 (N.D. Ohio 2000), denying plaintiff's motion for clarification of the court's decision on the prior restraint issue and holding that the city's permit scheme was an unconstitutional prior restraint.

CHAPTER 7

Reaching Consensus on Sign Regulation

By Marya Morris, AICP

Reaching consensus on sign regulation means balancing the needs and interests of local businesses, sign manufacturers, local residents, and elected officials. As preceding chapters have described, an informed approach to regulation is one that:

- recognizes the dollars-and-cents value of signs to businesses;
- addresses signs in the overall urban design context of the community and the immediate area in which they are placed;
- abides by the law, most importantly laws based on the First Amendment; and
- addresses traffic and pedestrian safety issues.

Most contact between planners and representatives of the sign industry takes place at the permit counter. Those interactions work best when those whose signs are being regulated recognize the code to be technically accurate, reasonable, and fair, and when the planning staff administering the code is well trained and knowledgeable about the ordinance. From the perspective of planners who regulate signs, interactions with business people and sign representatives work best when the applicant has made an attempt to understand the ordinance and agrees to abide by the same rules as other similarly situated businesses.

There are three general approaches municipalities use when preparing or revising sign regulations, although ultimately each community will do things its own way. The biggest variable among the approaches is the timing and extent of public participation. (In this chapter, "the process" refers to both an entire sign code rewrite process as well as a process to address specific regulatory or administrative issues. The sign code compliance process in Santa Clarita, California, which is highlighted below, is an example of the latter.)

The first and most traditional approach is for planning and zoning staff (or a consultant hired by the jurisdiction), working at the direction of the city council, planning commission, or another board, to prepare a draft sign ordinance. Once the draft ordinance or provisions are prepared, staff present the draft to the city council and other boards (e.g., zoning board of appeals, architectural review board) for review. If the draft meets the intent of the council, it is then distributed for public review and comment. Public hearings are scheduled at which business people, sign industry representatives, and other stakeholders have an opportunity to comment. Staff take the public comments under advisement and revise the draft ordinance. A revised draft is then distributed, and the date of adoption is scheduled. To become law, a sign ordinance would then go through the same process as other local ordinances, wherein there is a first reading, and a second reading, followed by the ordinance being published in a local paper. An ordinance will go into effect at a designated date (usually 30 days) after it is published. This approach, although perfunctory and not particularly inclusive, is the most common.

The second approach begins just like the traditional approach, wherein the planning staff or a consultant prepare a draft ordinance. Once ready for public comment, the city council or planning commission forms a task force or committee to review the ordinance, provide input, and study key issues. After reviewing the draft, the task force or committee then makes recommendations to the council and staff, and the ordinance is revised accordingly until there is consensus. Some communities begin a sign code revision process without necessarily intending to form task forces or committees. Rather, a committee is formed in response to a negative reaction to a staff- or consultant-prepared draft.

The third approach is for the city council to appoint a sign code revision committee or task force at the outset of the process. This committee advises staff throughout the process, conducting some of the background research and helping to frame the most important issues. As with the second approach, the municipality ultimately has responsibility for drafting the ordinance, but the policies and contents are influenced to a greater degree by the committee.

While it is not possible to prescribe a single, best approach, a community that is undertaking a comprehensive code revision or drafting a sign ordinance for the first time, should be as inclusive as possible (e.g., using either the second or third approach described above), while being respectful of time and staffing constraints as well as the participants' schedules. The risks of not being inclusive include heightened conflict levels, substantial redrafting of the ordinance at a later stage, and additional time delays to accommodate public comment after the fact. That said, the traditional approach—wherein planning staff take full responsibility for drafting ordinance revisions—may be just fine in cases where some very technical ordinance provisions need to be amended and improved (often at the suggestion of businesses and sign manufacturers).

Task forces and committees can be a rewarding, productive method of forming local sign policy. The basic framework described here is applicable to either of the processes described above where a committee is involved.

FORMING A SIGN ORDINANCE COMMITTEE

The first key step in forming a committee is to identify stakeholders and to invite them to participate. Members of sign code committees are appointed by the mayor or city council. The make-up of the group

depends on local circumstances but should include one or more of the following individuals:

- City council member
- Planning commission member
- City staff from planning, building, and legal departments
- Special district representatives (e.g., business improvement district, historic district)
- Sign company representatives
- Chamber of commerce representatives
- Local business people
- Main street managers
- Representatives from major institutions (e.g., universities and hospitals)
- Interested citizens

Determining the correct number of participants is always a concern—the goal should be to ensure adequate representation by all stakeholders while keeping the group to a workable size. Steve Preston, a professional facilitator who has worked with sign committees, suggests that such groups be limited to nine to 12 members. Anything larger than that gets unwieldy.

Four actions need to be taken once the committee is formed:

(1) Establish ground rules (three types of ground rules are described below)

(2) Gather information

(3) Generate options

(4) Reach consensus and present recommendations

These four actions have been developed by experts for resolving various disputes involving government regulation or decision making (Carpenter and Kennedy 1988; Susskind et al. 1999). They have been adapted here to fit a sign ordinance revision scenario.

Committee work can be made more productive by using a neutral facilitator. A facilitator is an impartial guide who is responsible for managing the discussion so that parties can focus their attention on substantive issues and achieving goals. A professional facilitator may be hired by the local government or can be a neutral person who works for the local government but has no particular stake in the issue. He or she establishes an agenda, suggests and enforces ground rules, keeps the discussion on track, and offers suggestions about process (Carpenter and Kennedy 1988). The facilitator reports directly to the city council, mayor, or the entity that appointed him or her. If a community has hired a consultant to draft the new ordinance, the consultant may serve as the facilitator.

Establishing Ground Rules

Ground rules describe the structure, procedures, and behaviors all participants are expected to follow. They clarify the activities of the group and the decision-making roles of the participants (Susskind 1999, 79). There are three types of ground rules. The first two are behavioral and adminis-

trative. The third type, substantive ground rules, defines the boundaries of discussion (Carpenter and Kennedy 1988). A typical substantive ground rule might be "This committee is charged with addressing on-premise sign regulation only. It will not address off-premise billboards." For facilitator Steve Preston, a substantive ground rule takes the form of a "strategic decision" about what the committee will be addressing.

For one sign committee Preston facilitated, a ground rule had to be established regarding whether the new sign ordinance would contain prescriptive numerical standards and formulas for sign size, height, and placement, or minimal regulatory language coupled with detailed design guidelines. It was important for all committee members to know the direction in which they were ultimately headed with the ordinance. In situations in which the committee is charged with addressing only one or several specific signage issues (e.g., only temporary signs), the person directing the work of the committee must remind members that information gathering and recommendations should necessarily be limited to just those issues.

Gathering Information

After laying down ground rules, the committee can begin gathering background information. The first source of information to be tapped is the knowledge of the committee members themselves. As part of the education process, each member should be invited to describe their perceptions of the issues, as well as their assumptions, their personal stake in the issue, and their most desired outcomes.

It is also important to mention that the sign code revision process may be part of a broader urban design planning process as described in Chapter 3. For example, if a new comprehensive plan is in place, the policies relating to urban design, economic development, and community appearance will serve as the foundation for the regulations. The difficulty in such cases is that the participants on the sign code committee may not have had input in the comprehensive plan policies that affect signage. In such cases, it is particularly important for the facilitator or whoever is leading the process to make clear the overarching community policies that affect signs.

Other background information used to draft a sign ordinance will comes from many sources. City staff who administer sign regulations and sign industry representatives can supply records or a simple account of sign variance requests to determine which provisions in the existing ordinance are problematic. Staff or committee members can conduct interviews with business owners and sign companies to ascertain their signage needs and their awareness of local regulations.

The committee can host outside experts to present information on topics such as the legal basis for sign control and the aesthetics and economics of signage. Staff will often collect sign ordinances from other cities in the region or of similar size to understand the range of approaches to specific sign regulation provisions. As with any use of another city's regulations as a model, APA strongly recommends that such examples be subject to thorough legal and practical review. In other words, the committee must ensure that the signs that result from the sample regulations from another city will indeed result in the desired signage, in terms of its size, placement, and appearance. The easiest way to do this is for the committee to take a field trip to the community from which it is considering copying the regulations to see what effect the ordinance has had on the ground. In terms of a legal review, the last thing a committee should do is enact another city's sign ordinance that contains unconstitutional provisions, such as violations of content neutrality, or results in signs that do not fit with the community's objectives.

Another common task for a sign committee is to undertake a "Prouds and Sorrys" exercise. Using disposable cameras, committee members take pictures of signs that exemplify the best-designed, sized, and placed signs in the city, and those that detract from the city's image. The photographs can be shared at a committee meeting and can provide the basis for substantive discussion about what it is the city hopes to accomplish with the sign ordinance. Participants in such an exercise should be cautioned not to bring pictures of other committee members' businesses or signs to offer as bad examples. Part of the exercise should also involve identifying which of the problem signs are illegal under the existing ordinance. In some cases, enforcement of the existing ordinance may solve the community's problem without having to enact a new ordinance.

Generating Options

The method by which a sign ordinance committee generates options depends on how large the group is, whether there are subcommittees dealing with discrete issues, and the extent of polarization between committee members. In general there are two forms of options (Carpenter and Kennedy 1988; 136). In the first, the committee will develop a number of options for each of the major issues they have identified in their discussions. Generating multiple options helps committee members break away from rigid adherence to their own favorite solutions. The second approach is for committee members to develop several comprehensive proposals that address all key issues. The comprehensive approach works best when issues are not numerous or complex. After working with the committee over the course of several months, the facilitator or chairperson may arrive at his or her own idea as to the most effective way for the group to generate options.

If, for example, the proliferation of freestanding pole signs has been identified as a problem, options that a committee could generate would be to: (a) require new freestanding signs to have pole covers and foundations; (b) reduce the permitted height of such signs; (c) encourage or require adjacent property owners to share a sign pole; or (d) require that businesses, over a period of time, replace their freestanding signs with monument signs. If sign visibility for storefronts is a problem, options that could conceivably arise would be to: (a) allow an increase in the sign area to make signs more readable, or (b) allow projecting signs if they had previously been prohibited.

Reach Consensus and Provide Recommendations

After generating options, the next step is to review and evaluate those options, choose one or several of the most desirable alternatives, and put them into the form of recommendations to be presented to the city council or other body that initiated the sign ordinance revision process.

In *Managing Public Disputes,* Carpenter and Kennedy (1988, 137) describe the importance of the foundation established in the first three steps of the process:

> Reaching agreements is the last step parties take to resolve their differences. Groups that begin discussing solutions without identifying issues or developing options discover, to their dismay, how difficult it is to reach closure. The parties thrash around, pushing with increased intensity for their position because they do not understand how others see the problem and do not recognize when a new proposal may serve their interests.
>
> On the other hand, when negotiators follow the steps of adopting procedures, educating themselves, and developing options, they prepare themselves to recognize workable solutions.

There are three general approaches to reaching agreement:

1. Develop an outline of how the problem should be resolved in principle and then proceed to work out details for each issue
2. Negotiate and reach closure on each issue separately
3. Blend the comprehensive proposals developed by the committee into a final agreement

For many public consensus-building initiatives to which these steps have been applied, the committee or group were working towards a formal, binding agreement that would result in policy or regulations. Generally, in a sign ordinance revision process, the recommendations the committee makes to the council or to another entity are advisory only. The facilitator or chairperson will ultimately decide the form that the recommendations should take and should communicate that to committee members.

CASE STUDIES

Three general approaches used by communities to revise the sign ordinance were described above. The five case studies that follow illustrate that, while the processes generally follow one of the three approaches, each community ultimately has to decide for itself exactly how to go about their drafting or revision process. The examples provided here are considered successful in that they all involved the public, they reached as broad a consensus as possible, and they were conducted in an open, honest, and positive way. No doubt there are groups or individuals in each of these communities who believe the process was too aesthetics driven or too business driven, or who view the sign ordinance that resulted as too restrictive or too permissive. The point is, there is no one ideal route, no magic formula for creating an ordinance. But it is the responsibility of the participants—the local officials, planners, business owners, and members of the public—to act in good faith, to recognize the need for compromise, and to craft a legally sound ordinance that is tailored specifically for the community.

San Diego

San Diego is offered as the first case study because the city's initial ordinance became the first to be litigated all the way to the U.S. Supreme Court. The court's decision regarding content neutrality now forms the legal basis for all other municipalities' regulation of signs. The court battle in San Diego is also what prompted the city to engage the community in the regulatory process.

The first sign ordinance enacted by the city of San Diego stemmed from the environmental movement (Lathrop 2000). Widespread public concern in the late 1960s and early 1970s among residents and local officials about the area's natural environment extended to concern about community aesthetics and quality of life. In 1971, the planning commission directed city staff to draft what would become the city's first sign ordinance. The first task was to draft a list of signs that should be banned. Billboards topped that list. As drafting got underway, a decision was made to extract the billboard provisions and enact them in an ordinance that would be separate from the on-premise sign regulations (March 2000). The billboard ordinance was enacted in 1972, and later was challenged all the way to the U.S. Supreme Court in *Metromedia v. City of San Diego*, 453 U.S. 490 (1981), which became the leading court case regarding sign regulation.

Following the adoption of the billboard ordinance, the city went to work on drafting an on-premise sign ordinance. City staff developed sev-

eral alternative ordinances with varying levels of restrictiveness. In 1973, the planning commission ultimately adopted the most restrictive option, a decision which did not sit well with local sign manufacturers or business groups (Lathrop 2000). In 1974, the sign industry persuaded then-Mayor Pete Wilson to hire a consultant to draft a more business-friendly ordinance. Around the same time, a sign task force was formed, which was comprised of a former mayor, a sign industry representative, and a member-at-large from the business community.

The redraft of the ordinance by the consultant dealt with several areas that the business community considered particularly problematic: 1) the unique signage needs of special districts (e.g., historic areas and scenic areas) and of certain types of businesses; 2) sign size and height provisions in certain zones; and 3) the use of enforcement and abatement in lieu of amortization of nonconforming signs (March 2000). The consultant also examined the impact of tourism on signage needs, the relationship between signs and traffic safety, and the implications of the pending issues in the *Metromedia* case on the regulations.

To address the first issue, the consultant recommended, and the city enacted, special provisions for certain types of zones and other areas that required a more tailored regulatory approach to signs due to their scenic or historic significance. This included supplemental provisions for signs in residential, agricultural, and open space zones as well as signage overlay districts for several neighborhoods and commercial districts. Today there are nine such overlay districts, including the historic Gaslamp Quarter near downtown, the LaJolla commercial and industrial area, the Centre City district, and the neighborhood commercial district of Ocean Beach. The

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A key feature of the San Diego sign ordinance is the creation of nine sign design overlay districts, including the historic Gaslamp Quarter adjacent to downtown. Signs in that district must conform in size, shape, design, material, color, lighting, and location to the Pre-1910 period. In keeping with the historical period, sign illumination is to be by means of gas or incandescent bulbs.

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The upscale shopping area that comprises the LaJolla Commercial and Industrial Sign Control District has restrictive provisions for the size, height, and setbacks for freestanding ground signs, projecting signs, and wall signs. Height limits for ground signs are limited to 20 feet from the sign base to the top of the sign with a maximum permitted area of 64 square feet. Wall signs for each premises can not exceed 25 square feet or one square foot for every foot of street frontage, whichever is larger. The allowable projection of projecting signs ranges from one foot to five feet, depending on the height of the base of the sign above the sidewalk.

Ocean Beach Sign Enhancement District, for example, aims to "maintain, preserve, and promote the distinctive commercial signage of the Ocean Beach area" (San Diego Municipal Code, Chapter 14, Sec. 142.1291). In particular the district encourages business to use neon tubing and other design elements that recapture the look of the area during its major period of development in the 1920s, 30s, and 40s. (See Chapter 5 for excerpts of San Diego's special sign district ordinance provisions.)

The business community asked the consultant to specifically explore size and height restrictions and whether the new regulations would limit the ability of drivers to notice and read signs in certain commercial areas in time to safely react to them. This was a particular concern for tourist-oriented businesses, such an economy motels, which made their case for needing visibility from highways in order to attract customers. In response, the consultant devised new provisions (and the city amended the ordinance to include them) that relate the permitted size and height of signs to traffic speeds and right-of-way widths. Thus San Diego was the first city to use what now has become a fairly standard method of regulating sign size and height. In applying the new standards in San Diego, the most significant difference between the original ordinance and the modified standards based on traffic speeds was to allow for bigger and taller signs for freeway-oriented uses and in industrial parks.

A third issue addressed by the consultant concerned the removal of nonconforming signs. The original ordinance contained amortization provisions to phase-out nonconforming signs over approximately 10 years. The business community reacted negatively to this plan. The consultant advised that, rather than amortization, strict enforcement of the code would lead to elimination of many of the problem signs, many of which were illegal. In fact, a sign inventory showed that most of the signs that people found either ugly, oversized, or in a bad state of repair had not been permitted in the first place. A compromise was reached wherein the city differentiated between abatement of illegal signs and amortization of legally erected signs. For the legal signs that became nonconforming, a series of amortization deadlines were set, the last of which expired in 1988. According to San Diego senior planner Gene Lathrop (2000), some of the signs that became nonconforming after the enactment of the original code in 1972 code were still standing in 2000. (The city has decided not to aggressively pursue removal of the signs.)

A sign users fee—paid by businesses as part of their sign permit fee—was enacted in 1972 to help pay for sign inspections and enforcement by city personnel. This fee was eliminated in the early 1990s to ease costs on businesses during a recession. The sign industry argued strongly for retaining the fee, noting that thorough enforcement and inspection would be nearly impossible without such a dedicated funding source.

According to Lathrop, the ordinance that is in place in 2001 (to which some significant amendments and additions were made in 2000) is substantively the same as what was adopted in the early 1970s. It has served the city well from an aesthetic point of view because the ordinance does not allow extremely large or extremely tall signs. The largest signs permitted are for freeway-oriented areas, where signs 300 square feet in size and 50 feet in height are permitted. The relatively modest sign sizes in most commercial areas also allow local businesses to remain competitive with national chains and franchises, which was one of the original concerns of business when the code was first drafted, said Lathrop. Finally, Lathrop said the ultimate key to the success of the San Diego ordinance has been the longstanding open line of communication between businesses, the sign industry, and the city regarding sign regulation.

Cleveland, Ohio

Cleveland provides a persuasive example of how a city, local business interests, and citizens can work in partnership to craft fair and effective regulations. On December 20, 1990, Cleveland Mayor Michael R. White signed into law an ordinance enacting the city's first comprehensive set of sign regulations. That event was the culmination of a two-year process of collaboration between the city's planning staff, the local sign industry, and several community-based development corporations. The collaboration resulted in an ordinance that has proven practical from the standpoint of businesses and sign contractors, while accomplishing the city's goals concerning community character and aesthetics.

Numerous reasons prompted the city to adopt a new sign ordinance. First, the old code (pre-1990) contained absolute size standards for wall signs (e.g., a maximum of 100 square feet in Local Retail Districts) rather than standards that related to building size (i.e., tying the permitted size of a wall sign to the width of the building or storefront). The old system was arbitrary, often resulting in signs that were either too big or too small for where they were placed.

Second, the code simply was too liberal, allowing very large pole signs and projecting signs. For example, there were no size limits on pole signs that were located behind a setback line. Also, in many instances, the old code allowed pole signs to be 50 feet tall. (The new code dropped this to 25 feet in most cases. A 1999 amendment further dropped the maximum height to 12 feet in neighborhood-oriented retail districts.)

Third, the old code ignored many small signs. There were no regulations for "directional signs" (e.g., Enter, Exit, etc.), and no regulations on "temporary development signs" (e.g., signs announcing a new development), and no regulations on garage sale signs.

Fourth, the inadequacies of the old ordinance resulted in many requests for zoning variances, all of which had to be heard by the Board of Zoning Appeals. Many variance requests were granted routinely, with the board acknowledging that regulations were inadequate. Since the adoption of the new code in 1990, there have been relatively few variance requests for signs, and very few have been granted.

Fifth, and most importantly, the old sign code made a major contribution to the negative image of Cleveland's neighborhood retail districts—as well as those residential districts for which the commercial streets are the "front door." According to Bob Brown, assistant planning director and project manager for the sign code revision, "The national retail chains had learned to tone down their signs in the more strictly regulated suburbs, but they gladly pulled out their 1950s-era monstrosities when building in the loosely regulated City of Cleveland" (Brown 2000a).

City staff had completed a draft of the ordinance in early 1990. Once completed, the city began sharing the draft ordinance with 16 local sign companies that were members of a sign contractor's association. Three billboard companies that operated in the Cleveland area (but were not members of the sign contractors' association) were also brought into the review process. The Cleveland Neighborhood Development Corporation (CNDC), which represents more than 30 community-based development corporations, was also asked to participate. Most of the CNDC's member organizations operate storefront renovation programs that are funded and staffed by the city of Cleveland. City staff held several meetings with each of these constituencies. This interaction led to numerous revisions in the regulations prior to formal introduction of the legislation.

As could be expected, most of the sign companies argued for more liberal regulations, while the neighborhood organizations argued in support of the city's proposals to more strictly regulate signs. There were exceptions, however. The sign contractors argued for stricter regulation of tem-

Bob Brown

Cleveland's sign ordinance prior to the 1990 revision had no size limits on freestanding signs that were located behind a setback line. Standards for wall signs were arbitrary and had no relation to building size or the amount of street frontage, resulting in signs that were either too big or too small.

Bob Brown

MAKING SIGN REGULATIONS WORK FOR CLEVELAND BUSINESSES

The 1990 Cleveland sign ordinance contained a very strict standard for projecting signs in retail districts. The ordinance allowed such signs but limited the size to 12 square feet—a size that the planners believed was appropriate for a pedestrian-oriented environment. The city sought to avoid creating streetscapes where large projecting signs blocked one another and created an image of clutter. In 10 years of administering the ordinance, planners found that some of the most innovative and attractive sign designs were for projecting signs, and that signs larger than 12 square feet were sometimes desirable to allow for the best design. In response, the city amended the sign regulations to permit projecting signs up to 36 square feet, depending on the width of the storefront. Specifically, the further the sign was set back from the end walls of the storefront, the bigger it could be. The formula kept the minimum permitted size as 12 square feet but allowed a 1-square-foot increase in size for each 1 foot in setback beyond 12 lineal feet. For example, if a storefront were 50 feet wide and the center point of the sign was placed in the middle—25 feet from each end of the storefront—the projecting sign could be up to 25 square feet.

Bob Brown

The revised Cleveland sign ordinance allows the planning commission to permit a larger sign or otherwise prohibited type of sign in design review disticts when the result will be a sign that better suits the building or business than would a conforming sign.

The city also requires design review for all projecting signs larger than 12 square feet, even for signs not located in designated design review districts. In simple terms, a business could display a larger projecting sign if the building were wide enough and if the sign were well designed.

A second issue is related to wall signs for buildings on corners. The original (1990) ordinance allowed a 50 percent additional allotment of sign area for a building with a second street frontage (i.e., on a corner). The formula for wall signs in the code is (W x 1.5) + 25, where "W" is the width of the storefront or building (in feet) and the result is expressed in square feet. For a storefront that is 50 feet wide, the formula would allow 100 square feet of wall signs ((50 x 1.5) + 25 = 100 square feet). A corner building would have been allowed the 100 square feet, plus 50 square feet additional for the secondary frontage—but the formula was inflexible, limiting signs on the main wall to 100 square feet and signs on the second wall to 50 square feet. After a number of requests for variances, the city made the regulations more flexible. The amended ordinance allows the "extra area" to be distributed between the four sides of the building in any way that the business prefers, as long as no side has more sign area than would have been permitted for the main frontage. In the previous example, the total 150 square feet of signs could have been distributed between different sides of the building as 100 + 50 *or* 75 + 75 *or* 50 + 50 + 50, or any other way the business preferred, as long as no side received more than the 100 square feet of signs that was permitted for the main wall.

Source: Brown (2000a).

porary signs and tougher enforcement of the regulations, fearing that less scrupulous operators would ignore the stricter regulations and get away with it by lax enforcement. Some of the neighborhood groups argued for added regulations. In particular, they recommended the city enact amortization provisions aimed at removing signs that were to become nonconforming under the new ordinance.

Brown said the city opted not to include amortization provisions for two reasons. First, the Ohio courts are regarded as fairly conservative, and thus, such regulations are not common in the state. Second, the city recognized that it would have a substantive administrative burden to shoulder in a city of Cleveland's size, compared to the burden a suburb with a limited number of older commercial districts would have. In Cleveland, the task of monitoring the status of tens of thousands of nonconforming signs would have been too expensive and time consuming to be effective.

Perhaps the best outcome of the dialogue the city had with the sign industry was the enactment of provisions in the ordinance allowing for flexibility and creativity in sign designs. The ordinance allows the city planning commission to vary the sign regulations in the interest of good design—somewhat like a PUD ordinance for signs. Specifically, the city planning commission (or the landmarks commission in historic districts) can permit a larger sign or an otherwise prohibited type of sign in a design review district when the result will be a sign that better suits its building or its property than would a conforming sign. Between 1990 and 2000, this provision proved to be a "win-win" situation for the city, the sign industry, and local businesses. From an animated jumping fish on the wall of a seafood restaurant to a neon-outlined saxophone projecting over a downtown sidewalk, these "design variances" have created a real incentive for innovative design by the local sign industry in Cleveland.

Since the ordinance was adopted in 1990, Brown said the city planning commission has taken responsibility for making amendments to it as issues arise. Planners have continued their informal dialogue with sign company representatives as they go through the permitting process. A key to success of the Cleveland ordinance, Brown said, was that the planners who drafted the ordinance had administered the old ordinance and now administer the new ordinance. "I make it clear to these sign company representatives that we recognize the sign ordinance as a living document, not as a set of divine laws handed down from on high, and that we are always open to suggestions for amendments," said Brown (2000a).

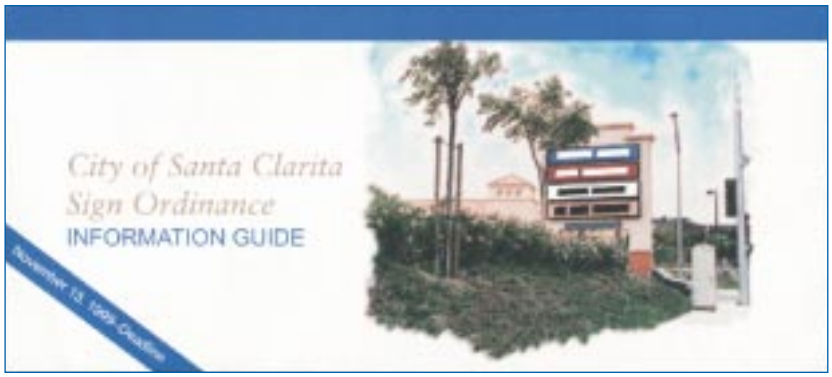
Over the course of drafting the sign ordinance, planning staff spent considerable time studying real-world examples, photographing existing signs that were regarded as appropriate as well as those that were too big or too small to work well. Staff measured those signs and devised regulations that would permit the appropriate signs but prohibit the signs that were bigger than necessary to be easily readable. The greatest strength of Cleveland's sign code, said Brown, is that it is balanced. A chief goal was to create a sign ordinance that would permit signs that passed the "common sense" test, but would not force the city to say No to signs that might not meet proscribed standards but otherwise fit well with the building and the surroundings. The ordinance is restrictive enough to accomplish community goals yet permissive enough to allow businesses reasonable opportunities to identify themselves. The code is less restrictive than those in some of the surrounding suburbs but is more restrictive than others. Said Brown: "Working collaboratively, the city and the interest groups were able to create a code that accomplished public objectives precisely, without overregulating, without regulating beyond the need to accomplish our goals" (Brown 2000b).

Bob Brown

According to Assistant Planning Director Bob Brown, the greatest strength of the Cleveland sign ordinance is that it is balanced. "Working collaboratively, the city and the interst groups were able to create a code that accomplished public objectives precisely, . . . without regulating beyond the need to accomplish our goals."

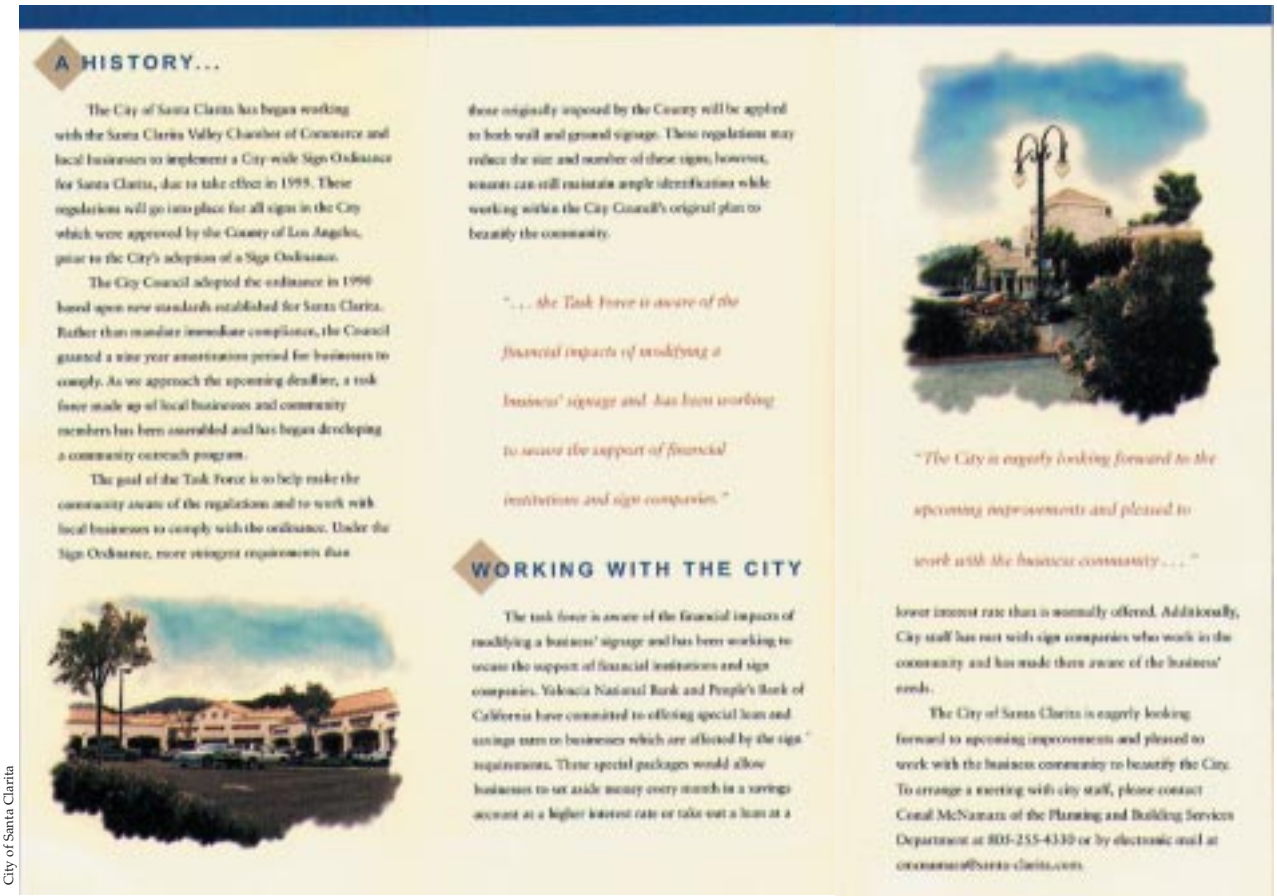
Santa Clarita

When of Santa Clarita, California, was incorporated in 1987, the newly formed city council made improving the city's visual appearance a top priority, said Enrique Diaz, associate planner for the city (Diaz 2000). To begin that process, the council directed the planning department to draft a new sign code. That code, which was adopted in 1990, contained a provision to amortize nonconforming signs over a nine-year period ending in November 1999. With the exception of all freeway-oriented signs, which by state statute were deemed conforming,[1] the amortization provisions applied to existing signs that were approved by Los Angeles County prior to the city's incorporation and that did not conform to the new sign code.



City of Santa Clarita

Santa Clarita undertook an extensive public outreach effort, including mailing the brochure pictured here, as well as sending city staff door to door to talk with business owners and operators to notify them about an upcoming sign amortization deadline.



A HISTORY...

The City of Santa Clarita has begun working with the Santa Clarita Valley Chamber of Commerce and local businesses to implement a City-wide Sign Ordinance for Santa Clarita, due to take effect in 1995. These regulations will go into place for all signs in the City which were approved by the County of Los Angeles, prior to the City's adoption of a Sign Ordinance.

The City Council adopted the ordinance in 1990 based upon new standards established for Santa Clarita. Rather than mandate immediate compliance, the Council granted a nine year amortization period for businesses to comply. As we approach the upcoming deadline, a task force made up of local businesses and community members has been assembled and has begun developing a community outreach program.

The goal of the Task Force is to help make the community aware of the regulations and to work with local businesses to comply with the ordinance. Under the Sign Ordinance, more stringent requirements than

City of Santa Clarita

those originally imposed by the County will be applied to both wall and ground signage. These regulations may reduce the size and number of these signs; however, sources can still maintain ample identification while working within the City Council's original plan to beautify the community.

"... the Task Force is aware of the financial impacts of modifying a business' signage and has been working to secure the support of financial institutions and sign companies."

WORKING WITH THE CITY

The task force is aware of the financial impacts of modifying a business' signage and has been working to secure the support of financial institutions and sign companies. Valencia National Bank and People's Bank of California have committed to offering special loan and savings rates to businesses which are affected by the sign requirements. These special packages would allow businesses to set aside money every month in a savings account at a higher interest rate or take out a loan at a

"The City is eagerly looking forward to the upcoming improvements and pleased to work with the business community..."

lower interest rate than is normally offered. Additionally, City staff has met with sign companies who work in the community and has made them aware of the business' needs.

The City of Santa Clarita is eagerly looking forward to upcoming improvements and pleased to work with the business community to beautify the City. To arrange a meeting with city staff, please contact Conal McNamara of the Planning and Building Services Department at 805-255-4330 or by electronic mail at cmcnamara@santa-clarita.com.

The city council gave the planning department explicit instructions to work with the business community to implement the new ordinance. In 1996, three years prior to the amortization deadline, the city formed a task force to help shape a public outreach program to alert businesses that changes to their signage might be necessary. The task force was composed of business people, the chamber of commerce, and other property owners.

As part of the initial outreach effort, the city developed a brochure that described the background of the regulations, provided answers to frequently asked questions, and listed the basics of sign permit requirements. In 1998, the city held Sign Walk Day, on which 45 city employees went door to door distributing sign brochures and responding to questions from business people. The city then hosted a one-day workshop for store owners featuring a small business consultant who used photo simulations to demonstrate how various businesses' signage could be modified to meet the new code requirements without compromising their visibility. The final ordinance also took into account the need for increased size and height in retail districts fronting multilane arterial or collector streets with higher speed limits.

The city hired a consultant to use a geographic information system to compile a Sign Notification Database. The database has a digital photograph of every sign in the community and is searchable by street address or business name. Three months before the November 1999 deadline for compliance, the city used the database to generate informational letters to approximately 600 businesses that it had identified as needing signage removal or modification under the ordinance. A second letter was also mailed asking business owners to "call the city to find out how to comply" with the sign code. As of March 2001, approximately 300 noncompliant signs had been removed, leaving approximately 150 that need to be addressed. The final steps in the notification process, including violation notices, identify code enforcement procedures.

Diaz (2000) said the task force has been "very cognizant of the financial impacts of modifying a business's signage." Thus, in addition to the steps described above, the city secured support from financial institutions to help businesses comply with the ordinance. A local bank, Valencia Bank and Trust, committed to offering special loan rates to businesses who are affected by the sign requirements. These special packages allow businesses to set aside money every month in a savings account at a higher interest rate than is normally offered. Additionally, staff met with sign companies who work in the community and made them aware of the businesses' needs and asked their help in offering the businesses discounted sign packages. The city council voted to help subsidize sign permit fees for business that require new signage under the ordinance. And finally, an administrative sign variance process was developed to address businesses with special circumstances.

The Santa Clarita story is unique for a several reasons. Most notably, the city took a proactive approach toward compliance that began three years before the a sign amortization deadline was to expire. The comprehensiveness of the effort—the formation of a task force, a photo inventory, a small business workshop, and help from local banks—all send a positive message that the city is trying to be firm but fair in bringing businesses into compliance.

Gatlinburg, Tennessee

Nestled in one of the most scenic regions of the U.S., Gatlinburg, Tennessee, (population 3,400) is the gateway community to the Great Smoky Mountains National Park. As such, it's economy is largely dependent on tourism. This physical and economic context presented a specific challenge to those involved in the sign ordinance revision process. That process began in 1999 with the formation of an ad hoc committee composed of city council members, planning commissioners, and representatives of the Gatlinburg Gateway Foundation, a nonprofit organization concerned with the economic health of downtown. One segment of the committee, which included a council member who initiated the process, felt it was time to push the city forward to improve the overall appearance of streetscapes and signage through more restrictive regulations.

Jay Ogle

Jay Ogle

As the gateway community to the Great Smoky Mountains National Park, Gatlinburg shares the challenges of other tourist-based economies when it comes to balancing the needs of tourist-oriented businesses (such as this Ripley's Believe it or Not! complex) to attract one-time or infrequent visitors with the desire to preserve mountain vistas and enhance the quality of the built environment in general.

Another segment were those who recognized the dependence of tourist-oriented businesses on signage to attract customers, many of whom would be unfamiliar with the area. Working intensively in nine meetings over a three-month period, the committee conducted windshield surveys, talked to business people, and prepared a draft ordinance.

The draft was presented to the city council and the public in February 2000. Five problem areas emerged at that meeting, and subcommittees with broader representation than the initial drafting committee were formed to address each area. Local businesses were particularly concerned with the proposed limits on sign size. Each subcommittee addressed a particular issue: (1) size and number of signs; (2) mall signage (3) products and objects (which addressed outdoor sales and storage and window displays); (4) off-premise signs; and (5) sign design. The subcommittees submitted their reports in November 2000. And as is often the case during a sign code revision process, there was concern among business owners affected by the new regulations that existing businesses whose signs were permitted under the old ordinance would have a competitive advantage until the point that they too would have to conform to the new ordinance.

The chief concern of the "Size and Number" subcommittee was that the ordinance should result in signs that are proportionate in size to the width and setbacks of individual store fronts. The committee recommended that the size of on-premise signs be determined by a formula wherein each building would be allowed a minimum square footage of sign area, plus an additional one-half square foot per each lineal foot of building frontage, plus an additional one-half square foot of sign area for each foot the sign is setback from the right of way. The prior ordinance had permitted up to four signs per business. The committee decided against changing this allowance, having agreed that leaving the permissible number intact would "optimize the probability for existing businesses to be in compliance with the new ordinance" (Gatlinburg 2001).

The primary issue addressed by the "Mall Signage" subcommittee was a provision in the draft ordinance that allowed only those mall tenants that have an exterior entrance to place signage on the exterior of the mall. The concern of the committee was that the proposed ordinance "did not lend the (internal) mall occupants the same opportunity to identify their businesses as other establishments throughout the business community" (Gatlinburg 2001). The committee recommended that interior mall tenants be allowed exterior signage. Further, it recommended that the ordinance be amended to require mall developers to submit a comprehensive mall signage plan that identifies the size, location, colors, materials, number, and lighting of all mall signs.

The "Sign Design and Elements" subcommittee drafted sign design guidelines that may ultimately be included in an appendix to the new ordinance. The guidelines are intended to help sign applicants with suggestions on how to comply with the new ordinance. Specific design elements addressed in the guidelines include simplicity, compatibility, color, lettering, and quality of materials (Gatlinburg 2001).

In June 2000, Jay Ogle, assistant city planner of Gatlinburg, said, "the sign industry has been very supportive of what the city's Environmental Design Review Board (which reviews buildings and signs) has been aiming for" in terms of sign appearance in the downtown. Ogle attributed this to the fact that sign makers are already familiar with what the review board is looking for. He says the sign ordinance revision was simply a means of codifying policy that the board has been implementing through the discretionary review process for a number of years.

HOW NOT TO REWRITE A SIGN ORDINANCE

Not every sign committee process works well. Poorly defined committee assignments, lack of staff assistance, time constraints, political turnover and "baggage" (simmering tension between participants), and lack of leadership can all derail a sign code process before it even gets off the ground. In preparing this chapter, the author contacted one Midwestern city sign ordinance administrator (who asked not to be identified) who described a sign ordinance task force process that provides a good cautionary tale for cities about to embark on this process.

A problem had arisen in the city regarding enforcement of a citywide ban (albeit a content-driven unconstitutional ban, but that's not the point of this story) on real estate For Sale signs in residential areas and a proliferation of temporary Open House signs being placed in the public right-of-way. Most local realty companies had adhered to the ban since its enactment in the 1970s, but one company continually violated the ordinance, creating an unfair advantage for that company. Other Realtors had urged the city to revise the ordinance to allow For Sale signs and had complained to the city council about uneven enforcement of the law. Further, the city was regularly confiscating temporary Open House signs, and both Realtors and code enforcement officers felt it was time to clarify that issue as well.

The city council's response was to form a 19-member task force, charging it with examining all aspects of the sign ordinance and requiring it to provide a final report and recommendations 10 months after its formation. From the outset, the scope of the task force's assignment was ill defined. Some committee members believed it was their task to draft an entire new ordinance, while others saw their role as advisory only. For example, according to a staff person, some committee members went too far and wanted to dictate permissible colors of signs. Ultimately, no new ordinance was produced by the task force, and the problems with proper regulation and enforcement of real estate signs still persists. The sign code administrator did move forward separately from the task force and prepare some code revisions for the purpose of minimizing variance requests. In the end, an effort that began with the desire to solve one specific regulatory problem mushroomed into a full code rewrite process that went nowhere.

The draft sign ordinance was approved by the planning commission in February 2000. It was presented for its first reading to the city council in March 2001 and was not adopted. According to Ogle (2001), despite the amount of work that went into it, the fact that the ordinance did not pass does not make the effort a failure. "It was a good educational process for the entire community. It was the first time a lot the issues had been discussed. But in retrospect we should have had even more people from every point of view involved from the outset" (Ogle 2001).

Georgetown, Texas

Fueled by growth of the high-tech industry, the city of Georgetown, Texas, 35 miles north of Austin, is part of one of the fastest-growing metropolitan areas in the U.S. Civic leaders recognized in the mid-1990s that the commercial and residential development boom making its way north from Austin along I-35 would soon have an impact on the visual appearance of the Georgetown area.

To engage Georgetown citizens in a discussion about community design, the chamber of commerce convened five "awareness" forums. The first forum featured James Howard Kunstler, author of *The Geography of Nowhere* and *Home from Nowhere*, two books that document the loss of community identity and character, and offer solutions to address these issues. Yet another panel featured land developers and Realtors. Attendance at the forums averaged 100 persons.

In 1997, the city, with strong encouragement from the chamber of commerce, responded by forming a committee to prepare urban design guidelines, including guidelines for new signs. The purpose was to establish a high standard for the appearance of commercial buildings and signs, which, in turn, the city hoped would help attract high-quality development to Georgetown and protect the historic character of the town.

Dennis Wilson, a Dallas planning consultant, was hired by the city to facilitate the work of the committee and help draft the guidelines. The 22-member urban design committee had broad representation from every key stakeholder group in Georgetown. Architects, landscape architects, bankers, sign company owners, downtown merchants, Realtors, a Southwestern University representative, several city councilors, business owners, and a former mayor all participated. The committee held several additional public meetings over the course of the 18-month process, which were attended by 15 to 20 members of the public each time.

Gordon Baker

The primary objectives of the Georgetown, Texas, urban design and sign committee were to preserve the community's distinct character and heritage, which in turn, local leaders hoped, would enhance its image and attract high-quality development. A key concern raised early in the ordinance revision process was the problem of visual clutter caused by pole signs and temporary signs, as well as overhead utility lines and poles.

Gordon Baker

Gordon Baker

Gordon Baker

Gordon Baker

The Georgetown Sign Guidelines, which were developed by a committee, provide assistance to businesses with sign materials, types, colors, lettering, layout, placement, and illumination. In terms of sign type, the committee decided to require businesses to use berm signs (i.e., monument signs) rather than pole signs. The Georgetown Chamber of Commerce—which spearheaded the urban design and sign ordinance process—believes that the attention the city has paid to quality of life and community appearance have helped to attract new businesses to the community.

Gordon Baker

The initial tasks of the committee were to develop a broad policy statement that described what Georgetown should look like in the future and, following that, identify key design issues and problems that may hinder that goal. The primary goal, the committee decided, was for Georgetown to retain its distinctive character. According to Wilson, "There was widespread concern that the rapid influx of national franchises and chain stores was putting Georgetown at risk of looking like everywhere else." Even committee members who had taken an "if it ain't broke, don't fix it" approach to design and signs, recognized that growth was coming to Georgetown, and the town's unique character could be lost without a proactive urban design plan. Reaching consensus on the overarching policy was important, said Wilson. "Jumping into the details of ordinances and regulations too quickly—before articulating a shared vision—may have caused the whole process to unravel" (Wilson 2001).

The city adopted urban design and sign guidelines as part of the Georgetown Century Plan in September 1999. Wilson then worked with the city attorney and development services staff to redraft the sign guidelines into a sign ordinance, which was enacted in March 2000.

The key signage issues the committee addressed were, first, a general perception of visual clutter caused by both pole signs and overhead utilities (e.g., telephone poles, electrical wires) and, second, a proliferation of temporary signs, specifically real estate signs in the public right-of-way and banners. After the group had identified the main problem areas with signs, Wilson used slides from both Georgetown and comparable communities to depict desirable

approaches and potential solutions. This gave the committee concrete examples upon which to base the new guidelines. "It helped to use graphics that reflected what the committee was aspiring to. It gave every participant an immediate understanding of what would result from the new policies," said Wilson.

To solve the problem of utility lines and poles, the committee pushed to have utility poles put underground. With respect to pole signs, an early decision was made by the committee to require businesses to use monument (referred to in Georgetown as "berm" signs) in place of pole signs. Gordon Baker, owner of a Georgetown sign company and chair of the chamber of commerce who represented the chamber on the committee, at first believed that such a requirement was too drastic a step. After extensive discussion, the committee stood by its decision. Baker said he ultimately recognized that "businesses pay enormous amounts of money to compete with height, only to be lost in a tangle of pole signs down a street." Berm signs, he added, also have the advantage of directing drivers into and out of business entrances, something that pole signs are less effective at without additional directional signage at street level. For businesses oriented to the freeway, the committee recommended (and the ordinance permits) allowing one pole sign up to 28 feet high and 250 square feet in size.

Rapid growth in new subdivisions led to an ongoing problem with real estate directional signs being placed in the public right-of-way. As is common, the city ordinance already had a ban on such signs being placed there, but it was very difficult to enforce given the quantity of signs. That said, the committee wanted to allow for some neighborhood identification. The consultant recommended that the city use a uniform environmental graphic design system including monument signs on medians and along roadsides that would contain interchangeable sign "blades." The signs could be used to identify newly developing subdivisions and neighborhoods as well as local libraries, historic sites, and other points of interest.

With regard to temporary banners, the committee first considered an outright ban but recognized that it would be impossible to enforce. A compromise was reached wherein businesses are permitted to use banners for 30 days per year, but for no longer than 10 days at a time. While not solving the enforcement problem, it provided reasonable limits on the display of temporary banners that the city could use if a particular banner became a problem.

During the period between the time when the urban design guidelines were adopted and the time the sign ordinance was passed, a number of people let their opposition to the new regulations be known. Baker and another chamber of commerce representative who had participated on the committee were labeled as "no-growth imposters." One chamber board member resigned in protest of the sign guidelines, which he believed would handicap his business. Other opponents said they had not "heard anything about" the process to develop the guidelines at any time during the two years it had been going on.

Baker said the attempts by the opposition to make it a personal issue backfired. He found that by sticking with the substantive issues and agreeing to modify the draft sign regulations where appropriate, the opposition eventually either came around to accept the new ordinance and guidelines or they "simply went away" (Baker 2001). For example, the final draft of the ordinance required 80 percent of the base of a berm sign to be touching the ground. As a compromise, the regulations were modified to allow space between the ground and the bottom of the sign, so long as its height does not exceed eight feet.

In 2000, after the guidelines and sign ordinance had been in place for a year, Baker said the proof of their value was already evident. Several large corporations had announced plans to locate in Georgetown. Adequate water supply, utilities, and a skilled workforce were the utmost draw, but the high quality of life and the demonstrated commitment of the community to present itself in a positive way were also mentioned by the prospective businesses to the Georgetown Chamber of Commerce as factors that influenced their decision to locate there (Baker 2001).

CONCLUSION

There is no one best way to reach consensus on sign regulation. As illustrated in the case studies, committees and task forces can bring stakeholder groups together to both allow for broad input and to ensure that those most directly affected have a hand in crafting the regulations. The city attorney (or outside legal counsel who is well versed in sign law) is elemental to the process, as are traffic engineers. While the scope and specific issues that such a committee will address vary between cities, the basic steps—identifying stakeholders, laying ground rules, educating committee members, generating options, and preparing recommendations—is a sound framework that is suitable for myriad circumstances.

The case studies here provide five snapshots of how committees have worked successfully to identify signage concerns when drafting and reviewing proposed regulations. The San Diego process resulted in first-of-a-kind regulations that created signage overlay districts in areas of special character and other provisions that relate sign size to traffic speeds in auto-dominated areas. In Cleveland, city staff prepared a draft ordinance and then invited the sign industry and neighborhood groups to review it. The result was a unique ordinance that encourages creative sign design and is responsive to the signage needs of all types of businesses. In Santa Clarita, the task force was instrumental in shaping a program to help businesses bring their signs into compliance. Gatlinburg provides a good example of a standard approach to ordinance preparation, which led to the formation of subcommittees to address specific issues once the draft ordinance was made public. In Georgetown, Texas, the chamber of commerce took the lead role is pushing for a new sign ordinance (and architectural design guidelines) when it recognized that a high-quality community appearance would help attract high-tech employers. All the case study cities recognized the intrinsic value of on-premise business signs as well as the importance of aesthetic quality in the community.

NOTES

1. California state law has a provision that overrides local government authority to seek removal or alteration of signs oriented towards freeways. No other state has such legislation. Section 5499 of the California Business and Professional Code provides that ". . . no city or county shall require the removal of any on-premise advertising display on the basis of its height or size by requiring conformance with any ordinance or regulation introduced or adopted on or after March 12, 1983, if special topographic circumstances would result in a material impairment of visibility of the display or the owner's or user's ability to adequately and effectively continue to communicate with the public through the use of the display. Under these circumstances, the owner or user may maintain the advertising display at the business premises and at a location necessary for continued public visibility at the height or size which the display was previously erected, and in doing so, the owner or user is in conformance."

REFERENCES

Baker, Gordon. 2001. Email correspondence with the author. 30 January.

_____. 2000. Owner, Baker Signs and Designs. Georgetown, Texas. Telephone conversation with author. 27 December.

Brown, Bob. 2000a. Email correspondence with the author. 24 December.

_____. 2000b. Email correspondence with the author. 21 December.

Carpenter, Susan L. and W.J.D. Kennedy. 1988. *Managing Public Disputes.* San Francisco: Jossey-Bass Publishers.

Diaz, Enrique. 2000. Assistant City Planner. City of Santa Clarita, California. Telephone conversation with the author. 12 June.

Gatlinburg, Tennessee, Planning Department. 2000. A Report for the City of Gatlinburg: Sign Ordinance Subcommittees. Available at www.ci.gatlinburg.tn.us/planning/subcommittees. htm

Lathrop, Gene. 2000. Senior Planner. City of San Diego, California. Telephone conversation with the author. 23 November.

March, Leo. 2000. CEO, Integrated Sign Associates (Retired.) Letter correspondence with author. 11 October.

Ogle, Jay. 2000. Assistant City Planner, City of Gatlinburg, Gatlinburg, Tennessee. Telephone conversation with the author. January 29.

_____. 2000. Telephone conversation with the author. June 13 .

Preston, Steve. 2000. Assistant City Manager. City of San Gabriel, California. Telephone conversation with the author. 5 June.

Susskind, Lawrence et al. 1999. *Assisted Negotiation to Settle Land Use Disputes: A Guidebook for Local Officials.* Cambridge, Mass.: Consensus Building Institute.

Susskind, Lawrence, Sarah McKearnan, and Jennifer Thomas-Larmer. 1999. *Consensus Building Handbook.* The Consensus Building Institute. Thousand Oaks, Calif.: Sage Publications.

Wilson, Dennis. 2001. Principal, J.D. Wilson & Associates. Dallas, Texas. Telephone conversation with the author. 31 January.

APPENDIX A:

Issues in the Regulation of Commercial Electronic Variable Message Signage (CEVMS):

Excerpts from the Federal Highway Administration Report

Safety and Environmental Design Considerations in the Use of Commercial Electronic Variable-Message Signage

(FHWA/RD-80-051)

Application of Highway Investment Costs to CEVMS

Editor's Note: The following passages appear on page 68 of the FHWA Report.

The trouble is that self-restraint in marketing CEVMS is likely to prove every bit as difficult as in marketing other types of electronic signs. . . .

The risk to the public highway investment from outdoor advertising therefore is, as it always has been, in the lack of market incentives or industry self-regulation to prevent excessive and poorly designed or constructed signing, and in the risks that accompany sign maintenance activities. . . . And this is what continues to be the risk that must be faced in any authorization for increased use of CEVMS, either in the present authority for on-premise usage, or in any possible proposal for extended used at off-premise location in the future.

Generally local planning and land-use controls have not been equal to dealing with the pressures to develop land in the major urban and suburban corridors. Strip commercial development, often with lavish use of on-premise signs, is common in these corridors. The growing use of CEVMS, as discussed in this section, may do little to improve this overall situation.

APPLICATION OF CURRENT TECHNICAL KNOWLEDGE TO DEVELOPMENT OF STANDARDS

Editor's note: The following passages are a continuous excerpt from pages 68 to 84 of the FHWA Report.

When consideration is given to the development of standards governing roadside display of commercial electronic variable-message signing, it is suggested that standards should address at least those aspects of signing that are listed below. In this list no attempt has been made to indicate priorities or rankings of importance that these aspects should have in any set of standards. Nor does the discussion of these aspects indicate all of the situations in which they are interrelated. These are matters that will enter into the design of standards in accordance with policy decisions regarding scope, purpose, and other factors.

A. **Longitudinal Location**. This refers to the location of signs along the highway in their relation to the major geometric design features of the highway. Such features include intersections, interchange entry and exit points, channelization features, traffic control devices (including official route markings and directional signing), highway structures (bridges, viaducts, overpasses), and design features which require a high level of attention to the driving task (sharp curves, lane drops, "weaving" areas, areas of reduced sight distance).

B. **Spacing and Density**. This refers to the number of signs that are located within a specified linear distance in roadside areas in their relation to highway traffic safety and effective delivery of informational messages to motorists on the adjacent highway.

C. **Lateral Location**. This refers to the distance that signs are set back from the highway, measured in distance from the edge of the main traveled way. Lateral location standards may also consider the angle of a sign on which the messages are displayed relative to the line of sight of motorists on the adjacent highway.

D. **Interaction with Traffic Signs**. This refers to both the location and design of signs as these factors may affect the operational effectiveness of official traffic control devices.

E. **Duration of Message On-Time**. This refers to the length of time that the full text of a message is visible to view on a variable-message sign panel.

F. **Duration of Message Off-Time**. This refers to the length of time that the message panel of a variable-message sign displays no part of any message.

G. **Duration of Message Change Interval**. This refers to the length of time between display of the full text of one message and the display of the full text of the next message in a series of messages programmed for a variable-message sign. It includes, but can be longer than the message "off" time, and might be equivalent to a visual "dissolve" in which one image fades from view while another appears. Thus, some visual portions of two sequential messages might be displayed simultaneously.

H. **Total Length of Information Cycle**. This refers to the length of time required to display all elements of a pre-programmed sequential message or a message series. Pre-programming may be in the form of a manually activated remote control device.

I. **Rate of Intensity or Contrast Change**. This refers to variable-message signs in which the illumination or contrast does not change instantaneously, but increases to a maximum level and then decreases to a minimum in the course of changing messages. The rate of this change is the interval of time between the moment of maximum illumination intensity or contrast for the message that follows it.

J. **Flashing Signs and Lights**. This refers to a cycle of intermittent illumination in which the phases are arranged so that the changes in illumination or contrast appear to be displayed in sudden bursts of light. The flashing character of a sign is determined by reference to the interval of time between its maximum and minimum illumination in the cycle of change for the messages displayed. Flashing signs may include those that present repetitive displays of the same message or a series of different messages displayed on sequence.

K. **Brightness and Contrast.** This refers to the degree of intensity and contrast between a sign's message and its background, and is a factor affecting the legibility of sign messages. Optimum correlation of intensity and contrast maximizes legibility. Poorly correlated intensity and contrast may reduce legibility either by too little illumination and contrast or excessive brilliance (glare).

L. **Animation and Message Flow.** This refers to the sequential display of the elements of a message so as to give the appearance of their movement on or across the message panel of a sign.

M. **Size of Sign and Lettering.** This refers to the size of the cabinet and message panel of a variable-message sign, and the size of letters, numbers of other elements of messages displayed thereon. Size of lettering includes spacing any number of characters or lines, but does not include any style of characters.

N. **Primacy of Information.** This refers to the priority accorded to the various types of messages displayed in roadside areas. Priorities are determined by correlation of motorist information needs, motorist-driving tasks, and other information stimuli present in the roadside environment.

O. **Maintenance Requirements.** This refers to the services that must be performed to maintain an electronic variable-message sign in optimum operational condition. It includes routine servicing and repair of mechanical, electrical, or electronic parts, but does not include major replacement or reconstruction of portions of the sign.

In developing standards for the foregoing design, structural, and operational aspects of electronic variable-message signing, the summary presented in Table 4 indicates the general relationship of these aspects to the public interests involved. Each of these 15 aspects of electronic variable-message signing is discussed in greater detail below.

TABLE 4. IMPACTS OF CEVMS ON TRAFFIC SAFETY AND VISUAL ENVIRONMENT

Design, structural, or operational aspect	Operationally Unique to EVM Signs	Impact on traffic safety	Impact on visual environment
A. Longitudinal density	No	High	Medium
B. Spacing and density	No	High	High
C. Lateral location	No	High	High
D. Interaction with traffic signs	No.	High	Medium
E. Duration of message on-time	Yes	High	Medium
F. Duration of message off-time	Yes	Low	Low
G. Duration of message change interval	Yes	High	High
H. Total length of information cycle	Yes	High	Medium
I. Rate of intensity or contrast change	Yes	High	Medium
J. Flashing signs and lights	No	High	High
K. Brightness and contrast	Yes	High	Medium
L. Animation and message flow	Yes	High	High
M. Size of sign and lettering	No	High	High
N. Primacy of information	No	High	Low
O. Maintenance requirements	Yes	Medium	High

A. **Longitudinal Location**. A critical safety consideration in selecting the longitudinal location of CEVMS is the preservation of motorist sight distance in the vicinity of intersections or other highway features and in traffic situations demanding specific attention to driving tasks. A second consideration, relating both to safety and effectiveness of communication, concerns the impact of commercial signing in roadside areas upon the time-sharing capability of motorists when they must deal with the concurrent display of commercial advertising messages, traffic information and control messages, and directional information.

Empirical evidence from accident studies indicates that the presence of advertising signs is, in some circumstances, associated with traffic accident locations. Also, the bulk of the experimental and accident study evidence indicates that, notwithstanding a substantial capability for time sharing in reading and comprehending a series of messages, conditions can arise where this capability is overloaded. Elimination of messages having a low priority for safe micro performance of driving tasks (commercial advertising) facilitates concentration on messages with high operational priority (traffic control signing, route guidance, directional signing).

Because of the novelty and attention-commanding characteristics of conspicuous, high-contrast signs, a conservative criterion for estimating sight distance requirements should be employed when locating such signs. . . .

B. **Spacing and Density.** Notwithstanding the recognized ability of motorists to selectively filter out messages or other sensory stimuli that are extraneous to their immediate driving tasks and related directional information needs, human factors research indicates that the capability for processing information is finite, and under some circumstances may become overloaded. In such instances the result is distraction or failure to comprehend certain messages, and increased difficulty in maintaining information processing priorities according to the driving task needs. Spacing and the risk of overloading the driver's information processing capability, and the principle of "spreading" has been recommended in order to better relate the location of roadside signs to the information needs of driving tasks.

Evaluations of the impact of CEVMS on motorists' information processing capability under varying conditions also must take into account the exceptional readability, size, and variability in mounting heights of CEVM signs. It would appear to be possible to arrange two or more of these signs in such a manner that all would be visible and readable by a motorist simultaneously, where conventional signs or standardized billboards arranged in the same manner would not.

Applied to the matter of locating on-premise CEVMS in rural and other roadside areas where land development is not intense, the problem is subject to the same considerations that govern longitudinal location. In areas of roadside strip commercial development, or in other areas of concentrated development such as shopping malls with storefronts facing and visible from an adjacent highway, space for "spreading" is not generally available. CEVMS technology and design options, however, offer opportunities for accommodating several advertisers by sequential displays on a single sign panel. Sign manufacturers have cited this capability in connection with the possibility of reducing the density of separate signs in roadside areas having high commercial development, and it would seem to be appropriate for use in standards for CEVMS in areas where other forms of on-premise signing are or may be utilized.

C. **Lateral Location**. Considerations of traffic safety make it necessary to prevent the placement of physical obstructions or fixtures that may constitute collision hazards immediately adjacent to the main traveled way of a highway. These areas, called "clear zones," typically extend to 30 feet (9.14 m) for conventional highways. Normally it is to be expected that the location of electronic variable-message signs will not involve conflict with established clear zones, since in practice all will be located outside of the right-of-way. Instances may occur in the densely developed urban environments, however, where recommended clear zones may extend beyond the right-of-way line. In such cases the need to reduce potential collision hazards indicates that standards for lateral location of on-premise electronic variable-message signs should apply the clear zone principle.

In addition to reducing the risk of roadside collision hazards, standards for lateral location should reduce the time that the drivers' attention is diverted from road and traffic conditions. Generally this suggests that signs should be located and angled so as

to reduce the need for a driver to turn his head to read them as he approaches and passes them.

Lateral location of CEVMS must give priority to maintaining clear zones that may be necessary for the existing terrain and highway geometric design. Selection of lateral locations beyond these clear zones should relate sight distance to the total length of a sign's information cycle, permitting the viewer to see the entire cycle by a series of glances. Necessary sight distance for lateral locations should not be provided by trimming, destroying, or removing trees or shrubbery from the right-of-way.

D. **Interaction with Traffic Signs**. Safety considerations require that traffic control devices and official directional signing have priority in the competition for motorists' attention while driving. One occurs where the design of commercial advertising signs in roadside areas makes it difficult to quickly identify and select out official signs from others near them.

These situations were recognized in the Regional Standards for regulating outdoor advertising signs adjacent to the Interstate System, promulgated in 1960 under the Bonus law (23 FR 8793, Nov. 13, 1958, as amended). The pertinent excerpts from these standards are as follows:

> Section 20.8(a) No sign may be permitted which attempts or appears to attempt to direct the movement of traffic or which interferes with, imitates, or resembles any official traffic sign, signal, or device.
>
> Section 20.8(b) No sign may be permitted which prevents the driver of a vehicle from having a clear and unobstructed view of official signs and approaching or merging traffic.

These general provisions, applicable to both on-premise and off-premise outdoor advertising signs, are as necessary in the regulation of CEVMS as for conventional advertising signs. In determining when the design of advertising signs is similar to official signs, authoritative standards and specifications are furnished by the *Manual of Uniform Traffic Control Devices*. Determination of when the view of an official sign is obstructed or interfered with is an engineering judgment based on the circumstances of each situation.

E. **Duration of Message On-Time.** The length of time that the full text of a message is visible to view is directly related to the ease with which a motorist can comprehend it without interfering with his driving task. The longer a message is displayed, the more opportunity a motorist has to choose the moment when he can best divert his attention from driving to read a roadside commercial sign.

Selection of a reasonable minimum standard for the duration of message "on-time" should be correlated with the length of the message or message element. Experience of state highway agencies using electronic variable-message signs for road and weather information on Interstate System highways indicates that comprehension of a message displayed on a panel of three lines having a maximum of 20 characters per line is best when the on-time is 15 seconds. In contrast, the customary practice of signing which merely displays time and temperature is to have shorter on-times of 3 to 4 seconds.

F. **Duration of Message Off-Time**. The interval of time between sequential displays of messages or message elements directly affects the ease with which a motorist-viewer can comprehend a series of messages or message elements. As this interval of "off-time" is lengthened, the difficulty of maintaining the continuity of attention and comprehension is increased. In prescribing an operational standard, an interval should be selected which provides optimum conditions for comprehension without creating time-sharing demands that jeopardize the priority of attention to driving tasks.

G. **Duration of Message Change Interval**. This issue is closely related to several others discussed in this chapter, including: rate of intensity or contrast change (which is incorporated herein); flashing signs and lights; and animation and message flow. It should be the intent of any regulations to bar those uses of CEVMS that may distract or overload the driver, while not prohibiting the changing of messages on such signs at reasonable intervals.

For purposes of this discussion, the "message change interval" is that portion of the complete information cycle commencing when message "one" falls below the threshold of legibility and ending when message "two" in a sequence first reaches the threshold of legibility.

Present technology makes it possible for a displayed message to be removed from the sign face and a new message displayed in its place (with a blank period of predetermined length between the two) in such a brief overall time that the entire operation is barely perceptible by the human observer, particularly a driver in a moving vehicle. On the other hand, the same technology can be employed so that the time taken to present or remove a message can be extended. This can be achieved in several ways. For example, a multiword message can be "written on" or "erased from" the display face one character or word at a time rather than all at once. Second, on a sign capable of displaying message movement or animation, the first message can be moving across the sign while a new message is also moving in to take its place. Third, the illumination and/or contrast of the message can be varied so that one message appears to fade or dissolve into the subsequent one.

Control of the message change interval should be regulated to ensure that this interval is not obtrusive regardless of the technique utilized to effect the change. In other words, if the message change is accomplished by a change in illumination intensity, this change must be accomplished in the shortest possible time permitted by the system hardware and software, with the further restriction that no discrete messages will ever overlap on the display, nor would one message ever appear to gradually fade or dissolve into the next. Likewise, regulations should ensure that no message would appear to be written on or erased from the display piecemeal, i.e., less than the entire message at once. If such a partial image-change technique is required by a particular control system technology, a maximum time limit should be set for the complete message change such that the passing motorist is unable to read (and is not "compelled" to try to read) the message during the change. It is suggested that the figure commonly used as a measure of average glance duration, 0.3 second, be used here as a maximum permissible message change time limit. . . .

H. **Total Length of Information Cycle**. The goal being sought in the regulation of the information cycle length is that of allowing the passing motorist to comfortably read the entire message without an excessive added burden to his information processing workload; and of minimizing the sense of anticipation felt by the motorist while waiting to see what the next display will be, which could compel the driver to fix his attention on the variable message sign at the expense of his other tasks.

Information cycle length can be a function of the type of sign used and the nature of the information being transmitted, as well as the actual amount of material to be communicated. At one extreme is the unchanging, fixed message sign. In this case there is no information cycle per se, so the driver may read the sign when it is most convenient for him, provided his transit time is long enough for the text length. The simplest sign that may be regarded as having a measurable information cycle is that of the two-message alternating display. The most common form of this is the time and temperature sign. . . .

Clearly, this type of sign can have its information cycle length extended by the addition of a third message (e.g. the name of the business providing the sign), or by increasing the complexity of the present message (perhaps by displaying temperature in both degrees Fahrenheit and centigrade). Adding to the message complexity requires a longer time commitment by the driver to read and interpret the sign. Adding an additional message not only increases this time commitment, but increases the compelling characteristic of the sign as well. This situation is exacerbated with the type of sign in which several sequential displays are required to form one thought. Here, the motorist's compulsion to attend to the sign is greatly increased due to the psychological difficulty of leaving a task when it is incomplete. (This phenomenon is well documented in the psychological literature and is known as the Zeigarnik effect.) The famous "Burma Shave" signs were early examples of the commercially successful use of this concept. . . .

A different problem arises in the case of a sign where many independent messages are displayed sequentially. This might commonly occur in a regional shopping center, where the management erects an electronic, variable message sign and grants each member business "equal time." . . . When many merchants are involved, it is impossible to display every message in the short time that the sign is readable to the passing motorist. In order to minimize the compelling nature of the display caused by the driver's desire to read every message, and to prevent the motorist from committing potentially unsafe driving acts (drastic speed reduction, lane change, etc.) in a (possibly) futile attempt to do so, it becomes necessary to extend the total information cycle by con-

straining the message change interval at the low end. Specifically, it should be required that each message be held on display long enough for the sign to appear to be unchanging to any given motorist. While there is a high likelihood that a message change will occur within a particular motorist's field of view, the compelling qualities of the display will be minimized due to the long message "on-time" coupled with the fact that any one motorist will see at most one such message during a particular trip.

A worst-case condition occurs with a running message sign, in which the display is capable of continuous movement, and cannot be said to have a finite length. . . . As discussed in section K of this chapter, it is recommended that such signs be prohibited in those areas controlled under the Highway Beautification Act, as amended.

It should be noted that certain types of signs might possess information cycles even though their actual messages do not change. . . . The preprogrammed changes of color, pattern, and sequence of their lamps, however, effectively create information cycles. In the case of the Uniroyal sign, this information cycle lasts four hours. Clearly, any signs that have an information cycle but do not change messages should not be permitted on the roadside.

In summary, signs that are capable of displaying motion or animation, and signs that display information cycles without changing the texts of their messages, should be prohibited under the Highway Beautification Act amendments. Those signs on which many independent messages are displayed sequentially should maintain a minimum "on-time" for each message calculated to be such that a motorist traveling the affected road at the 85th percentile speed would be able to read not more than one complete or two partial messages in the time required to approach and pass the sign. In no case, however, should this on-time be less than four seconds. Since the average glance duration is generally accepted to be 0.3 second, a display time per message of four seconds would require less than 10 percent of the driver's available visual search time. A shorter display time could be too demanding when there are more competing needs for the motorist's attention.

In the case of signs on which a complete message requires several sequential partial presentations the situation is more complex, but formulae can readily be derived to compute acceptable ranges of total information cycle lengths for different highway/traffic/signing conditions. For any chosen vehicle speed, sign size, and distance from the road, a total information cycle time (taking into account message "on," "off," and "change" time) could be derived from knowledge of the number of display changes required, and the number of words and lines per display. Since the display details will obviously change over time, the regulation should be based upon a hypothetical worst case, and should incorporate such stipulations into its text. Any formula to be developed for this type of sign would have as its criterion the capability for a motorist, driving at the 85th percentile speed, to read the sign's entire message (within certain limits) without any undue increase in his processing workload. This goal would have to be met no matter where in the display cycle the motorist was first able to read the sign.

It is believed that, if the driver is given sufficient time to read the complete message, and can be reassured that he has, in fact, seen the entire display, he will be less compelled to continue looking at the sign with a possible adverse impact on his driving performance. By extension, when the series of sequential messages is too long for a passing motorist to read, the potential compulsion should be minimized by greatly extending the display change cycle as discussed above. And, in those cases where the display changes without a change of message, or where a message has the capability of continuous motion, the compulsion should be avoided by banning the signs from the roadside.

I. **Rate of Intensity or Contrast Change**. Refer to **Duration of Message Change Interval**.

J. **Flashing Signs and Lights**. The critical parameters for a sign or light to be designated as flashing concern the relative durations of the "on" and "off" phases of the signal, the pattern of these phases, the rise and decay time required for the signal to achieve maximum and minimum intensity, respectively, and the relative brightness of the "on" and "off" signal phases. In fact, a sign or lamp need not be completely extinguished between "on" phases to be designated as flashing. A perceptible change of brightness between the "on" and "off" phases is sufficient. The issues of signal brightness and contrast will be dealt with in another section. For the purpose of defining the operational use of the term "flashing" it does not matter whether the sign displays the

same message repeatedly or if the message changes periodically or with each cycle. The main factor of concern is the attention-getting nature of the signal, as governed by its flashing characteristic, which, intentionally or not, can capture and hold the motorist's attention even before he can read the message.

. . .

The objective of any regulation governing flashing signs or lights for roadside commercial use should be to minimize the likelihood of potentially hazardous attention-getting or distracting properties, while permitting signs which present messages which can change over time. The safety goal is to permit the messages to be changed in an unobtrusive manner, so as to avoid introducing a novel or distracting visual element into the driver's perceptible environment.

To this end it is suggested that any commercial sign visible from the highway be specifically prohibited from flashing (as defined below) if it displays a message of unchanging text. The illumination of or within such a sign should be regulated to permit a maximum of two "on" and "off" phases within any 24-hour period, unless such illumination is controlled by a device that senses the outdoor, ambient illumination in the immediate vicinity of the sign. Such signs should be permitted to cycle on and off as the ambient illumination under natural conditions changes about a level as yet undefined. These two proposals may seem somewhat arbitrary, but they have been based upon analysis that considered daylight versus night conditions; weather; periods of rush-hour traffic; and business operating hours.

For all roadside commercial signs subject to regulation which present messages whose text changes over time, the safety goal of unobtrusive message changes can be met by optimizing two parameters: a) maximization of the length of the signal "on-time" as a percentage of the total cycle; and b) minimization of the flash rate or number of periods per unit time in which the signal is on. For example, a signal that is "on" 50 percent of the time (a 50 percent duty cycle) and has a flash rate of 10 cycles per minute would yield a display that is on for 3 seconds, off for 3 seconds, etc. Obviously, the goal of a near steady-state (non-flashing) signal can be achieved by maximizing the duty cycle to nearly 100 percent and minimizing the flash rate, possibly to a value of 3 per minute or less. A sign displaying a message requiring sequential displays, however, needs a flash rate high enough for the entire sequence to be read by the passing motorist without demanding an undue degree of the driver's attentional capacity. The duty cycle issue can be resolved easily (the "off-time" figure required to be as brief as the actual time required to replace one message with another by the system hardware and software in conjunction with minimum performance standards), but an acceptable flash rate must be based upon research through which the tradeoff between the motorist's ability to read the entire message and a flash-rate low enough to avoid excessive attentional attraction can be optimized empirically. The resolution of this issue will also have to take into account the maximum message length (total informational cycle) that the motorist is expected to read, and his compulsion to read the entire text.

An initial approach to this problem might proceed as follows. Assume that the goal is that the "average motorist" (one traveling at the 85th percentile speed, perhaps) be able to read a sign's complete message during a fixed percentage (perhaps 30 percent) of the time it will take him to travel from the point at which the sign's message is first legible until he passes it. Then the flash rate would be determined to be that subdivision of the total information cycle length that allows the entire message to be seen once in that time period. For further discussion of this issue refer to **H. Total Length of the Informational Cycle.**

K. **Brightness and Contrast**. Like the issue of letter and sign size discussed in a later section, the major parameters affecting sign legibility due to brightness and contrast are well documented in the human factors literature. . . . Under daytime conditions it is usually irrelevant to talk about a sign that is too bright or contains too much contrast. At night, however, this is not the case. Here, the range of brightness acceptable for sign legibility depends largely on ambient lighting conditions. Brightly lit urban areas, the glare of oncoming headlights, or competition from nearby illuminated signs can all interfere with the driver's ability to read the message on a particular sign. Worse, a commercial sign of brightness and/or contrast that is too high for the particular circumstances of its placement can lead to the driver's inability to read nearby official signs or can temporarily destroy his night vision (of importance for hazard detecting and seeing roadway delineation) under otherwise low illumination nighttime conditions. Thus, it is crucial that upper limits on

sign brightness and contrast be established for CEVMS in nighttime use. The advertiser should not be restricted on the low end of brightness or contrast under the reasonable assumption that he will take care to design a sign that meets at least the standards of good human factors practice for ease and comfort of reading.

. . .

Lighting engineers and designers speak of two phenomena which may be caused by excessive illumination, and which are closely related. These are disability glare (the more severe), and discomfort glare. The former often results in a reduction in contrast of the visual stimulus. . . ., and may adversely affect the driver's ability to read a sign; the latter, as its name implies, makes the sign reading task less pleasant, and may affect the effort which the driver will make to read a sign. Glare sources, some of which were mentioned above, will additionally impair seeing at night since they can change the eye's pupil size and its degree of dark adaptation. Obviously, a bright illuminated sign, or simply a sign of high luminance, may affect sign reading comfort or ability not only of its own message, but those of nearby signs and road markings as well. When it is remembered that a brightly lit advertising sign could act as a glare source, conceivably affecting the driver's ease of reading official signs and markings, it becomes clear why regulations establishing upper limits on CEVMS nighttime luminance must be set so as to avoid possible discomfort glare. Such limits are not easily defined, and should be subject to empirical validation.

L. **Animation and Message Flow.** The one characteristic of a sign or light bank, which has perhaps the greatest potential for motorist distraction as well as a dominant impact on the aesthetic environment, is motion or the illusion of motion of lights or other display features. Signs possessing such capabilities have been variously referred to as animated, chasing, scintillating, or traveling, among others. The unifying feature among them is the appearance of movement, either of lights themselves, or of letters, numbers, characters, or graphics that are often comprised of many individual light bulbs. The electronic, remote control of the displayed image which is a hallmark of the type of signs addressed in this report, coupled with the programmable features of the state-of-the-art display technology being discussed, permit such signs to offer animation and message flow quite readily. Such signs can be visually captivating, and their traditional use on movie theatres, the Las Vegas and Times Square commercial strips, and, increasingly, on major sports stadium scoreboards emphasizes this point. Clearly, however, they have no place on or alongside our Nation's highways, where their very advantages can cause a serious problem of distraction of attention from the driver's task. It is recommended that signs that convey an appearance of movement or animation in any form should not be permitted in those areas controlled by the Highway Beautification Act, as amended.

Specifically excluded from this section, and addressed in other sections of this chapter, are signs in which the message may be changed, electronically or mechanically, by the appearance of complete substitution or replacement of one display by another, but in which the appearance of movement during message display, or of messages appearing to move across the display face, is not present. The distinction being made is that of a changeable message display, in which a message being presented is visually removed and then replaced with another, versus and animated, moving, or dissolving display in which part or all of a message displayed on the sign appears to move during the time it is intended to be read.

M. **Size of Sign and Lettering**. It is not the function of this report to prescribe to the advertising industry the optimum human factors display characteristics for their products. Yet, with regard to choice of character size, spacing, and typeface used on CEVMS visible from the highway, the goals of the highway safety specialist are closely aligned with those of the advertiser. The reason for this is straightforward. In order for the advertiser's message to be conveyed to the motorist quickly, clearly, and unambiguously, the display should be designed with full understanding if the constraints imposed by vehicle speed and vibration, diverse lighting and weather conditions, and the need for driver time-sharing among simultaneous, competing tasks. As the readability of a particular display is degraded, the likelihood of the message is being completely and accurately read and understood diminishes. This is because the motorist will require more of his already limited time to read the sign because he begins to read it later than he otherwise would, or because he chooses to ignore it rather than struggle to read it.

Accordingly, commercial sign display characteristics relating to sign size and to character size, spacing, and typeface should be chosen with the guidance of one of the many excellent human factors design guidelines available for this purpose—with careful attention paid to environmental constraints under which signs will often have to be read.

Of course, it is entirely possible to erect a sign of a size and with characters so large that readability is no problem. On the other hand, such a sign would be likely to create potential for motorist distraction, and would probably be judged as more deleterious to the aesthetic environment as well. Thus, where existing regulations do not apply it will be necessary to develop guidelines for maximum limitations on sign and character size for commercial electronic variable message signs.

N. **Primacy of Information**. Traffic safety and human factors research indicate that priorities must be maintained in providing information to motorists while they are driving. In regulating display of information in roadside areas, primacy must be given to messages that relate directly to driving tasks and coping with traffic situations. This principle has been referred to earlier in the recommended regulation of longitudinal location of CEVMS in order to reduce the risk of driver distraction in the vicinity of interchanges, intersections, and other major driving decision points, and in the recommended location of such signs so as to avoid interference with the easy identification and recognition of traffic control devices.

Application of the principle of primacy to the problem of assuring the necessary functional balance of information displayed in roadside areas involves regulating the message content of signage. Traditionally, on-premise signage has been used for a wide variety of purposes, including identification of a business site, advertising goods or services for sale, entertaining viewers or providing public service information, and giving directions into and about the business site.

Electronic variable-message signs are capable of all of these uses. The necessity for primacy of information responsive to motorist's information and direction-finding needs suggests that their use should concentrate on messages that identify business sites, give directions into the site and its facilities (parking and loading areas, internal circulation pattern), goods or services available, and other information necessary to use the site (e.g., hours of operation).

The principle of primacy of information is recognized in the Highway Beautification Act's provisions for assuring that adequate directional signing and travel information are available to motorists. It is also applied in Federal Regulations regarding priorities for removal of nonconforming signs, and in standards that prohibit in certain locations the display of information not related to motorist needs or traffic operations. But while relevant legislation and court decisions appear to be broad enough to permit promulgation of standards requiring CEVMS to give primacy to certain types of information, the problem of enforcing such standards is formidable. The ease with which CEVMS information displays can be changed, in some cases almost instantaneously, means that compliance with primacy standards must rely almost entirely on the self-restraint of individual sign owners and operators. While a sign operator's record of responsibility in this matter might be considered a relevant factor in determining fitness for a license to display a CEVMS, the day-to-day detection and correction of failures to observe information primacy principles is clearly a difficult administrative aspect of this matter.

O. **Maintenance Requirements**. Since the communication function of CEVMS requires that mechanical, electrical, and electronic elements be maintained in proper operating condition, it is essential that standards for such signage include a requirement that they shall be maintained in good repair at all times.

Where light bulbs comprising part of a message display are not working, they can present an unintelligible pattern that frustrates the viewer's expectations and holds his attention for longer than normal recognition and comprehension time. For motorist viewers this may be a particular safety hazard under certain traffic conditions. Similar risks may result where the message display panel uses mechanical devices or is controlled by electronic means and these elements malfunction.

The CEVMS cabinet should receive regular maintenance, and repair or replacement when needed, since this housing may affect both the operational and aesthetic aspects of the sign. Cabinets that are not weather proof obviously increase the risk that mechanical, electrical, and electronic elements of the sign will be exposed to damage or deterioration. Also, when the exterior appearance of a cabinet is allowed to deteriorate it

becomes an unattractive feature of the roadside environment, reflecting an unfavorable impression of both the sign site and its advertiser.

Standards may reasonably require that signs shall be kept in good operating condition and external appearance, and such standards are not invalid due to vagueness merely because they fail to specify the particular maintenance or repair measures that must be taken by sign owners. Moreover, such standards may also reasonably provide that failure to keep signs in good operating condition or external appearance will be a basis for forfeiture of permission for operation of such a sign.

NEEDED RESEARCH

A series of three research studies is recommended in order to obtain definitive answers to those safety and environmental questions raised in the body of the report, which, after prolonged debate in the research literature, still are not settled. The three questions, which correspond to the three research studies to be described below, can be broadly summarized as follows:

1. Is there a demonstrable relationship between the presence of roadside commercial advertising signs in general and CEVMS in particular, and driver distraction, information processing ability, or workload?

2. If the answer to question 1 is yes, can those features and other characteristics of signs . . . which are thought to contribute to this established relationship can be empirically identified, and can the critical parameters of each contributing feature be specified?

3. Through empirical testing, can a relationship be demonstrated between roadside commercial advertising signs, and specifically CEVMS, and the aesthetic impact of the roadside environment upon highway travelers and adjacent property users?