

OPTIONS FOR ASSURING ADEQUATE MOTORIST
TRAVEL INFORMATION SYSTEMS
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Abstract

Historically information relating to goods and services needed during travel has been delivered through a combination of official signing, billboards, guidebooks and maps. Implementation of laws restricting billboards has caused concern that needed information will not be available. Authorization for special official signing and other information facilities has been included in all Federal billboard laws but has not been systematically implemented. Congressional authorization contemplates a cooperative, coordinated, multi-media; incremental information system reflecting functional needs of motorist. Information needs regarding goods and services are met by (1) locational information, (2) directional information, and (3) preference information.

The Federal Highway Administration (FHWA) Task Force recommends that the national policy on information systems recognize that the general duty to provide a safe, efficient, economical and convenient highway system includes the specific duty to assure that motorists using that system have adequate, timely information regarding goods and services and attractions that may be travel objectives. Existing legislative authority provides options for State highway agencies to meet this travel information need by developing a "mix" of techniques that is suitable to individual State or regional needs and circumstances. Specific options are listed and described. Recommendations for developing adequate motorist travel information systems are made.

Introduction

Throughout history our legal system has seemed to work best when it performs the function of settling disputes. Another function it performs well, when it has public support, is the regulatory function -- suppressing something that endangers public health, safety or welfare. In both cases the task is, essentially, to take rules that have been agreed upon, and, acting as arbiter or enforcer, apply them to varying fact situations. The results are readily visible, conclusive, and constructive in the sense that they can be classified, distinguished from each other, and used as the basis for inferences about how to treat other situations that have not yet occurred.

When the law is asked to perform the dual function of restricting one activity and facilitating another, it often seems less decisive. Indeed, sometimes it flounders, for this dual function probably is the most difficult one that it is asked to perform.

An example of this problem occurs in connection with assuring adequate motorist travel information services and facilities in the highway system. This paper discusses some of the options for a national policy on this matter, and steps for achieving the policy. The discussion is based on the work of the Federal Highway Administration's Task Force to Restudy Directional and Informational Signing in 1978 to 1980.

The Problem of Assuring Adequate Motorist
Travel Information

The problem can be described as follows:

Historically, the responsibility for providing information to motorists about services and travel attractions has been dispersed among highway agencies that provide official signing within the highway rights-of-way, and the operators of service establishments and travel attractions using outdoor advertising adjacent to the right-of-way. In this division of labor, highway agencies have tended to limit their information signing to general identification of major communities and geographic points, and, on the Interstate system, general locational and directional information about food services, fuel, lodgings, campgrounds and major travel attractions. Businesses catering to highway travelers have provided varying amounts of information relating to locations and routing instructions on signs advertising their products and services.

Development of the Interstate system and other controlled access highways, together with efforts to reduce the risk that these highways would become "billboard alleys", sharpened the need for a rational, consistent system for delivering motorist service information. From its first appearance in Federal-aid highway legislation, therefore, the program to regulate roadside advertising created concern about motorists' ability to get sufficient, timely information about goods, services and facilities needed during travel, and for in-trip planning of travel objectives.

Congress never announced a national policy on this matter, but indirectly addressed the issue in three features of the Federal-aid law.

First, not all commercial advertising in roadside areas was prohibited. Exceptions were made for certain types of commercial signs providing directional information.

Second, States were authorized to use Federal-aid funds to provide systems of official signs giving specific information in the interest of the traveling public (i.e., business and brand names) and also to establish other information facilities and services.

Third, procedures for removal of nonconforming advertising signs encouraged States to delay removal of directional information until adequate alternative sources and services were available.

Federal law and policy did not mandate any uniform program or timetable for establishing effective alternative information systems, and, State-by-State, development of alternatives to nonconforming roadside billboards as sources of motorists services information has been uneven. A cyclical relationship has appeared to exist between removal of nonconforming billboards and progress in introducing alternative information services. Lack of available alternatives discourages removal of nonconforming signs; and delay in removal of these signs reduces incentives for States to provide alternative information systems.

This cycle symbolizes the stalemate that prevailed from 1958 to 1978. During these years there has been little application of new technology to the practical matter of communicating with motorists as they travel, and no national policy detailing the kind of motorist information system that would

best serve the public interest, or the steps to achieve it. As the Restudy Task Force interpreted its task, the first step was to describe the elements of an adequate motorist travel information system. Against this standard the information system authorized by Congress can be considered for its adequacy, and options for improvements can be identified.

Task Force Study Directive

What does the term "adequate" mean in this context?

The basic instruction given to the Task Force by Congress in the 1976 Federal-aid Highway Act, was only generally helpful. It said: (1)

"During the implementation of State laws enacted to comply with this section, the Secretary shall encourage and assist the States to develop controls and programs which will assure that necessary directional information about facilities providing goods and services in the interest of the traveling public will continue to be available to motorists. To this end the Secretary shall restudy and revise as appropriate existing standards authorized under subsection 131(c)(1) and 131(f) to develop signs which are functional and esthetically compatible with their surroundings. . . . (2)

In the view of the Task Force the adequacy of any system must be understood and evaluated by reference to the function it is intended to serve. In this case the function of the system's information components is determined by the functional needs of the motorist for information during travel. (3)

Motorists Travel Information Needs: Subject Matter

Motorist surveys show a wide range of subjects about which information is wanted during travel, reflecting the wide-ranging interests of the traveling public and the purposes of highway travel. These subjects may be classified according to whether they are *essential* or *desirable*.

While neither term is rigorously defined, there is a practical consensus that *essential* subjects include fuel, food, lodging, campgrounds and emergency services (e.g., first aid, hospital, telephone). Subjects for which in-trip information is desirable but not essential relate to other travel objectives or intermediate stops that are identified in pre-trip planning or by in-trip decisions. Typically such subjects involve scenic areas, cultural or historic sites, recreation areas, local or regional craft centers, tourist resorts and attractions, travel-oriented businesses, churches, and service clubs.

Motorist Travel Information Needs: Types of Information

With regard to any of these subjects, motorists normally need to know a variety of specific things, all of which may be correlated with the process of making in-trip planning decisions. Three major categories or types of information may be identified, namely:

1. Locational information announces the availability of certain goods, services or facilities at a given location. Often these announcements include certain

additional details about the subject. Typically, these include brand, type, quality, hours of availability, price, credit card acceptance, distance to next service, and availability of access for handicapped persons. Where an area offers a choice of particular goods, services or facilities, or offers them in combination with other goods, services, or facilities, the range of choice may also be important.

2. Directional information advises as to a specific location, distance, routing, travel time, and return access to an arterial highway. Whereas *location* information tells a motorist what goods, services, facilities or attractions are available in the area in which or to which he is traveling, and assists him in determining whether he wishes to utilize them, directional information tells how to get to the specific site where those services or facilities are available.
3. Preference information supplements locational and directional information with data about factors that have special significance in the selection of service establishments where a choice is available. Studies of how motorists actually select the establishment they patronize show that these selections are influenced by such things as appearance of sites or facilities, availability of parking, convenience of access, necessity for reservations, dress code, reputation or quality rating, and proximity to other related services. (4)

Motorist Travel Information Needs: Priorities

In the priorities of highway signing, information for trip planning and services is subordinate to signing for traffic control and guidance. Therefore in determining what types of official signs shall be provided within the highway right-of-way, certain roadside locations always are preempted for traffic control and advisory signs. (5)

Within the subsystem of signs providing location and directional information there also are priorities which reflect functional needs. Since motorists' ability to process information is limited, the information system should be designed to facilitate this processing. Information relating to matters that do not call for immediate driving decisions has low priority. (6) It should not be displayed in areas where demands of higher priority information oblige the motorist to shut it out of his processing activity. The practice of "spreading", or moving low priority information to places of low processing demand, is one way of making display of such information effective. The effectiveness of low priority information also can be increased by providing it where motorists have come to expect such information rather than in random locations.

Applying these principles to the design of a system for supplying information about goods, services and facilities, the following conclusions seem warranted: (7)

Directional information is most effective when provided at points where action decisions must be made, such as exists from main highways to local routes.

Information as to availability, choice, and location of services or travel objectives should

be provided sufficiently in advance of access routes to allow motorists to make trip planning decisions regarding them.

Advance notice of the availability of a service or facility should include sufficient information to enable motorists to decide whether they wish to use that service or facility when they arrive in its vicinity. Such notice should not, however, provide precise routing instructions or extraneous advertising messages.

When adequate notice is provided to identify an available service by name or brand, and to give directions to the business site, repetitive messages regarding the availability, location, brand, distance, and similar information do not increase its effectiveness. Excessive repetition of such information is chiefly a commercial advertising stratagem.

An Effective Motorist Travel Information System: Basic Considerations

Although it may be desirable to have more insight regarding the way motorists obtain and use information about goods, services and facilities needed during travel, enough is known to say that an adequate information system should cover the following categories of subjects: (8)

Fuel, routine maintenance and emergency repair services.

Food services.

Lodging, including standard transient housing and facilities for camping.

Travel attractions, including points of scenic, historical, cultural and recreational interest.

Miscellaneous goods and services having special interest to the traveling public, generally or regionally.

The frequency of these information needs naturally affects the level of service the information system should provide. In some cases this may be inferred from the nature of the need or the driving task; thus, for a typical traveler (9)

Fuel information is required, on the average, once every 200 miles (322 km).

Food information generally is required at intervals of 3 to 5 hours.

Lodging information is required once a day.

Information about travel attractions and miscellaneous goods or services is needed according to its availability.

Any system of information facilities and services capable of meeting the needs of the motoring public should be:

Comprehensive, in that it covers the full range of the motoring public's information needs, including special regional needs that may be locally important.

Multimedia, recognizing that no single source or information technique can meet all information needs in a timely, convenient, and economic manner.

Coordinated, so that each medium and technique performs the function for which it is best suited within the total system.

Incremental, making it possible for different levels or categories of information to be handled by differing program options, and enabling the user to choose the level of information he or she desires and is willing to make the effort to obtain.

Cooperative, in which responsibility for providing the required information is shared by the public and private sector.

Uniform, to assure easy general understanding and use by the traveling public.

States have a variety of technical options to use in designing informations that meet these criteria. The "mix" of options that any State selects may be influenced by local or regional factors. Some of these factors are: (10)

Level of information services needed.

Number of users to be served.

Timeliness of information needed.

Provision for updating information.

Maintainability of the system's elements.

Governmental costs.

User costs.

Lead time for system implementation.

Transition problems associated with implementation.

Responsibility for Providing Information

Since the 1940s, the motoring public's information needs have grown and changed significantly. This has been due to a general increase in highway travel, changing patterns of business and recreational travel, and the growth of a wide range of commercial services catering to the highway user's needs and interests. These changes have been reflected in the way public highway agencies view their responsibility to provide directional and locational information regarding essential goods, services, and facilities, and recreational and travel-related interests.

Historically, official signing within the right-of-way has provided some of this information. The extent of official responsibility for such signing is reflected in the Manual on Uniform Traffic Control Devices. (11) Most recently, the development and growth of facilities for clear, short range radio communications have shown that these facilities can supplement visual sources for certain types of information.

A central issue in improving the present information system is whether the historic allocation of responsibility between public highway agencies and the private sector should be changed, and, if so,

Table 1. Evaluation of currently authorized facilities and signing for directional information and travel services information.

TYPE OF SIGN OR SERVICE	INFORMATION COVERAGE		EXTENT OF CURRENT USE	OPERATIONAL EXPERIENCE
	TYPE	SUBJECT		
General Service Signing 23 USC 109	Directional information	Food, Gas, Lodging, Campground, Hospital, and Telephone.	Used in most States on interstate system, expressways, freeways; some use on rural trunk highways.	Gives timely notice of services at next interchange or intersection where services are not visible from main highway. Does not give business identification or brand of service, or distance on crossroad. Does not give distance to next available services.
Directional and Official Signs 23 USC 131(c)(1)	Directional information	Public places owned or operated by Federal, State, or local agencies; natural phenomena; historic, scenic, cultural, scientific, educational, or religious sites; areas naturally suited for outdoor recreation deemed to be in interest of traveling public; public service organizations; public utility facilities.	Permitted in 46 States by laws substantially similar to Federal law and National Standards; permitted in three States under limited conditions.	Gives directional information for certain types of activities not generally service signs or commercialized outdoor advertising. States vary in interpretation of activities eligible for use of these signs. Sign sites are not always obtainable where information is needed by motorists. New eligible activities sometimes cannot obtain sign sites because of spacing requirements. Although sign size limits authorized by the National standards are adequate for legible signing within 61 m (200 ft) from highways, use of poor design frequently impairs the communication effectiveness of signs.
Sale or lease of property signs 23 USC 131(c)(2)	Business identification and commercial advertising	Sale or lease of land or building at sign site.	Permitted in all States under laws substantially similar to Federal law.	Gives notice of availability of land or building at the site for sale or lease and identification or owner or agent. May also give some description of premises. Lack of standards for size, design, etc., permits variety of style.
Onpremise advertising signs 23 USC 131(c)(3)	Business identification and commercial advertising	All types of facilities, services, or activities carried on at the site.	Permitted in all States under laws substantially similar to Federal law.	Gives necessary identification of business site, and provides motorists with "index" to roadside development. However, local standards and enforcement vary widely, and are lacking in many rural areas. As a result, excessive numbers and poor design of onpremise signs impairs their communication effectiveness. In some instances high rise onpremise signs in rural areas attempt to serve as directional signing.
Landmark signs 23 USC 131(c)(4)	Business identification; commercial advertising; directional information	Signs, generally on farm structures or natural surfaces, having historic or esthetic significance.	Permitted in 14 States. Implemented in two States.	Operational experience limited to Nevada, which has designated one landmark sign on interstate system, and Missouri, which has designated 43 on interstate and 62 on primary highways.
"Free Coffee" signs 23 USC 131(c)(5)	Directional information	Nonprofit organizations offering free coffee to motorists.	No States authorize this type of signing.	Authority for permitting these signs was enacted in 1978 Federal legislation. No operational experience has been reported.
Commercial outdoor advertising 23 USC 131(d)	Business identification; directional information; general commercial advertising	All types of activities.	Permitted in all States but Alaska, Hawaii, Maine, and Vermont in zoned and unzoned commercial or industrial areas, subject to customary use regarding size, lighting, and spacing, and land use development requirements in some States.	Unzoned areas are difficult to supervise due to frequent changes in land development. Local zoning practice sometimes allows signs where no actual commercial or industrial development exists. Limited availability of sign sites permitted in zoned and unzoned areas has given existing sign owners an advantage over new businesses seeking sign sites. State agreements governing size, lighting, and spacing for signs in commercial and industrial areas negotiated in the 1960's may not in fact represent current "customary use" relative to existing policies on roadside land use, planning, technological developments in signage, and prevailing industry practices. Regulatory and other constraints limit such signing to only random availability.

Table 1. Continued.

TYPE OF SIGN OR SERVICE	INFORMATION COVERAGE		EXTENT OF CURRENT USE	OPERATIONAL EXPERIENCE
	TYPE	SUBJECT		
Specific service information signs 23 USC 131(f)	Business identifi- cation; directional information	Food, gas, lodging, camp- grounds, all located within specified distance from inter- change or intersection.	Used on segments of interstate system in seven states.	Gives timely notice of services at next inter- change or intersection, with business identity and brand logos. Advance signs sometimes supplemented with direction and distance signs on exit ramps. Motorist acceptance of these signs has been good. Installations cost along extensive distances is substantial. Business establishments near inter- changes may exceed capacity of logo panel and force limitation of signing to services nearest exit services with nationally known logos may have advantage over local independent businesses.
Information centers; services directory displays 23 USC 131(i)	Business identification; directional information; commercial advertising	All types of commercial activity, but mainly highway- oriented services and travel attractions; public and privately operated outdoor recreation facilities.	Forty-two States operate 251 centers on interstate system; 24 States operate 92 centers on Federal- aid primary system.	Initial cost and maintenance generally are paid by State highway agency; operation costs borne by other State or local agency or private contractor-operator. Practice of locating centers in rest areas permits combining rest stop with information inquiries. Motorist acceptance of service, especially in manned centers, is good. Telephones at centers allow advance reservation of facilities and inquiries for trip planning. Manned information centers are not operated 24 hours a day. Patrons must stop and leave vehicle to obtain service. Generally, in- formation is oriented to State and local facilities rather than multi-State region.
Highway Advisory Radio 47 CFR parts 2 and 89	General advisory information	Area orientation and "welcome" messages; road and weather condition safety tips.	Experimental or demonstration projects in six States.	Audio information systems can be utilized without adding signs to roadside areas, except for advance notice of frequencies. Currently assigned frequencies at outer edges of regular AM broadcast band are difficult for some car radios to receive. Current FCC rules prohibit advertising commercial services or giving business identification in broadcasts.

how a new division of responsibility should be delineated. The FHWA Restudy Task Force noted increasing acceptance of the view that *overall responsibility for providing a safe, efficient, convenient, and economical highway system encompasses the specific responsibility for assuring that motorists using that system have adequate and timely information regarding goods, services and facilities essential to their travel, and recreational and travel-related interests that may be the purpose of their trip.*

Public highway agencies have a variety of options for meeting this responsibility in ways most suitable to their interests and circumstances. (12) They may choose to act directly, through official signing and information facilities within the right-of-way, or indirectly through regulation of roadside land use by private outdoor advertising. They may act alone, or jointly with other public agencies, or through private sector contractors. Flexibility and local orientation are desirable. It is essential, however, that the options selected to comprise a comprehensive motorist travel information system be appropriately correlated with the needs of the traveling public, the public's driving functions and travel patterns, and the objectives of billboard control under the highway beautification program. The major choices that currently are available to State highway agencies under Federal-aid highway laws are summarized in Table 1.

Evaluation of the Present Motorist Travel Information System

If the facilities and services currently authorized in Federal-aid highway legislation were fully implemented, would the resulting system meet the traveling public's need for locational and directional information for goods, services, facilities, and travel related attractions?

Certainly when this system was conceived by Congress and refined by Federal standards, it was intended to assure that these needs would be adequately met. One difficulty in evaluating its success is that all of the system's elements never have been implemented and coordinated according to their intended functions on a scale that could demonstrate their capability nationwide. Another difficulty is that since 1965, Federal and State laws and regulations pertaining to this program have become so extensive and complex and have been changed so often that the change of full implementation may now be seriously impaired. (13) Thus, conclusions about how any particular combination of elements will function as a program must be made on the basis of their conceptual design with relatively little validation by empirical evidence.

On this basis, the FHWA Restudy Task Force found that existing legal authority is adequate for developing a travel information systems that is a comprehensive multimedia system, and can be expanded incrementally to increase its effectiveness and convenience. This authority can be used to develop and implement coordinated programs involving both public and private sector participation. In short,

if fully implemented this authority could assure that the minimum essential information needs of the traveling public would be met.

In such an evaluation the concept of "minimum essential information needs" is of critical importance. The Task Force determined that an adequate system in this respect is one that covers five categories of information, namely: (1) advance notice of availability of service, (2) specific location and distance, (3) directional instructions at major decision points, (4) route guidance from major arterial routes to the destination site, and (5) site identification.

Options for Designing Information Systems

Using these five criteria as a frame of reference, it is possible for State highway agencies to select combinations of media and techniques that achieve an effective division of labor in covering all necessary functions while at the same time accommodating local or regional highway conditions, travel patterns and economic development plans. A correlation of the major information media that currently are authorized under Federal-aid laws with the five categories of minimum essential information needs is shown in Table 2.

Task Force Findings and Recommendations

What can be done to improve the uneven implementation of the policy and authority provided in the Federal law? The FHWA Restudy Task Force report addressed this question with recommendations on the general program level, on the level of improving technical options, and in regard to planning, coordination and administration of comprehensive information systems.

At the general program level, the Task Force recommended that the Federal-aid law require the establishment in each State of a comprehensive coordinated system for providing information about goods, services, facilities and significant attractions of interest to the traveling public. This requirement does not mandate any specific or exclusive set of measures by the States: it only insists that whatever system a State establishes must fully meet the minimum essential information needs of the traveling public. It contemplates Federal-aid incentives to the States, while leaving it to the States to determine whether their system will be operated by the State's highway agency, or other governmental agency, or be private sector enterprise overseen by a public body.

In the Task Force view, this option offered maximum flexibility for system design while at the same time establishing the States' commitment to providing adequate travel information service for the motoring public.

Among measures to improve the coverage and effectiveness of these information systems, the Task Force recommended the following:

- Authorization for additional information on official standardized motorist service signing, both for general application and for the needs of bypassed rural communities.

- Modification of current limitations on official destination signing to permit directional information for major travel attractions and recreation areas.

- Greater utilization of existing authority for signing to permit business or brand identification

- of establishments offering travel-related services ("logo signs") and directional information.

- Greater utilization of existing authority for establishment of manned and unmanned facilities in rest areas to provide information about local or regional availability of services, attractions, and other matters of interest to the traveling public, together with routing information.

- Authorization for use of Federal-aid funds for a greater range of official publications giving travel and services information.

- Authorization for expanded information programming for Highway Advisory Radio and Citizens Bank radio monitoring dealing with motorist service and travel information needs.

Among measures for improving the means for delivering needed information to the traveling public, various options relating to the planning, design, establishment and operation of comprehensive information systems were considered, and the following were recommended:

- Establishment in each State of organizational responsibility for a comprehensive motorist travel information system and consideration of the use of special bodies to serve as focal points for planning and coordination of statewide information programs, and, if desired, perform certain administrative functions in the system's operation.

- Establishment of a national-level advisory body on travel information needs and information systems.

- Encouragement of the use of contractual arrangements with private enterprise and with other State or local agencies for operation of public highway travel information of facilities and services.

- Establishment of adequate and continuing funding for development of national and State motorist travel information systems. The policy of user-beneficiary responsibility for financing the highway system, as declared by Congress in the Federal-aid Highway Act of 1956, is applicable to programs to assure an adequate motorist travel information system, and can provide a basis for broadening the resources available to the State and Federal highway agencies for developing and expanding the effectiveness and convenience of such systems.

- Increased emphasis should be placed on programs to foster research and development work and demonstration projects aimed at improving the functional and cost effectiveness of motorist travel information systems.

Summary

In its 1976 directive for assistance and encouragement of the States in developing systems which assure that information about goods, services, facilities and travel attractions which are of interest to the motoring public will continue to be

Table 2. Options for meeting minimum essential motorist travel information needs.

Minimum Essential Information Needs Currently Available Information Media	Advance notice of availability.	Specific location and distance.	Directional instructions at major decision points while driving.	Route guidance from major arterial route to destination site.	Site identification.
Directional and official signs for scenic, historic, recreational, etc. places. (See Figure 1)	X	X			
On-premise advertising, including sale and lease signs. (See Figure 2)	X(1)				X
Official services signing, General information. (See Figure 3)			X		
Official services signing, Bypassed community signs. (See Figure 3)	X				
Business directional signs. (See Figures 4, 5 and 11)	X	X			
Specific information services signs ("logo" signs). (See Figure 6)		X	X		
Services and tourism information directories in rest areas. (See Figures 7, 8 and 12)	X	X			
Manned information center. (See Figure 8)	X	X			
Hard copy reference material (maps, guidebooks, directories). (See Figure 9)	X	X	X	X	
Special route markers (trailblazers)			X	X	
Highway Advisory Radio (HAR) (See Figure 10)			X(2)	X(2)	
Citizens' Band Radio (CB) (See Figure 10)	X(3)	X(3)	X(3)	X(3)	

1. When high-rise standards are used to elevate the sign panel above treetop level, and sight distances allow it, on-premise signs can be seen for substantial distances, and serve as advance notice to motorists of the presence of a business establishment.
2. Current Highway Advisory Radio (HAR) practice limits its use to general road condition, weather and detour information. Broadcasts relating to construction work detours may provide directional information at decision points resulting from temporary disruption of normal routes.
3. Citizens' Band Radio (CB) monitors may answer inquiries from motorists calling from the highway, but may not otherwise volunteer specific information about business establishments which would be regarded as advertising. Current rules of the Federal Communications Commission prohibit commercial advertising over CB radio.

available, the Congress reemphasized a need that it recognized at the inception of work on the Interstate system. Although the controversial history of billboard control along Federal-aid highway systems has hampered steady and orderly development of adequate information systems nationwide, some States have taken imaginative initiative in this matter. Also Congress has continued to reflect its policy through expansion of the authority for Federal-aid participation in the establishment of comprehensive and coordinated systems of signing and informational services.

When the FHWA Task Force to Restudy Directional and Informational Signing commenced its work, therefore, it found that the basis for a national policy, a system concept, and substantial enabling authority already existed. Review of the technical options available in informational signing and services revealed a wide range of media and communication techniques, audio as well as visual, that could be used for information system development.

In the view of the Restudy Task Force two developments are needed in order to bring together these elements into a national policy and an action plan for its implementation. One is the establishment of an analytical frame of reference for determining a State or region's information needs and designing a system of signing and services that is responsive to those needs. Such a frame of reference is offered in the Task Force's report.

The second need is for acceptance by State highway agencies of overall responsibility for assuring that highway users have adequate and timely information about goods, services and facilities essential to travel. This is a matter that must be worked out by the States and Federal government within the legislative mechanism of their historic Federal-aid program by recognizing it as a necessary feature of modern highway systems. Used in this way, the law performs a creative role. By structuring responsibility for performing the various information functions, and utilizing public and private sector resources, it can not only respond to the interest of the public, but encourage adaptation or technological advances for improved highway travel.

References

1. 23. U.S. Code, "Highways", 131(q)(1), (1980 edition).
2. The Standards referred to in this directive provide, essentially, for installation in controlled roadside zones of limited-size directional signs for public places and public or privately owned natural phenomena, historical, cultural, scientific, educational or religious sites, and areas of natural beauty or naturally suited for outdoor recreation. (23 Code of Federal Regulations, "Highways", 750.151-750.155), and for installation within rights-of-way of controlled access highways of official signs showing business identification and directional information for facilities providing food, gas, lodging, or campgrounds (23 Code of Federal Regulations, "Highways", 655.301-655.310).
3. Options for Assuring Adequate Motorists Travel Informational Signing, Report of the Task Force to Restudy Standards for Directional and Informational Signing, Federal Highway Administration, May 1979.
4. C. Moore, et al., A Valuation of Information Sources and Cues by Motorists Traveler Guests of Lodging Establishments, (Highway Research Record No. 233, Highway Research Board, Washington, D.C., 1968), 27-32.
5. Location of signs is controlled by standards prescribed in 23 Code of Federal Regulations, Parts 655 and 750, and the Manual of Uniform Traffic Control Devices.
6. G. King and M. Wilkinson, Motorists Needs for Services Information on Interstate and Federal-aid Primary Highways, FHWA/RD-82/101, June 1982, Federal Highway Administration, Washington, D.C., 1982.
7. Restudy Task Force Report, note 3 *supra*.
8. King and Wilkinson, note 6 *supra*.
9. *Ibid*.
10. *Ibid*.
11. Manual of Uniform Traffic Control Devices for Streets and Highways, U.S. Department of Transportation, Federal Highway Administration, (Washington, D.C., Government Printing Office, 1978).
12. C. Miller, Motorists Information Services, (Washington, D.C., Federal Highway Administration, 1980); King and Wilkinson, note 6 *supra*.
13. C. Floyd and P. Shedd, Highway Beautification: The Environmental Movement's Greatest Failure, (Boulder, Colorado, Westview Press, 1978).

APPENDIX

Examples of Directional Signage and Information Facilities Currently
Available for Development of Motorist Travel Information Systems

The illustrations that follow provide examples of the types of signage and other information facilities that currently are authorized by law and are in use on an experimental or operational basis as part of motorist travel information systems.

Caption references to numbered options relate to the options recommended by the Federal Highway Administration's Restudy Task Force in 1979 for improvement of the coverage and effectiveness of comprehensive and coordinated motorist travel information systems. Illustrations are reproduced from the Restudy Task Force's final report.

Figure 1. Examples of state-approved directional and official signs authorized by 23 US Code 131(c) (1).



(a) Arizona



(b) Missouri



(c) Tennessee



(d) Wisconsin

Figure 2. Examples of outdoor advertising authorized under the Highway Beautification Act of 1965.



(a) On premise signs, authorized by 23 US Code 131(c)(3)



(b) Outdoor advertising in zoned and unzoned commercial and industrial areas, authorized by 23 US Code 131 (d)

Figure 3. Standard and modified general service signing.



(a) General service signing, as authorized in the Manual of Uniform Traffic Control Devices.



(b) Option 7. Official signing for services located in bypassed community (New Mexico).

Figure 4. Examples of official business directional signing within the highway right-of-way (option 9).



(a) New York



(b) New York



(c) New Hampshire

Figure 5. Vermont official business directional signs (option 9).



(a) Automotive fuel and services



(b) Food services



(c) Lodgings



(d) Recreation facilities including campgrounds



(e) General business and services

Figure 6. Specific information signing authorized under 23 US Code 131(f) to provide directional information for facilities offering gas, food, lodging, and camp-grounds.



(a) Option 10. Specific information signs using logos to show fuel service facilities at next interchange (Virginia).

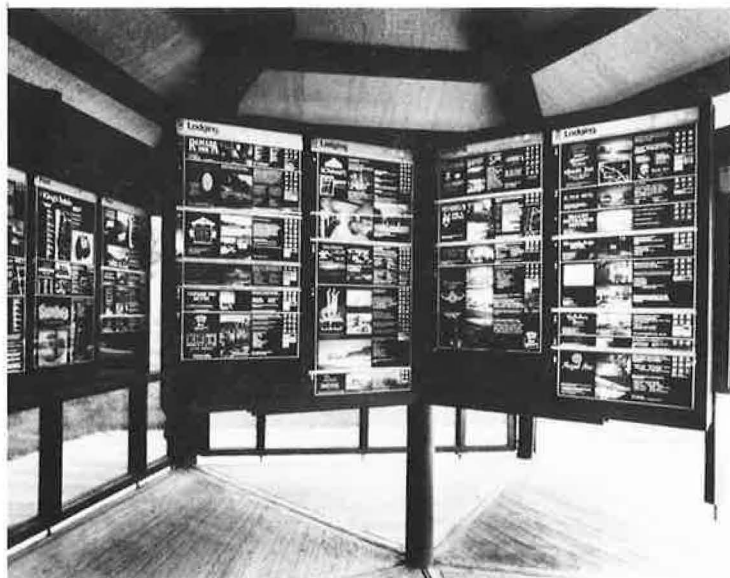


(b) Option 10. Logo sign panel erected on interchange exit ramp to give directional information for fuel service facilities (Virginia).

Figure 7. Example of facilities giving information about the availability of goods, services, and attractions of interest to the traveling public (Oregon).



(a) Option 11. Travel information facilities in highway rest areas (Oregon).



(b) Option 11. Directory of services in rest area travel information facility (Oregon).

Figure 8. Vermont motorist travel information facilities:



(a) Option 11. Visitors' information directory located in roadside rest area (Vermont).

Travel Information

Lodging

Hartness House Country Inn -18

Snow Lake Lodge Mount Snow -6

The Highlands Rest. - Motel -48

Snow Mountain Inn -7

Pa-Lo-Mar Motel

Food

Country Girl Diner -83

Idleot Farm Restaurant -590

Recreation

Crown Point Camping Area -3

Mount Snow -5

Other Services

Basketville -37

Double Four Orchards -113

(b) Option 11. Services information display in Vermont visitors' information facility.

Figure 9. Directories of services and attractions published and distributed by State highway agencies.

Motorist Services Points of Interest

EXIT NO.	AUTO SERVICE	DINING	LODGING	CAMPING	POINTS OF INTEREST
148 A-B	TEXACO ENCO	GEN DRINGS COCKTAIL LOUNGE TINLEY PARK BOWLING LANES		LAKE SAM LE MAR	
151 A-B	NO EXIT				
154	R & B SERVICE HIGHLAND 86 STANDARD MARATHON	BROWN'S FRIED CHICKEN CHICKEN UNLIMITED PIZZA HUT PONDEROSA STEAK HOUSE STONEBRIDGE INN			
155	NO SERVICES				
156	SHELL ENCO HOMWOOD SERVICE CENTER STANDARD CHECKER OIL GAS U.S.A.	BURMA'S RESTAURANT BOZ HOT DOGS	DIXIE GOVERNOR		
157	STANDARD STANDARD CLARK	SIZZLER STEAK HOUSE GOLDEN BEAR RESTAURANT TURF CLUB HOLIDAY INN COFFEE SHOP IRON GATE RESTAURANT DENNY'S RESTAURANT	SHERATON HOLIDAY INN BUDGETTEER		
160 A-B	STANDARD	ABRAHAM LINCOLN OASIS			
161 A-B	ENCO SHELL CHECKER QUICK SERVICE B-Z-GO CLARK OIL SHELL	HOLIDAY INN RESTAURANT LANGES RESTAURANT CAL'S ROAST BEEF MCDONALD'S BROWN'S CHICKEN A & R	HOLIDAY INN PIONEER MOTEL		

(a) Option 13. Except from Illinois Department of Transportation Motorist Services Guide.

BROWNSVILLE (G-13)
 34 Mt. Ascutney Ski Area & Chalet Motel, I-91 Exit 8,
 2 mi. no. on Rte. 5 to Rte. 44, then 4 mi. to Browns-
 ville. 484-7722, 484-7711. 🏠 🏠

CHESTER (F-14)
 114 Chester Inn, Rte. 11 in village center. 875-2444. 🏠 🏠
 83 Country Girl Diner, Rtes. 11 & 103, in village. 875-
 5685. 🏠
 248 Motel in the Meadow, Rte. 11, 2 mi. w. of village.
 875-2626. 🏠

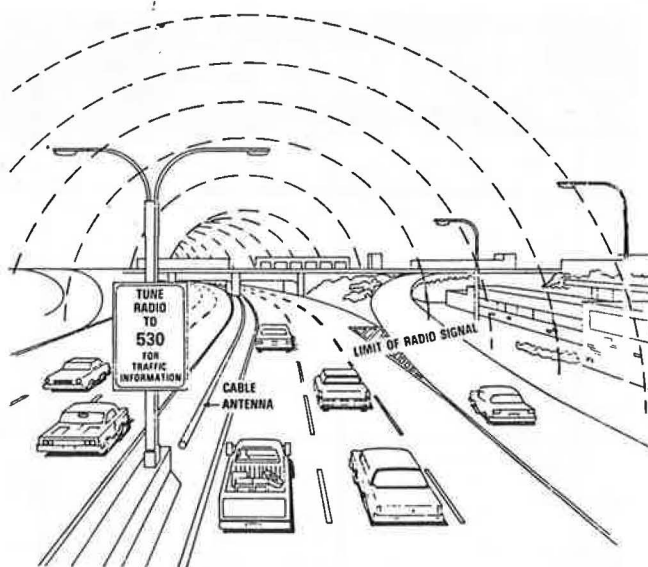
DORSET (D-14)
 429 J.K. Adams Company, Rte. 30, 2.3 mi. so. of village
 center. 362-2303. 🏠
 427 Barrows House, Rte. 30 in village center. 867-4455.
 🏠 🏠

(b) Option 13. Listing of services in Vermont Visitors' Guide.

Figure 10. Options for audio communication of motorist travel information.



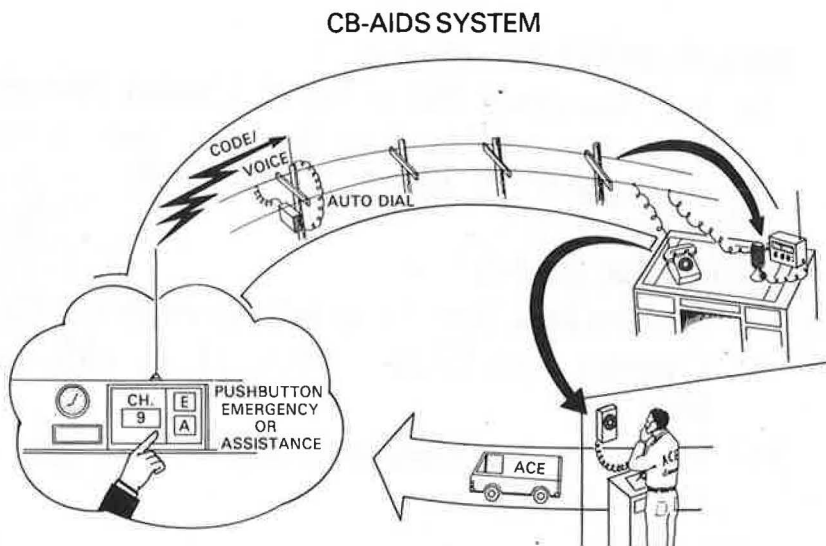
(a) Option 14. Highway Advisory Radio roadside advance notice sign (Wyoming).



(b) Option 14. Highway Advisory Radio operation zone.

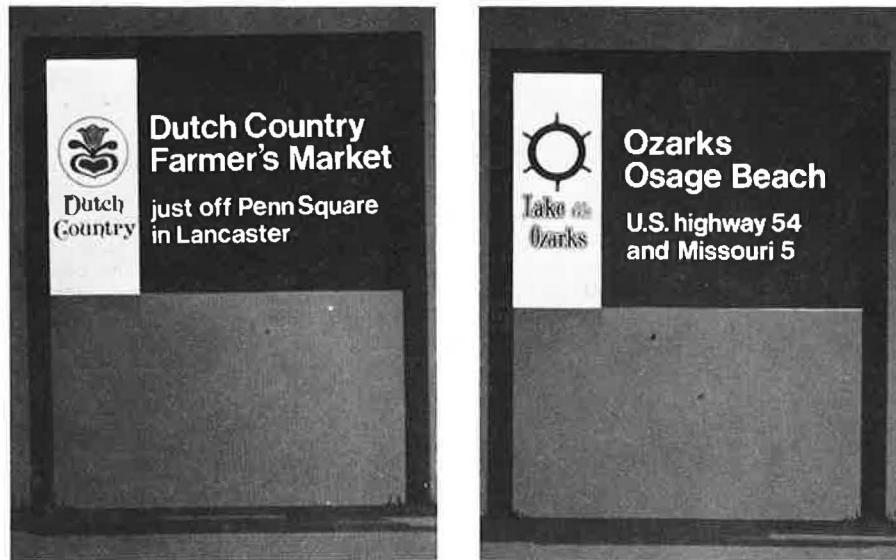


(c) Option 15. Citizens Band radio monitoring notice sign (New York).



(d) "CB for Motorist Aid" system uses automatic radio telephone interconnect to relay CB message

Figure 11. Proposed private business directional signing for use outside the highway right-of-way (option 16).



(a) Region travel attraction

(b) Tourist resort

Figure 12. Motorist services and travel attractions display board in roadside area (option 17).

