

DRAFT

SIGN GUIDEBOOK

Planning, Designing, Fabricating,
Procuring, Installing, and Maintaining
Bureau of Land Management Signs



Department of the Interior
Bureau of Land Management

October 2002

MISSION STATEMENTS

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to tribes and our commitments to the island communities.

The mission of the Bureau of Land Management is to sustain the health, diversity, and productivity of the Nation's public lands for the use and enjoyment of present and future generations.

PREFACE

Effective communication requires the clear, concise delivery of an understandable message through a powerful medium. Signs are one of the avenues for conveying information to the public about the Bureau of Land Management (BLM). They are a key factor in the way the public views the BLM's competency to manage the public lands and waters under its jurisdiction. Signs on the BLM-managed public lands and waters are our "silent employees."

A comprehensive sign program fosters safety, facilitates the management of an area, provides a learning opportunity for visitors, and offers a positive image and identity for all entities involved in the management of that area. This National Sign Guidebook establishes standards and guidelines for signs and the BLM's National Sign Program. Signs purchased and installed on the public lands must comply with a number of procurement and accessibility laws and regulations. This National Sign Guidebook presents information for planning, designing, fabricating, procuring, installing, and maintaining signs in a clear, complete, and user-friendly format for all BLM employees.

CHAPTER I

INTRODUCTION

The Bureau of Land Management (BLM) uses the highest standards for signing the public lands and waters under its jurisdiction and management. Signs are intended to guide, inform, and protect visitors. This National Sign Guidebook (Guidebook) establishes uniform guidelines and directs the reader/user through the sign planning process.

A. PURPOSE OF GUIDEBOOK

The purpose of this Guidebook is to establish standards and guidelines for planning, developing, and managing signs for the BLM-administered public lands and waters.

This Guidebook:

1. Describes the National Sign Program planning process.
2. Describes the different types of signs and the locations where they are used.
3. Outlines the national design standards.
4. Provides specific design standards that apply to certain types of signs, including material and specification requirements.
5. Identifies procurement procedures.
6. Delineates the inventory and maintenance guidance.
7. Provides reference material and other resources.

B. SIGNING GUIDEBOOK PRINCIPLES

The following principles were used in formulating the National Sign Guidebook and should be used in administering the BLM National Sign Program:

1. Signs must deliver understandable messages to visitors. Each sign should address a single topic and not include jargon or technical terms. Messages should not be mixed.
2. The established BLM logo must be used, where appropriate.
3. Signs must comply with the Uniform Federal Accessibility Standards (UFAS) and the Americans with Disabilities Act Accessibility Guidelines (ADAAG). Sections 4.1 and 4.30 from both standards provide specific guidance for signs (see Appendix 1). Persons with disabilities must be consulted when designing informational signs and interpretive materials.

4. Signing situations related to vehicular and pedestrian traffic should follow the specifications established in the Manual on Uniform Traffic Control Devices (MUTCD), published by the Federal Highway Administration.
5. BLM-approved international symbols and established signing industry standards must be used for sign design, fabrication, installation, and maintenance.
6. Signs must comply with pertinent Federal, State, and local laws, as appropriate.
7. The standards and guidelines in this National Sign Guidebook must be applied consistently to ensure that areas are safe and to enhance visitors' experiences on the BLM's public lands and waters.
8. Whenever possible, signs should be used in conjunction with other media, such as maps, brochures, interpretive materials, etc.

C. FUNDING

All funding needs for conducting inventories and reviews and preparing maintenance schedules, as well as for the cost of planning, designing, fabricating, installing, and maintaining signs, are the responsibility of the Field Office or designated area. The National Sign Coordinator can assist with cost estimates for design, fabrication, and installation.

D. SIGN REVIEW

A periodic review should be performed by the appropriate Area or Field Office, along with any managing partners, to address adequacy, wording, and design standards. This review should also include, but not be limited to, location concerns, the relevancy of the signs, condition of signs, visual clutter, the relationship to other signs in the area, and program issues.

E. SIGN MAINTENANCE

Each office should prepare a maintenance schedule for signs currently in place. This schedule should then be reviewed and updated annually to address damage, visibility, legibility, and appearance. A five-year plan should be developed, based on the annual maintenance plan, for each office.

F. SIGN PLAN APPROVAL

An approved sign plan must be in place prior to the fabrication and installation of new signs. The sign plan must be approved by the Area/Field Manager.

G. PROCUREMENT PROCESS

The National Sign Center, located in Rawlins, Wyoming, is the source for all signs.

H. DATA BASES

Until a sign module to the facilities maintenance system is developed, BLM Form 9130-4 may be used.

CHAPTER II

SIGN PLANNING

This section answers the question, “So you think you need a sign?” and offers guidance for using signs. It also emphasizes the importance of a communication strategy in developing a sign plan and provides details for conducting an inventory. Each Field Office should develop a Sign Plan consistent with the National Sign Strategy/Policy to ensure that signs are planned and used properly, will inform the visitor, are not cluttering the area, and will achieve the intended results. Ideally, signs should be used in conjunction with other media to communicate and/or reinforce key ideas. By themselves, signs cannot tell the entire story.

A. COMMUNICATION STRATEGY- “So You Think You Need a Sign?”

The decision to use a sign begins with planning. Signs must be part of an identified need or communication goal to inform an intended audience while fulfilling both BLM and legal requirements. Knowledge of how, when, and where to develop effective messages is the key to successfully developing a sign plan and communication strategy. If your communication strategy is effective, users will have **prior** knowledge of the context for the sign. For example, if route markers are being considered for a trail system, the user may already have a map reflecting the location of those markers and additional information explaining their purpose. Therefore, the strategy would include planning for the trail system, the map, and specific signs within resource management plans, activity plans, or project plans (see Section B).

Considerations for developing a communication strategy include:

1. Rationale

The decision to use or not use a sign to communicate a message should not be made on an ad hoc basis. Sign use should always be consistent with the direction of larger planning efforts (resource, activity, and project plans) in tandem with the National Sign Strategy and the Field Office Sign Plan.

2. Delivery

It is important to recognize that most information and attitudes are acquired before a user arrives at the use area. Where will the visitors receive the initial message? It could be at home, on-site, or in another location. Where the user receives the message will determine the level of attention and the consistency of his/her response to subsequent messages placed on the area signs. It can be helpful to include photos or illustrations of signs located onsite in communications intended for off-site use so that people are primed for the reminder when they arrive at the site.

Typically, there are three major “zones” in which information is delivered.

a. Exterior Zone

This may vary from one mile to several hundred miles outside of the destination site. Information in this zone is usually most appropriately delivered in the form of maps, brochures, public outreach programs, etc. The only signs needed in this zone may be directional signs so that the visitor can easily find the site. It can be useful to work backwards from the site to make sure that directional or other information is provided at all visitor decision points.

b. Entrance Zone

This zone includes the access point or area. A wide variety of sign categories (Chapter 3) would be appropriate in this zone to inform visitors they have arrived at the entrance of their destination and what, if any, services and facilities are available.

c. Interior Zone

The messages in this zone are more detailed and should be used to reinforce previously acquired information; to identify and interpret themes; to remind users of regulatory issues; and to provide detailed directions, warnings, services, etc.

3. Effectiveness

Effective messages can come in a variety of forms, including signs, brochures, maps, etc. Regardless of their form, successful messages must:

- a. Fulfill a user need and contain pertinent information to ensure that the user has a safe and enjoyable visit on the BLM public lands and waters;
- b. Convey clear, simple, brief messages;
- c. Command attention and user respect;
- d. Convey positive messages;
- e. Be presented in a manner that allows for ease of viewing and gives the viewer time to respond appropriately;
- f. Be maintained to reflect a positive image of the BLM;
- g. Be designed so that user response(s) can be measured or evaluated; and
- h. Not be used as instructional media; it is critical that signs be used with other media such as maps and brochures.

After you have developed an effective communication strategy and determined that signs are the most effective way to present the information, you should create a sign plan.

B. THE SIGN PLAN

A sign plan provides for the systematic and uniform development and maintenance of a sign system for a given area. A sign plan is necessary to ensure that signs placed in an area are consistent with land use and other planning documents; that they are designed to be consistent with all applicable laws, regulations, and policies; and that all signs adhere to a consistent theme. A sign plan should include the goals, objectives, and responsibilities for the placement of signs, as well as an inventory of existing signs and may include a process for designing/locating new signs. Examples of Sign Plans can be found in Appendix 2.

1. Inventory

Creating an inventory of both existing sign locations and any new locations for signs is an essential first step in managing visitor communication strategies. The inventory may require a great deal of time and should be completed in a detailed, comprehensive manner (see below). While the public lands under the jurisdiction of an office may be inventoried in their entirety, it might be easier to divide an area into more manageable components (wilderness areas, wilderness study areas, campgrounds, areas of critical environmental concern, etc.). A good inventory includes all signs in a management area, as well as a comprehensive survey of the locations that may need signs.

Use Form 9130-4, “Sign Inventory/Maintenance Form” (Appendix 3), to ensure a consistent inventory of all signs. Be sure to enter information from this form into the Facility Inventory Maintenance Management System database because funding to maintain signs is obtained through this system. The inventory may also be entered into a GIS system either from a hard copy or through data collection with a GPS unit. Digital photographs (which may be useful later in the planning process) may be taken and attached to the inventory sheets or entered directly into a GIS database. Please include all of the following items on an inventory form or in a GIS database for each sign:

1. Date inventoried and name of person conducting the inventory;
2. Location (initially identified on a map or as mileage from a starting point);
- c. All language on the sign;
- d. Size, color, and shape of sign (height, length, etc.);
- e. Size, color, and font of the lettering;
- f. Sign material;
- g. Condition of sign (good, deteriorated, damaged, missing/down, or obsolete);

- h. Type of post and attachment system (4X4 treated lumber, metal fence post, etc.);
- i. Condition of post (good, deteriorated, damaged, missing/down, obsolete); and
- j. Notes (poor location, accessibility issues, shrubs blocking view of sign, etc.)
– anything deemed necessary to discuss the sign later in the planning process.

When the inventory is complete, place all sign locations on a map of the area, with the detailed information cross-referenced to the Facilities Inventory Maintenance Management System. The map may consist of the several “bite-size” area maps used during the inventory. Eventually, you should combine all inventory data on one large map to facilitate the coordination of signs across the entire area.

2. Sign Review

The review of existing signs is the heart and soul of the sign planning process. This review is essential to determine the need for and usefulness of each sign. Field staff involved with sign placement should have input during this review. It may be difficult, at best, to determine if signs are being read or ignored. The field staff’s interaction with visitors, however, provides them with experience to determine which signs are worthwhile, which signs should be eliminated, and/or which signs should be specifically clarified. Field staff may also be able to identify locations where signs are needed to resolve use problems, to improve stewardship ethics, and/or to accommodate public health and safety issues.

Each sign should be reviewed to answer the following questions and determine compliance with the Sign Plan:

- a. Is the sign consistent with existing planning documentation (resource management, activity, or project plans, etc.)?
- b. Is this sign needed? Does it serve a purpose? Is it one of several in an area? Have things changed in this location so that the sign is no longer necessary?
- c. Is the sign effective? Is the message inappropriate or confusing? Is lettering too small to be read from a high-speed vehicle?
- d. Is the location of the sign appropriate?
- e. Are sign and post materials appropriate for year-round conditions, protection from vandalism, etc.?
- f. Does the sign complement the rest of the signs in the area?
- g. What is the condition of the sign? Even if the message is appropriate and the location is a good one, is the sign faded? Is it time to replace it?

- h. Is each sign meeting required rules and regulations, such as MUTCD, UFAS/ADAAG, etc.?

3. Commitment

Maintaining effective visitor communication costs money. Funding is needed for planning, designing, fabricating, installing, maintaining, and replacing signs. There must be an ongoing funding commitment factored into both short- and long-term budgetary cycles. All messages (brochures, maps, and signs) should be constantly evaluated to ensure that they are current, meet user needs, and adhere to the BLM's mission, goals, and policies.

A sign plan should be in place prior to ordering, designing, or installing new signs. **DO NOT PIECEMEAL SIGN DECISIONS.** Most signing decisions should be implemented based on a project plan. In emergency situations, signs may be designed, acquired, or constructed without the benefit of an approved plan. These emergency situations include the following:

- a. Ensuring visitor health and safety;
- b. Eliminating or abating the effects of resource overuse, misuse, or vandalism;
- c. Preventing the loss or destruction of existing developed facilities and cultural or natural resources.

Once the emergency situation has been addressed, an activity and project plan should be developed to implement the long-term sign plan.

C. RELATIONSHIPS BETWEEN PLANS

The BLM has three levels of planning; (1) **resource management plans**, (2) **activity plans**, and (3) **project plans**. Because the decision to place a new sign should begin at the earliest level of planning, communication strategies should be discussed when writing resource management plans. The best method for preparing a plan depends upon several factors, including the overall scope and complexity of the project, time constraints for meeting management objectives, and availability of funds to undertake the effort. Plans should involve an interdisciplinary approach and include recreation planners, landscape architects, engineers, interpretive specialists, and other appropriate resource/program specialists.

Usually, **Resource Management Plans** (RMP) discuss “big picture” management and are not site specific (e.g., a portion of a large area will be closed to off-road use). A coordinated communication strategy using signs, maps, brochures, and outreach programs, along with a Sign Plan, should complement the decisions in the RMP.

Activity plans should address the development of communication strategies and signing objectives in greater detail, including specific sign types and systems, maps, brochures, etc. The following example details a communication strategy for a situation dealing with off-highway vehicle (OHV) and river management:

“OHV and river management objectives will require a revised sign system that reinforces the interpretive and public information program. The target audiences will be the OHV/River user communities. The signs will convey river safety tips and identify access/egress points (both from the river and land). All OHV routes should be mapped and signed and public outreach programs should be developed for both user groups. Site information (signs, etc.) will be designed with a rustic theme and focus on major access points. Maps and brochures will be designed to convey detailed messages for the user.”

Project plans include details about the project, which may include signs. A project plan may also be written specifically for the installation of a single sign or a group of signs within a project area. For example:

“The sign will be approximately 24 inches by 24 inches, aluminum, mounted on a single wood post. The message will read “Vehicles Must Stay on Designated Roads,” and the sign will be installed at the intersection of Roads 3051 and 3052.”

As stated previously, it is very important that all signs complement the larger Sign Plan and communication strategy for the area. A Sign Plan must be developed prior to ordering or installing any signs.

D. NOW YOU ARE READY TO ORDER A SIGN

1. Final Check

Signs are not effective if they misinform, alienate, or confuse the public. As a final check, ask yourself the following questions:

- a. Have you accomplished your purpose with the sign (provided directions, solved a management problem, enhanced the visitor’s experience, improved resource/visitor protection, etc.)?
- b. Have you addressed the correct audience (locals or out-of-town visitors, married or single people, senior citizens, families, international visitors, etc.)?
- c. Have you taken into consideration the visitor’s length of stay (passing through or coming for an extended period of time, staying the night or using the area just for the day, etc.)?
- d. Have you placed appropriate signs in the correct zones (on the way to a destination, on-site)?
- e. Is the sign consistent with BLM and other legal requirements?
- f. Are the materials appropriate for the area (vandalism, climate, etc.)?

2. Things to consider

Before planning/ordering any signs, here are several issues to consider.

- a. Coordinate with other agencies. Now is the time to contact other agencies (Federal, State, Tribal, and local) whose properties border your area to coordinate signs benefitting all entities involved.

For example: If a sign is needed to identify a BLM trail that eventually traverses Forest Service lands, why not construct a sign that is beneficial for both agencies? Or, if you are placing a sign along a public road, have you coordinated with the jurisdictional agency to obtain an encroachment permit?

- b. Prioritize your orders. Determining which signs are a priority for ordering is often essential because of tight budgets and a lack of labor for installing a large number of signs. Establishing priorities for meeting special requirements will help you determine which signs will be ordered first and assist in scheduling the installation process.
- c. Order bulk whenever possible. Signs are less expensive when they are ordered in large quantities. A successful planning process will result in larger and less frequent purchases. In areas of high vandalism, it may be worthwhile to order two or three of the same sign so it can be replaced quickly if it is extensively damaged. Depending on budgets, it is usually a good idea to have one backup for all signs so that one can be installed while new ones are being ordered.
- d. Look for opportunities for partnerships. Signs are expensive, and installation requires time and effort. Explore options and events that might supply your Office with grant money, volunteer labor (e.g., local user groups, trail crews, local schools, etc.), or donations of materials.
- e. Create a maintenance schedule. Regardless of how many signs are ordered and how many signs exist in the area, include a 5-year Maintenance Plan Addendum to your Sign Plan. It is essential that you create and maintain a sign maintenance schedule. Your initial inventory will determine which signs need to be replaced/restored, which bases need to be replaced/restored, and what other maintenance needs must be completed (cut brush around signs, relocate signs, etc.). Keep the dates that each sign was inventoried and replaced on file. Ensure that your budgets always include funding for sign maintenance.

CHAPTER III

SIGN CATEGORIES

This section groups and defines the types of signs used on the BLM public lands and waters. Signs are grouped into the following categories: identification signs; guide signs; informational signs; traffic control devices; regulatory, warning, and safety signs; and a miscellaneous group that includes temporary, boating, snowmobile, concessionaire, and special event signs. Each of these categories has its own requirements and functions. Messages should not be mixed on a single sign or in a grouping of signs if it leads to sign clutter.

A. IDENTIFICATION SIGNS

Identification signs help to orient the visitor, project the presence and image of the BLM to the visitor, and identify important areas, facilities, and visitor amenities. These signs also provide public land visitors with a ready recognition of BLM facilities, projects, and services. Messages are primarily text and should be limited to key ideas and information. These signs should not contain any interpretation. If an area is cooperatively managed, an identification sign may display the names/logos of the other entities.

Identification signs must be the standard truncated shape, be recreation brown, and include the BLM emblem of proportional size. This format emphasizes the identification of the BLM and is intended to enable the public to easily recognize a BLM facility. Flexibility in the design of the sign base allows individual offices to create a unique theme. Consider using different colors and/or materials, incorporating the office logo, etc., into the sign base. In situations where there are back-to-back signs with similar messages, consider placing the raised emblems back-to-back to avoid the “Mickey Mouse” ears effect. Identification signs are grouped into three subcategories:

1. Administrative Signs

These signs are used to identify office buildings, field stations, visitor centers, etc., and must include a raised emblem. When an administrative facility is in a non-BLM setting, the owner may have specific requirements for signs. In these cases, every effort should be made to include the BLM emblem as part of the sign.

2. Feature Signs

These signs are used to identify trail heads, topographic features, points of interest, special projects, etc. The emblem is not raised on this type of sign.

3. Area Signs

These signs designate the primary entrances to a land area, campground, facility, or group of facilities not covered in the above subcategories. Area signs should be located along primary access routes serving each area. Typical areas that should be signed include BLM National Monuments, National Landscape Conservation Areas (NLCAs), off-highway vehicle (OHV) areas, project areas, Back Country Byways, Wild and Scenic Rivers, Special Recreation Areas, etc. The emblem may be raised on this type of sign, depending on the significance of the area.

B. GUIDE SIGNS

Guide signs direct the visitor to a specific destination, such as communities, towns, facilities, projects, features, or points of interest. These signs typically use arrows and distance indicators. This is the only other category (besides identification signs) that must be truncated in shape, be recreation brown, and contain the BLM emblem, unless a different shape is dictated by another jurisdictional agency such as a State highway department for a highway right-of-way. The emblem must not be raised on guide signs. These signs should use the standard geographic names (i.e., the names found on USGS topographic maps). International symbols should be used when possible to provide supplemental information in a simple, concise manner. Directional signs should be located to provide the visitor adequate time to make a decision. Reassurance markers (route markers) may be placed along roads and trails, typically at the beginning, at the end, at intersections, or periodically along the route.

C. INFORMATIONAL SIGNS

These are signs located in key areas throughout a site that provide important information for the visitor. The message should be conveyed in a brief, clear manner and be conveniently located to provide information to the visitor. This type of sign requires more planning than other types of signs. Informational signs provide limited educational opportunities and identify unique and unusual features. They enhance the public's awareness and appreciation of the public lands and waters. The sign should be written from the user's point of view and contain soft, positive messages. Informational signs are typically rectangular. Emblems are optional on this type of sign. The design of these signs should reflect the characteristics of the site while maintaining harmony with the overall design of the project area. Informational signs consist of the following subcategories:

1. Bulletin Board

This sign should be large enough for posting rules, regulations, and other information pertinent to a particular site. The sign should also include extra space for posting users' messages. Avoid visual clutter and multiple small signs where one larger sign will suffice.

2. Instructional

These signs should provide instructions for the use or operation of specific facilities, such as trailer dump stations, boat ramps, and fish cleaning stations. They should also be used in association with other signs, facilities, or other media to provide supplemental information as required (e.g., seasonal information, office hours, restrooms, showers, and campground site markers).

3. Information/Interpretive

These signs are placed in specific locations around a project to provide information/interpretation about the resources of the area. Interpretation as defined by the National Association for Interpretation Board of Directors is “. . . a communication process that forges emotional and intellectual connections between the interests of the audience and the inherent meanings in the resource.” These same principles apply when developing messages for informational signs. Staff should engage the assistance of a graphic designer,

interpretive specialist, media specialist, and/or the National Interpretive Coordinator when planning interpretive signs. Additional information on interpretive signs can be found in BLM Manual 8362 and BLM's Guidance for Interpretation. Although interpretive products are not part of the sign program, the following guidance is included to assist with small, uncomplicated projects.

- a. The information should be based on a solid theme and central message.
- b. Graphics, poetry, or other art forms may be used to illustrate the theme.
- c. Stories or descriptions of events unfolding should be used to teach concepts instead of identifying straight facts.
- d. Titles should use five words or less to identify the point or idea.
- e. Subtitles should be used to identify the theme and introduce text paragraphs.
- f. Appropriate colors reflecting the surrounding environment should be incorporated into the design.
- g. Letters should be at least 24 points in size.
- h. Entire text blocks should not be in all capital letters.
- i. Text should be written to convey a simple message.
- j. Graphics should be clear, easy to identify, and complement the text.
- k. The BLM emblem should be included as part of the design. It is not necessary to include an emblem on each panel of a kiosk display.

4. Accessibility

These signs identify particular areas or facilities/programs that are universally accessible. There are only four areas or facilities where the International Symbol of Accessibility (ISA) is required to be posted according to the two Federal Accessibility Standards (the Uniform Federal Accessibility Standards (UFAS) and the Americans with Disabilities Act Accessibility Guidelines (ADAAG)).

The four areas/facilities requiring the ISA (ADAAG 4.1.2.(7)) are as follows:

- a. an accessible parking space,
- b. an accessible restroom,
- c. an accessible loading zone, and,
- d. an accessible entrance to a building if the main entrance is not accessible.

Posting the ISA at the entrance to an area, a campground, etc., indicates that *all* of that area meets the Federal Accessibility Standards (Uniform Federal Accessibility Standards (UFAS) or the Americans with Disabilities Act Accessibility Guidelines (ADAAG) – so be careful where you use the ISA!

Post the appropriate International Symbols where various modes of adaptive equipment are available such as TTY, sign language interpreters, assistive listening systems, etc.

Where pedestrian trails have been evaluated for accessibility, post the following in addition to the standard message with the trail name, destination, length, etc.:

- a. typical and maximum trail grade,
- b. minimum trail width,
- c. typical and maximum cross slope,
- d. trails surface (type and firmness of surface), and
- e. any major height obstacle such as boulders, etc., in the trail tread.

Refer to ADAAG & UFAS for specific requirements for this type of sign.

D. TRAFFIC CONTROL DEVICES

These signs have very stringent requirements and must be designed and installed in accordance with the Manual on Uniform Traffic Control Devices (MUTCD). For the specific requirements of the MUTCD, access www.mutcd.fhwa.dot.gov (Keyword: MUTCD). These signs includes any type of vehicular-related traffic control messages. Traffic control devices must be justified by legal warrants signed by a professionally registered engineer as specified in MUTCD.

E. REGULATORY/WARNING/SAFETY

These signs should be used for the protection of visitors and the environment. They can also address the security needs of facilities. Signs should be concise and straightforward. They should also include international symbols wherever possible to facilitate understanding at a glance, as well as to aid in maintaining design continuity throughout the project. Signs should identify hazards and caution the visitor or employee regarding a hazardous and/or dangerous condition.

These signs should be legible and plainly displayed from any approach to a facility or feature, whether the visitor is on foot or in a vehicle. When appropriate, signs should be erected to assist in controlling authorized use, in deterring unauthorized entry and use, or in precluding accidental entry. The size, color, lettering, and the interval of posting must be appropriate for each situation. The message should be positive rather than prohibitive or negative, and should explain the reason for the restrictions to enhance the visitor's understanding. Signs should be rectangular, unless otherwise directed by a higher authority (MUTCD), and do not have to display the BLM emblem

These signs are used to enforce regulations/policies. Signs should provide the visitor with an appropriate level of information as they enter, use, and leave BLM-administered public lands and waters. Where appropriate, stewardship messages may be included, e.g., “Tread Lightly” and “Leave No Trace” concepts. Be sure to use standard symbols, colors, sign shapes, and sign sizes that follow established highway signing principles and practices that are easily recognized and understood by visitors. In addition, specific strategies for using OHV signs should be consistent with State and Federal regulations when there is a possibility that certain roads or trails may be used by both OHVs and highway vehicles. Any sign that regulates vehicular traffic on any road must follow MUTCD. See Section D above.

F. MISCELLANEOUS SIGNS

1. Temporary

Temporary signs are necessary at construction sites, fires, etc., and are used only for specific periods of time. They are temporary, highlight special conditions or hazards, and may include seasonal messages or special precautions. They should be placed at appropriate high-visibility areas and removed when no longer necessary. Signs should be mounted appropriately and not fastened to trees or other natural features. Where practical, the BLM emblem may be included.

2. Concessionaire

To the extent practical, outdoor signs within a concessionaire’s area should follow the same design format as signs throughout the area. These signs should not display the Department of the Interior’s logo or the BLM emblem. Concessionaire signs must be reviewed and approved by the responsible State Office Sign Coordinator.

Permanent outdoor signs that advertise products by brand name, by emblems, and/or by symbols in the colors or designs of the manufacturer are prohibited. The State Office Sign Coordinator may allow temporary use of company banners and signage when the company is sponsoring a special public event that has received the BLM’s prior approval. Concessionaire’s gasoline pumps may be painted in the recognizable standard colors normally used by the oil company supplying the gasoline. The sign on the pump may include the oil company’s name or emblem but must not extend beyond the normal pump dimensions.

3. Snowmobile Use

Snowmobile users may be exposed to various hazardous conditions. These hazards, coupled with the speed of snowmobiles, require effective route marking. The Field Office Sign Plan should identify snowmobile trails for effective signing to emphasize user safety and provide adequate warnings of hazards.

4. Special Event

The temporary use of banners and signs designating a special, one-time public event on the BLM public lands and waters is allowed. Although there are no specific guidelines, the National Sign Center may be contacted to design and create banners for special events, such as National Public Lands Day, National Trails Day, National Fishing and Boating Week, Great Outdoors Week, the Lewis and Clark Bicentennial Commemoration, American Frontiers, etc.

5. National Programmatic Initiatives

Approved logos required to identify a specific national program, special initiative, and/or partnership may be used. These include, but not limited to:

- a. National Trails Programs (Historic, Recreation, Scenic, etc.);
- b. Wild and Scenic Rivers;
- c. Fee Programs (Recreation Fee Demonstration, Golden Age, etc.);
- d. Special Initiatives (Service First, Back Country Byway, Tread Lightly, etc.).

CHAPTER IV

DESIGN STANDARDS

This chapter contains the standards for sign design, shape, color, size, placement, and reflection.

A. GENERAL SIGN DESIGN STANDARDS

The design should be completed before the procurement process begins. After selecting the general sign message, use the following standards to determine the size and layout of all signs:

1. The truncated shape and the BLM emblem are mandatory for *all* identification and directional signs unless dictated by another jurisdictional agency (highway right-of-way, partner, etc.). The depth and length of the trapezoid can vary to match the design needs.
2. The preferred location for the BLM emblem on identity signs and directional signs is the upper-right corner of the sign. The BLM emblem however, may be placed on the left side of the sign if the situation warrants. When using signs that are mounted back-to-back, place the raised emblems to avoid a “Mickey Mouse” ears effect. The preferred location of the emblem on general purpose signs is also on the right side. The size of the BLM emblem shall be approximately one-third the depth of the sign.
3. Specially designated areas i.e., Visitor Centers, National Scenic Trails, Wild and Scenic Rivers, Scenic Byways, and other special sites approved by the State Director, may include a graphic mark. Marks are explained in NCA/NM Sections B and I. Other office administrative signs and portal signs on general areas will not have a mark.
4. Accessibility standards must be incorporated early in the process, particularly for signs that provide pedestrians with information.
5. Signing for law enforcement purposes must be coordinated with the appropriate personnel.
6. Some flexibility exists for regional diversity when designing sign bases and using substrates: these can be chosen for their compatibility with the surrounding landscape and area themes.
7. Native materials can be used in the sign base to create a unique look.
8. The location of a sign with respect to the amount of light and sun exposure, weather conditions, etc., will help determine the type of sign that is most suitable for that particular area.

B. NATIONAL CONSERVATION AREA (NCA) and NATIONAL MONUMENT (NM) DESIGN STANDARDS

1. NLCS units Portal signs are to have a landscape graphic unless an exception for the use of a mark is approved by the State Director. These are the only signs that are allowed to use the landscape graphic. The Landscape graphic shall be a panoramic band across the sign that depicts the area, drawn in a form reminiscent of the 1930's Works Progress Administration (WPA) posters.

2. Signs for individual sites within an NLCS unit shall use a mark. This mark shall be placed on the left side of the sign and be a WPA style illustration that depicts some important aspect of the site.
3. NLCS units that are jointly managed with a different agency are exempt from these standards. BLM offices, however, should work with their partners to incorporate as many of the standard design characteristics as possible.
4. San Serif fonts in both uppercase and lowercase must be used.

C. DESIGN CHARACTERISTICS

Signs should be designed to ensure that:

1. Features such as size, contrast, color, shape, composition, lighting, or reflectorization are combined to draw attention to the sign.
2. The shape, size, colors, and simplicity of the message combine to produce a clear meaning.
3. Legibility and size, combined with placement, allow adequate time for viewing and response.

D. SIGN SHAPES

1. BLM Sign Shapes

- a. The **INVERTED TRUNCATED TRIANGLE** is the standard shape for all Identification Signs and Guide Signs. The length and depth of the sign may vary to match the design needs.
- b. The **BLM EMBLEM** is triangular.
- c. The **RECTANGLE**, with the longer dimension vertical, is used for most Regulatory Signs and some Warning/Safety Signs.
- d. The **RECTANGLE**, with the longer dimension horizontal, is used for most informational signs.

2. Traffic Control Sign Shapes

The Federal Highway Administration and each State's Department of Transportation have standardized shapes for specific purposes. See the MUTCD at www.mutcd.fhwa.dot.gov (Keyword: MUTCD) for more guidance.

- a. The **DIAMOND** is used for most warning signs.
- b. The **RECTANGLE**, with the longer dimension vertical, is used for most regulatory signs and some warning signs.

- c. The **PENTAGON**, with its point up, is used *only* for SCHOOL and SCHOOL CROSSING signs.
- d. The **PENNANT**, with the longer dimension horizontal, is used *only* for NO PASSING ZONE warning signs.
- e. The **OCTAGON** is used *only* for STOP signs.
- f. The **EQUILATERAL TRIANGLE**, with the point down, is used *only* for YIELD signs.
- g. The **ROUND** shape is used for Railroad Advance warning signs and for Civil Defense Evacuation route signs.

E. COLORS

1. Standard colors for BLM signs equal the Pantone Color Matching System (PMS). Care should be taken to choose standard paints that can be matched to the PMS. If the paint chosen is not equivalent to a Pantone color, a visual or a computer-generated match should be made. Stains typically do not have Pantone color equivalents. A visual or computer-generated match will have to suffice.
2. The standard color for the background of most signs should be recreation brown with white lettering. The background color for all signs of the truncated shape must be recreation brown unless specifically approved by the National Sign Coordinator.
3. Special-purpose signs that rely heavily on illustrations rather than words to send the message (e.g., fire prevention signs) may use other colors.
4. Care should be exercised in selecting text and background colors. At least 70 percent contrast is recommended between text and background. Red and green should be used only minimally for text because of the distortion created when viewed by readers with color blindness. Restrict the use of red and green for critical information and borders.
5. Specific colors have been standardized by the Federal Highway Administration for certain traffic control purposes. These colors should not be used on other signs along roadways or close to traffic control signs, where they could cause viewer confusion between the non-traffic control signs and the traffic control signs. The principal colors and their uses are:
 - RED - Stop or prohibition
 - BLACK - Regulation
 - WHITE - Regulation
 - ORANGE - Construction and maintenance warning
 - YELLOW - General warnings
 - BROWN - Recreational and cultural interest guidance
 - GREEN - Indicated movements permitted, direction guidance
 - BLUE - Motorist services

For further guidance, see the MUTCD at www.mutcd.fhwa.dot.gov (Keyword: MUTCD).

6. Color Guide	<u>Pantone Color</u>
Green Ground	373U
Green Hills	376U
Green Border/Tree/Lettering	3435C
Blue Sky	297C
Blue Stream/Mtn.	292C
White Snow Cap	

One-color versions may also be used. If a one-color version is used, the logo may be used only in the positive form. It must not be reversed. If the logo is to be used against a dark background in which the logo border would be lost, the logo should be superimposed on a white triangle so the logo border is visible.



a. Logos

On signs with the BLM emblem, the Department of the Interior emblem is optional.

b. Agency Identification

The standard BLM emblem is the only symbol used to identify the agency. The BLM emblem may not be modified.

F. FONT

The standard fonts used on all directional, regulatory, and identification signs must be either News Gothic Bold or Sans Serif. Both uppercase and lowercase letters must be used (i.e., not all uppercase). The fonts used on informational signs may be varied but care should be taken to ensure readability by all users.

G. AGENCY NAME

The “Bureau of Land Management” and the “Department of the Interior” must be the same font size. “Department of the Interior” must be set in all upper case. “Bureau of Land Management” may be set in either all uppercase or upper/lowercase. The BLM name/emblem may be used on fire prevention, agency regulatory, or other signs, as appropriate. Signs that do not require the white banner may use the emblem rather than the written department and agency name.

H. PARTNER NAMES and LOGOS

Partner name(s) and logo(s) are permitted, as appropriate. The name/logo may not be larger than the logo of the BLM. If there are more than two partners, consider placing cooperators’ logos across the bottom of the sign. If there are three or more partners, consider incorporating the logos into the base. The location and size of the partner’s logo should be commensurate with the relative importance of the partner.

I. AGENCY MARKS/LOGOS/SYMBOLS

On signs that are allowed to carry a mark, the mark must not be larger than the BLM emblem and the preferred location is on the left side of the text.

NCA/NMs:

- The mark can be a slice of the landscape for NCA/NMs or some other graphic identifier.
- National Scenic and Historic Trails: the mark must be the established trail logo.
- Wild and Scenic Rivers/Designated Wilderness Areas: the mark must be the national logo.

The International Symbol System, adopted by the BLM, should be used to supplement the Bureau's National Sign Program (see Appendix 4). Symbols and text messages should be used together for all traffic signs designed to direct pedestrians.

J. ID NUMBERS

Identification numbers of any sort are not permitted on the face of any signs. Place ID numbers on the back of the sign.

K. REFLECTORIZATION

Road and motorized trail signs and other signs intended to be seen at night should reflect the same shape and color both day and night. Ensure that the letters and the background have different levels of reflectivity so that the message stands out both in daylight and with artificial lights. Identification and directional signs should be reflectorized for night visibility. Use engineering-grade reflective sheeting for most signs. High-intensity grade sheeting must be used for most traffic signs as specified in the MUTCD. High-intensity grade sheeting may also be used in unique situations where atmospheric conditions or other factors indicate a need for additional reflectivity.

L. FINISH

ADAAG/UFAS requires that signs have a no-glare finish. Many signs are naturally non-glare because of the materials used in their construction. However, some signs have extra protection against weathering with an added layer of plexiglass over changeable information, which may create glare. Eggshell or matte finishes can be used to reduce glare.

M. MESSAGE FORMULATION

In formulating the message, use standard (approved) word messages, where applicable. The use of symbols on signs is encouraged to supplement the English word message, provided they clearly convey the intended message. Consider the use of bilingual signs if your situation warrants.

Under normal driving conditions, there is little time between being close enough to read the sign and passing the sign. Consequently, messages must be short. They should be confined to the essentials (for example, destination or direction).

When composing a message, consider the following guidelines:

1. Use no more than four words per message or line, except where the proper name of a destination is more than four words long.

2. Use as few word lines as possible. A maximum of four lines of directions is allowed for guide signs; however, three is preferred.
3. Keep messages short by using certain commonly recognized abbreviations (e.g., “Rd” for “Road,” “Mt” for “Mount,” “Pt” for “Point,” “St” for “Street,” or “Hwy” for “Highway”). **DO NOT** abbreviate historic proper names (e.g., “Fontanelle” to “Font,” “Vernal Drains” to “V.D.”).

N. DETERMINATION OF LETTER SIZE

The letter size for signs is determined by the maximum vehicle speed that is allowed at that point of the road system. To be easily read, the sign should have sufficient color contrast between letters and background. The following speed rules pertain only to the sign’s primary message:

1. Roads

Please refer to Table 1.

2. Pedestrian and Trail Signs

For pedestrian and trail signs, the guidelines include adjusting letter and space size to meet special conditions, such as composition, emphasis, etc. Sizes should never be less than those indicated in the charts for particular uses or speeds. As a rule, 1 inch of letter height can be read from a distance of 50 feet, 2 inches at 100 feet, and so on. The letter size for pedestrian signs is determined by location, volume, and type of visitors using the area, rather than by speed. See Figure 1.

- a. Short messages to be read from some distance: lowercase height and thickness of arrow shaft, 2-1/2 inches. If the sign is positioned over a pedestrian path, the height of the letters should be 3 inches minimum.
- b. Direction, distance, instructions, listings in moderate visitor-use areas where pedestrian traffic is channeled by walks, etc.: letter size 3/4 inch to 1 inch.
- c. Plaques, markers, and object identification: capital height, 1-1/2 inches; lowercase height and thickness of arrow shaft, 1 inch; and recreation symbol; 8 inches.
- d. Description sign texts: capital height, 1 inch; lowercase height and thickness of arrow shaft, 5/8 inch; recreation symbol, 6 inches. The letter size for a sign’s secondary message should be two-thirds the height of the primary message.

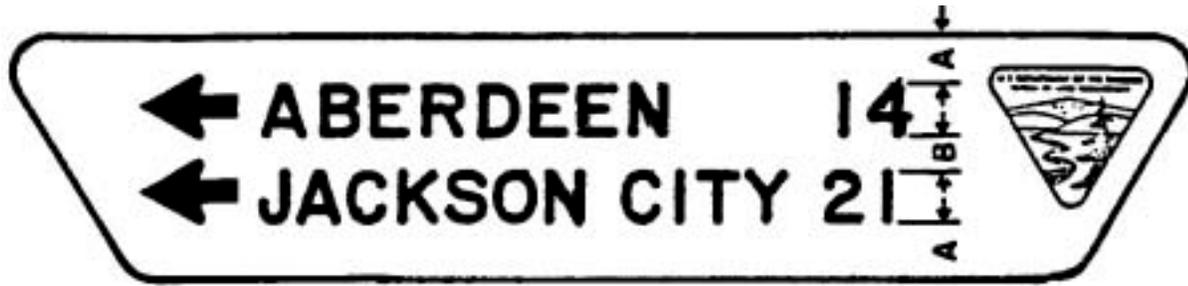
O. DETERMINATION OF LINE SPACING AND SIGN SIZE

Line spacing should be 75 percent of uppercase letter size. The emblem should be proportional to the message. See Figure 2.

P. RULES FOR CAPITALIZATION

1. Identification signs should use both uppercase and lowercase letters, not all uppercase (e.g., “Aspen Grove Campground”).
2. Traffic Control signs must follow MUTCD standards
3. Informational signs should use both uppercase and lowercase letters.
4. Directional signs should use uppercase letters, except to abbreviate miles (i.e., mi).
5. Regulatory/warning signs should use both uppercase and lowercase unless specifically dictated by another authority.

Table 1

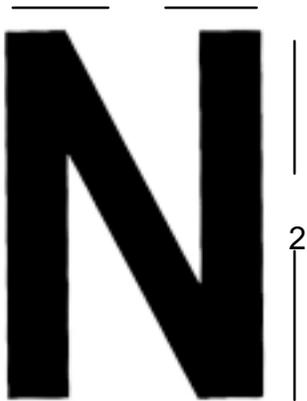


Speed Limits	Letter Size	Lines of Message	Line Spacing		Depth of Sign *	Emblem Size	Corner Radii	Rec Symbol
			A	B				
Stop and Read	1	1	1¼	-	3½	2¾	¾	3
Stop and Read	1	2	1	1	5	2¾	1	3
Stop and Read	1	3	1	1	7	4 or 5	1	3
	1½	1	1	-	3½	2¾	¾	3
	1½	2	1	1	6	4	1	3
	1½	3	1½	1-1½	9½-10	8	1	3
	2	1	2	-	5-6	4	1	4
	2	2	1d	1¼	8	5	1	4
	2	3	1½	1½	12	8	2	4
25 to 35 mph	3	1	2	-	7	5	1	6
25 to 35 mph	3	2	2	2	12	8	2	6
25 to 35 mph	3	3	2½	2½	19	10	2¼	6
35 to 45 mph	4	1	3	-	10	6	1	8
35 to 45 mph	4	2	2¾	2½	16	10	2½	8
35 to 45 mph	4	3	3	2½	23	16	3	8
45 to 60 mph	5	1	3	-	11	6	1	12
45 to 60 mph	5	2	3	3	19	10	2½	12
45 to 60 mph	5	3	3	3	26	16	3	12
over 55 mph	6	1	3	-	12	8	2	12
over 55 mph	6	2	3	3	21	16	3	12
over 55	6	3	3	3	30	18	4	12

* All dimensions are in inches. Sign depth is a top to bottom measurement.

Series D Federal Highway Administration letters must be used for road signs with speed limits over 40 mph. Series C, E, and F should be used for road signs with speed limits less than 40 mph.

Figure 1
Determining the Size of Signs



The average width of letters is $\frac{3}{4}$ of the total height. This is also true with the spaces between words.

The space between letters is about the same as the stroke of the letters.

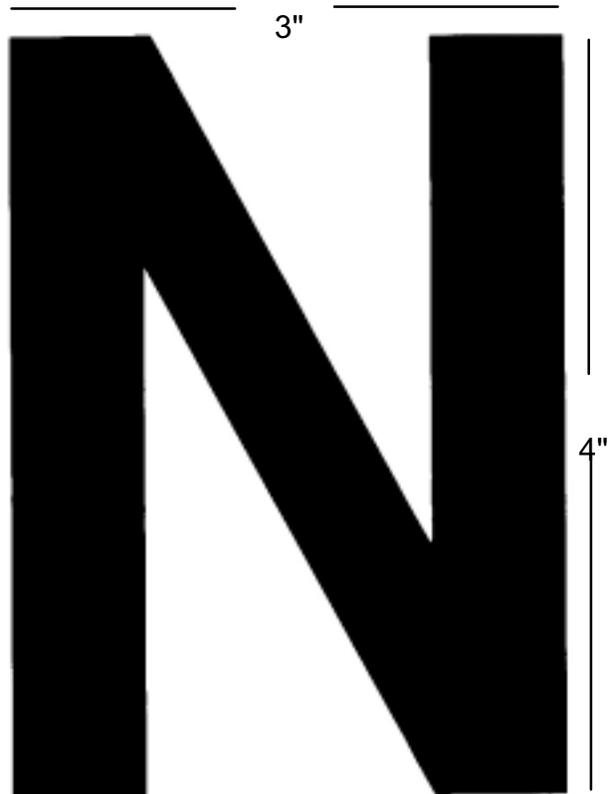
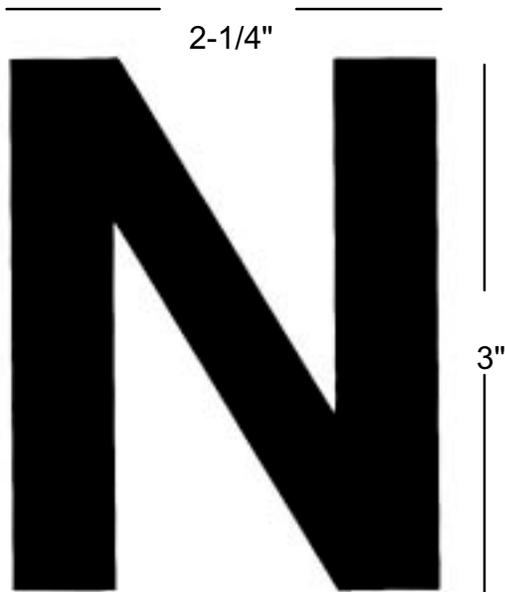
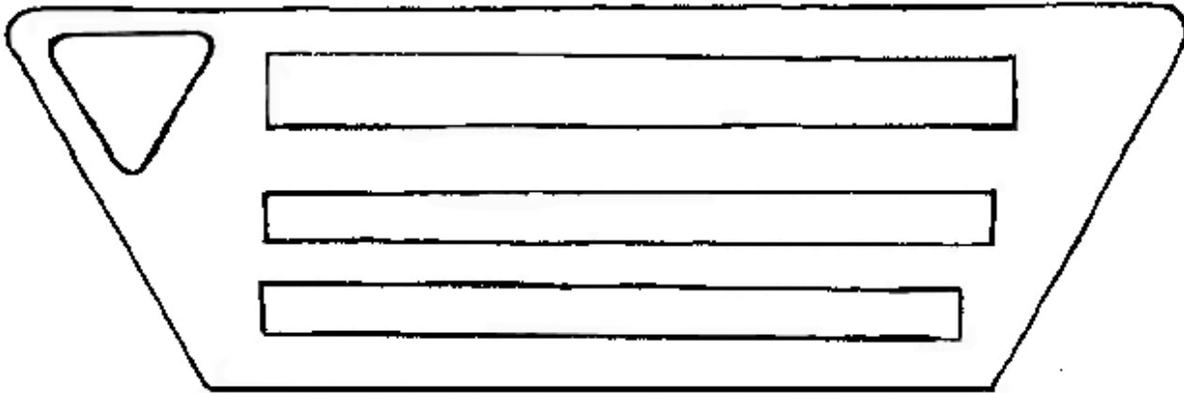
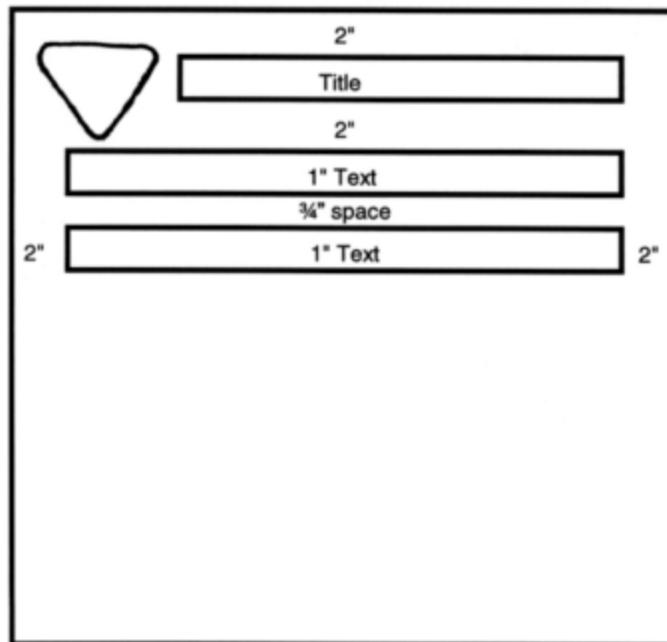


Figure 2 Determination of Line Spacing and Sign Size



Line spacing should be 75% of the letter size.
Emblem size should be no less than 30% of overall height of sign.



On informational signs, the text should be easy to read and the emblem of a size that fits in the open space.

Q. ARROWS

Arrows are normally used to point in three directions: straight up, straight left, and straight right. In certain circumstances an up-pointing arrow 45 degrees off vertical can be used. Arrows should *NEVER* point down.

Arrows are to be positioned either to the right or left of the message or symbol so that the arrow is pointing away from the message or symbol rather than back at it. On trail signs for pedestrians that contain long listings of directions, the arrow may be placed above or below the message for greater clarity. If, at certain locations, a narrow sign is preferred and the position of an arrow to the right or left of the message requires an excessively wide sign, the arrow may be placed below the message.

Arrows should be proportional to the text size as shown in Figures 3 and 4.

R. SPACING GUIDE

1. Minimum Vertical Spacing (refer to Figure 2)
 - a. Between the top edge of a sign and a symbol, arrow, or message, allow space equal to 1-1/2 times the primary lowercase letter height above the message, or one-third the symbol height above the symbol, whichever creates the greater total sign height.
 - b. Between the baseline of first line and top of second line of the primary message, allow space equal to 75 percent of the primary uppercase letter height.
 - c. For signs with both a primary and secondary message, allow space equal to one primary uppercase letter height between the baseline of the primary message and the top line of the secondary message.
 - d. Between the baseline of a secondary message and the top line of the second line and each succeeding line, allow space equal to 75 percent of the secondary uppercase letter height. On information signs, the text should be easy to read. The emblem can be any size that will fit in the open space.
 - e. Between the bottom edge of the top symbol and top edge of lower symbol, allow space equal to one primary lowercase letter height or one-third of the symbol height, whichever is greater.
 - f. Between the bottom edge of the lowest symbol or message, allow space equal to 1-1/2 times the primary lowercase letter height below the message or one-third of the symbol height below the symbol, whichever creates the greater total sign height.
 - g. Signs with a symbol or arrow to the left or right of the message should have the message centered vertically on the symbol or arrow.
 - h. In a two-line message, the arrow should be vertically centered between the two.

Figure 3

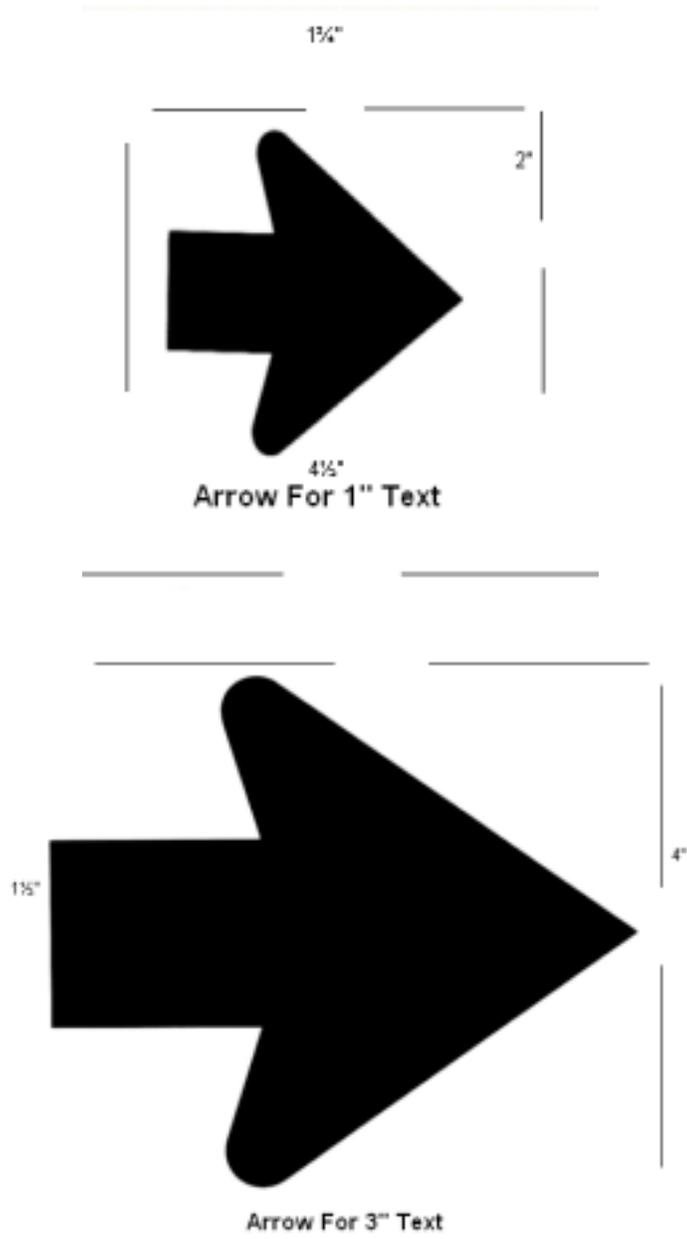
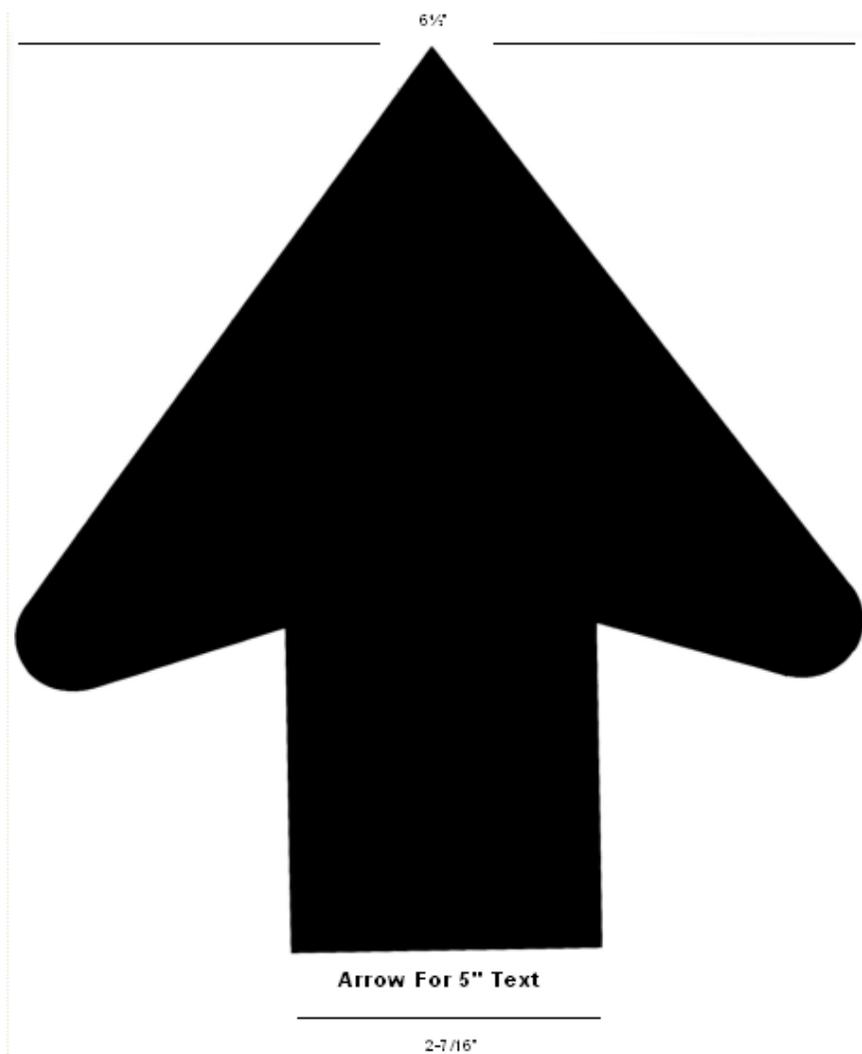


Figure 4



S. SIGN MATERIALS

Signs and posters may be manufactured from a variety of materials, including wood, stone, metal, plastic, fiberglass, and cardboard. These materials are called “substrates.” The “message” is applied to the substrate by a variety of methods, including painting, printing (either by applying cut letters, digital printers, or silk screening), engraving, routing, and sandblasting. Other materials commonly used in the manufacturing process include reflective sheeting, paint, stain, and vinyl film.

As a general rule, the softer or more porous a substrate material is, the better the paint will penetrate the surface to create a solid bond. The harder or more slick the material, the more likely the paint will dry on the surface. Softer substrates are more likely to be damaged by vandals. Harder substrates are more likely to resist gouging and destruction of the substrate, but the paint is more easily chipped away. Decals and pressed-on vinyls will adhere better to harder, less porous surfaces.

When selecting the substrate material, consideration should be given to the environment in which the sign will be located. If the sign will be placed in a desert environment with little to no natural wood source present, consider using metal, plastic, or stone products. If the sign will be located in a wooded or forested environment, consider using plywood or wood products. The surrounding natural environment will provide the best indication of which materials are suitable, hardy, and able to withstand the local weather patterns for a longer life.

The following are some commonly used sign substrates identified by the National Sign Center.

1. High-Density Overlay (HDO) Plywood

Marine-quality 3/4-inch and 1-inch plywood with both sides covered with a high density, slick material (the overlay) to which adhesives cling quite strongly. Plywood is commonly used as the substrate for pressed-on materials such as reflective vinyl. This substrate is the most commonly used wood substrate because it weathers well. The cost is moderate.

2. Medium-Density Overlay (MDO) Plywood

Marine-quality 3/4-inch plywood with one side covered with a smooth but more porous overlay than HDO. The porosity of the overlay allows the paint to bond with the substrate better than HDO. This substrate material may be routed and is used less often than HDO. The cost is moderate.

3. Plastics

Sign design involves a variety of plastics.

a. Polyethylene and polypropylene (Sintra) are fairly common materials that are suitable for most routine sign applications. They are soft materials that have sufficient rigidity to stand up as small signs, but not so rigid that they are easily broken. They come in basic colors and take paint (silk screening) well. Generally, they weather well; however, their softness makes them easy prey to vandals wielding sharp or pointed instruments. Initial and replacement costs are low.

b. Calendered vinyl is a compressed foam plastic material. It is lightweight and ideal for temporary or interior signs.

- c. Acrylic or Plexiglas is a hard, rigid material that withstands abrasion, but it does break easily. It is often used as a clear protective covering over another sign.
- d. Polycarbonate, or Lexan, is similar to acrylic panel but is softer, with a greater flex. Because of the softness, the sign has a tendency to be marred by dust and blowing sand.

4. Aluminum

A proven substrate for both small and large signs. The message can either be silk screened directly onto painted aluminum or applied to a vinyl overlay. Aluminum is used by some transportation departments for large highway signs. When used for large signs, it requires reinforcement with an appropriate support system. This material is easily and significantly damaged by bullets and other forms of vandalism. However, it has excellent weather resistance. Initial and replacement costs are moderate.

5. Aluminum-Clad Plastic

Similar in character to aluminum signs. The plastic core adds strength; this substrate is highly durable and lightweight, making it ideal for Kiosk panels or other signs mounted with a backing. The cost of this product is moderate.

6. Aluminum-Clad Plywood

Similar in character to aluminum signs. Plywood backing adds support to the aluminum to provide stability/rigidity for larger size signs. Initial and replacement costs are moderate to high.

7. Synthetic Textiles

A fibrous, paper-like material that has good short-term resistance to inclement weather and animal damage. It is flexible and lightweight. This substrate is a good choice for temporary signs.

8. High-Density Foamboard

May be routed or sand blasted and is generally used for interior signs. When covered with an impervious material, it can be used outdoors. Foamboard can be formed to replicate rock, metal, or other materials to make unique looking signs at a fraction of the cost.

9. Routed Wood

Routed redwood signs have been used extensively in the past. Since redwood is in short supply, is expensive, and requires high maintenance, it is no longer recommended as the standard. Routed wood (fir, pine, cedar, etc.) may be appropriate in backcountry pedestrian settings. Costs for initial and replacement fabrication and maintenance are high.

10. Cardboard

A paper product that degrades quickly in inclement weather. Cardboard takes paint (silk screening) well, depending on the slickness of the surface, and is easily nailed or stapled. It is used primarily for seasonal posters and indoor uses.

11. Fiberglass/Epoxy Resins

Fiberglass and epoxy resins that are combined make a strong but flexible substrate. Used most often in a thin, vertical format, it may also be used for smaller signs. Its hard, impervious surface is best used as a substrate for decals, although silk screening is also possible. These resins are very resistant to impact and weather. Initial costs are high.

12. Porcelain Enamel on Steel

Highly resistant to scratches, impacts, and weathering. Most often used on interpretive signs, it offers an appealing appearance, but at high initial and replacement costs. It lends itself well to the use of graphics. While very expensive, it has a life expectancy of 20 years or more.

13. Fiberglass Embedment

Consists of, a paper image that is embedded in a fiberglass/epoxy resin panel. Preparation of the initial paper image is costly. However, the second, third, and subsequent copies may be quickly and inexpensively created at the same time as the original and stored for later embedment at relatively low cost to replace a damaged or stolen original. The fiberglass resists scratching and impact and weathers very well; however, it is expensive.

14. Metal

Engraved or acid-etched metals such as aluminum and stainless steel. Such signs have a long service life and are generally good or very good in resisting weather, but they are only fair or poor in their resistance to scratching or impact. Metal has limited application due to contrast requirements for accessibility. Initial and replacement costs are medium to high.

T. PERMITS AND CLEARANCES

Appropriate clearances such as cultural, Endangered Species Act (ESA), etc., or National Environmental Policy Act (NEPA) documentation may be required. Prior to the BLM installing any sign, the appropriate jurisdictional agency must grant its permission. This may include the State Department of Transportation if the sign will be placed along a State highway, or the county road and bridge department if the sign will be installed along a county road. Permission to install a sign will generally be granted with an encroachment permit issued by the managing agency.

U. SUPPORT SYSTEMS

Normally, signs should be individually erected on separate posts or mountings. There are exceptions when one sign supplements another or when route markers and directional signs must be grouped. Signs should be located so they do not obscure each other and are not hidden by other objects. Signs should not be attached to natural features such as trees. It is also inappropriate to mount signs on telephone poles or fence posts. Signs may be mounted on dams, buildings, or other structures.

1. Sign Posts

Breakaway-type mounting posts must be used when a sign is placed within the right-of-way of a road. Refer to MUTCD for breakaway mounting details and specifications. Signs should be attached to posts in a manner that does not interfere with the legibility of the message on the sign.

- a. Posts are used to hold signs in a proper and permanent position and to resist swaying in the wind. Generally, wood or metal posts are used. If posts are set in concrete, the footings should be flush with the ground level.
- b. All hardware used to affix signs to either wood or metal posts should be aluminum or galvanized metal.
- c. After a sign is installed, the ends of the bolts should be snipped off and the threads upset or fractured to prevent removal of the hardware by vandals or thieves. Vandal-resistant hardware is also available from a variety of suppliers.
- d. The number and size of posts per sign should be proportional to the size of the sign. A single post should be used for signs up to 36 inches in length. Two posts are recommended for signs ranging in size from 37 inches to 72 inches. Three posts are recommended for signs 73 inches to 96 inches. For signs larger than 96 inches, a professional architect or engineer should be consulted for designing the sign base and identifying the appropriate mounting details to ensure structural stability.

2. Bases

Signs and interpretive materials may have bases that support the design character of the area. Large administrative/portal/entry signs should be mounted on bases that match the size and mass of the sign, and they should complement the surrounding landscape. Bases are normally located outside the roadside recovery area, usually at least 30 feet from the edge of the roadway travel surface, or outside the highway right-of-way. Signs located within the highway right-of-way must conform to Federal Highway Standards as described in the MUTCD. See Figure 5 for a typical entrance sign installation and a properly sized sign base. Unique sign base designs should be approved by the State Sign Coordinator. Guidelines for pedestrian-level signing related to the base height and angle have been established by the UFAS and ADAAG (see Appendix 1).

Some basic kinds of bases include the following:

a. Stone

This base may be formed using either a single large stone or a grouping of boulders to form the support system.

b. Masonry

A masonry base uses bricks, block, cobbles, or stones mortared together. A masonry base may consist of a solid brick pier, wall-type construction, or a veneer applied to a concrete foundation. Many possibilities exist to vary the patterns and colors.

c. Wood

This type of base may incorporate logs or timbers as the support system. Wood framing and/or siding may be used as well. As with the other options, many varieties of wood exist to create a distinctive design.

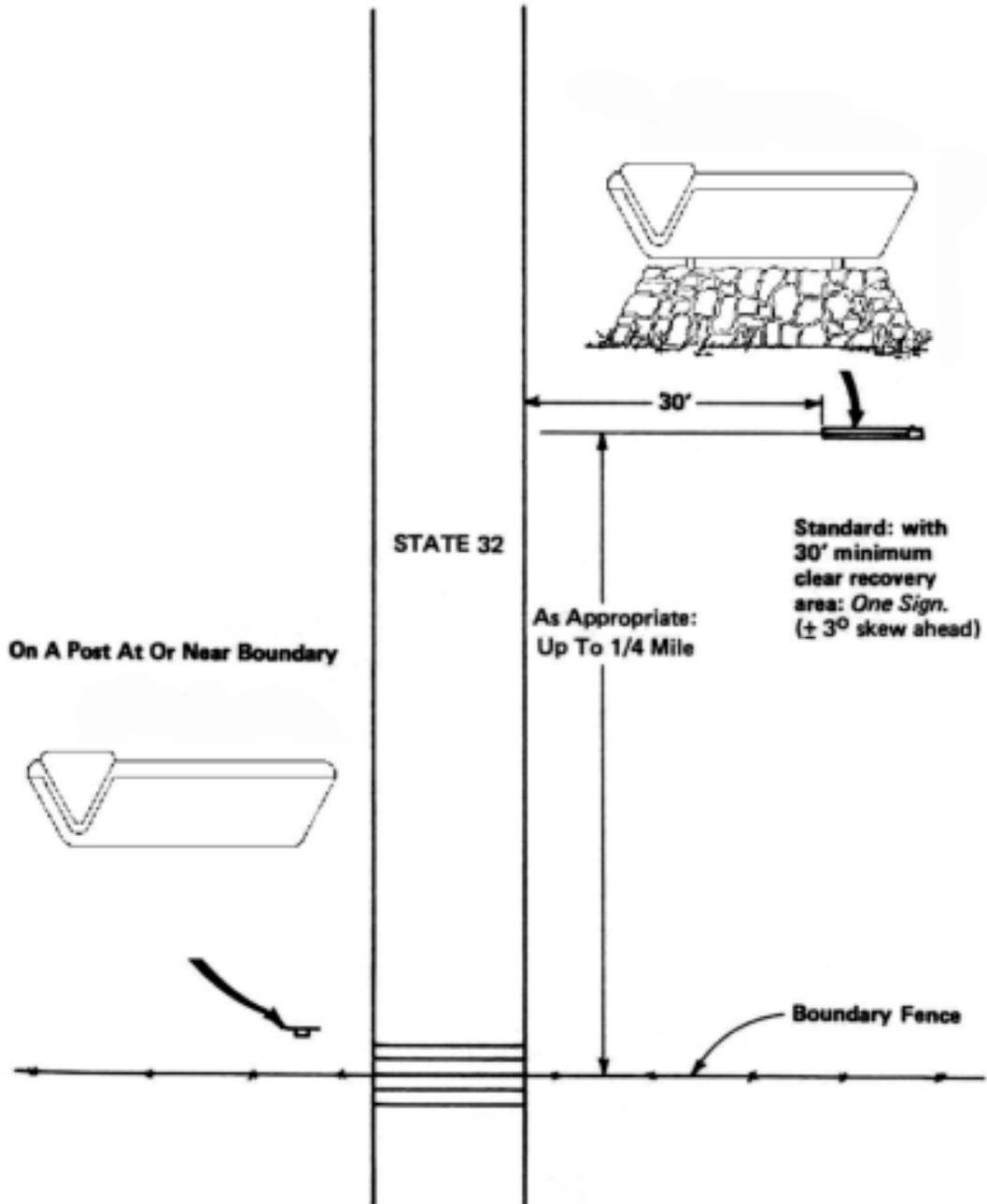
d. Metal

Various types of metal, including galvanized or steel, aluminum, iron, bronze, etc., may be formed or welded to develop an artistic and unique design for the sign base.

e. Found Objects

Many times objects found on site may be used to create a sign base or support system. Old mining cars or equipment, boats, farm implements, or other found objects may be used to incorporate the originality of the area into the sign design. Prior to using found objects, consult a local cultural resource specialist to ensure found objects do not need to be preserved as historical or archaeological properties.

Figure 5
Typical Sign Installation
and
Properly Sized Sign Base



3. Placement and Installation

Uniformity of placement and installation helps visitors see BLM signs and determine where the directed action is to take place. A landscape architect can help you select optimal locations so that your sign can best convey its intended message.

a. Placement

As a general rule, place signs on the right-hand side of the roadway as close to the standard locations as possible. Consider the following guidelines when selecting sign installation locations:

- (1) Place signs where they provide adequate time for viewer response, considering such things as approach speed, road conditions, etc.
- (2) Select locations that minimize viewing obstructions. Some common placement locations to be avoided, if possible, include:
 - (a) Dips in the roadway or trail.
 - (b) Just beyond the crest of a hill.
 - (c) Locations where the sign may interfere with the normal operation of the facility.
 - (d) Too close to trees or other foliage that could cover the face of the sign.
- (3) Where the possibility exists that the sign may become a “photo opportunity,” the sign location should be carefully chosen to ensure safe access.
- (4) Place the sign within the viewer’s “cone of vision.”
 - (a) As speed increases, the driver’s focus point increases. At 25 mph, the natural eye focus point lies 600 feet ahead of the car; at 45 mph, it lies 1,200 feet ahead.
 - (b) As speed increases, the driver’s peripheral vision decreases. On low-speed roads, the signs can be set farther back from the right-of-way and still be visible and effective. At 25 mph, a driver’s “cone of vision” is 90 degrees. At 45 mph, it narrows to 65 degrees, and at 60 mph, it is only 40 degrees.

- (c) As speed increases, the driver’s ability to focus on foreground detail decreases. At 40 mph, the closest point of clear vision lies 80 feet ahead of the car. At 60 mph, the driver can see clearly only detail that is within an area 110 to 1,400 feet in front of the car and within a 40-degree “cone of vision.” See Figure 6 for a typical driver’s visual perception responses.
- (d) The location of all signs along roadways should comply with MUTCD standards. The following chart outlines the approximate distance required between signs and the distance required to provide advance warning on directional signs before intersections:

Speed limit	Distance between signs or from sign to intersection (in feet)
20	100
30	150
40	300
50	500
55	750

There are no standards for the location of pedestrian signs. Physical surroundings, however, play an important role. Pedestrian signs should be highly visible and not obstructed by the vegetation or physical features of the area.

Care should be taken to ensure that signs directed to one activity do not interfere with another activity, such as a sign along a roadway that might block traffic on an adjacent bicycle path. Visitor safety should always be considered when determining both the message and location of signs.

b. Height

The bottom of a sign should be a minimum of 5 feet above the level of the roadway. For pedestrian signs, headroom beneath the sign must be 80 inches minimum.

c. Lateral Clearance

(1) Traffic control devices on BLM roads

The distance from the edge of the roadway to the inner edge of the sign may range from 6 to 12 feet. The normal minimum is 6 feet. In cases where roadside topography precludes the 6-foot minimum, the inner edge of the sign should not be closer than 2 feet from the edge of a roadway with no shoulder and no closer than 2 feet from the outer edge of a shoulder. See Figure 7 for typical lateral clearances and heights.

(2) Non-Motorized Trails

Signs should be installed so that the nearest edge of the sign is at least 3 feet from the edge of the trail tread (to allow adequate clearance for pack stock).

(3) Winter-Use Trails

Signs should be mounted and placed so the nearest edge of the sign is a minimum of 2 feet and a maximum of 6 feet from the right edge of the trail tread. Place signs so they are protected from prevailing winds to keep a buildup of ice and snow from occurring. The signs should be placed so the bottom of the sign is a minimum of 40 inches above the average maximum snow level (so the sign will never be buried by the snow).

Figure 6
A Typical Driver's Visual Perception Responses

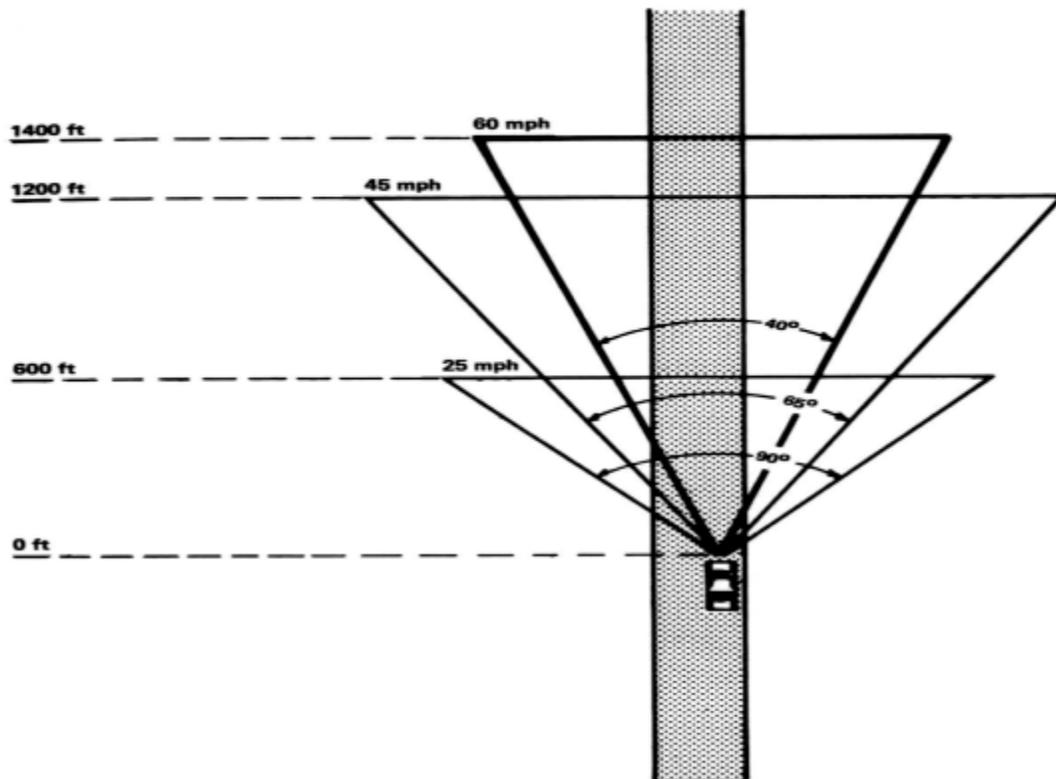
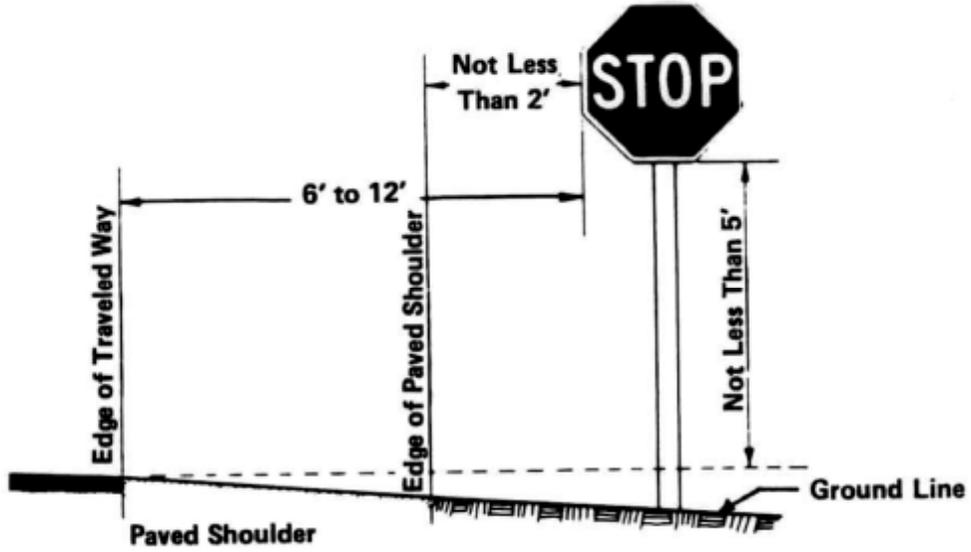
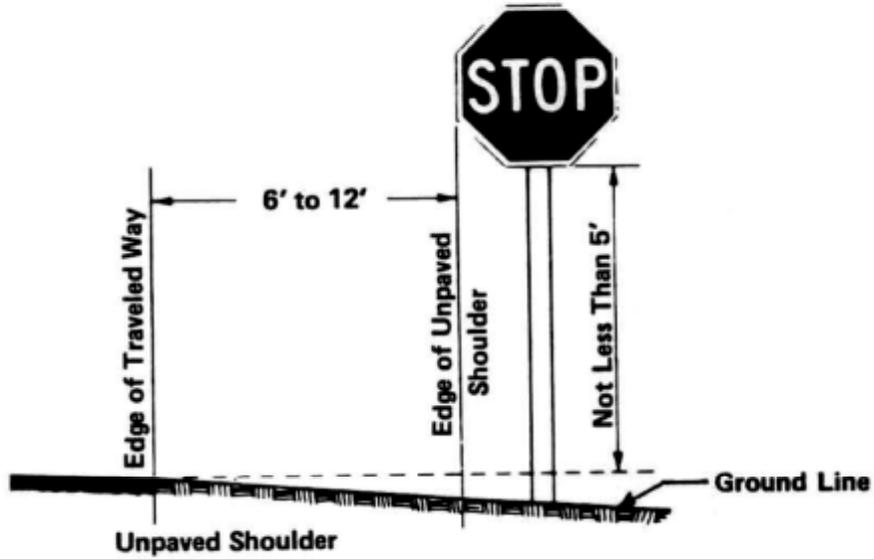


Figure 7
Typical Lateral Clearances and Heights



WITH PAVED SHOULDER



WITH UNPAVED SHOULDER

d. Canting

Depending on the distance from the road, signs should be mounted approximately 87 degrees or 93 degrees to the direction of, and facing, those they are intended to serve. This canting aids in reducing mirror reflectivity. Sign faces are normally vertical or tilted only slightly (see paragraph below). On upgrades and downgrades, it may be desirable to tilt from the vertical to improve readability.

e. Tilting

Tilting a sign slightly forward helps prevent environmental contaminants, such as sap or bird residue, from defacing the sign.

CHAPTER V

SIGN MAINTENANCE

A. MAINTENANCE

Maintenance should be planned, scheduled, and performed to ensure that signs, posters, and other traffic control devices are clean, legible, functional, and properly positioned. Effective sign maintenance will help ensure the safe use of the BLM public lands and facilities, as well as foster a positive image of the BLM. When maintaining signs, consider the physical condition, the message content, and the relationship to other materials such as maps, brochures, etc., that are available to the public land user. The message should be reviewed to determine whether it is still valid and current. If a new sign is needed, refer to Chapter II, Sign Planning. The maintenance schedule should address, but not be limited to, the following points:

1. Condition Survey

Condition surveys should be performed on a periodic basis to determine the condition and effectiveness of all traffic control devices, signs, and posters. Reflective devices should be inspected both night and day to ensure effectiveness. Evaluation should include the sign's legibility, reflectivity, supports, placement, and visibility; the encroachment of vegetation; a verification of the location; and the overall condition.

It is important to report missing, improper, incorrectly placed, damaged, or deteriorated signs to the Field Office Coordinator or the resource specialist whose program is supported by the sign.

a. Field inspectors should use the checklists on the Sign Inventory/Maintenance Form 9130-4 (attached in Appendix 3) to capture all information during the inventory/review. The checklists should also be used as a reference in developing the annual maintenance plan.

b. Condition Ratings:

(1) Good

The sign has experienced some weathering, but its lettering and symbols are legible. The sign is intact, with no holes or broken portions. It may need some cleaning to eliminate accumulated dirt and some minor touch-up painting. No vegetation or other objects obscure the sign.

(2) Deteriorated

The sign has been extensively impacted by weathering, requiring extensive cleaning and painting to restore it to its original condition. Lettering and symbols are legible, but barely so. Reflectivity is about half of the original. Vegetation is beginning to encroach on the sign, further detracting from the legibility of the message. The sign may have some holes or other minor damage that can be readily repaired.

(3) Damaged

The sign is weathered to the point that its message is no longer legible. It has severe damage from holes or other vandalism. The sign may be repaired temporarily, but it should be replaced as soon as possible.

(4) Missing/Down

The sign is either missing or so damaged that repairs are impossible. If a sign is still needed, a replacement sign should be ordered immediately.

(5) Obsolete

The sign message is outdated or incorrect. If a replacement sign is needed, refer to Chapter II, Sign Planning.

2. Rating Factors

a. Damage

Damaged signs must be repaired or replaced, as required.

b. Visibility

If signs have become obscured by brush or grass, the problem vegetation must be cleared to restore the visibility of the signs.

c. Legibility and Appearance

Signs that have become faded or illegible must be restored to their original condition. The appearance of sign hardware should also be considered.

d. Reflectivity

Numerous signs are reflective to ensure their visibility at night. To test visibility, create a small panel (about 8 inches by 10 inches) using sheeting that has an acceptable level of reflectivity. At night, tape the test panel to the face of the sign. Step back about 30 feet, hold a flashlight about 2 inches from your face, and shine it at the sign (see Figure 10).

(1) If the inspection panel is brighter than the sign, replace the sign within the year.

(2) If the sign is brighter than the inspection panel, the sign still has several years of life remaining.

(3) If the sign and the panel have equal brightness, the sign has 1 to 2 years of useful life remaining.

3. Five-Year Deferred Maintenance Schedule/Plan

Signing requirements should be identified for annual maintenance funding as well as out-year funding needs. A five-year sign maintenance plan must be developed by each Field Office and administered by the State Office Sign Coordinator to assure that all signs are replaced in a timely manner. This five-year plan will allow the State to prioritize its needs when requesting deferred maintenance funds.

4. Maintenance Performance

Perform maintenance on a regular and systematic basis to ensure signs and other traffic control devices are clean, undamaged, and functional. Use only those materials (paints, stains, sheeting, hardware, etc.) that comply with the original specifications for the sign. Evaluate the maintained product against the standard for materials and workmanship established for the original. Materials needed for maintaining signs can be purchased from a local hardware store, the National Sign Center, or Printed Materials Distribution Services (PMDS).

A sign repair kit is available to simplify the sign repair process. It contains all the materials necessary to replace faded or damaged logo decals and signs that have minor bullet hole damage. The kit also included repair instructions and order forms for reordering additional logo decals. It is available in a plastic carrying case which makes everything convenient for employees to use when traveling/working on BLM lands. The kit may be ordered from the PMDS.

a. Clearing

Clear all trees, brush, and other vegetation that may obscure signs. Also make sure that fences or other objects do not obscure signs. Relocate signs if obstructions cannot be eliminated.

b. Cleaning

Clean all signs obscured by dust, bituminous materials, road film, mud, etc., to restore legibility and reflectivity. Wash signs by:

- (1) Flushing the sign surface with clean water to remove loose dirt.
- (2) Scrubbing the sign face with a soft brush, rag, or sponge, using a mild, non-abrasive detergent or other suitable cleaner. Scrub from the top down. Avoid damaging the surface with unnecessary scrubbing. Keep a steady stream of water flowing on the sign face to wash away dirt.
- (3) Rinse the entire sign face with clean water.

c. Special Cleaning Problems

- (1) For tar, oil, diesel, and bituminous material, use a mild solvent such as mineral spirits. Then wash the surface with a mild detergent and water, and rinse with clean water.

- (2) With pollen and fungus, wash the surface with a 3 to 5 % sodium hypochlorite solution, such as a commercial brand of bleach, followed by detergent and water. Rinse with clean water.
- (3) For lipstick and crayon, use a mild solvent such as mineral spirits to remove the material. Follow with detergent and water and a clean water rinse.
- (4) Paint may be removed by spraying a commercial paint remover onto the reflective sheeting sign face. The type of paint, length of exposure, and type of remover may affect the life of the sheeting.
- (5) Other severe contamination may be removed with a very fine steel wool or plastic kitchen scour. Unless great care is taken, however, this scrubbing may destroy all or part of the sign's reflectivity.

For all of these special cleaning procedures, the sign should be inspected at night to determine if the cleaned area has lost too much of its reflectivity. Replace any signs with insufficient reflectivity.

- d. To maintain a fiberglass sign in good shape, periodically wax the sign with car wax. If the fiber threads start appearing, a waxing may often add life to the sign.
- e. Repair

Repair damaged signs following the procedures described below. Minor damage may be repaired in the field without removing the sign from its support. Repair of major damage will normally require that the work be performed in a workshop. "Scotchcal" signs can best be maintained by referring to the 3M Maintenance Hints (Appendix 4).

- (1) Aluminum Substrate Signs

- (a) Bent Signs

Straighten the sign. If the reflective background or legend has been scraped or damaged, proceed as follows:

- (i) Remove all background sheeting from an area slightly larger than that damaged.
- (ii) Clean the exposed surface with a mild detergent and rinse with clean water.
- (iii) Apply matching pressure-sensitive reflective background sheeting, extending at least 1/2-inch beyond the damaged area.

- (iv) Replace damaged legend with die-cut, pressure-sensitive, pre-spaced letters, borders, and symbols and firmly press in place.
- (v) If the sign is subjected to snow burial and the replacement sheeting extends to the top edge of the signs, place transparent film or tape along the top edge.

(b) Holes

Many times, it is not necessary to repair each hole in the sign. When a hole does not damage the message or symbol and does not, of itself, create a sloppy signing image, maintenance may not be needed. Where repairs are needed, follow these steps:

- (i) Remove all damaged background sheeting and legend.
- (ii) Straighten the sign using a hammer and flat dolly.
- (iii) Remove any additional sheeting damaged during straightening.
- (iv) Clean the entire area with mild detergent and rinse with clean water.
- (v) Patch the hole or puncture on both sides using aluminum foil tape. Use a squeegee to apply firm pressure on both sides of the sign. On large holes, start placing the foil at the bottom of the hole, overlapping each strip shingle fashion as you move up.
- (vi) Apply reflective background sheeting, extending it at least ½-inch beyond the foil strips.
- (vii) Replace damaged areas with die-cut, pressure-sensitive, pre-spaced letters, borders, and symbols and firmly press them in place.
- (viii) Place transparent film or tape along the top edge if a sign is subjected to snow burial and replacement sheeting extends to the top edge of the signs.

(2) Plywood Substrate Signs

The following procedures are recommended to repair holes and other punctures and to restore a sign's legibility:

- (a) Remove all loose wood on both sides of the sign and all damaged sheeting.

- (b) Fill holes with wood filler or auto body filler. Sand and smooth.
- (c) Wipe areas with clean cloth.
- (d) On larger repairs, it may be desirable to cover holes with aluminum foil tape. Use a squeegee to apply firm pressure. Start placing the foil at the bottom of the hole, overlapping each strip shingle fashion as you move up.
- (e) Apply reflective background sheeting, extending it at least ½ inch beyond the foil strips.
- (f) Replace damaged areas with die-cut, pressure-sensitive, pre-spaced letters, borders, and symbols and firmly press into place.
- (g) If a sign is subjected to snow burial and replacement sheeting extends to the top edge of the signs, place transparent film or tape along the top edge.
- (h) Using an aerosol can of enamel paint (color to match back of sign board), lightly spray the aluminum tape covering the holes on the sign back.

(3) Routed Wood Signs

(a) Repairing Sign Board

- (i) Scrape off loose paint with a wire brush. Dress all holes and damaged wood with a knife.
- (ii) Fill all cracks, holes, and imperfections with wood or auto body filler.
- (iii) Sand sign edges back and forth. Do not sand surface overlays on MDO substrate signs.
- (iv) Remove all loose paint, dust, and other foreign materials.

(b) Painting

- (i) Apply a prime coat.
- (ii) Apply two coats of paint to the sign message. Work paint thoroughly into all corners of letters and numbers. Let paint dry thoroughly between coats.
- (iii) Apply two coats of paint to the background area.

- (iv) Touch up letters if background paint contaminates the message.
 - (c) Staining
 - (i) Hand paint the message area, keeping paint off the sign face.
 - (ii) Apply two coats of stain to background areas.
- (4) Supports and Hardware

Repair or replace, as necessary, damaged or deteriorated sign supports and associated mounting hardware.
- (5) Emblems

Replace the emblem by applying a new emblem over the top of the existing one. First, remove any loose edges of the existing emblem. Then clean it with alcohol and carefully apply the new pressure-sensitive emblem. To order a new emblem, measure the existing one from the left corner to right corner and then order a replacement from the National Sign Center in Rawlins, Wyoming, or the Printed Materials Distribution Services (PMDS) in Denver, Colorado.

5. Disposal of Excess, Obsolete, and Damaged Signs

Care must be taken to ensure that all Department of the Interior and Bureau of Land Management signs removed from the Federal Property Management System are properly disposed of to prevent their misuse and misrepresentation in the private sector.

There are several recommended methods of sign disposal.

- a. Excess, overstocked, or unneeded signs that are still available in the PMDS inventory should be returned to the PMDS so they may be redistributed to other offices. To coordinate the return of unneeded signs, contact the PMDS.
- b. Obsolete or damaged signs have no value other than their material content and should be recycled. Where recycling is not available, standard waste disposal practices should be followed. Whatever method is selected, the property disposal must be documented in accordance with Federal Property Management Procedures. Prior to the transfer of a sign to a recycler, landfill, etc., the sign should be sufficiently altered and defaced to prevent its misuse in the private sector. If this is not possible, then a written agreement must be in place with the recycler or landfill operator assuring that the signs will be reduced to scrap and not reused by the private sector.

CHAPTER VI

PROCUREMENT

A. General

The supplier for the BLM's signing needs is the National Sign Center located in Rawlins, Wyoming. They are the clearinghouse by determining the most effective and timely source for producing the BLM's custom signs.

Sign sources are selected based on their ability to provide quality signs that adhere to BLM sign standards for shape, size, and color. The type and quantity of sign required helps determine the source. Most sign types fall into the following categories: Custom, Standard Bureau, and General Purpose.

B. Custom Signs

Custom signs are produced in-house by the National Sign Center in Rawlins, Wyoming. These signs are unique to a location or application, e.g., a sign for a specific campground or management area. They are often one-of-a-kind or limited-quantity signs. The Center has developed a website for ordering signs and describing design options, (<http://web.wy.blm.gov/signshop>). This site has been created to assist the ordering office in using the skills of the Center. The website contains information on substrate, design, and cost estimating. It also includes photographs of some of the products the Center has produced. The Center will accept art work in either hard copy or electronic format. The customer pays for the total cost of the sign, including design and transportation. Use Form 9130-3, Bureau Sign Shop Requisition (see Appendix 5), to order custom signs from the National Sign Center.

Meeting the customer's needs is very important to the Center. To help meet the needs of the National Sign Program, the Center, the National Sign Coordinator, and the Printing Specialists at the National Business Center in Denver, Colorado, have developed contracts with the Government Printing Office (GPO) to produce signs and to contract for other signs. While the contract charges are not as low as the Center's, they allow the Center to deliver finished signs that are consistent in quality and format in a timely manner. The decision to use the contract as an alternative is based on existing workload and the quantity and type of signs ordered.

C. Standard Bureau Signs

Standard signs (S Series) are signs that are usually common to all of BLM, to multistate regions, or to individual states. They are produced through a Government Printing Office (GPO) contract and stocked in large quantities by the PMDS, in Denver, Colorado. Information about the signs and ordering information is contained in the Catalog of Signs, Posters, and Decals or directly from the PMDS (<http://ncweb.sc.blm.gov/pmds/>). As with custom signs, the customer pays for the entire cost of the signs.

D. General Purpose Signs

These are signs that are not specific to the BLM. Stop signs and other traffic signs and Occupational Safety and Health (OSHA) signs are examples of signs that fall into this category. These signs are available from Federal Prison Industries (UNICOR) (<http://www.unicor.gov>).

Traffic control signs should be purchased through Federal Prison Industries. These signs are of consistent quality and follow the regulations outlined in the Manual on Uniform Control Devices (MUTCD) (<http://mutcd.fhwa.dot.gov/ser-pubs.htm>).

OSHA signs must conform to the Occupational Safety and Health Standards (29 CFR 1910.145). They are used to warn or inform BLM personnel and/or the general public of hazards or conditions that may cause injury. If UNICOR cannot supply the sign or poster, contact the National Sign Center.

E. Other Types of Signs and Symbols

1. International Symbols

There is currently no central agency responsible for international symbols. As a result, there is a problem with uniformity between agencies and even within the BLM when it comes to using symbols on maps, brochures, and signs. The BLM and other Department of the Interior bureaus/offices are working toward standardizing international symbols. A mapping website (<http://www.blm.gov/nstc/>) has been developed for use when designing maps and other products using these symbols. The international symbols are portrayed in Appendix 6. Signs containing the approved versions of international symbols are available from the National Sign Center using the same ordering procedures as custom signs. Care must be taken to ensure that the symbols used in accompanying brochures and other publications match those provided by the Center. International symbols come in four sizes. The 18-inch by 18-inch size is for use on roads with a design speed greater than 25 mph. The 12-inch by 12-inch size is recommended for lower speeds. The 8-inch by 8-inch size is for pedestrian use where the sign will be viewed from 75 feet to 100 feet. The 6-inch by 6-inch size is for viewing at a distance of under 75 feet.

2. Composite Recreation Symbols

These are divided into two categories: (1) for Services and Facilities and (2) for Off-Road Vehicle Control. These signs are requisitioned from the Sign Center.

3. National Recreation Trail Markers

National Recreation Trails must be identified with the symbols adopted for those trails. Scenic and Historic Trails are authorized and designated only by an Act of Congress. Specifications and applications of uniform trail markers, guide signs, and trail blazers are established by the lead agency. The trail markers and blazers are available from UNICOR. The 18-inch size is reflectorized and intended for use at major road crossings. The 3-1/2-inch size is not reflectorized and is used for identification on guide signs. It may be also used alone as a reassurance marker.

National Rivers must be identified by a uniform marker. This marker identifying the National Wild, Scenic, and Recreation River System must be used on all identification, guide, and information signs within the boundaries of Wild, Scenic, or Recreation Rivers. The 18-inch sign is reflectorized for use along roads. The 9-inch size is not reflectorized since it is used for stationary viewing at trailheads and along trails. The 3-1/2-inch size is not reflectorized and is intended for use on small signs and as a reassurance marker. These are available from UNICOR.

5. Fire Posters

Fire posters are ordered from the National Interagency Fire Center (NIFC) warehouse by using Sign Requisition Form 9130-3 or similar form.

E. Additional Information

Additional information on the above-referenced signs may be found by accessing the following websites:

Uniform Traffic Control Devices Standards - <http://mutcd.fhwa.dot.gov/ser-pubs.htm>;

Uniform Waterways Marker System -

<http://www.boatsafe.com/nauticalknowhow/buoychanges.htm>;

Accessibility-Dept. of Justice - <http://www.usdoj.gov/crt/ada/adahom1.htm>

-Access Board - <http://www.accessboard.gov/>

F. Ordering Signs

1. National Sign Center

Orders for custom signs from the Center are submitted by using BLM Form 9130-3, "Bureau Sign Shop Requisition." The Center charges the customer for the full cost of the sign, including transportation. The Government Purchase Card is the preferred method of payment. Be sure to include the complete card information in the appropriate block on BLM Form 9130-3. If your sign includes graphics or photos, they should be sent with the requisition form. Graphics and photos can be submitted in an electronic format on either CD-ROM, zip disk, or standard disk. Photos and graphics may also be submitted in hard copy.

2. Printed Materials Distribution Service (PMDS)

Large quantity or bulk signs may be ordered from the PMDS by submitting BLM Form 1556-1, Printed Materials Distribution Services Publications Requisition Form. Additional ordering information may be obtained by visiting the PMDS website at <http://ncweb.sc.blm.gov/pmds/customerinstruction.htm> The order may be either mailed or faxed.

appears on the purchase card. In the Appropriation Number block, enter the purchase card number and the card's expiration date. Alternatively, you can place a note in the Appropriation Number block to call back for purchase card information. For specific ordering instructions, see the PMDS web site.

3. UNICOR

Refer to the UNICOR catalog or website for ordering instructions.

4. NIFC

Submit the following information to the National Interagency Fire Center Great Basin Area Cache; name, address, credit card information, NFES item number, description, quantity, and price.

5. Private Sector Vendors

Speciality signs are available from a number of private sector vendors. These are usually quality products that can be used to fill an existing need.

ACCESSIBILITY STANDARDS AND GUIDELINES

APPENDIX 1

ACCESSIBILITY

General

The guidance in the Guidebook concerning accessibility must be considered in planning, designing, fabricating, and placing sign messages. This is most critical for signs used at the pedestrian level. Part II below outlines the general cautions and legal requirements that apply to signs.

The Accessibility Data Management System (ADMS) is an assessment and design tool used to check the BLM's Compliance with the Uniform Federal Accessibility Standards (UFAS) and the Americans with Disabilities Act Accessibility Guidelines (ADAAG) for pedestrian-level signing.

Parts II and III below are the ADMS checklists to evaluate the compliance of signs with current laws. The headings are generic to ADMS. Although headings may not specifically address current usage, they are excellent tools that should be used early in the design phase. Check the final design solution prior to fabrication.

PART I

STANDARDS AND LEGAL REQUIREMENTS FOR ACCESSIBILITY

PART II

PRINTED MATERIALS

This checklist may be used for any text messages, brochures, maps, etc.

PART III

EXHIBITS/INFORMATION PANELS

This checklist may be used for groups of signs and other interpretive materials mounted on posters, panels, etc.

PART I

STANDARDS AND LEGAL REQUIREMENTS FOR ACCESSIBILITY

PART II

PRINTED MATERIALS

This check list can be used for any text messages, brochures, maps, etc.

PART III

EXHIBITS/INFORMATION PANELS

This check list can be used for groups of signs and other informational materials mounted on posters, panels, etc.

APPENDIX 2

EXAMPLE OF A SIGN PLAN

APPENDIX 3

SIGN INVENTORY/MAINTENANCE FORM

APPENDIX 4

INFORMATION FOLDER 1.11, 3 M STORAGE & PACKING,
INSTALLATION, SIGN POSITIONING, CLEANING, SIGN
MAINTENANCE MANAGEMENT, SIGN FACE
REPLACEMENT, SHEETING REMOVAL FOR
SCOTCHLITE REFLECTIVE SHEETING

APPENDIX 5

FORM 9130-3, "BUREAU SIGN SHOP REQUISITION"

APPENDIX 6

INTERNATIONAL RECREATION SYMBOLS