



Sign Manual



December 2011

Mission:

"The Division of State Parks plans, develops and maintains a system of parks and recreation areas for the use and enjoyment of residents and visitors. The Division also preserves areas of scenic, historic and scientific significance in Nevada."

Key Objectives:

- To continue to manage, protect, operate and maintain existing and future units of the Nevada State Park System.
- To acquire, plan for and develop a well-balanced system of areas of outstanding scenic, recreational, scientific and historical importance.
- Continue to manage and interpret the natural, cultural and recreational resources of the State Park System.

Preface:

Signs and what they say, whether it is the story they tell, the information they provide, their appearance or the lack of signs altogether, is one of the first, and most lasting, impressions the Division has on park visitors and program users. Creating an aesthetically pleasing environment through the use of a simple, inoffensive signage system is paramount. A signage system needs to be easily comprehended and efficient to be beneficial to both the public user and administrative personnel. Signs should be used and placed specifically to add to the users' enjoyment and increase their comprehension of the park. Effective communication of information relies upon an understandable system of directional signs and landmark identifications. The user should recognize and be proud of Division facilities and opportunities by the style and quality of Division signs and markings.

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I. INTRODUCTION

The American Heritage Dictionary of the American Language, 4th Edition defines a sign as, *(noun)* "Something that suggests the presence or existence of a fact, condition, or quality. An act or gesture used to convey an idea, a desire, information, or a command. A displayed structure bearing lettering or symbols, used to identify or advertise. A posted notice bearing a designation, direction, or command. *(verb)* To communicate with a sign or signs."

As stewards of outdoor recreation and resources to improve Nevada's quality of life, the Division utilizes signs to communicate, orient, direct, identify, inform, educate, and protect. These signs come in all shapes, sizes, colors, and materials with varying lettering and symbols and unique messages specific to the particular need. However, signs can be over utilized, improperly designed or installed, or convey the wrong message. They can also vary considerably within an area or from facility area to facility area confusing the user and reducing the sign's impact.

A. Purpose

Consequently, the Division states that a sign's purpose is the following:

To communicate a specific message in a clear and concise manner to enhance the visitor's experience or to protect a specific feature.

The Division's adherence to this purpose ensures that signs will be used in the proper manner to convey the proper message. The Division developed this Sign Manual to provide guidelines to ensure standardization of signs within the park and across the state and at the same time allowing for uniqueness associated with the park or the area.

This manual will:

- Establish a sign program planning process.
- Describe the different types of signs and the locations where they are used.
- Provide specific design standards that apply to certain types of signs, including material and specification requirements.
- Provide inventory and maintenance guidance.
- Identify funding and procurement procedures.
- Provide needed reference material.

This manual provides the necessary information to plan, design, procure, install, and maintain signs. The guidance provided is only discretionary as provided and in all instances requires Regional Manager approval. Compliance with this manual will result in a consistent, effective, and economic signing program that meets Division objectives and conveys to the public a favorable Division image. The sign principles used in formulating this manual will be followed to successfully administer a comprehensive sign program.

B. Sign Manual Principles

The following principles and objectives were used in formulating the manual and will be used in administering the sign program:

- Deliver effective, understandable, and meaningful messages to visitors.
- Minimize verbiage and use international symbols as much as possible.
- Standardize signage with limited area flexibility.
- Inform the public of prohibitions for entry into and regulations on Division facilities and areas.
- Incorporate where applicable the Nevada silhouette, the Division's logo, the park's logo, and any managing partner's logo.
- Convey the Division's, and, where applicable, the managing partner's, primary mission, general information, or project data to the public.
- Educate and inform the public about the variety of natural and cultural resources managed by the Division or in cooperation with other entities.
- Comply with all accessibility standards and, where appropriate, accommodate individuals with bilingual needs.
- Utilize sign industry standards for design, fabrication, installation, and maintenance.
- Comply with pertinent Federal, State, and local laws in administering signs at outdoor public use areas, as appropriate.

C. Sign Administration

1. Purpose: The purpose of signs is to communicate a specific message in a clear and concise manner to enhance the visitor's experience or to protect a specific feature. The purpose of this sign manual is to provide guidelines to ensure standardization of signs within the park and across the state and at the same time allowing for uniqueness associated with the park or the area.

2. Scope: This manual primarily applies to signs located on lands and at recreation facilities or structures owned or managed for public recreation use on a regular basis. Where facilities are operated by other entities, other guidelines may apply pursuant to prior arrangements and language in the management agreement. Sign standards of managing partners will be used, if required. Directional signs located on external (off-site) roadways leading to the parks will be identified and coordinated with the respective entry.

3. Responsibility: Responsibility for the administration of signs resides with the Regional Managers respective to their responsibilities.

4. Sign Review, Funding, and Maintenance: Each park will prepare a sign plan, conduct periodic reviews, prepare maintenance schedules, and prepare annual requests to repair or replace damaged signs or install new signs. It is each park's stewardship responsibility to ensure that proper signs are installed and maintained. It is the Regional Manager's responsibility to provide funding for replacing and updating signs.

5. Sign Plan: An initial plan followed by an annual review will be performed by each park to address adequacy, wording, and design standards. The plan will identify and address both internal (on-site) and external (off-site) sign needs. In addition, a maintenance schedule will be prepared, reviewed, and updated annually to address damage, visibility, legibility, and appearance. Regional Managers will verify that all parks complete their annual inventory.

6. Funding: Parks will have different levels of and opportunities for funding obligations as identified in section VII Procurement and Funding.

7. Sign Approval: Signs will be approved by the Regional Manager prior to fabrication and installation.

8. Data Base: Each Region / park is encouraged to develop a sign database, which would facilitate consistent application of this manual.

II. PLANNING CONSIDERATIONS

Many factors must be considered when planning a sign and deciding on its location. First, it must be decided whether a sign message is really required and, if so, what sign type can most easily convey the message. The sign must be placed for easy observation and the location must allow the observer the opportunity to fully observe the sign and, if applicable, to react in time to carry out the message command. Our environment today is overloaded with graphic and written messages, so care must be taken to keep the number of signs to a minimum.

A. Determination of Need

The first consideration of a signing and marker program is determination of need. In determining the need for any sign or marker, the following questions, as identified in the National Park Service Sign Manual – Revised January 1988, should be answered:

1. What does the visitor need to know?
2. Is guidance or a message needed?
3. If so, where is a message needed?
4. What message is needed?
5. How shall the message be presented (sign, symbol, exhibit, audio, or other)?
6. Is the sign for drivers of vehicles, pedestrians, other forms of travel, or a combination thereof?
7. At what speed is the visitor traveling?

Signs are used as a convenience to park visitors / program users to regulate the traffic and for direction and information. Signs should be used judiciously as a service to Division patrons, not as a cure for Division problems. Consequently, after the above questions are answered and it is determined that a sign is needed, all signs shall meet the following elementary requirements to be effective:

1. **Purpose:** They should be capable of fulfilling an important need.
2. **Practicality:** They should (a) command attention; (b) be made of the best materials; (c) be located where they can easily be read in time for adequate response; and (d) be well maintained.
3. **Aesthetics:** They should command respect of Division users and should be uncluttered, effective, and necessary. They should not impede upon nor control the environment or facility.

B. Method of Presentation

After the designer has determined who the sign will be for then the best presentation method can be chosen (symbol, word message, or both). The sign must be placed for ready observation, and the location must allow the observer to react in time to carry out the message command. When choosing graphic symbols for an area consider these important determinants:

- The graphic should reinforce the character of the organization, which in this case is the Nevada Division of Parks and Recreation. A uniform signing system will convey that it is Division land or a Division sponsored opportunity.
- Graphic symbols must be appropriate to the type of activity that it represents.
- The graphic must be compatible with the surrounding visual appearance of the area.
- The graphic must be legible for the intended purpose and location. This is determined by the contrast – the characteristic, which determines whether the sign is readable or not. Letters, colors, and symbols and their relationship to each other create contrast. In park and rural areas, the ratio of message (total graphic area) to background should be a maximum 60:40. The limit of graphic information that the occupant of a moving car can handle is generally ten items at a time. An item includes:

Word Syllable

Graphic Symbol

Sign Configuration (size and shape of sign itself)

Many times signs tend to defeat their own purposes by conveying more information than the observer can assimilate. This compounds the observer's confusion and tends to reduce their mental capacities. The observer actually sees less, not more, because they are too distracted.

C. Location

Sign location is of first importance; therefore, select the site before designing the sign. The designer should have complete information about the site and should visit the site when the work is done. The two main considerations in the placement of any sign are:

1. Visibility
2. Safety

Important factors to remember in any sign location are:

- Design speed of adjacent roadways
- Traffic or other known hazards
- Suitable parking places for vehicles
- Visual distractions (fences, utilities, other signs, landscaping, etc.)
- Relationship of sign and its subject point of interest (point of interest should be obvious)
- Sign visibility including suitability of the view and environment and how it may be retained during construction and installation
- Life expectancy of current established use and projections for future use (added campgrounds, increased usage, expansion of trails, etc.)
- Placement of sign so as not to impair photographic value of setting
- Placement so that the sign does not hide the view or detract from the main point of interest – poor placement can destroy the value of the sign
- Adverse effect of wind, insects, cold, heat, dust, bright sunlight, reflection, and other distracting elements upon the readers

This list shows that the sign itself is only a part of the consideration involved in sign placement. Factors of safety, movement of persons and vehicle, addition or removal of plant materials, shaping of earthwork, design of traffic routes, and development of practical installation in a natural environment become more important with increased consideration of signing projects.

The placement of signs adjacent to roadways shall conform to federal and state regulations as outlined in the Manual for Uniform Traffic Control Devices (MUTCD). Signs shall be located on the right hand side of the road in relationship to direction of travel and placed to optimize night visibility. Signs may not block the view of the road ahead, intersections, or other signs. All other signs will be located in adherence to ADA requirements and any other respective rules, regulations, and codes.

III. SIGN PLAN AND INVENTORY

To prevent omissions or duplication and to ensure that signs are located properly, each park will develop and maintain a sign plan that will become an integral part of the park's / area's operation plan. The sign plan will include both internal (on-site) and external (off-site) signs. This sign plan will be used for inventory purposes, maintenance scheduling, and replacement of existing signs. Field personnel will develop the sign plans to include location and type of sign (which corresponds to the description in the Sign Manual). A separate "interpretive" sign plan/inventory will be developed for interpretive trails, outdoor kiosks, displays inside visitor centers, museums, and so on as a part of the area's Interpretive Plan.

Guidelines for the development of a general sign plan are as follows:

1. Obtain maps of the area using a scale, which will allow a detailed study and preclude crowding.
2. Drive, walk, and hike the area from both directions and locate each sign that applies to your area at the time or that is needed for communication. To reduce clutter and confusion, think of only the simplest and most straight forward signs that are absolutely necessary (the fewer, more concise signs, the better).
3. Give each sign a number, which will correspond to the sign inventory where a record of each sign will be kept. The sign number will also be designated on the map at the sign's location. The numbering system can be done any way that is convenient and efficient for the field personnel.
4. Existing signs can be evaluated according to its physical characteristics and maintenance needs. The following questions should also be addressed:
 - **Adequacy:** Are additional signs needed? Are existing signs effective? (If not, remove them.) Are some signs no longer needed? (If so, remove them.)
 - **Wording:** Is the message clear, concise, and easily understood? (If not, make the necessary changes.)
 - **Design:** Does the sign design conform to the Sign Manual Guidelines? (If not, is a new sign more desirable?)
5. After evaluating the sign inventory, decisions can be made about whether a sign needs to be eliminated, added, or repaired.

Staff will mark each sign's location on the park's map utilizing the sign's unique identification number. An example Map is provided in Appendix D. Staff will develop the initial sign inventory (see Appendix B for the Sign Inventory Worksheet) in conjunction with the map. The sign inventory will be updated each year so that new situations or maintenance problems can be taken care of. The sign inventory will include:

1. **Identification Number:** Each sign will be assigned a unique identification number.
2. **Location:** By road number or park name. GPS coordinates will be included where feasible and applicable.
3. **Description:** By a short description, such as "interpretative sign," not longer than 25 letters.
4. **Material:** Aluminum, wood, plywood, plastic, etc. as identified under the materials section V.G. Design Standards/Specifications, Materials.
5. **Size:** Dimensions of sign.
6. **Color:** Indicate primary background and lettering colors. (see Appendix I)
7. **Installation Date:** Date the sign was installed.
8. **Cost:** Include design labor, fabrication labor, materials, and shipping. (Important if vandals are to be prosecuted.)
9. **Last Maintenance Date:** The date that the sign was previously maintained.
10. **Cost of Maintenance:** Include both labor and material costs. If labor is by volunteers, include estimated value of the labor.
11. **Current Condition:** See section VI. – Sign Maintenance, for condition ratings and criteria for each described condition rating.
12. **Date Condition Determined:** The date of the inventory.
13. **Projected Next Maintenance Date:** The date that the next regular maintenance should occur.
14. **Digital Picture:** Digital pictures will be preserved and labeled respective to the identification number for reference in replacing or upgrading damaged or ineffective signs. The pictures will be retained in electronic form on the area's computer and backed up on an acceptable medium. The area will also print the pictures and keep in their respective files for reference.

15. **Comments:** Include pertinent information for reference. May want to include the sign's verbiage/message.

During the annual inventory, staff will identify needed signs and maintenance requirements. To facilitate this, staff will answer the following questions:

1. Are there missing signs?
2. Are the existing signs in good condition?
3. Are the signs in compliance with standards in these Guidelines?
4. Are the signs or posters no longer needed or no longer appropriate?
5. Are there obsolete signs that should be replaced with newer editions of the same sign?
6. Are all signs in their proper locations?
7. Is there a vandalism or theft problem that should be solved in coordination with local law enforcement agencies/officers/authorities?

Based on the inventory and evaluation described above, staff will identify an annual action plan for ordering and installing new or replacement signs and for maintaining existing signs on the inventory sheet. The action plan will clearly describe the intended action, time by which action is to be completed, individual or work unit responsible for accomplishment, and estimated cost. The Annual Sign Action Plan Worksheet is provided in Appendix C. The plan should be commensurate with available funding and workforce availability. If a vandalism or theft problem exists, discuss possible solutions with appropriate law enforcement entities. Include any antitheft or anti-vandalism activities in the action plan.

A detailed plan is required for only the following calendar year. The plan will be completed by November 1, allowing time for purchase, construction, and placement prior to the following season.

Planning for out years may be less detailed. Approximately twenty five percent of Divisions signs should be scheduled for maintenance each year.

Staff will document all inspections, installations, removals, and maintenance work as it is completed incorporating the information into the Sign Inventory in preparation for the following year's evaluation and inventory.

IV. SIGN CLASSIFICATION / TYPES / FUNCTIONS

A. Identification

These signs help to orient the visitor and identify important areas and facilities, and project the presence and image of NDSP. 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.

1. Entrance

Each park will have a primary entrance sign. The entrance sign will be located on the main access route inside the park. It is the initial introduction of the user to the park and should reflect the character of the park. The sign design should basically consist of a shape reflecting a distinctive park feature or landmark with the state park logo and the name of the park on it. The base construction should utilize natural materials, which reflect the indigenous character of the area. All custom entrance signs, after input from the Park Supervisor and/or Regional Manager, will be designed by the Planning and Development Section staff and approved by the Chief of Planning and Development.

Special and unique entrance signs should be considered. Although there is much to be said in developing consistent park wide / program wide signing, non-uniform entrance signs are an exception. The park may elect to follow the standard sign design as outlined in the NDSP sign manual.

Entrance signs are perhaps the most important of all informational signs when the visitor is searching for their first glimpse of the park. Advantage should be taken of this because it is often possible to find a combination of placement and construction that captures and reflects the true significance or spirit of the park.

It may be desirable to use a distinctive supporting structure or base that establishes and/or enhances the feeling that the visitor has crossed a threshold into an area providing a different experience. These bases, however distinctive, must be as hazard free as possible to the motoring public. Ideally, entrance signs are constructed to permit the replacement of the text portion of the sign without disturbance to the base structure.

The information on an entrance sign does not require Nevada Division of State Parks designation since this information is incorporated in the NDSP logo design. All entrance signs should have the NDSP logo incorporated into their design and should be prominently placed.

Entrance signs shall be restricted to contain the park area name, the NDSP logo, and any cooperating agency logo. Entrance signs may also include the words "Entering" or "Welcome to."

These signs will be placed only on heavily used areas such as state parks, or on large program areas in a location of primary use. Each major public use area shall have an entrance sign. Exceptions can be made for small acreage areas or isolated areas with high vandalism potential or the need for proper identification.

2. Minor Entrance Sign

These signs are to be used at minor entrances and exits to the park, which are not widely used. The Division's logo should be incorporated into these signs. They should be low profile using a written legend and the state park logo.

3. Boundary Markers

The park logo should be used where necessary to designate state park area property, but should not be overused. Where ownership is obvious, the signs should not be used. Boundary markers should be located along boundaries and should face toward adjacent property.

Supervisors will have the flexibility to utilize the most appropriate sign for each location. Most boundaries will utilize a metal boundary sign. Where no fences exist, Carsonite signs may be appropriate. As other signs, these are to be kept to a minimum. As a general rule, boundary signs next to a public right of way should be spaced at least ½ mile apart. Refuge boundaries and other special situations may dictate a closer spacing. Whenever an area use change occurs or trespass is probable, signs should clearly delineate boundaries.

4. Logos

The NDSP logo is the official identifying symbol of the Nevada Division of State Parks. This logo shall always appear in its proper form with no embellishment or variation, to ensure consistency and promote recognition. Its use conveys to visitors their presence in an area administered by the Nevada Division of State Parks.

The logo in the appropriate size (see Appendix K, Figure 1) shall be incorporated on all entrance signs, either on the sign itself or the base and support structure. The NDSP logo shall be located with appropriate consideration to layout and design of the overall sign. Materials selected for the NDSP logo shall complement the entrance sign.

The NDSP logo may be used in limited instances on other signs, e.g. at visitor centers, ranger stations and boundaries on major trails. The NDSP logo also may be used individually at carefully selected sites within parks / program areas or offices, e.g. visitor centers, park headquarters, ranger stations and other visitor contact facilities. If placed on an entrance station, the NDSP logo shall be well separated from traffic signs. The NDSP logo is not intended to be used routinely on road or trail signs, or buildings.

When an NDSP logo is mounted on an entrance sign or against a building, spacers can be used to separate the logo from its support. This produces a heavy shadow, emphasizing the logo. Spacer thickness should be in proportion to the logo size used

Black and white versions of the logo in various reduced sizes may be used in other instances where official NDSP identification is appropriate, e.g., publications, selected trailheads, etc. The intent is to use the logo sparingly and with consistency.

Many parks and program areas have devised a distinctive symbol or logo for quick identification of park facilities, program areas, interpretive trails, etc. The use of a park logo is permitted when it is integrated into a design-coordinated series of signs and/or exhibits.

5. Site Posts

This should be a low profile marker indicating the number and location of the site utilizing materials, colors, and format standard with the area's signs.

B. Kiosks / Bulletin Boards

1. Kiosks

Kiosks can have any number of sides. In addition to interpretive panels, kiosks can display park specific information, exhibit titles, and even interactive programs. They are suitable for use indoors and outdoors and come in aluminum, steel, wood or laminate. Since these will often be located near a road, space for a pull-off area should be designated to prevent traffic tie-ups. They are also often associated with park entrances, trailheads, or visitor centers. Standard designs for kiosks with 3, 6, and 8 sides have been incorporated into Appendix L. Included are both steel and wood versions, and some with roofs or without roofs. Selection of a kiosk style should be based on site-specific needs.

Every state park should ideally have a specialized orientation kiosk or "trptych" near its entrance. The triptych should contain three panels displaying a general introduction to the park, an orientation map, and park specific rules, regulations and fee requirements. The Type A triptych is shaped like a triangle with 3 sides facing outward. Type B has a center panel with wing panels at 30° angle on either side of the center panel (see Appendix L). A self-pay fee "iron ranger" may be incorporated into the kiosk or located nearby. Program areas will install a kiosk as applicable and appropriate to provide the required and relevant information. All grant funding sources will be acknowledged within the kiosks as well.

2. Bulletin Boards

Bulletin boards typically have just one or two useable sides, as opposed to the multiple sides found on kiosks. The more elaborate models include an overhanging roof or

shade structure, but this is not mandatory. Bulletin boards are essentially specialized signs that should be large enough to post rules, regulations, and other information pertinent to a particular site, and should also allow space for the posting of messages by park users. It is also important to provide the public with adequate direction to the nearest emergency medical facility. Avoid visual clutter and multiple small signs where one larger sign will suffice. If the bulletin board is located near a road; space for a pull-off area should be designated to prevent traffic tie-ups.

Bulletin boards will be installed in central, high use locations, such as visitor centers, restroom facilities, and trailheads. They will adhere to the design specifications provided in Appendix M.

C. Information

These signs direct users to the park use areas and/or inform them of rules and regulations. Only general use area should be designated to keep the signage simple and reduce confusion. The size and location will be determined by the importance of the message and the number of information items. User regulations, park maps, etc., can be shown. They are generally found at the entrance area of the park or near the visitor center. These signs may vary from park to park and should be incorporated into kiosks and bulletin boards when applicable. If an information sign is located near a road, space for a pull-off area should be designated to prevent traffic tie-ups.

Lettering size for these signs is based upon roadway categories as determined by the posted speed limit of the road (see Appendix F, Figure 1). The factors to be considered are: the prevailing vehicle speeds; the roadway physical features; accident experience; and traffic characteristics and control. The Park Supervisor in consultation with a professional traffic engineer where appropriate, should review the design speed of all roads and the enforceability of the posted speed limits to ensure that visitor safety criteria are met.

They shall be constructed whenever a great deal of information is required, and to reduce the need for directional signs. Brochures will be available at information centers to reduce the need for long worded signs. These centers will be used to post park regulations, special events, activities and other special information. These signs must include recognition of all agencies involved.

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. The sign should be written from the user's point of view and contain soft, positive messages.

1. Interpretive / Wayside

A general definition of an interpretive sign or wayside exhibit is a device or facility located at a significant place in the park to provide interpretation of the site or scene. These devices form an integral part of the park's coordinated interpretive program. Interpretive signs take many forms. Some are simple textual messages intended to be read from autos on the roadside. Others include plaques, markers, exhibits, panels, and demonstration displays in diverse designs appropriate to specific interpretive needs. This latter group goes beyond the scope of this manual and will follow the *NDSP Design Standards for Interpretive Panels Handbook* (See Appendix P).

Upon installation in the area, interpretive signs and wayside exhibits should become part of a sign survey and inventory. Except for routine maintenance, however, the rehabilitation and replacement of interpretive signs and roadside exhibits not manufactured in accordance with this manual remain the responsibility of the Park Supervisor.

Interpretive signs are to enlighten or enhance the enjoyment of the public user. These signs will also vary from area to area, and shall be individually designed for the best visual presentation of the information. These signs should be designed to utilize natural materials and can have a variety of reading surfaces. Interpretive signs can be used for nature trails, designated unique areas, or for information purposes in the visitor center.

This section discusses interpretation in general and provides "how to" information about interpretive signs. It is not intended to be a comprehensive discussion of a very complex communication process. Rather, it provides some very basic guidance to staff faced with an interpretation project or task.

2. Dedication / Memorial

Signs of these types will be needed on area-by-area basis as special situations arise. Special signs need approval from a regional manager prior to use. The Park Supervisor will determine creation and placement of these signs. Discretion should be used at all times.

3. Instructional

These signs are necessary when visitors need instructions to use the area. They should provide instructions for the use or operation of specific facilities such as trailer dump stations, boat ramps, and fish cleaning stations. These signs will vary from instructions for self-pay stations to instructions on fitness trails. They will generally be "long message" types, which mean conciseness will be important; however, it needs to be simplified making it easy for the reader and increasing the readership. 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 unit number posts).

D. Accessibility

These signs identify particular areas or facilities/programs that are universally accessible. The signs could designate certain sites for persons with disabilities or notify individuals or groups that certain programs and facilities are accessible to person with disabilities (e.g., restrooms, trails, campgrounds). 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 are as follows:

- an accessible parking space
- an accessible restroom
- an accessible loading zone
- 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 the area meets the UFAS or the ADAAG so be careful where you use the ISA! Post the appropriate International Symbols where various modes of adaptive equipment are available such as a Teletypewriter/Text Telephone (TTY), sign language interpreters, assistive listening systems, etc.

Where pedestrian trails have been evaluated for accessibility, standards developed by Beneficial Designs, Inc. will be utilized at all trailheads, to include but limited to, the following in addition to the standard message with the trail name, destination, length, etc. (See Appendix N):

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

E. Directional

These signs show the location of specific Park features or facilities. International symbols should be used, when possible, to provide the necessary information in a simple, concise manner. The international symbol for accessibility should be used,

whenever possible, to direct visitors to accessible facilities and programs. Directional signs should be located to provide the visitor adequate time to make a decision.

1. External (off-site): These are signs located outside Division boundaries / jurisdiction. Advance notice signs outside of a park must be coordinated with NDOT or other local jurisdictional entity.

2. Internal (on-site): These are the signs located within Division boundaries / jurisdiction. Signs will be constructed primarily from painted aluminum. Newer materials such as Carsonite©, plastic, or other approved natural materials may be used when more appropriate. Whenever possible, verbiage will be minimized.

F. Regulatory / Warning / Security

These signs should be used when necessary for the protection of visitors and the environment. These types of signs are also needed to address the security needs of park facilities including those managed by other entities. Signs should be concise and straightforward and should use international symbols wherever possible to facilitate understanding at a glance and to aid in maintaining design continuity throughout the project. They should be plainly displayed and legible from any approach to a facility or feature, whether the visitor is on foot, in a wheelchair, or in a vehicle. When appropriate, signs should not only be erected to control existing authorized uses but also to deter unauthorized entry and use, and to preclude accidental entry. The size and coloring of such signs lettering, and the interval of posting must be appropriate for each situation.

1. NDSP Rules and Regulations

This is the most diverse type of signage an area will have. These signs range from the long list of area regulations to signs prohibiting specific activities. The signs are divided into two categories – “Short Message” and “Long Message”.

“Short Message” – Flexibility will remain with the Park Supervisor to utilize Carsonite©, plastic, wooden, or metal signs based on the specific situation. Whenever possible, international symbols will be used. (i.e., day use picnic area, dump station instructions).

“Long Message” – These signs should only be placed at area kiosk, information centers, or in locations important to their use (i.e., day use picnic, dump station instructions).

2. Traffic

Vehicular Signs: Vehicular signs will be of the standard metal highway type or acceptable, approved alternative material in conformance with all NDOT (Manual of Uniform Traffic Control Devices – MUTCD) standards to facilitate safety. Vehicular signs will be placed at entrances and exits to parks and features, and along the travel routes within a park, to regulate motor vehicle traffic. Signs designating a prohibited

area, and the conditions of entry to a facility or area, should be plainly posted at all principal entrances and should be legible at a distance not less than 50 feet from the point of entry.

Pedestrian Signs: Pedestrian signs are generally those located along trails, walks, in or near buildings, campgrounds or other similarly developed areas. These signs are used to inform the visitor of such items as park regulations, provide direction services, and narrative and pictorial descriptions of park resources. Pedestrian guide signs used to direct the visitor to accommodations or special use facilities are to be placed in such a manner that the visitor will not become confused or lost between facilities. Pedestrian signs should always be kept to the minimum size feasible and used in locations where they will not detract from the visual scene. Symbols should be used to the greatest extent possible and should be grouped to identify facilities and/or activities within developments.

3. Warnings / Hazards / Security

Warnings: Warning signs should be installed along the area's physical barriers, such as fences, and at each entry point, so they can be readily seen and understood by anyone approaching the perimeter. Signs should be posted on or outside the physical perimeter barriers and must be at intervals of no more than 100 feet.

Hazards: Whenever there is a hazard that might reasonably be expected to result in injury to Division personnel or the visiting public, signs warning of the hazard may be installed. The need for and the placement of this type of sign shall be carefully considered to ensure that persons who might be exposed to the hazard will be adequately warned in accordance with the American National Standards Institute color code (ANSI Z-535), as follows:

- Fire and Danger signs – red on white
- Hazard signs – black on orange
- Caution signs – black on yellow
- Safety and First Aid Equipment – green on white
- Radiation Hazard signs – black on yellow

(Remember, signs are warnings; hazards are the features we are warning visitors about.)

Security: Signs should be erected according to the degree of security desired. The message should be effectively conveyed to the visitor. The signs should not only set forth the designation of the prohibited area, but challenge visitors by warning intruders that an area is restricted and that trespassing is prohibited.

4. Government Regulated

a. Material Safety Data Sheet (MSDS): MSDS is written or printed material, concerning hazardous chemicals or materials.

- The park shall have a material safety data sheet in the workplace for each hazardous chemical or material, which they use or have on hand.
- The park may use signs, placards, process sheets, batch tickets, or other such written materials in lieu of affixing labels to individual stationary process containers as long as the alternative method identifies the containers to which it is applicable and conveys the information required by this subsection to be on the label. The written materials shall be readily accessible to the employees in their work area throughout each work shift.

b. Human Resource Required Postings: The park will post the following required Human Resource postings within all work places. They must be displayed in an area where employees congregate so they can see them such as in a break room. The postings are available through the Division's Personnel Analyst.

- Your Rights under Uniformed Services Employment and Reemployment Rights Act (USERRA)
- Nevada Minimum Wage Law
- Equal Employment Opportunity is the Law
- Right to a Safe and Healthful Workplace
- Employee Polygraph Protection Act
- Employee Rights under the Family Medical Leave Act (FMLA)
- Unemployment Insurance Benefits
- Employee Rights under the Fair Labor Standards Act (FLSA)
- Nevada Law Prohibits Discrimination in Employment
- We Verify Employment Eligibility
- If you have the Right to Work
- Military Family Leave

c. Partnership Requirements: Each area will post signs required by partners as required by their rules, regulations, and policies.

G. Miscellaneous

1. Temporary Signs

These signs are used when signing will only be needed for 30-60 days. They should be of poster board or printed paper laminated and adequately protected from the weather so that they will remain legible as long as they are needed. These are often used for short-term activities or special regulations in the park. Division personnel will construct them and remove them within two days after the activity or event.

2. Land Based Recreation Signs/ Trail Blazes/ Markers

All trailhead and trail junctions should be adequately marked and identified with an informational sign that specifies the trail name, distances to trail destinations or length of a loop trail, including accessibility info. Where other trails intersect, the direction of an intersecting trail should be indicated. Indicators of allowable and/or prohibited trail use may also be incorporated on a marker at trailheads and trail intersections, especially where the allowed uses differ on the intersecting trails. Use standard international symbols.

Trail blazes are used at key locations to delineate the trail and to provide intermittent reassurance to the users. NDSP has adopted a bold white arrow on brown background as its standard trail blaze, conforming with the standard international symbols format. These can be mounted on Carsonite© posts or other metal or wood posts, fences, rocks or rock cairns or even trees (although the latter is not encouraged).

However, there is an exception for the division adopted standard blaze in situations involving long distance trails that have their own unique blazes. For example, the Tahoe Rim Trail, which traverses Lake Tahoe Nevada State Park, utilizes a “pregnant triangle” design that is common for many well known long-distance trails. Other examples include, but are not limited to, the cross-country American Discovery Trail and the Silver State Trail in eastern Nevada.

Placement and erection of trail signs or blazes should be considered during the planning phase of development. They should be located:

- a. In a location easily viewed from the trail and close enough to each other to provide reassurance to the user that they are on the correct route.
- b. Far enough off a trail so that they will not be damaged by users, or create a hazard.
- c. Away from obvious hazards.
- d. So that they do not compete with the view of the surrounding landscape.

3. Concessionaire

At various times the Division participates in cooperative efforts with private entities. Signage for these facilities, which includes signs designating the name of the concession businesses, will meet park design standards. As is practical, outdoor signs within a concessionaire's area will follow the same design format as signs throughout the park. These types of signs should not display any Division logos. All concessionaire signs must be reviewed and approved by the responsible Park Supervisor.

The Chief of Planning and Development has the flexibility to grant deviations from established guidelines when local conditions, such as topography and vegetation, dictate otherwise. Neon or flashing signs are not recommended outdoors. However, backlighting or indirect lighting is permissible. Signs that exceed the height of concession buildings should not be permitted under normal circumstances.

Permanent outdoor signs that advertise products by brand name or by use of logos or symbols in the colors or designs used by manufacturers are prohibited. The sign coordinator may allow temporary use of company banners and signage when such a company is sponsoring a special public event that has received prior approval.

4. Advertising

Accept as previously covered under Concessionaire, all advertising must adhere to NDSP Rules Governing the Administration of Park and Recreation Areas and Facilities.

a. Printed Material: Public notices, public announcements, advertisements, or other printed matter shall only be posted or distributed in a special area approved by the Park Supervisor or designee.

b. Political Advertising: Political advertising is strictly prohibited within any lands administered by the Division.

5. Waterways / Buoys

Signs prescribed by the United States Coast Guard and approved by the State are the standard waterway markers on large bodies of water requiring control of water traffic, water skiing, skin diving, and other similar uses. The U.S. Coast Guard promotes safe navigation on waterways. <http://www.uscgboating.org/>

Determining signage needs is the responsibility of each park. Signage needs for park features, land areas, recreation facilities, etc., should be evaluated by the park having jurisdiction. Parks must coordinate with Nevada Department of Wildlife for waterways and buoy markers.

6. Off-Highway Vehicles (OHV)

These signs inform visitors of the status of Division lands with respect to their use by visitors using OHVs. However, park lands are closed to OHV's unless the lands have been officially designated as open. If parks are open to OHVs, signs should provide the visitor an appropriate level of information as they enter, use, and leave park lands. All park OHV signs should provide positive explanations for specific use restrictions and, where appropriate, include "Tread Lightly" and "Leave No Trace" concepts in the signing program.

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. Where feasible, signing should be coordinated, uniform, and consistent throughout land management agencies. In addition, specific strategies for the use of OHV signs should be consistent with State and Federal regulations when there is a possibility that both OHVs and standard highway vehicles may use certain roads or trails.

Snowmobile users may be exposed to various hazard conditions. These hazards, coupled with the speed of snowmobiles, require effective route marking. The park sign plan should identify snowmobile trails as needing effective signing that emphasizes user safety and provides adequate warnings of hazards. Snowmobile signs should conform to the *Guidelines for Snowmobile Trail Signing and Placement* produced by the International Association of Snowmobile Administrators.

Proper coordination with the respective land managers is essential to adhere to their sign plans, manuals, and guidelines. The Bureau of Land Management's Sign Guidebook is on-line at http://www.blm.gov/wy/st/en/Sign_Center.2.htm. The United States Forest Service utilizes the internal publication Sign and Poster Guidelines for the Forest Service, EM 7100-15.

7. Boating

All signs must conform to the Uniform Waterways Marker System (<http://www.uscgboating.org/>) and/or the Standard International Symbols unless otherwise specified by State or county authorities that may have jurisdiction and/or responsibility. . Parks must coordination with Nevada Department of Wildlife for waterways and buoy markers.

8. Grant Fund Acknowledgement

When the Division receives funding from outside sources, these sources need to be identified as required. The Federal Land and Water Conservation Fund, Boating Access and Recreation Trails programs can usually provide any needed signage for new projects and, as needed, replacement signs and decals for installation as required. The installation will need to be accomplished by the sponsor of the project. Permanent

signage will also be provided to the sponsor for installation. Installation and maintenance of signage will adhere to the following guidelines.

a. Temporary Signing

Temporary signs are normally required for development projects involving the federal funding sources listed above, except Recreation Trails. The appropriate temporary signing will be located on or near the affected site. An example of the temporary signage is provided in Appendix G. Projects will be signed at the time construction action is initiated and will remain in place until completion of the development. The Division's Park and Recreation Program Manager or Recreation Trails Manager can usually arrange to provide these signs.

b. Permanent Signing

State administered grant funds including the Land and Water Conservation Fund (LWCF) or Federal Boating Access program, are required to be acknowledged by permanent acknowledgement signs. The Division's Park and Recreation Program Manager or Recreation Trails Manager can arrange to provide these signs (see Appendix G).

V. DESIGN STANDARDS / SPECIFICATIONS

Design should be completed before the procurement process begins unless design preparation is to be completed under a scope of work as part of the procurement process. After selecting the general sign message, use the following guidance to determine the size and layout of all signs. Some flexibility exists for regional diversity when designing signs that are compatible with the surrounding landscape and park themes. Use of native materials is encouraged when specifying particular design types.

When deviating from the Sign Manual, coordination with Planning and Development and the Regional Manager is required. Though the materials specified are adequate for sign construction, there may be other materials and technologies that are superior and could be used. As funding permits, superior materials are recommended.

Purpose: This section provides a general overview of basic principles, standards, and guidelines that govern design and installation of signs. It also includes information on estimating sign sizes.

Principles: This section contains standards and specifications for sign materials, colors, and designs to include lettering, sizing, message formulation, and posting. parks and programs developing or using signs should follow these standards to portray a neat, organized appearance; to provide uniformity; to project a professional agency image; and to comply with laws and requirements of memoranda of understanding with Federal, State, and local agencies. Supervisors should consider use of symbols and/or

non-English word messages to supplement English word messages on signs in areas that are frequented by non-English speaking visitors.

Sign Objectives: Design, locate, and maintain signs to:

- Fulfill an important need.
- Command attention.
- Convey a clear, positive, friendly, simple message.
- Generate respect.
- Give adequate time for viewer response.
- Identify State Parks / Program Areas.

Sign Design: Design of signs should ensure that:

- Such features as size, contrast, color, shape, composition, and lighting or reflectorization are combined to draw attention to the sign, but not detract from the area or environment and as an enchantment to the area.
- Shape, size, colors, and simplicity of the message combine to produce a clear meaning.
- Legibility and size combine with placement to permit adequate time for viewing and response.

A. Message Formulation

In formulating the message, use standard (approved) word messages, where applicable. Word legends should be brief, but clearly convey the intended message. The use of symbols on signs is encouraged, provided they clearly convey the intended message. 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:

- Use no more than four words per line, except where the proper name of a destination is more than four words long.
- Use a minimum number of word lines.

- Use no more than three lines per message, except where a proper name of a certain size requires more than three lines.
- Keep message short by using certain commonly recognized abbreviations (e.g., “Mt.” for “Mount,” “Pt.” for “Point,” “St.” for “Street”). (Do not abbreviate historic proper names)

Pedestrians and those on bicycles and horseback have time to pause and leisurely read sign messages unhurriedly; therefore, these rules do not apply to trail signs. However, the wording of trail signs should still be concise. Descriptive text should be relevant and contain only information of general interest.

1. Planning: A sign is a communication tool. It is one of several in a Division employees’ grab bag. Others are brochures, news releases, websites, direct discussions with a customer or client, radio ads, talks before interest groups, and flyers. These tools should only be used following a communication planning process that identifies both the messages and the intended audience.

Audience and Message: Decide on the audience and the information the audience needs at that particular location.

- A visitor to a recreation site might wish to know:
 - Length of stay allowed
 - Fees, if any
 - Types of services offered
 - If reservations are needed
 - If pets are allowed
 - Location of trailer dump station
 - Open trails for hiking, horseback riding, or OHVs
 - Restriction on trailer lengths or weight on access roads
 - How to get to the site

An agency may wish to inform visitors about:

- Hazards
- Poisonous plants, animals, etc.

- Emergency phone numbers
- Fee amounts
- Restrictions on firearms
- Restrictions on fires
- Restrictions on pets
- Length of stay limitations
- Protection of the environment
- Historical or interpretive messages
- Traffic regulations
- Resource appreciation/stewardship (“Leave No Trace” / “Tread Lightly”)

Alternatives: A sign is not always the best way to influence visitor behavior. For example, a sign at a campground entrance prohibiting pets is of little use to visitors who have traveled a long distance with their pet to that destination, if that information was not correctly available to them in some form before leaving home. Rather, it would be counterproductive to an agency’s intention to provide high-quality service to its clients.

A brochure or map can often convey information more effectively. The information may be very general, or very broad, in geographical coverage and may help the visitor when making long-range plans to use a park.

Kiosks and bulletin boards may be used to display information sheets. Information sheets are easily developed, inexpensive, 8.5- by 11-inch sheets of paper that contain important information about an area. This may be a small site-specific map, a hiking trail map, a list of safety concerns, or a description of environmental cautions.

Brochures and recreation guides that include pictures as well as words are other effective communication tools that can be provided to Division users well in advance of departure for their park destination.

News releases can reach a large urban audience with a desired message. However, the newspaper editor or radio/TV news director must decide if it is newsworthy. Also, if used, the news release may be edited to such a degree that it no longer serves the agency’s intended purpose.

Physical controls such as barriers and fences, used to warn visitors to stay on roads, may preclude the need for signs within a given area. Signs that are part of an enforcement effort usually must be backed up by some administrative action. Thus, a

sign giving notice of a restriction or closure does not, in itself, legally create an enforceable closure. The public must be given notice of such closures or restrictions through appropriate, established channels (e.g., posting in a region office). However, most closures or restrictions are not in effect until the area affected is signed or posted.

The Division's website <http://parks.nv.gov> can provide updated information and available phone numbers and e-mail addresses to obtain additional information. Physical contact by Division employees, volunteers, rangers, and maintenance personnel can be one of the most effective tools for user information and control and may be more helpful than any of the alternatives.

Information Zones: This term refers to an area's initial point of use, where visitors need certain information before proceeding further. There are three zones:

Exterior Zone: This zone may vary from 1 mile to 100 miles from the park. Information disseminated here should allow visitors to prepare for their trip to the interior zone. It is in this zone, for example, that information about pet prohibition at a particular destination should be readily available unless specifically needed.

Entrance Zone: This is the entryway to the destination. Information in this zone should contain most of the warning, controls, hazard identifications, specific use area maps, and fee information.

Interior Zone: This is the actual destination or point of use. Information within the destination should be minimal and positive. It may include direction signs, restroom signs, campground signs, and other boundary signs. It should not include warning or behavior restriction signs.

b. Message Development: There are psychological behavior patterns that an agency must consider in developing messages for the public. Those who use the lands as part of their livelihood are driven by important economic considerations. However, most visitors use Division managed and administered lands during limited, valuable, nonworking time. Since the visitor is in control of the use of time and space (and expects few or no restrictions over behavior); any restrictions should be reasonable and conveyed in a polite manner.

Within this framework, the user is not open to, or tolerant of, long delays or extensive control. Passive controls placed on visitor behavior must be positive, give assistance, and be supportive; otherwise, users are not receptive to them. Loss of passive control, or a rebellion against it, will likely require mandatory enforcement. That brings into play conflict and confrontation.

In determining message content on signs and other communication tools intended to control or direct visitor behavior, Division staff should answer the following questions:

What is the purpose of the sign or poster? What problem is it trying to solve?

- Who is the intended audience? What do they know about this particular situation?
- What do we want that audience to do, feel, think, or know after seeing the sign?
- What traits of the audience should be considered in developing the sign?
- What language do they speak?
- Are there cultural considerations?
- Are there communication disabilities to be considered?
- What is the message to be given to the target audience?

In developing messages on signs and other communications tools, Division staff should strive to achieve the following:

- Be positive in approach, uniform in application, and minimal in the quantities of signs produced.
- Review the message from the visitor's viewpoint: Does it answer the questions? Does the message provide a solution to the visitor's problem or dilemma? Is there sufficient interest for all the information? Is all the information necessary?
- Keep messages on signs to a single subject. Use two signs to avoid mixing unrelated messages.
- Keep the message simple, clear, and straightforward.
- Threatening or shocking messages do not necessarily encourage compliance. Use them only in extreme situations, such as where life-threatening hazards exist.

B. Lettering

Lettering varies greatly depending upon the type and size of a sign. Flexibility in fonts varies based upon whether the sign is computer or hand generated. This section is applicable to all signs within these constraints but focuses on an area's primary signs, which are standard in nature with respect to font and color and tend to be made of wood.

Fonts and other lettering characteristics such as letter type and letter angle should remain uniform throughout the sign. Letter spacing is also a critical component of a professional looking sign.

Emphasis, readability, and attractiveness can be achieved by the use of correct letter placement, style, and arrangement. Space between words, sign margin, figures, and arrows should be adequate so they do not tend to run together visually. Sufficient space will be left between messages for ease of reading, when trail names and/or numbers are used, and where destinations are in different directions. Signs to be read from a moving automobile require lettering of strong legibility, discernable at a distance sufficient to permit the sign to be read before passing.

Obtain message emphasis, readability, and attractiveness through the proper use of lettering. Avoid using larger headline letters where adequate design can be obtained without them. Often a headline message that is 1/2" to 1" larger will increase the signboard length to a point where a double post mount is needed. The lettering shall be simple form, of adequate size, and executed to withstand weathering. The number of different sizes of letters shall be kept to a minimum on each sign in order to increase readability of the sign. No more than two different size letters on a single sign. Signs to be read from moving automobiles require lettering of strong legibility, discernable at a distance sufficient to permit the sign to be read before passing. Lettering on signs to be read by standing persons at close range should be large enough to be legible from the spot where the reader normally would stand. Appendix F, Figure 1 provides the guidelines for letter sizing and spacing based upon mode of travel and speed.

1. Letter Style

Letter sizes and types will help emphasize and rank items of information on a sign. Letter style to be used for the majority of the signs is Arial. For small copy and signs with a great deal of wording (i.e., regulation signs) Arial will be used. If these fonts are not available, a similar font can be used.

The only exceptions are standard roadway signs that will conform to NDOT standards and interpretive signs that will be established during the planning phase of development. If signs are provided in conjunction with other agencies, their choice of letter styles should be taken in consideration.

Capital letters are used for main titles and the first letter of place names. Lower case letters are used for the remaining signing except for small copy. It has been found that maximum legibility can be achieved when a combination of upper and lower case letters 2/3 their height are used. Avoid the use of large headline letters that increase sign size and hinder readability. Numbers will be used for mileage and camp spot numbers.

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:

Roads – Letter size on roadways is based upon speed to ensure travelers have the opportunity and ability to read and assess the sign before passing it. (Refer to Appendix F, Figure 1)

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 their location, as well as the volume and type of visitors using the area, rather than by speed. (Refer to Appendix F, Figure 1)

- Short messages to be read from some distance: Lowercase height and thickness of arrow shaft, 2 ½ inches. If the sign is positioned over a pedestrian path, the height of the letters should be 3 inches minimum.
- Direction, distance, instructions, listings in moderate visitor-use areas where pedestrian traffic is channeled by walks, etc.: Letter size ¾ inch to 1 inch.
- Plaques, markers, and object identification: Capital height, 1 ½ inches; lowercase height and thickness of arrow shaft, 1 inch; and recreation symbol; 8 inches.
- 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.

2. Spacing Guide

Line spacing should be 75 percent of uppercase letter size. The logo should be proportional to the message. (Refer to Appendix F, Figure 1)
Minimum Vertical Spacing (Refer to Appendix F, Figure 1)

- 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.
- 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.
- 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.
- 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 logo can be any size that will fit in the open space.

- 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.
- Between the bottom edge of the lowest symbol or message, allow space equal to 1½ 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.
- 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.
- In a two-line message, the arrow should be vertically centered between the two.

3. Rules for Capitalization

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

4. 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 unless the sign is positioned directly above the referenced item.

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 of 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 Appendix F, Figure 3.

C. Agency Logos

On signs that are required to carry the Division logo, the logo size will adhere to the standard shown in Appendix F, Figure 1. The preferred location of the logo is on the left side of the text. The Division logo is provided in Appendix K and included electronically.

Partner logo(s) are permitted, as appropriate. The logo may not be larger than the Division logo. In the case of a single partner, the preferred location for their logo is on the right side of the text. 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.

D. International Symbols

The International Symbol System should be used to supplement and reduce the verbiage on signs. Symbols and text messages should be used together for all traffic signs designed to direct pedestrians. Refer to Appendix F, Figure 1 for the respective size based upon mode of travel and speed. The most relevant and applicable international symbols are provided in Appendix K.

E. Shapes

1. Standard, General Purpose Park / Program Signs: Standard, general purpose signs should be either square or rectangular. Elongated rectangular signs, usually decals on posts, are acceptable. However, reading elongated text is difficult. Messages must be clear and concise.

2. Traffic Control Sign Shapes: The Federal Highway Administration and each State Division of Highways have standardized certain shapes for specific purposes. These shapes should not be used for other purposes along highways where they would cause confusion. See Appendix H for a summary of the standardized shapes and Appendix I for the standardized colors.

The DIAMOND is used for most warning signs.

The RECTANGLE, with the longer dimension vertical, is used for most regulatory signs and some warning signs. The PENTAGON, with point up, is used only for School and School Crossing signs.

The PENNANT, with the longer dimension horizontal, is used only for No Passing Zone warning signs.

The OCTAGON is used only for STOP signs.

The EQUILATERAL TRIANGLE, with the point down, is used only for YIELD signs.

The ROUND shape is used for Railroad Advance warning signs and for Civil Defense Evacuation Route signs.

F. Sizes

The actual size of the sign takes all of the aforementioned characteristics into consideration: shape, lettering size, lettering spacing, arrows, agency marks or logos, and international symbols. The actual size requirements for each of these are based upon the type of sign and speed of the “traffic” that will be referencing the sign. If the sign is too large due to site restrictions, then staff will need to try and reduce the verbiage or create two signs if applicable. Utilize Appendix F, Figure 1 to determine all size aspects associated with sign development.

G. Materials

Signs and posters can be manufactured from a variety of materials, including metal, plastic, fiberglass, and cardboard (temporary signs only). Wood is not recommended. These materials are called “substrates.” The “message” is either routed, painted, or printed onto the substrate. Other materials commonly used in the manufacturing process include, reflective sheeting, paint, stain, and vinyl edge film.

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

Some commonly used substrates for Division signs are:

1. Wood – Routed cedar or redwood signs have been a Division standard for a long time. These types of signs are relatively inexpensive and can be manufactured “in-house”. However, such signs are typically short lived, especially under severe climate situations. Accordingly, it is recommended that wood signs be replaced, as needed, with more durable substrates.

2. High Density Polyethylene (HDPE) – Multi-colored layered materials that can be routed and machined into various shapes and come in various thicknesses. This material is more expensive but is durable and doesn’t require painting.

3. High-Density Overlay (HDO) Plywood – Marine-quality, 3/4-inch plywood with one side covered with a high density, slick material (the overlay), to which adhesives cling quite strongly. Commonly used as the substrate for pressed-on materials such as reflective vinyl. This substrate can be used for the larger signs. It weathers well, and holes in the vinyl can be easily repaired.

4. Medium-Density Overlay (MDO) Plywood – Marine-quality, 3/4-inch plywood, with one side covered with a smooth but more porous overlay than HDO. This substrate accepts paint much better than HDO. The porosity of the overlay allows the paint to bond with the substrate better.

5. Medium-Density Fiberboard (MDF) – A pressed-particle board product that accepts paint (silk screening) very well and but does not weather well so should only be used for internal purposes. Plywood for temporary signs should be replaced after sixty days with a permanent sign.

6. Plastics – Sign making can involve a variety of plastics:

- Acrylic, or Plexiglas, is a hard, rigid material that withstands the elements well but breaks easily. It is often used as a clear protective covering over another sign.
- Polycarbonite, or Lexan, is similar to the acrylic panel but is softer, with a greater flex. Its softness makes it more likely to be marred by dust and blowing sand.
- Polyethylene and polypropylene 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 accept 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.

7. Carsonite© – Carsonite© is a patented material that combines fiberglass and epoxy resins to make a strong but flexible substrate. Used most often in a thin, vertical format, it is also used for small routine signs. It's hard, impervious surface is best used as a substrate for decals, although silk screening is possible. It is very resistant to impact and weather. Initial and replacement costs are low. Several manufactures make a similar product.

8. Aluminum – A long used, common substrate for routine, smaller signs. Message usually silk-screened onto substrate. Easily and significantly damaged by bullets and/or other forms of vandalism. It has good weather resistance. Medium initial and replacement costs.

9. Cardboard – *(Temporary Signage Only!)* A paper product that degrades quickly in inclement weather. Accepts paint (silk screening) well, depending on the slickness of the surface. Easily nailed or stapled. Used primarily for seasonal posters in protective kiosks.

10. Paper – This includes computer generated or professionally printed signs that typically are temporary in nature and that are installed for a short time for a specific reason or are updated and replaced on a regular basis. These signs need to be laminated to enhance their appearance and increase their longevity in the elements.

11. Fiberglass Embedment – In this process, a paper image is embedded in a fiberglass/epoxy-resin panel. The fiberglass resists impact and weathers very well.

12. Phenolic Resin Embedment – Digitally printed graphics are fused into a solid phenolic or laminate material and is used for signage, murals, and many more applications in both exterior and interior environments. The product is made to be UV tolerant, graffiti resistant, and weather resilient.

13. Metal – Engraved or acid etched metals, aluminum, and stainless steel are often used for signs. Such signs have a long service life, are generally good or very good in their resistance to weather, and fair or poor in their resistance to scratching or impact. Initial cost is generally medium to high, as is the replacement cost.

14. High-Density Foam Boards – Three-dimensional signs made by cutting a matte and sandblasting to the desired depth. Sand blasting and mattes can also be used to make three-dimensional wood signs from 2-inch-thick material.

15. Porcelain Enamel – High quality porcelain enamel covered steel is used primarily for interpretive signage in relatively low vandal areas and exposed to extremely hot climates.

16. Manufactured Signs: Specifications for pre-manufactured signs should be followed per manufacturer's instructions, regardless of the procurement source. These signs must meet or exceed NDSP signage requirements and have a fit and finish like that of surrounding park signage. (letter sizing, color, material etc.)

H. Colors

The purpose of this section is to ensure standardization of sign colors throughout NDSP parks and program managed and operated areas and facilities. The standard colors will be used on signs within the park unless the type of sign, such as unique or specialty signs, dictate otherwise. Appendix I provides the standardized colors for non "park" signs. Prior to using non-conforming colors, staff must obtain approval from the Regional Manager.

Sign Body: Semi-solid oil alkyd stain. Columbia #08-600-05 Mahogany mixed with Columbia # 08-700-XX clear semi-transparent oil alkyd U.V. protective stain, (50/50 mix). Staff can use another comparable brand as long as the color matches

Letter Coloring: Gloss "White" or Rustoleum Professional Gloss "White" # 7592 oil base paint. Staff can use another comparable brand as long as the color matches

High Density Polyethylene: Brown/White/Brown

1. 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).

2. Warning / Hazard / Security: The American National Standards Institute color code (ANSI Z-535) is as follows:

- Fire and Danger signs – red on white
- Hazard signs – black on orange
- Caution signs – black on yellow
- Safety and First Aid Equipment – green on white

3. Post: Should match sign color as applicable to the sign post material.

I. Support Posts

Posts are used to hold signs in a proper and permanent position and to resist swaying in the wind.

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 not be attached to natural features such as trees. It is also inappropriate to mount signs on telephone poles or fence posts. Fence posts may be used for posting boundary markers. Signs may be mounted on dams, buildings, or other structures. Signs should be attached to posts in a manner that does not interfere with the legibility of the message on the sign.

Posts will be primarily galvanized steel, powder coated steel or plastic. However, in certain instances such as bulletin boards or kiosks, wooden posts may be used. Wooden posts should be pressure or preservative treated (ccx or penta-treated) as warranted by local conditions. If posts are set in concrete, the footings should be flush with the ground level. Holes for attachment of signs may be bored, prior to erection, where posts can be pre-matched with standard signs; but the more common practice is to drill the holes when a sign is mounted.

The number and size of posts per sign should be proportional to the size of the sign and the length of the post. A single standard 2" X 2" square tubular steel post should be used for signs up to 36 inches in length. Two such posts are required for signs ranging in size from 37 inches to 72 inches. Two 3" X 3" tubular steel posts are required for

signs 73 inches to 96 inches. For signs larger than 96 inches, a Planning and Development professional architect or engineer should be consulted for designing the sign base and identifying the appropriate mounting details to ensure structural stability.

All wooden posts shall be square or rectangular (i.e. 4" x 6") and be beveled on top. Figure 4 in Appendix F will be used to determine dimensions of posts, position of post on sign board, depth of post to be buried in the ground, height above ground, etc.

With respect to wood sign sizes and post requirements, if the sign requires posts that are five to nine feet long, then a 4" X 4" post is required. If the sign requires posts that are longer than nine feet, then a 6" X 6" post is required.

J. "Posting" Information

- The posting of information includes materials/signs that are more site specific, for "informational" purposes, and tend to be short term in nature. With this in mind, the following guidelines are provided.
- Kiosks with a posting/bulletin board should be used.
- Locations can also include "gathering places" and shall be placed on bulletin boards; restrooms, entrances, visitor centers, etc.
- Long-term postings should be professional looking made of durable materials; metal from sign shop, Mylar, etc.
- Dry erase boards can be used but should be done neatly including regular cleaning to eliminate previous postings.
- Short-term postings need to be professional looking; hence, all materials will be computer generated and protected from the elements through lamination or inside a "glass" enclosure.
- They need to be minimized both in the number that are posted and the verbiage that is used.

VI. SIGN MAINTENANCE

A. Maintenance Schedule: Each park will develop a sign maintenance schedule annually. A backlog of signing needs will be noted, and an annual work plan will be prepared to detail the funding needs for achieving the goals of each park's sign program. The maintenance schedule should address, but not be limited to, the following points:

- **Damage:** Damaged signs shall be repaired or replaced, as required.

- **Visibility:** Signs that have become obscured by brush or grass shall have the problem vegetation cleared to restore them to a state of desired visibility.
- **Legibility and Appearance:** Signs that have become faded or illegible shall be repainted, re-stained and restored to their original condition. Signposts may have to be replaced due to breakage or rot. The adhesive lettering on metal signs may have to be replaced due to peeling.
- **Maintenance Objective:** Plan, schedule, and perform maintenance to keep signs, posters, and other traffic control devices clean, legible, functional, and properly positioned. Effective sign maintenance will facilitate safe use of Division lands and facilities and foster a favorable image of the agency's professionalism in the visitors' eyes.
- **Condition Survey:** Condition surveys should be performed on a periodic basis to determine condition and effectiveness of all traffic control devices, signs, and posters. Reflective devices should be inspected at night as well as during the day. Evaluation items should include legibility, reflectivity, overall condition of both the sign and its supports, placement, visibility, encroachment of vegetation, and continued need of the sign at that location.

Supervisors should promote a high level of awareness among field staff to recognize missing, improper, incorrectly placed, damaged, or deteriorated signs. They should be encouraged to report these findings to the Park Supervisor so that arrangements can be made to request necessary materials or funding for replacements.

- Field staff should use locally generated checklists to capture information during the inventory/review. The checklists should also be used as a reference in developing the annual action plan in accordance with the inventory.
- As a minimum, the checklist should document the sign location (facility or road number), date and time of inspection, inspection findings, recommended actions, name of inspector, maintenance accomplished, and name of person performing maintenance.
- **Condition Ratings:**
 1. **Excellent.** Sign is new or in a like-new condition. Needs no attention. All lettering and symbols are legible. No vegetation or other objects obscure the sign.
 2. **Good.** Sign has experienced some weathering, but its lettering and symbols are legible. The sign is intact, with no holes or broken portions. May need some cleaning to eliminate accumulated dirt and minor touchup painting. No vegetation or other objects obscure the sign.

3. **Fair.** Sign has been extensively impacted by weathering, required extensive cleaning and painting or staining 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. Sign may have some holes or other minor damage, which can be readily repaired.

4. **Poor.** Sign is so weathered that its message is no longer legible. It has been refurbished at least once. It has severe damage from holes or other vandalism. It can be repaired temporarily, but it should be replaced as soon as possible.

5. **Missing / Destroyed / Obsolete.** Either the sign is gone or is so damaged that repairs are impossible, or the sign message is outdated or incorrect. If one or more of these conditions exists, and a sign is still needed, a replacement sign should be ordered immediately.

- Reflectivity

A great many signs are reflective to ensure their visibility at night. To test visibility, create a small panel (about 8 inches by 10 inches) using sheeting which 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.

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.

B. Maintenance Performance: Perform maintenance on a regular and systematic basis to ensure signs and other traffic control devices are clean, undamaged, and functional. Check and replace edge tape on a routine basis. Use only those materials (paints, stains, edge tape, sheeting, hardware, etc.) that comply with the original specifications for the sign or traffic control device being refurbished. Evaluate the maintained product against the standard for materials and workmanship established for the original.

1. 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. If clearing is to be accomplished by application of

herbicides or other chemicals, appropriate policy and guidelines on applying chemical should be followed.

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

- Flushing sign surface with clean water to remove loose dirt.
- Scrubbing sign face with soft brush, rag, or sponge, using a mild, nonabrasive 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.
- Rinse entire sign face with clean water.

3. Special Cleaning Problems:

- Tar, oil, diesel, or bituminous material: Use a mild solvent such as mineral spirits. Then wash the surface with mild detergent and water and rinse with clean water.
- 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.
- 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.
- Paint: It may be possible to remove paint sprayed onto a reflective sheeting sign face using a commercial paint remover designed for that purpose. The type of paint, length of exposure, and type of remover may affect the life of the sheeting.
- Other Severe Contamination: Soiling that cannot be removed by previously mentioned methods can be removed by scrubbing with a very fine steel wool or plastic kitchen scour. However, unless great care is taken, 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.

4. 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.

- Aluminum Substrate Signs.

Bent Signs: Straighten sign, and if the reflective background or legend has been scraped or damaged, proceed as follows:

1. Remove all background sheeting and legend from an area slightly larger than that damaged.
2. Clean exposed surface with a mild detergent and rinse with clean water.
3. Apply matching pressure-sensitive reflective background sheeting, extending at least half-inch beyond the damaged area.
4. Replace damaged legend with die-cut, pressure-sensitive, pre-spaced letters, borders, and symbols and firmly squeegee in place.
5. If sign is subjected to snow burial, cover with plastic or remove sign for winter season if it is not needed.

Holes: Often, 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:

1. Remove all damaged background sheeting and legend.
 2. Straighten the sign using a hammer and flat dolly.
 3. Remove any additional sheeting damaged during straightening.
 4. Clean the entire area with mild detergent and rinse with clean water.
 5. Patch the hole or puncture on both sides using aluminum foil tape. Use squeegee to apply firm pressure. Do this 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.
 6. Apply reflective background sheeting, extending it at least half-inch beyond the foil strips.
 7. Replace damaged legend with die-cut, pressure-sensitive, pre-spaced letters, borders, and symbols and firmly squeegee in place.
 8. If sign is subjected to snow burial and replacement sheeting extends to the signs, place transparent film or tape along top edge.
- Plywood Substrate Signs. The following procedures are recommended to repair holes and other punctures and to restore a sign's legibility:

1. Remove all loose wood on both sides of the sign and all damaged sheeting.
2. Fill holes with wood filler or auto body filler and sand smooth.
3. Wipe areas with clean cloth.
4. On larger repairs, it may be desirable to cover holes with aluminum foil tape. Use squeegee to apply firm pressure. Start placing the foil at the bottom of the hole, overlapping each strip shingle fashion as you move up.
5. Apply reflective background sheeting, extending it at least ½ inch beyond the foil strips.
6. Replace damaged legend with die-cut, pressure-sensitive, pre-spaced letters, borders, and symbols and firmly squeegee in place.
7. If sign is subjected to snow burial and replacement sheeting extends to the top edge of the signs, place transparent film or tape along top edge.
8. 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.

- Routed Wood Signs

Repairing Sign Board

1. Scrape off loose paint with a wire brush or sand off down to wood. Dress all holes and damaged wood with the knife.
2. Fill all cracks, holes, and imperfections with wood or auto body filler.
3. Sand sign edges back and forth. Do not sand surface overlays on MDO substrate signs.
4. Remove all loose paint, dust, and other foreign materials.

Painting

1. Apply prime coat.

2. Apply two coats of paint to background area.
3. Apply two coats of paint to sign message. Work paint thoroughly into all corners of letters and numbers. Let paint dry thoroughly between coats.
4. Touch up letters if background paint contaminates the message.

Staining

1. Apply a minimum of two coats of stain to background areas.
 2. Hand paint message area, keeping paint off sign face.
- Supports and Hardware: Repair or replace, as necessary, damaged or deteriorated sign supports and associated mounting hardware.

VII. PROCUREMENT AND FUNDING

The Park Supervisor shall initiate all requests for new, replacement, or redesigned signs by completing the Sign Requisition Form, see Appendix E, and forwarding it to the Regional Manager for review, comment, and approval. The requested sign will adhere to the park's sign plan. Staff may directly obtain prefabricated signs and standardized signs, such as warning, traffic, snowmobile, and boating signs as approved in the sign plan.

The requisition should include a description of the sign and the catalog number, if applicable. If the sign is not a standard Division sign (i.e., park information sign, interpretive sign, entrance sign, etc.) the requisition should be accompanied by an accurate drawing of the desired sign. Descriptions will include dimensions, materials, and a complete listing of what should be on the sign. When requisitioning signs, the general layout of the sign should also be explained. The type of symbols, wording, and directional arrows should be adequately shown, so that the sign can be constructed.

If approved, the requisition will then be sent to the Park Supervisor or Regional Maintenance Supervisor for replacement signs kept in stock, or to an approved commercial sign shop. The finished sign(s) will be delivered to the Park Supervisor.

Parks and programs will have different levels of and opportunities for funding obligations associated with the planning, design, fabrication, installation, and maintenance of signs. Funding may be available under special circumstances from the Planning and Development section as a part of projects.

Region: Regional Manager's are responsible for scrutinizing individual park requests to provide funding for replacing and updating signs. When justifiable,

they will allocate a portion of their region buildings and grounds maintenance budgets for this purpose to ensure signs are adequately maintained and replaced. However, when emergency sign replacement needs occur, BA 4605/06 Fee Overage or BA 4604 Pine Creek Account funding requests can be made by Park Supervisors.

Park: All funding needs for conducting inventories and reviews and preparing maintenance schedules, as well as for the cost of installation and maintenance are the responsibility of each park. Each park must ensure adequate funding is allocated annually for the installation and maintenance of their respective area's signs. BA4605-Cat06 or BA4604 funding can be requested for non-routine/emergency sign replacements.

Jointly Managed Area: All funding needs for public recreation use areas managed by the Division in cooperation with another entity should be determined through negotiation and a subsequent management agreement. Joint occupancy may be with either a Federal or non-Federal entity.

VIII. Appendices

Appendix A

Interpretive / Wayside Signs

Design Specification

Interpretive / Wayside Signs – Design Specifications

Definitions and Concepts:

Interpretation is a communication process designed to reveal meanings and relationships of our cultural and natural heritage to the public through firsthand involvement with facilities, objects, artifacts, landscapes, and sites. Interpretation does much more than just provide facts. Interpretation tells a story and brings meaning and interest to a subject for the enjoyment of the visitor.

Interpretive signs communicate specific messages to visitors. These messages can be written to change behavior, educate, or evoke an emotion in the reader. They are used for self-guided trails and for wayside exhibits at points of interest, such as viewing areas and resource management areas. They can be constructed of many different materials and are mounted so they are visible to all viewers.

Interpretive signs provide communication services to visitors. Interpretive signs support management objectives, tell a story, and reveal meanings of and relationships among built, manipulated, natural, cultural, and other natural resource features. The program's main components are orientation, information, and interpretation. The program functions as a customer service tool, a management tool, and a public awareness tool.

To be “interpretive,” the communication process should be based on the principles articulated by Freeman Tilden. Interpretation should:

- Provoke the attention or curiosity of the audience.
- Relate the message to the everyday life of the audience.
- Reveal the essence of the subject through a unique viewpoint.
- Address the whole. Show the logical significance of an object to a higher-level concept or story line.
- Strive for message utility. Use a sufficient but varied repetition of cues to create and accentuate a particular mood, theme, aura, or atmosphere.

Interpretive Signs:

- Use a combination of well-written text and professional graphics to convey a message.
- Increase visitor enjoyment through appreciation and understanding of features, concepts, themes, and stories of the natural, cultural, created, managed, and historic environments.

- Explain management of public land resources.
- Guide or modify visitor behavior to reduce visitor impacts to resources or facilities.

Interpretive Signs in Relation to Other Media:

Advantages

- More visitor contacts than other types of media.
- Relatively inexpensive in terms of cost per visitor contact.
- Consistent message too many people at one time and can be viewed at the visitors' convenience.
- In place at all times and available to visitors during all hours of operation.
- Long-term value, since visitors' photos tell the story long after the visit.

Disadvantages

- Impersonal - contacts by employees are much more effective.
- Communicate one-way and may become outdated.
- No tangible "take home" value except for the visitors' photographs of them.
- Draws attention to a fragile resource, which, in turn, may be damaged or destroyed through inappropriate behavior of visitors.
- Those located outside are vulnerable to damage by weathering, decay, wildlife, and vandalism.

Planning: Interpretive sign planning is a process that requires detailed interdisciplinary participation, including the use of interpretive specialists.

Need: Consider the following in determining the need for interpretive signs:

- Is there something visitors can see, smell, or hear at the area that needs explaining?
- Is there something interesting in the area that visitors will probably miss if not interpreted?

- Will visitors get more from their experience if appropriate interpretive signs are provided?
- Is interpretive signing appropriate, or will some other method work better?
- Are there impacts or damage being caused by visitor use or behavior that can be alleviated by an interpretive sign?
- Will enough visitors see the sign to make it cost effective?
- Will people with disabilities be accommodated (reference ADAAG 4.30)?
- If the answers are “Yes,” plan for the minimum number of signs needed to convey the appropriate message(s) in a professional manner. Too many signs reduce effectiveness.

Objectives: State the objectives of the sign in writing. They should support the objectives and goals listed in the interpretive plan for the site, or area. When developing interpretive signs, consider park and project objectives, as well as visitor expectations. For example, visitors to a particular site may want to learn something about an historic event that occurred there, or the park may want them to be aware that sites are being preserved and studied through an ongoing cultural resources management program. Without satisfying both parties’ needs, an interpretive sign will be only partially effective. Clear objectives help to evaluate the effectiveness of the sign. Three levels of objectives should be addressed:

- **Educational:** What should the visitor KNOW?
- **Behavioral:** What should the visitor DO?
- **Emotional:** What should the visitor FEEL?

Example: A park employee observes that visitors to a campground are causing damage to trees at the site. A visitor profile reveals that the campsite’s predominant users are families with young children and teenagers who camp two to three times a year. The families live in an urban area and don’t have much sensitivity to, or understanding of, the environment.

The agency defines its objectives as follows:

- **KNOW:** The visitor will be able to identify three behaviors that cause injury to a tree.
- **DO:** The visitor will stop injuring trees in the campgrounds.
- **FEEL:** The visitor will respect trees as living organisms that serve a purpose.

The agency's staff decides an interpretative sign will be the most effective medium. They choose to place it near a tree that clearly shows signs of vandalism. They construct the sign message as follows:

Artwork: First drawing - Anthropomorphized tree wincing as a person hammers a nail into it to hang a lantern. Tree has bandages and scars on it; several branches are broken. Tree is not robust, looks sickly. Second drawing - Healthy, happy tree, radiant with good health and vigor.

Test: "Ouch! Like you, trees can get sick or be hurt. When bark is injured through such thoughtless acts as hammering nails, breaking branches, and carving, it allows easier entry for harmful insects and diseases, which may eventually kill the tree. Look at the oak tree behind this sign. Does it look healthy? What signs of injury do you see?"

"Please help campground trees stay healthy by not hammering nails, carving bark, or breaking branches. You'll help them stay around a lot longer to provide shade and scenery, improve air quality, give wildlife homes, and protect soil from erosion."

The park staff considers supplementing the sign with other interpretive activities (self-guided or ranger led) for children and parents. The activities touch on outdoor skills and ethics to further emphasize the message and to enhance the public's awareness of trees.

Visitor Profile and Marketing Research: Describe the characteristics of the visitors who will be reading the sign, what they like, and what their expectations are, then determine what visitors need to be satisfied. In most cases, the visitors should be asked about these needs, rather than the staff making assumptions. Seek assistance of someone who specializes in "service marketing." This research should drive the entire interpretive planning process. Knowing who the visitors are and what they need allows staff to appropriately aim the messages at a particular target group for maximum effectiveness and customer satisfaction.

Visitor Use Estimates: Determine the expected or preferred volume of visitation. This will be a major consideration in determining locations for sign placement, the size of the sign, and the complexity of the message. It will also help in deciding whether or not a sign is, in fact, needed or justified.

Themes: A theme should be clearly stated and easily identifiable as the "thread" linking the various parts of the story to be told to the public. A major theme covers a related group of interpretive signs, such as a self-guided interpretive trail, route, or historic facility. Even a sign that will stand alone, such as the one described above, should have a theme.

Design: Design is the final link between the visitor and information. Design should be in full compliance with the Division's *Design Standards for Interpretive Panel Handbook*. Designs for interpretive signs should take into account:

- Colors and images that will attract target visitors.
- Keywords in headings and subheadings that will catch the visitors' attention and provoke interest.
- Type sizes and styles that will ensure easy readability.
- Height and angle that will ensure comfortable head movement.
- Reading level appropriate to the visitors.
- Height, angle, and positioning that do not obscure the view of the subject being interpreted.
- Sign contrast, lettering, and height will comply with ADA Accessibility Guidelines (ADAAG, see <http://www.access-board.gov/adaag/html/adaag.htm> for reference).

Text: Language is one of our basic forms of communication. However, written text should be kept to a minimum for an interpretive sign. Text writing is complex. Text must be researched, written, edited, and proofread. Space for text is limited. It occupies a surprisingly large space when properly sized and laid out. Adequate letter size and spacing must be maintained to ensure readability. Also, text must be written at a level that is appropriate for visitors with a wide range of experience and education levels. Visitor interest in text is low. Research has shown that when text blocks exceed 50 to 75 words, visitor interest and attention decline rapidly. Text writing tips:

- Use vivid language and active verbs.
- To reach the widest range of people, write at a 7th- to 9th-grade level.
- Use short sentences and paragraphs.
- Be conversational.
- Avoid technical jargon and clichés.
- Avoid gender-specific language (i.e., for fisherman, use angler; for stockmen, use stock handlers).
- Use upper and lowercase lettering for text. Use capitalization only for headings or for emphasis of a word or two.

Examples: The following examples illustrate the difference between information text and interpretive text.

Information:

- PAINTBRUSH (*Castilleja miniata*). The Indian Paintbrush (or paintedcup) is a member of the Figwort family. The flower is an inch or more long, and the calyx tip is scarlet in color. Paintbrush usually grows in the mountains along streams and in wet places below 11,000 feet.
- Stalagmites, which rise from the floor when dripping water deposits minerals, are usually larger in diameter and more rounded on top than stalactites.

Interpretive:

- There's no longer anything remaining of the old cookhouse, with its long table covered with a brightly colored tablecloth, where the miners ate three hearty meals a day. Imagine the breakfast-time aroma of fresh, hot coffee brewing and the sound of eggs and bacon sizzling on the grill. The miners were also served hot cakes, fried potatoes, and toast with homemade jam.
- Clark's nutcrackers have the habits of crows and the color of jays and are, in fact, cousins to both. The most forward of all birds, they will steal food off the picnic table from under your very nose.

Graphics: Illustrations, maps, drawings, photos, colors, type styles, and general esthetics are all encompassed in the graphics development of an interpretive project.

It is the combination of these elements that will attract and involve the visitor more than anything else. Use graphics to:

- Draw viewer attention.
- Complement the text.
- Enhance the understanding of the illustrated subject.
- Tell a significant story visually.

Organization Identification: The park's / program area's logo should be displayed on all interpretive and information signs. The identification should be an integral part of the sign design, and it should usually be subtle. Cooperators' and other appropriate logos, such as a partnering agency's logo, may also be included, but they, too, should be subtle and an integral part of the sign design.

Sign Layout: Skillful layout and design will provide high-quality signs for effective interpretation. Pay particular attention to the following:

- **Make the sign the right size:** Consider the location and the distance from which the sign will be read. Letter size should provide easy legibility from planned viewing distances. (see Design Standards / Specifications, section V and/or Design Standards for Interpretive Panels handbook) Text and graphics are also factors in determining sign size. Consider using standard sign sizes for cost effectiveness. Make the sign no larger than necessary.
- **Allow the right amount of space around the text:** The text should not be crowded. Leave enough space between blocks of text and headings and around the border for easy reading. Borders are also helpful to contain the graphics and copy.
- **Avoid diverting attention from the message:** Design the support structure to blend and harmonize with the sign and the environment. Low profile signs, for example, should be used on overlooks. Although there are exceptions, interpretive signs are usually rectangular. Unusual shapes compete with the text.
- **Avoid distractions:** Odd colors, awkward designs, unusual words, and overemphasis of symbols are examples of distractions.

Although interpretive products are not part of the sign program, the following guidance is included to assist with small, uncomplicated project.

- The information should be based on a solid theme and central message.
- Graphics, poetry, other art forms may be used to illustrate the theme.
- Stories or descriptions of events unfolding should be used to teach concepts instead of identifying straight facts.
- Titles should use five words or less to identify the point or idea.
- Subtitles should be used to identify the theme and introduce text paragraphs.
- Appropriate colors reflecting the surrounding environment should be incorporated into the design.
- Letters should be at least 24 points in size.
- Entire text blocks should not be in all capital letters.
- Text should be written to convey a simple message.
- Graphics should be clear, easy to identify, and complement the text.

- The NDSP logo should be included as part of the design. It is not necessary to include a logo on each panel of a kiosk display.

Appendix B

Sign Inventory Worksheet

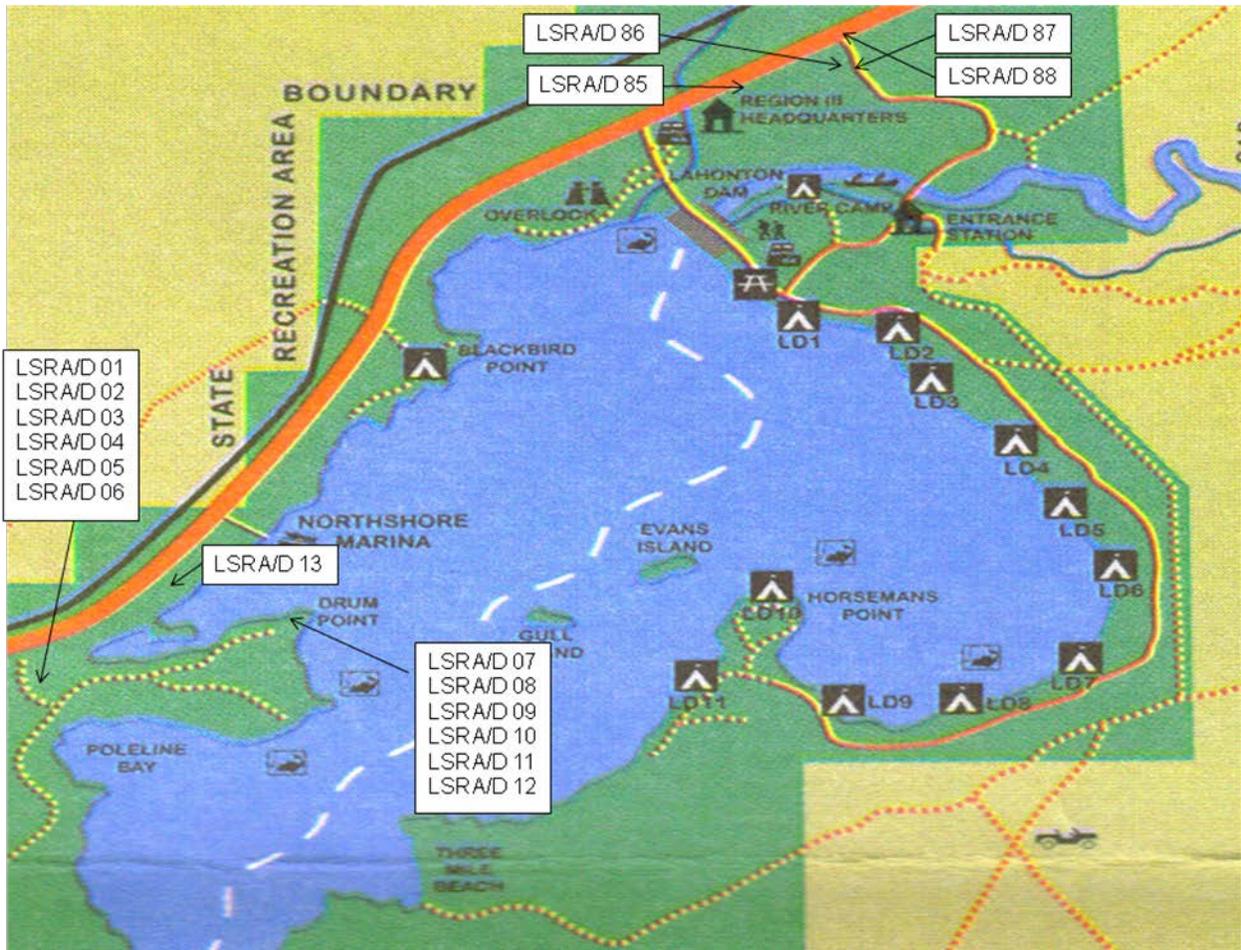
Appendix C

Annual Sign Action Plan Worksheet

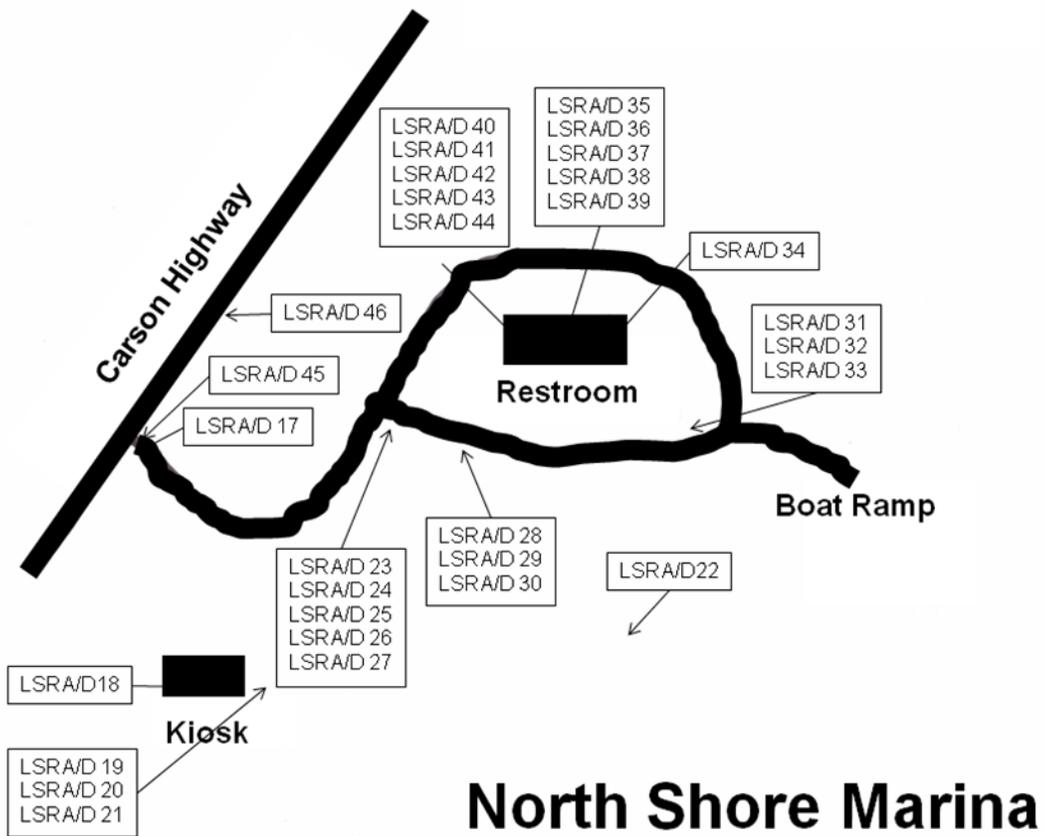
Appendix D
Sign Inventory / Map /
Annual Action Plan
Examples

Nevada Division of State Parks
Lahontan State Recreation Area / Dam : Park Signs
Sign Inventory Worksheet

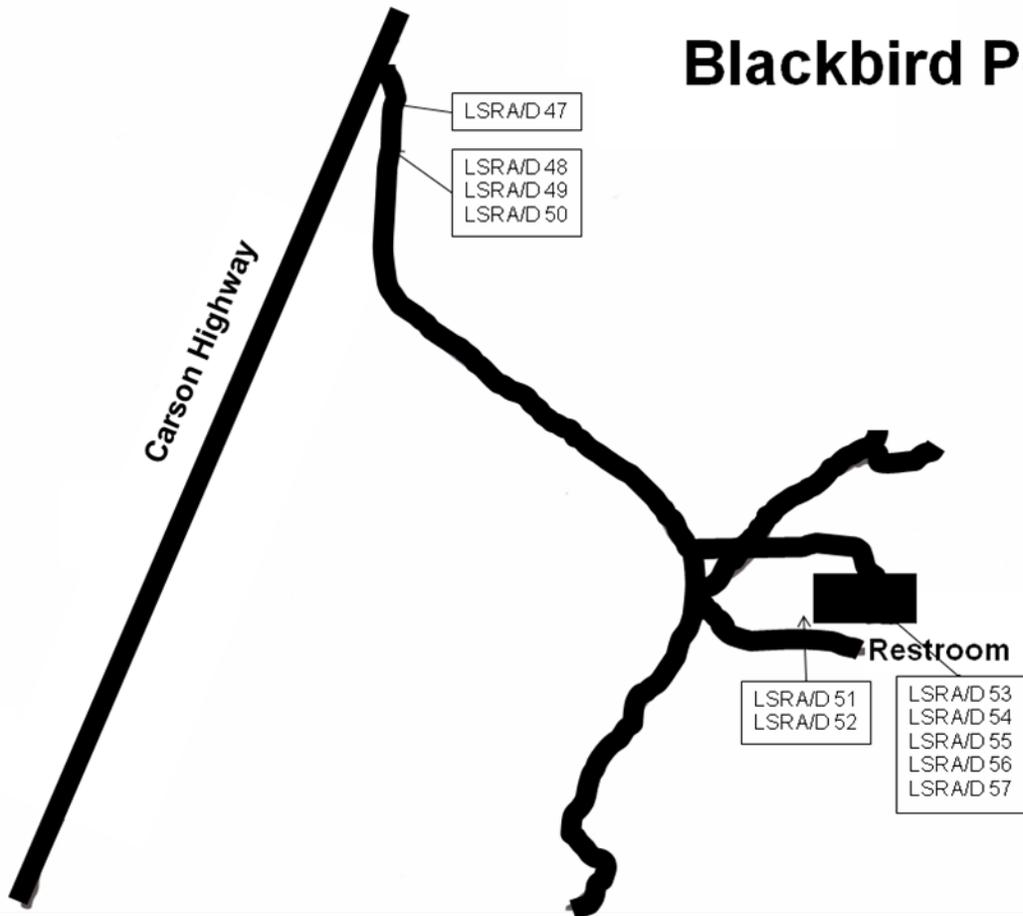
ID #	Location	Description	Material	Size in Inches	Color	Install Date	Last Repair Date	Repair Cost	Current Condition	Inventory Date	Projecte d Repair Date	Photo #	Comments
LSRA/D01	Poleline Bay	Location	Wood	138 x 66	Brown / White				Fair	3/12/2010			Needs Painting
LSRA/D02	Poleline Bay	Fee Information	Metal	24 x 36	Brown / White / Yellow				Excellent	3/12/2010			
LSRA/D03	Poleline Bay	Fee Area	Metal	18 x 12	Brown / White				Excellent	3/12/2010			
LSRA/D04	Poleline Bay	Informational	Metal	18 x 12	Brown / White				Excellent	3/12/2010			
LSRA/D05	Poleline Bay	Underage Drinking	Metal	24 x 24	Brown / White				Good	3/12/2010			Replacement words/numbers are not the same brown as original
LSRA/D06	Poleline Bay	No ATV's.....	Metal	24 x 18	Brown / White				Excellent	3/12/2010			Installed crooked
LSRA/D07	Drum Point	Van Accessible	Metal	12 x 18	White / Blue				Excellent	3/12/2010			
LSRA/D08	Drum Point	Restroom	Plastic	12 x 24	Brown / White				Excellent	3/12/2010			
LSRA/D09	Drum Point	Restroom	Plastic	12 x 24	Brown / White				Excellent	3/12/2010			
LSRA/D10	Drum Point	Restroom	Plastic	12 x 24	Brown / White				Excellent	3/12/2010			
LSRA/D11	Drum Point	Camp Watch	Metal	9 x 11	White / Black / Red				Good	3/12/2010			Could beach name be part of sign?
LSRA/D12	Drum Point	No Trash in Toilets	Metal	12 x 8	Brown / White				Excellent	3/12/2010			
LSRA/D13	Poleline Road	Fee Area <	Wood	24 x 16	Brown / White				Poor	3/12/2010			Needs replacing or removing
LSRA/D14	N. Shore Marina	Directional	Metal	45 x 30	Brown / White				Excellent	3/12/2010			
LSRA/D15	N. Shore Marina	Location	Metal	84 x 30	Brown / White				Excellent	3/12/2010			
LSRA/D16	N. Shore Marina	Wildlife Area	Metal	48 x 48	Brown / White				Excellent	3/12/2010			
LSRA/D17	N. Shore Marina	Entrance / Fee Area	Wood	63 x 29	Brown / White				Fair	3/12/2010			Needs replacing / painting at minimum
LSRA/D18	N. Shore Marina	Kiosk											Signs to be inventoried later
LSRA/D19	N. Shore Marina	Handicapped Parking	Metal	12 x 18	White / Blue				Excellent	3/12/2010			
LSRA/D20	N. Shore Marina	Van Accessible	Metal	12 x 6	White / Blue				Excellent	3/12/2010			
LSRA/D21	N. Shore Marina	Handicap Isle	Metal	12 x 18	White / Red				Excellent	3/12/2010			
LSRA/D22	N. Shore Marina	Entering Fee Area	Wood	43 x 26	Brown / White				Fair	3/12/2010			Needs replacing / moving
LSRA/D23	N. Shore Marina	Protect Waters	Metal	12 x 18	White / Black / Red				Excellent	3/12/2010			Needs moving



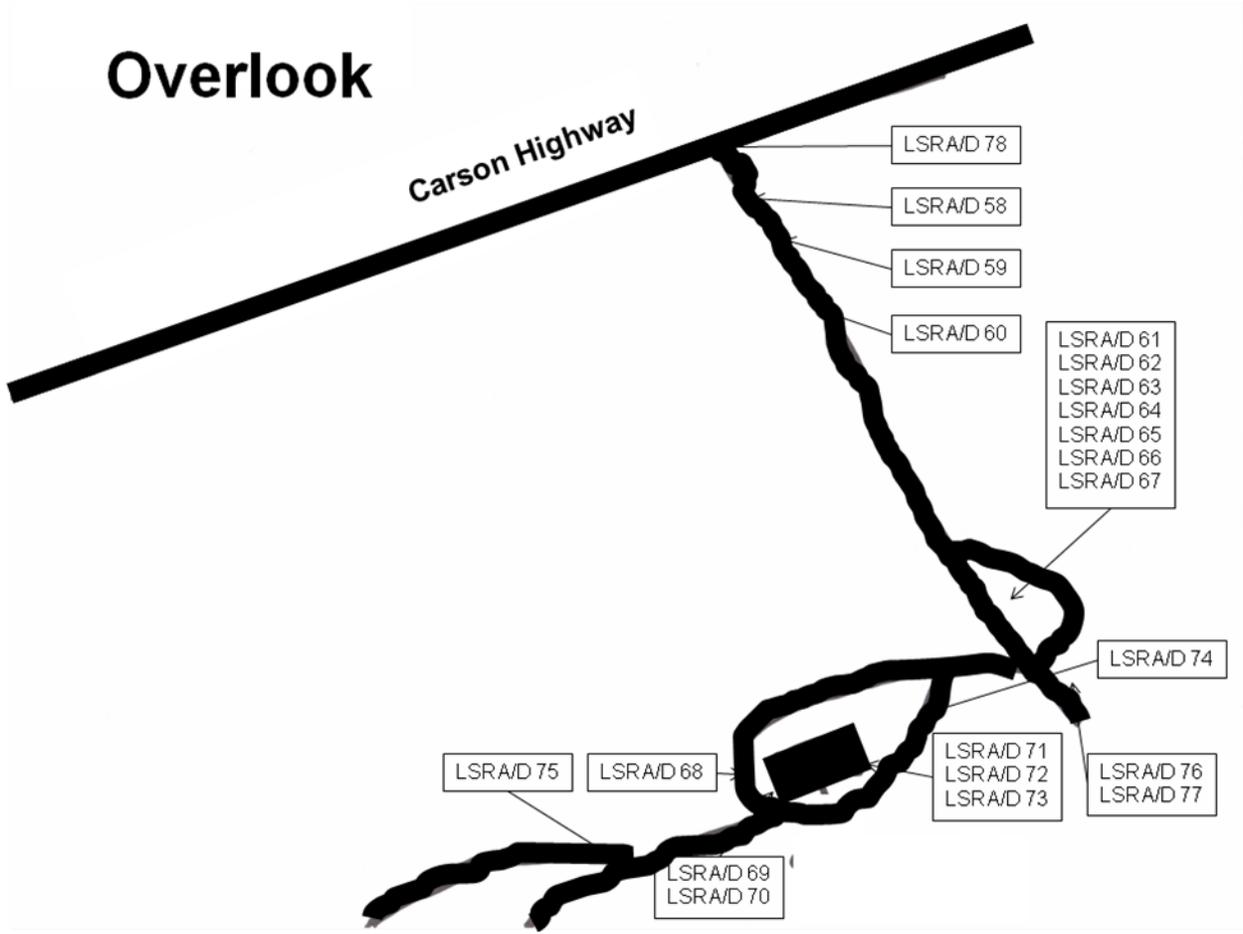




Blackbird Point



Overlook





LSRA/D08, 09, 10, 53, 54, 55



LSRA/D011, 37, 56, 71



LSRA/D12, 57



LSRA/D13



LSRA/D14, 15



LSRA/D016



LSRA/D17



LSRA/D18



LSRA/D19, 20, 29, 30, 40, 41, 43, 44



LSRA/D021, 28, 42



LSRA/D22



LSRA/D23, 24



LSRA/D25



LSRA/D026, 27



LSRA/D31



LSRA/D32, 33



LSRA/D34



LSRA/D35



LSRA/D36, 39



LSRA/D38, 72, 73



LSRA/D45, 78, 85, 88



LSRA/D46, 86



LSRA/D47



LSRA/D48



LSRA/D49, 50



LSRA/D51, 52



LSRA/D58



LSRA/D59



LSRA/D66



LSRA/D67



LSRA/D68



LSRA/D70



LSRA/D74



LSRA/D75



LSRA/D76



LSRA/D77



LSRA/D79, 80, 81, 82, 83, 84, 89, 90, 91,
92, 93, 94



LSRA/D87

Appendix E

Sign Requisition Form

Nevada Division of State Parks
Sign Requisition Form

Park / Area:

Sign ID #:

Location (attach Sign Plan Map):

New Replacement

Quantity:

P.O. #:

Material:

Color:

Sign Sketch / Current Photo / Description (include verbiage and symbols, and sign, letter and symbol sizes):

Special Instructions:

Sign Adherence to Approved Sign Plan? Yes No

Park Supervisor Signature: _____ Date: _____

Regional Manager Signature: _____ Date: _____

Comments:

Design Completed: _____

Sign Ordered: _____

Sign Completed: _____

Sign Delivered: _____

Sign Manual / Sign Requisition Form
03/2010

Appendix F

Design Standards / Specifications

Figure 1: Letter Sizes and Spacing Chart

	Speed Limits	Letter Size	Lines of Message	Line Spacing		Depth of Sign	Emblem Size	Arrow Size*	45° Corner	Rec Symbol
				A	B					
	Stop and Read	1	1	1 1/2	-	4	3	A	1	3
		1	2	1	1	5	3	A	1	3
		1	3	1	1	7	5	A	1	3
	Foot Traffic	1 1/2	1	1 1/4	-	4	3	B	1	3
		1 1/2	2	1	1	6	4	B	1	3
		1 1/2	3	1 1/2	1 1/4	10	8	B	1	3
	Horse, ATV, Motorcycle, Bike Traffic	2	1	1 1/2	-	5	4	B	1	4
		2	2	1 1/8	1	7 1/4	5	B	1	4
		2	3	1 1/2	1 1/8	11 1/4	8	B	1	4
	5 to 35 MPH	3	1	1 1/4	-	5 1/2	5	C	1 1/4	6
		3	2	1 3/4	1 3/4	11 1/4	8	C	1 1/4	6
		3	3	2	2	17	10	C	1 1/4	6
	35 to 45 MPH	4	1	2 5/8	-	9 1/4	6	D	1 1/2	8
		4	2	3	2 1/2	16	10	D	1 1/2	8
		4	3	3	2 1/2	23	16	D	1 1/2	8
	45 to 60 MPH	5	1	3	-	11	6	D	2	12
		5	2	4	3	21	10	D	2	12
		5	3	4	3	29	16	D	2	12
	Over 60 MPH	6	1	4	-	14	8	D	2	12
		6	2	4	3	23	16	D	2	12
		6	3	4	3	32	16	D	2	12

Note: All dimensions are in inches

* A larger arrow, including arrow size E, may be used when more than one line of text reflects the same direction.

When adding an agency logo to any sign other than Interpretative the Nevada Division of State Park's logo must be twice the size of the largest capital letter on the sign. Refer to *Design Standards for Interpretive Panels (Appendix P)* for agency logo size on Interpretive Panels.

Figure 2: Letter Sizing and Space Guide

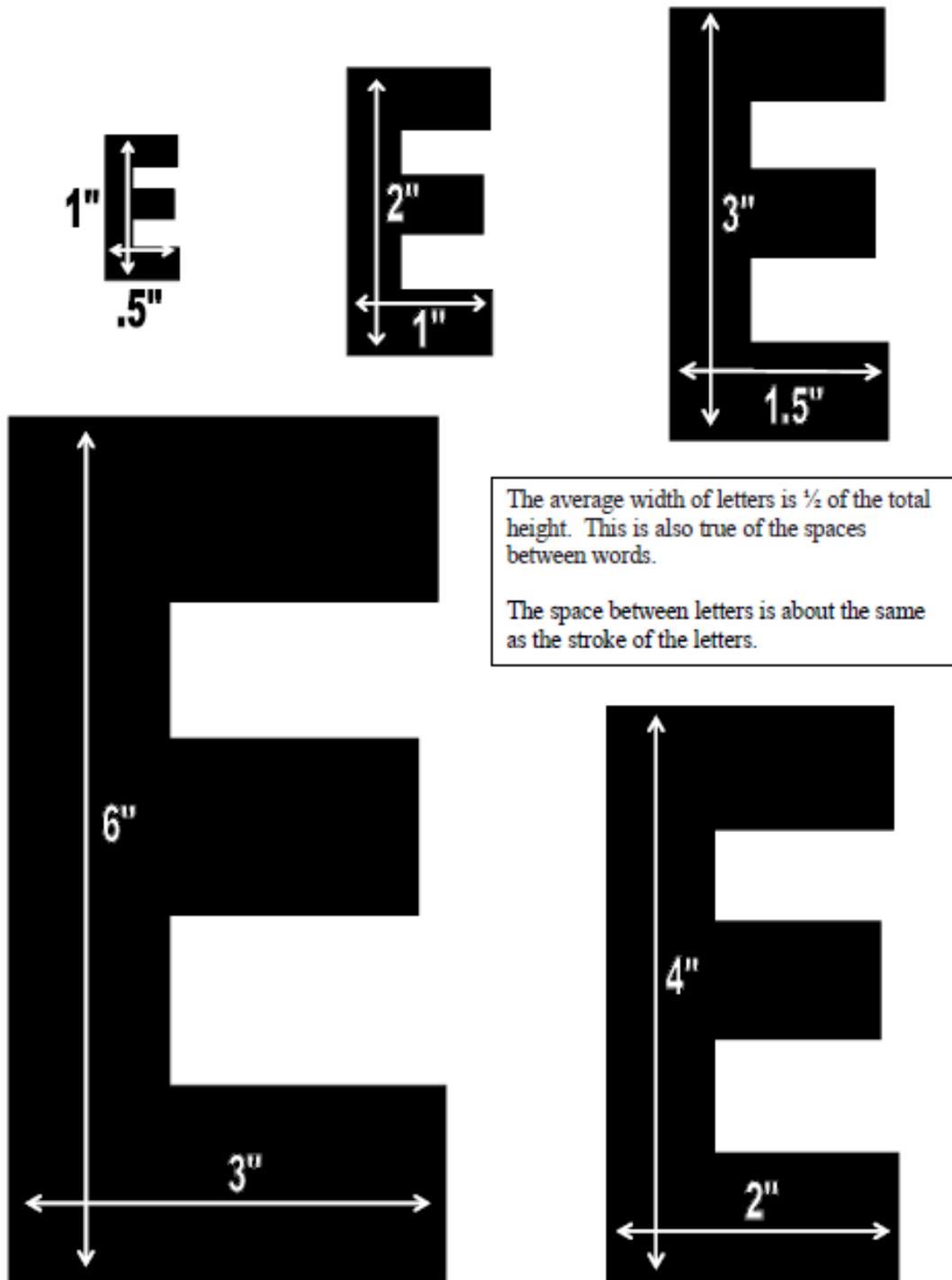
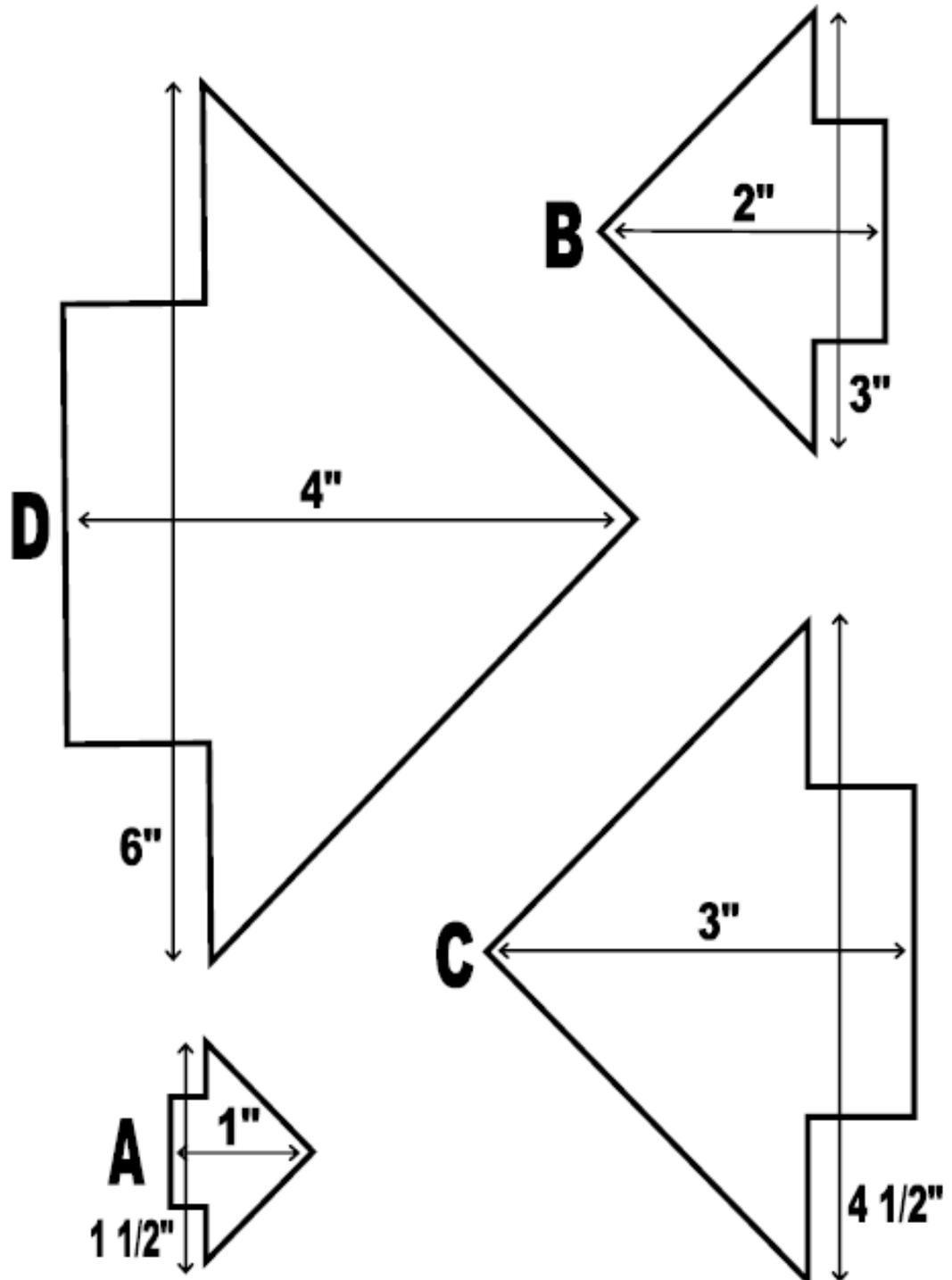


Figure 3: Arrow Sizing Chart



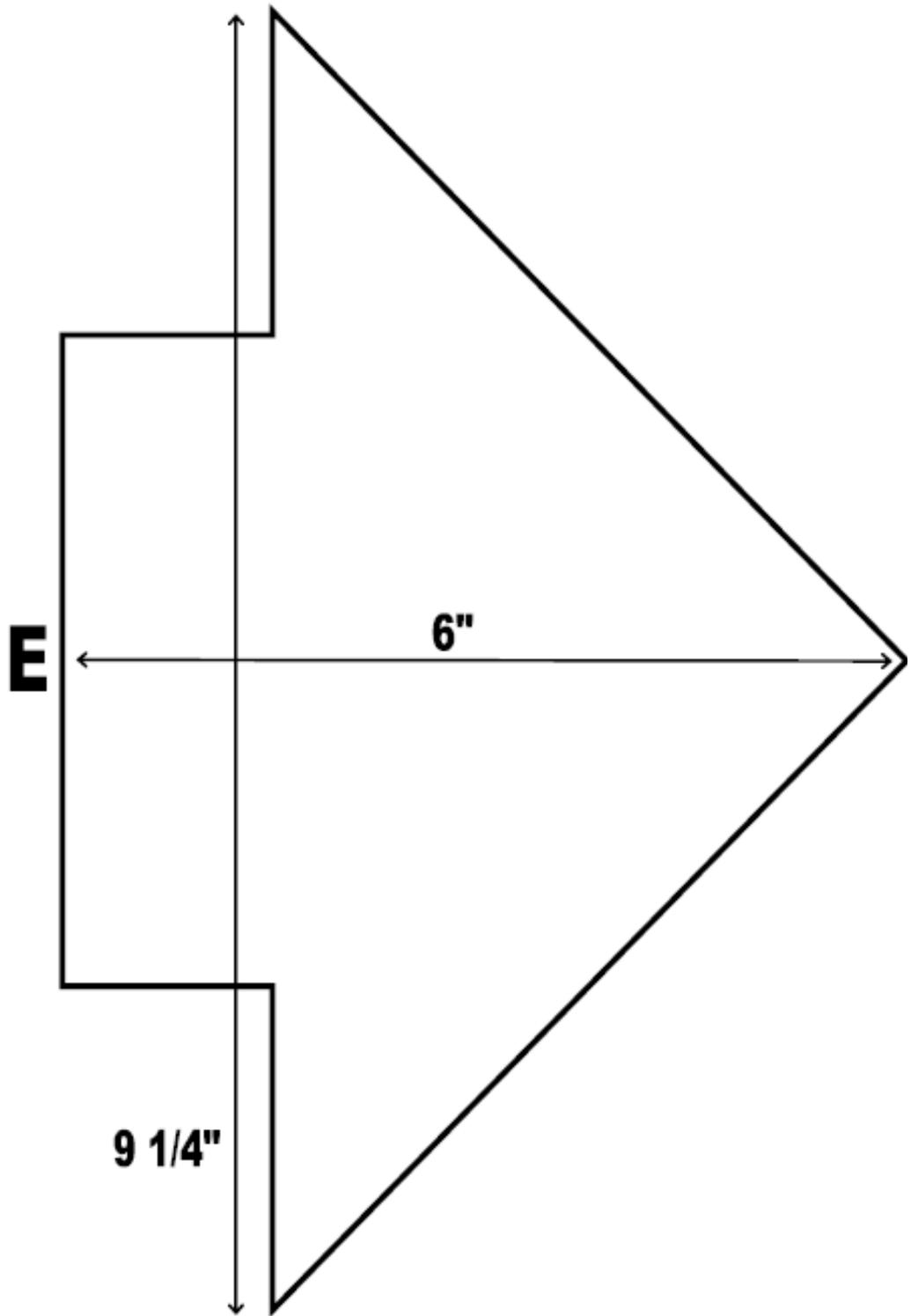
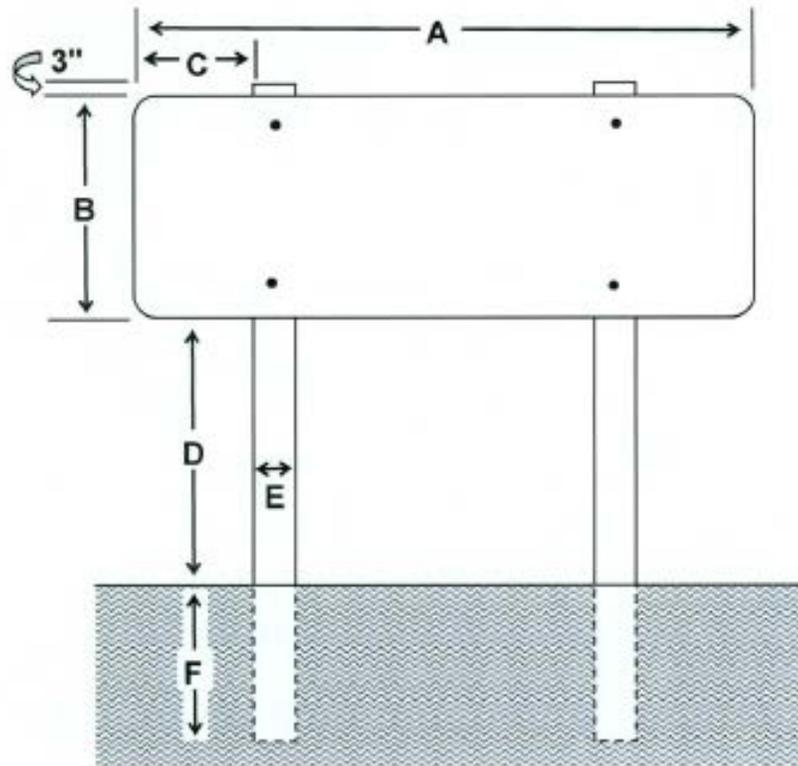


Figure 4: Sign Board and Post Mounting Guide



A	B	C	D	E	F
Sign Board Width	Sign Board Height	Post to Edge Distance*	Ground to Sign Height	Post Size/Number	Post Burial Depth
0 - 35"	0 - 24"	1/2	36"	1 - 4X4	24"
36" - 47"	12" - 24"	1/5	36"	2 - 4X4	24"
48" - 59"	12" - 30"	1/5	36"	2 - 4X4	24"
60" - 71"	24" - 36"	1/5	36"	2 - 6X6	36"
72" - 83"	36" - 48"	1/5	40"	2 - 6X6	36"
84" +	36" - 64"	1/5	46"	2 - 6X6	36"

Note: All post tops will be beveled 45°, 3/4" from the top of the post.

Appendix G

Grant Acknowledgment

Temporary Signage



Permanent Signage



Appendix H

Standard Sign Shapes

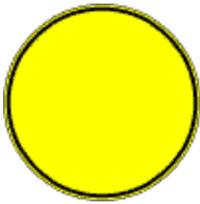
Standard Sign Shapes

Signs convey information to travelers not only by their messages and color, but through their shape as well.

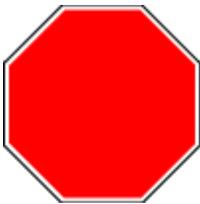
Special shapes are specifically assigned to certain types of signs so that travelers can recognize them quickly and react appropriately.

In general, the greater number of sides on a sign, the more critical a message it conveys. This is why a circular shape was adopted for the Railroad Advance warning sign (i.e. infinite number of sides), as a collision between a train and a typical vehicle will nearly always end badly. Then next the octagon shape is used for the STOP sign, since not noticing that sign typically has unpleasant consequences, and so on down the line. There are of course exceptions to this rule - a pentagonal County Route marker isn't (typically) a greater threat than a standard square route marker, and even though they have only 3 sides, the YIELD and No Passing Zone signs are still rather important (and the pennant shape of the NPZ sign serves as a sort of "get back over on your own side of the road" arrow).

Standard sign shapes and their assigned meanings:



Circle – Exclusively for railroad advance warning signs



Octagon – Exclusively for STOP signs



Crossbuck – Exclusively for railroad grade crossing signs



Pentagon – Used for school advance warning signs and county route marker signs



Diamond – Used for warning signs



Rectangle, Longer Dimension Vertical – Used for regulatory signs



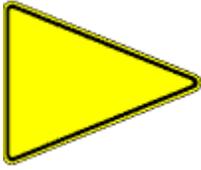
Rectangle, Longer Dimension Horizontal – Used for guide signs, some warning signs, and temporary traffic control signs



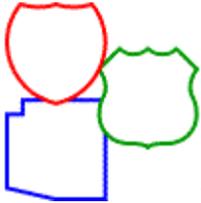
Trapezoid – Used for recreational area guide signs and National Forest route markers



Equilateral Triangle, Point Down – Exclusively for YIELD signs



Pennant – Exclusively for No Passing Zone signs



Other shapes – Typically used for route marker signs

These images are from the Manual of Traffic Signs, by Richard C. Moeur
(<http://www.trafficsign.us/index.htm>)

Appendix I

Standard Sign Colors

Red - used for STOP and YIELD signs, multiway supplemental plates, DO NOT ENTER and WRONG WAY signs, for legend or symbols on some regulatory signs, and as part of Interstate and some state route markers

Orange - used as background color for temporary traffic control signs

Yellow - used as background color for warning signs (except temporary signs) and school signs

Green - used as background color for guide and information signs, and for legend on permissive regulation and parking signs

White – Use this color for ISA Handicap Signs

Blue - used as background color for traveler services information signs, emergency evacuation route signs, and as part of Interstate and some state route markers

Brown - used as background color for guide and information signs related to points of recreational or cultural interest

Black - used as background color for ONE WAY, night speed limit, and truck regulatory signs, and as legend color on signs with white, yellow, orange, fluorescent pink, and fluorescent yellow-green backgrounds

White - used as background color for most regulatory signs and some route markers, and as legend color on signs with red, green, blue, brown, and black backgrounds

These images are from the Manual of Traffic Signs, by Richard C. Moeur (<http://www.trafficsign.us/index.htm>)

Traffic signs will follow *Manual on Uniform Traffic Control Devices* (MUTCD). Interpretive signs will follow NDSP *Design Standards for Interpretive Panels*.

Appendix J

International Symbols

International Recreation Symbols

The Bureau of Land Management (BLM) National Science and Technology Center (NSTC) is the point of contact for standard International Recreation Symbology used by the BLM. As there is no single government agency responsible for managing International Recreation Symbols, many agencies have developed their own symbols and definitions. This has led to confusion and misuse throughout the government.

The NSTC will continue to work and coordinate with other agencies in an effort to standardize symbology and definitions. However, this is an ongoing effort and until it is completed, the downloadable symbols and definitions listed below should be used by in conjunction with all NDSP signage. The NSTC has created the following set of International Recreation Symbols and their definitions, which were derived primarily from symbol sets approved by the Manual of Uniform Traffic Control Devices (MUTCD) and adaptations of symbols from BLM-NSTC and the U.S. Forest Service (USFS). The BLM symbols were NSTC-specific recreational and cultural symbols used to support standard and special-theme Bureau mapping projects. All of the symbols provided here are consistent with the MUTCD and USFS, however some of the definitions have been modified for clarity. This symbol set is not all inclusive and will continue to be updated as necessary.

The following international recreation symbols are provided as fonts on that attached CD. The following download instructions and Baseline Symbol Fonts and Keyboard Equivalents are also provided on the CD as PDF's to use as reference. They can also be accessed at the BLM website <http://www.blm.gov/nstc/mapstandards/intlsym.html>. To download and access the fonts follow the following directions.

Symbol Fonts

The four files, **WINTTSEA.exe**, **WINPSSEA.exe**, **MACTTSEA.hqx**, and **MACPSSEA.hqx** contain eight symbol fonts in TrueType (...TT...) and PostScript Type 1 (...PS...) format for PC and Mac installation and for use with the ESRI ArcInfo program. The fonts were created with Macromedia Fontographer for the PC from Bureau of Land Management (BLM) and US Forest Service (USFS) Encapsulated PostScript (.EPS) vector graphic files. As they are vector based rather than bitmaps they may be enlarged to virtually any extent without loss of linework quality or resolution. The files were compressed using WinZip on the PC and CompactPro on the MAC. Decompression and installation are as follows:

WINxxSEA.exe – These files are self-extracting archives that will place the working fonts in a directory of the user's choice for installation in the operating system. Once expanded the files are to be installed in the fonts folder found in the Control Panel. Double-click on the Fonts icon in the control panel and follow the instructions for installing a new font(s). The TrueType format (.ttf) should be installed unless the PostScript version is needed for use with Adobe Type Manager.

MACxxSEA.hqx – These files are self-extracting compressed format files that have been saved in binhex format so they can be transmitted over networks or the Internet /Internet to either MAC or PC machines. To open these files you must have an archiving program with binhex conversion capabilities, such as CompactPro or Stuffit, installed on the MAC.

Once the files have been un-binhexed and decompressed the fonts can be installed in the System Font folder by simply dragging them to the System folder. Either format can be used but the TrueType version is recommended for cross platform compatibility.

The next page displays the Font Name, symbol, and keyboard stroke associated with each symbol. The pages following show each available International Recreation Symbol for reference.

BLM BASELINE SYMBOL FONTS AND KEYBOARD EQUIVALENTS
 (Insertion point at bottom center of symbol)

BLMSYRAB	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	I										
BLMSYRGB	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	I	
BLMSYRLB	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	I				
BLMSYRMB	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	I					
BLMSYRSB	A	B	C	D	E	F	G	H	I	J	K	L	M	I													
BLMSYRWB	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	I				
BLMSYCSB	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	I
	a	b	c	d	g	h	i	j	k	l	m	n	o	p	q	r											
BLMNUMBB	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	I
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x			
	0	1	2	3	4	5	6	7	8	9																	



Airport



Bus Stop



Campfire



Elevator



Kennel



Laundry



Locker Rental



Parking



Men's Restroom



Women's Restroom



Sleeping Shelter



Trail Shelter



Showers



Bus Parking



Family Restroom



Helicopter Activity



Automobile



Bear Viewing Area



Dam



Deer Viewing Area



Drinking Water



Environmental Study Area



Nature Study Area



Shooting Area



Fishing



Information



Leashed Pets



Litter Container



Lookout Tower



Pedestrian Crossing



Ranger Station



Smoking Permitted



Truck Parking



Tunnel



Watchable Wildlife



Historic Site



High-Clearance Vehicle



Seaplane Activity



Amphitheater



Climbing



Climbing



Hunting



Playground



Rock Collecting



Spelunking



Stable



Bicycle Trail



Hiking Trail



Horse Trail



Interpretive Auto Road



Interpretive Trail



Four Wheel Drive Trail



Dirt Bike Trail



Aerial Tramway



All Terrain Vehicle Trail



Corral



Hang Gliding Area



Rollerblading



Walk- In Campground



Campground



Trailer Camping



Ferry



First Aid



Food Service



Gas Station



Grocery Store



Wheelchair Accessible



Lodging



Mechanic



Post Office



Picnic Area



Picnic Shelter



Restrooms



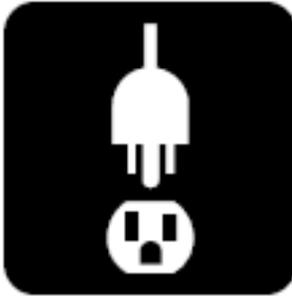
Telephone



Trailer Sanitary Station



Scenic Area



Electrical Hookup



Motor home



Group Campground



Group Picnic Area



Ice Skating



Ski Jumping



Skibobbing



Cross Country Skiing



Downhill Skiing



Sledding



Snowmobiling



Snowshoeing



Winter Recreation Area



Chairlift



Dog Sledding



Snow Tubing



Snowboarding



Boat Tours



Canoeing



Diving



Scuba Diving



Fishing



Marina



Motor Boating



Boat Ramp



Non-motorized Boats



Sail Boating



Water Skiing



Surfing



Swimming



Wading



Beach



Fishing Pier



Hand Launch



Personal Watercraft Area



Kayaking



Rafting



Wind Surfing





Mountain Bike Trail



Wild Horse Viewing



Hot Tubs



Bird of Prey Viewing



Scenic Geology



Visitor Center



Back Country Byway



Point of Interest



Interpretive Sign



Petroglyph



Archeological Site



Cabin Rental



Land Sailing



Desert Tortoise Area



Fee Area



Fossil Site



Group Day Use Area



Long Term Visitor Area



Emergency Communication



Wayside Exhibit



Golfing



Hospital



Off-Highway Vehicle



Forest Service Facility



Trailhead



Trailhead



Trailhead



Trailhead



Hot Tubs



BLM Field Office



Recreation Area #1



Recreation Area







Recreation Area











Appendix K

Division Logo



Appendix L

Kiosk Conceptual Drawings



KSK 3-8

“Off the Shelf” Polygon (brand) Steel Triptych “A1”

Triptych A1 Plan



In-house Fabricated Wooden Triptych A2

KIOSH DESIGNS – SEE MARK DAVIS AT DIVISION HEADQUARTERS

Appendix M

Bulletin Board Conceptual Drawings

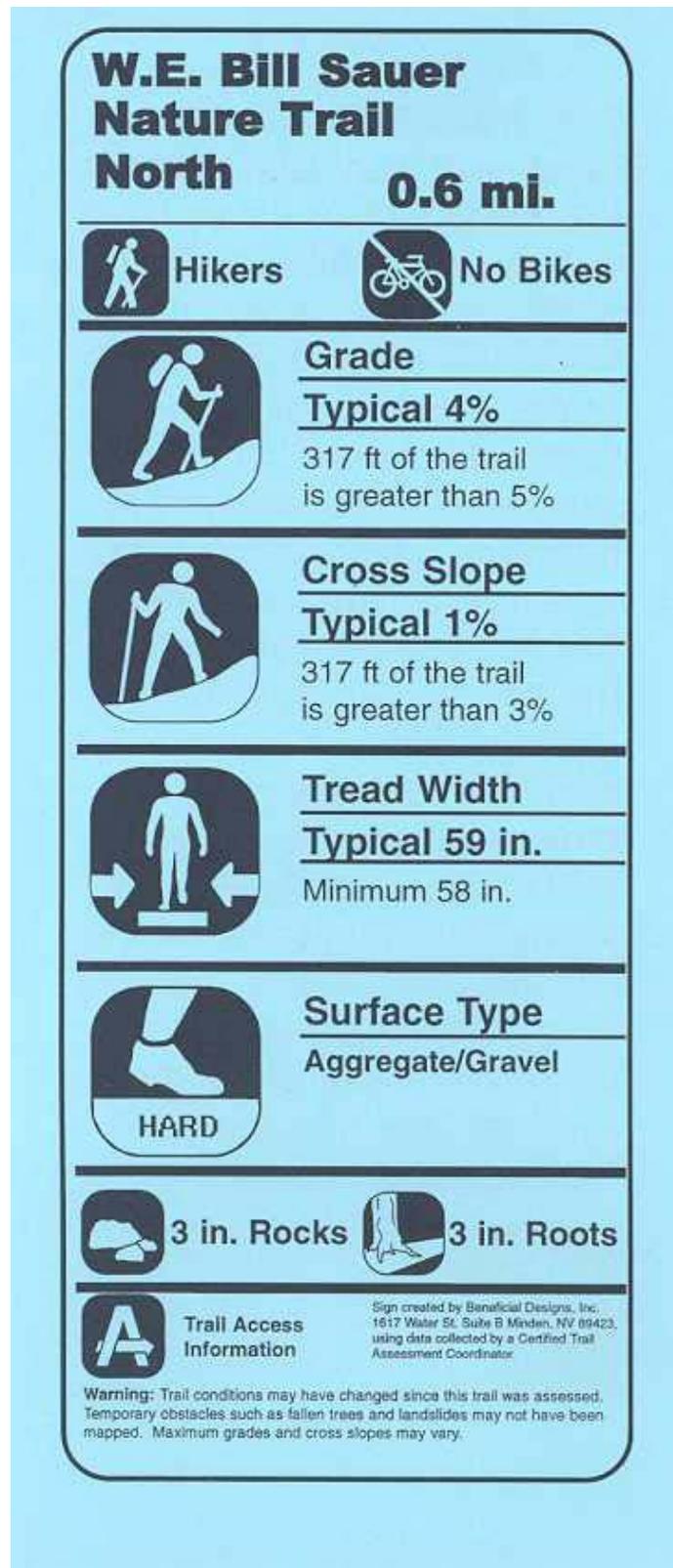
In-house Fabrication Design – see Mark Davis



**WSS-S41 Double Sided Enclosed Display Case
Off the Shelf Polygon (brand) Bulletin Board**

Appendix N

Trailhead/ ADA Informational Signs and Trail Blazes



Trailhead Info/ADA Sign



Tahoe Rim Trail Blaze - LTNSP

**Insert Standard NDSP Trail Blaze –
White Arrow on Brown Background**

Ward Charcoal Ovens Trail Marker



Wild Horse Trail Marker



Appendix O

List of Resources

List of Resources

Americans with Disabilities Act Accessibility Guidelines (ADAAG):

<http://www.access-board.gov/adaag/html/adaag.htm>

American National Standards Institute (ANSI):

<http://www.ansi.org>

Bureau of Land Management's (BLM) Sign Guidebook:

http://www.blm.gov/wy/st/en/Sign_Center.2.htm

Federal Highway Administration (FHA):

<http://www.fhwa.dot.gov>

Guidelines for Snowmobiling Trail Signing and Placement, International Association of Snowmobile Administrators:

<http://www.snowiasa.org/>

Nevada Division of State Parks (NDSP):

<http://parks.nv.gov>

International Recreation Symbols:

<http://www.trafficsign.us/index.htm> or

<http://www.blm.gov/nstc/mapstandards/intlsym.html>

Manual for Uniform Traffic Devices (MUTCD):

www.mutcd.fhwa.dot.gov

Manual of Traffic Signs:

<http://www.trafficsign.us/index.html>

Material Safety Data Sheets (MSDS):

<http://www.msds.com>

Uniform Federal Accessibility Standards (UFAS):

<http://www.access-board.gov/ufas/ufas-html/ufas.htm>

United States Corps of Engineers (COE) Sign Manual:

<http://corpslakes.usace.army.mil/employees/sign>

U.S. Coast Guard's Boating Safety Division

<http://www.uscgboating.org/>

Appendix P Design Standards for Interpretive Panels

**Design
Standards
for
Interpretive
Panels**



**Nevada
State
Parks**

Produced by
Pilley Associates
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For the
State of Nevada
Division of State Parks

First Printing
September 1993

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Introduction

“Flexibility within order” could well be a succinct summary of these design objectives. It is a framework for all design elements, while allowing the panels to be distinctive for each park unit.

There are many advantages to a unified design system for interpretive panels. A well-planned design standard:

- 1) Provides a “corporate look” to all areas of the system.
- 2) Indicates that each unit is part of a whole.
- 3) Allows visitors to quickly recognize the site as a Nevada State Park, different from other agencies.
- 4) Strengthens resource protection. Visitors will abide by the regulations if they are assured of which agency is responsible for administering the area. (i.e., dogs are allowed on trails in national forests, but not in State Parks).
- 5) Conveys professionalism and thorough, consistent, state-wide planning.
- 6) Save thousands of State budget dollars in design fees.
- 7) Prevents “reinventing the wheel” for each new project.

The Written Word

The text – the thoughts to be conveyed – should govern the size and appearance of all interpretive panels. After all, unless there is information that should be provided to visitors, there is no need to create wayside or tail panels. These design standards, produced in advance to any texts, make certain assumptions and estimates the number of words necessary to convey interpretive ideas and concepts. A selection of sizes is provided, to offer maximum flexibility to meet different needs.

Word Counts

As a general guide, we suggest that no more than one-third of any panel be used for text. This allows for an expansive appearance, with sufficient space for display title, photographs, illustrations, diagrams, maps and “air”. Since all type must be of sufficient size to meet the standards for the visually impaired, all sizes and shapes of panels in these standards are based on a recommended number of words for each size. Recommended word counts are provided in the *Panel Size* section of the report.

If the public is barraged with wordy, lengthy blocks of text, they are likely not to read any of it. Since we retain only approximately ten percent of what we read, it is critical that interpretive writing adhere to certain elements of style to make the text as appealing as possible. To be successful, a different style of writing is required for interpretive panels that for books, articles, or journalism.

Writing Style

Interpretive panel writing should be tight; no extraneous words. Everything should be written in the active voice. Thoughts should be conveyed in a conversational tone, as if conversing with the visitor; a condescending, or “preachy” tone will quickly discourage visitors from reading further. Smooth segues (or bridges) are important, especially between paragraphs and subject changes.

Each panel should have a wrap-up or summary, raise a questions, or convey philosophical implications in the last paragraph to assure the information stimulates the visitor’s interest and curiosity and that the text is more than a collection of facts. Facts unto themselves do not constitute interpretation. Interpretation means literally what it says – interpreting the meaning, the significance, of a set of facts.

Scientific Names

The use of scientific names on interpretive panels is not recommended except on plant identification signs. They break the flow of the text and are meaningless and extraneous to the majority of visitors. However, the information should be available in other forms – in checklists, sales publications, teacher manuals and plant identification signs.

Writing Level

There are many opinions on the proper level of writing; some suggest using an eighth-grade level. If the writing is clear, concise, precise, colorful, accurate, and consistent in style, there should be no need to fret over the proper writing level.

Style Manuals

To assure a consistency in style, the Nevada State Park System should designate particular style manuals to be used by staff and contractual writers for all interpretive writing including, but not limited to, free and sales publication, museum-type exhibits, wayside and trail panels, and teacher manuals.

Adherence to one style manual can resolve diverse views on such questions as the use of serial commas, when to use numerals vs. spelled-out numbers, and the placement of closing quotation marks with punctuation. The following style manuals are generally accepted:

Primary: The Chicago Manual of Style (University of Chicago Press)
Secondary: The Associated Press Style Manual
Tertiary: Government Printing Office Style Manual

The Elements of Style, by William Strunk, Jr. and E.B. White, (Macmillian) is an invaluable little reference which should be on every interpretive writer's desk (and other's as well).

Taxonomy

Consistent taxonomy is as important as consistent style. Visitors are confused and frustrated to find the same plant in two separate parks (within a system) having different common and/or scientific names in each. Primary, secondary, and tertiary taxonomies for flora and fauna (including cacti, insects, birds, trees, etc) should be established and used by all writers of interpretive materials.

Successful interpretive panels are the result of thorough, meticulous attention to the writing.

The Design Challenge

The challenge in developing these standards is to provide certain elements consistent to interpretive wayside and trail panels for all Nevada State Parks. At the same time, the elements must provide flexibility to match all needs, for panel subjects may include orientation, regulations, geology, flora fauna, fish, birds, archaeology, history, and/or recreational opportunities.

Restrictive design elements include:

- 1) Bands: the distinctive bands (top and bottom), in the same position on all panels, provide a graphic identification.
- 2) Typography: Only one type font family – readable, appropriate to natural, cultural, and recreational areas, and attractive – should be used.
- 3) Color: Two colors are consistent to all panels; a distinctive (third) accent color identifies each individual park unit.
- 4) Park identification and logo: The name of the park should appear on all panels, in a consistent location, and with the Nevada Division of State Parks' logo.
- 5) Size: There should be a minimum of recommended sizes and shapes of panels; the minimum to fill every need.

- 6) Fabrication methods and materials: Should be limited to one primary type of product and one alternative for special needs.

Identification

The name of the specific Nevada State Park should appear on each and every trail and wayside panel throughout the System to recognize and distinguish the administration of the unit. Is this redundant and too repetitive? Not at all. On the contrary, there are numerous benefits to be derived:

- 1) It distinguishes the site as an entity of the Nevada State Park System and reinforces that it is not administered by another federal, state, county or city agency.
- 2) It reinforces the concept to visitors that their Nevada tax dollars are benefitting them.
- 3) It reminds visitors that all other sites they visit with similar panels are all part of an entire Park System.
- 4) It is a subtle reminder that all rules and regulations enforced at this site will be consistent with those for all other Nevada State Park.

The park name should be set in Arial Bold, the same typeface recommended for panel map labels. The sans-serif face provides good contrast to the Century Schoolbook serif type used for the body text. Below is an example of a park name set in the specified type:

Echo Canyon State Park

Agency Logo

The Nevada Division of State Parks logo, followed by the name of the specific park, should appear together in the bottom right-hand corner of all interpretive panels and waysides and be an integral part of the lower band. Both should be reversed out of the third, or accent color, similar to the title in the top band. Camera-ready, reproducible copies of the logo are available through the State or Division offices.

Combined, the logo and park name would appear, always in the same proportions, as follows:



Echo Canyon State Park

Title Bands

The color bands on each panel are essential ingredients for these design standards. They provide a distinctive character, provide a consistent unity for the numerous elements, and tie all interpretive panels together.

The top band is the wider of the two. It is to be used exclusively for the panel title. The text is to be reversed out of the background color and always set flush left, in capitals and lower case. The color is always to be a medium value, providing sufficient contrast to the light background color for good readability.

The lower band is considerably narrower than the top band and is of the same accent color (medium value). It is to contain the State Parks' logo and name of the park, exclusively. Identical to the top band, all type and graphics are to be reversed out of the background color.

Typography

The following criteria were established to determine the appropriate typeface and type family for this project:

- 1) It must be extremely easy to read and legible.
- 2) It must not be pretentious, calling attention to itself.
- 3) It must be equally appropriate for natural, cultural, and recreational sites.
- 4) It must be functional for all interpretive media: publications, museum exhibits, wayside and trail panels, and audio-visual titles.
- 5) It must include a regular weight, a bold, and italic.
- 6) It must be a type readily available to designers nation-wide.
- 7) It must be a type that is available in press-type, photo-typography, and computer-generated type.

Century Schoolbook is the type specified for all Nevada State Park System interpretive panels. It meets all criteria listed above, has a pleasing appearance and it totally unpretentious. It has a consistently even thickness in weight of line, with little variation. Century Schoolbook is probably the most readable type available; besides which, it is very attractive.

Century Schoolbook is to be used, exclusively, for all typeset copy on all Nevada State Park System interpretive panels. This includes, but is not limited to; title, sub-titles, quotations, body copy, and captions.

There are three styles of Century Schoolbook that are specified for the Nevada State Park System interpretive panels:

Regular – to be used for body text, captions and labels (*Century Schoolbook*)

abcdefghijklmnopqrstuvxyz
ABCDEFGHIJKLMNPOQRSTUVWXYZ
1234567890.,:”&!?\$

Bold – to be used for titles and headings (**Century Schoolbook Bold**)

abcdefghijklmnopqrstuvxyz
ABCDEFGHIJKLMNPOQRSTUVWXYZ
1234567890.,:”&!?\$

Italic – to be used for quotations and emphasis (*Century Schoolbook Italic*)

abcdefghijklmnopqrstuvxyz
ABCDEFGHIJKLMNPOQRSTUVWXYZ
1234567890.,:”&!?\$

Maps

Maps (orientation, vicinity, floor plans, etc.) are an exception; they are to set in Arial to separate them from the general character of the piece. The park name (lower band), is also to be set in Arial.

Type sizes

All type sizes **must** meet federal and state legibility requirements for the visually impaired. The *minimum* type-size standards for all panel sizes recommended in the report are:

Title:	60 – point bold
Body Copy:	24 – point regular
Direct Quotes:	24 – point italic
Tertiary Text:	20 – point regular
Captions:	18 – point regular
Labels:	18 – point regular
Credit line or disclaimer:	16 – point regular

Leading

Also called “line spacing”, this specified space between lines is important to the visual impact of the copy. Leading that is too tight impairs readability; too much leading weakens cohesion. Use three-point leading for the 24-point body copy specified.

Line Length

For body copy, no line should contain more than 60 spaces, including all character, punctuation, and spaces between words. This is an absolute maximum for readability; 45 to 590 spaces is better criterion. It is preferable to use three columns of text rather than to that are too wide and contain too many spaces. Remember, the size of type is irrelevant; it is the number of spaces in the column, regardless of type size, that matters.

Margins

All body copy, tertiary copy, and detached quotations should be typeset as flush left, ragged right. There are to be no justified right margins on any panels. Justifying type causes irregular ward-spacing which often looks awkward and can cause “rivers”. An undesirable formality is imposed by justified typesetting. Justified text creates a third set of rectangles in addition to those formed by photographs and the outer rectangles of the panel. Ragged right margins are much more casual, for inviting to the reader.

Caps and lower case

All-capitals are never to be use; any and all typeset words, including title, body text, quotations, and captions should be set as capitals and lower case (U/lc). The latter is less formal, less inhibiting, and improves readability.

Illustrations

Illustrations by professional artists are preferable over photographs for must wayside and trail exhibits, unless there are excellent, high contrast, black – and – white historic photographs available. Good illustrations have several advantages over poor photographs. Since illustrations are always irregular in shape, they make a softer, more pleasing layout; photographs form rectangles within other rectangles created by the column margins, outer shape of the panel, and the frame. Illustrators can be selective. They can choose to include only those portions of a scene important to the message to be conveyed, eliminating extraneous detail. Liberty can be taken to improve the composition.

All illustrations for the Nevada State Park System panels should be pen-and-ink line art; with no shading or gradations in tone (shaded art requires halftones). The art should always relate to the text subject, be anatomically/historically accurate, and amplify major points made in the text. Illustrations also can dramatize or create moods and often can show action or involvement.

For consistent quality, use a professional illustrator. Better yet, use a combination graphic designer/illustrator to assure all of the various elements are homologous.

Art References

The client should provide the designer/illustrator adequate art references after the text is finalized and approved but before the design process begins.

Whenever possible, these art references should be photographs rather than other drawings of the subject. If an illustrator is forced to use someone else's drawings as reference, the drawing cannot possibly be any better than the first artist's interpretation. To avoid confusion and disappointment, be as explicit as possible about what you want. Don't just ask for a bird; ask for "a woodpecker, Gila, mature, male profile view, in habitat picking bugs from tree bark". If the plumage or beak are important factors mentioned in text, advise the artist. Better yet, provide the artist a copy of all relevant text and captions in advance.

Ask for all illustrations to be drawn at the *actual size* to be produced on the camera-ready art. Bigger is better; reductions of original art will eliminate small imperfections. (Much of the art for the largest panels may be produced half-size). Obviously, it is important to know the finished drawing size when approaching an illustrator. This is another reason why it is better to use one person who is both a graphic designer and illustrator.

Be sure to determine rights in the contract. Many illustrators prefer to sell rights to their original pieces "for one-time use only". The client price will be more reasonable. Often, the client will have no other uses to make of the drawing, unless they plan to publish a poster or book, using the same illustration. There is no additional charge, or fee to the artist, if the same art is used again on replacement panels.

Color

Color is a vital ingredient in establishing the appropriate mood and feeling of the individual sites. Interpretive panel accent colors in natural areas should reflect colors in nature – minerals, rocks, flowers, earth. Color at historic sites should engender a feeling of respect, of admirations, and of the period. Recreation area accent colors should be appropriately bright and colorful.

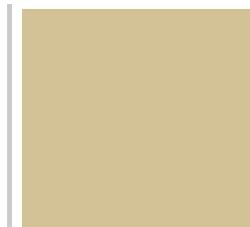
Number of Colors

Costs and effectiveness were considerations in determining the number of colors critical to effective interpretation. An excessive number of colors would make the cost of the panels prohibitive; yet color play such an important role in attracting readership that too few colors could lessen the panels' effectiveness.

Three colors are suggested for each panel. The background color and the second color (for type and line art) are to be constant for panels throughout the System. The third, or accent, color is specifically selected for each individual site. The Pantone Matching System (PMS) numbers, their description and rationale for their use are as follows:

Background

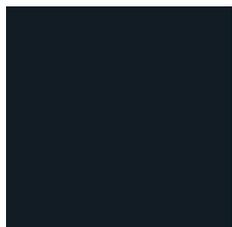
Tan (PMS 467) This shade of light brown was selected as the most appropriate background color for natural, historic, and recreation areas. Also, it is a color that blends well with black (for typography and line art) and all accent colors. It is light enough to allow strong contrast with the color for the type and line art, but sufficiently dark to reduce glare and appear as a true “color”. It will also be effective when reversed out of the medium accent colors in the title and credit bands.



Pantone®
467 C

Type and Line Art

Black (PMS Black 6C) This particular shade of black is to be used for all typography, line-art illustrations and halftones (photographs). Its use is restricted to the center (middle) portions of panels only. This is no ordinary black; it is a warm black with reddish-brown undertones. It will complement the tan background better than a cold, blue-black.



Pantone®
Black 6 C

Accent Colors

Each accent color (the third panel color) is specified for individual sites. It should, when possible, reflect the character of the park and create an appropriate mood. If a particular color had been previously established, such as the “Navajo” barn-red at

Spring Mountain Ranch State Park, the panel color matches it. (The rust color for Valley of Fire was selected because of the same color appearing in the hills).

Accent colors are to be used in the top and bottom portions of panels (titles and park name), with type reversed in the background color (tan). All accent colors are medium value; sufficiently dark to contrast well with the tan color for the titles and park name/logo, yet light enough to contrast with the black line-art.

The accent colors and the specific park for which they were selected are:

Beaver Dam (PMS 168)



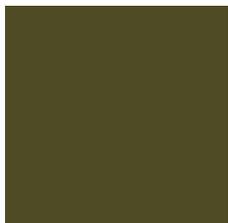
Pantone®
168 C

Belmont Courthouse (PMS 668)



Pantone®
668 C

Berlin-Ichthyosaur (PMS 450)



Pantone®
450 C

Big Bend (PMS 5757)



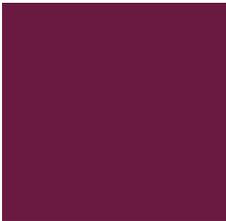
Pantone®
5757 C

Cave Lake (PMS 3155)



Pantone®
3155 C

Cathedral Gorge (PMS 222)



Pantone®
222 C

Dayton (PMS 221)



Pantone®
221 C

Echo Canyon (PMS 548)



Pantone®
548 C

Fort Churchill (PMS 154)



Pantone®
154 C

Kershaw-Ryan (PMS 370)



Pantone®
370 C

Lahontan (PMS 471)



Pantone®
471 C

Lake Tahoe – Nevada (PMS 301)



Pantone®
301 C

Mormon Station (PMS 119)



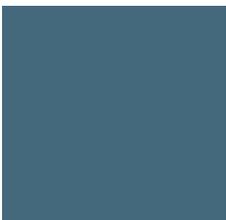
Pantone®
119 C

Old Las Vegas Mormon Fort (PMS 469)



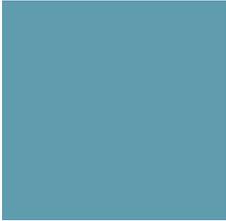
Pantone®
469 C

Rye Patch (PMS 5405)



Pantone®
5405 C

South Fork (PMS 549)



Pantone®
549 C

Spring Mountain Ranch (PMS 1807)



Pantone®
1807 C

Spring Valley (PMS 568)



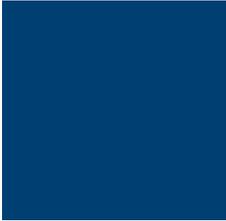
Pantone®
568 C

Valley of Fire (PMS 159)



Pantone®
159 C

Walker Lake (PMS 541)



Pantone®
541 C

Ward Charcoal Ovens (PMS 431)



Pantone®
431 C

Washoe Lake (PMS 322)



Pantone®
322 C

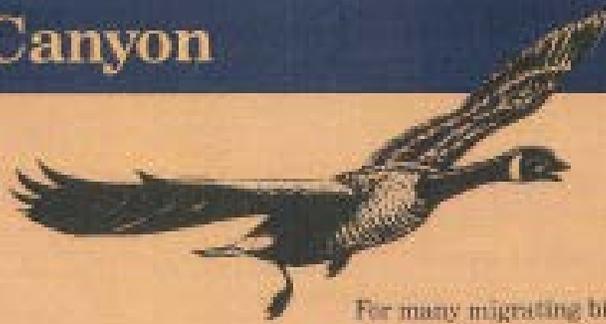
Wild Horse (PMS 260)



Pantone®
260 C

A color-key, showing the use of these three colors on the panels if provided on the following page. *The colors are not accurate* in these color-copier reproductions and are to show the relationship between color use only. (For accurate color swatches, refer to page with color swatches).

Echo Canyon

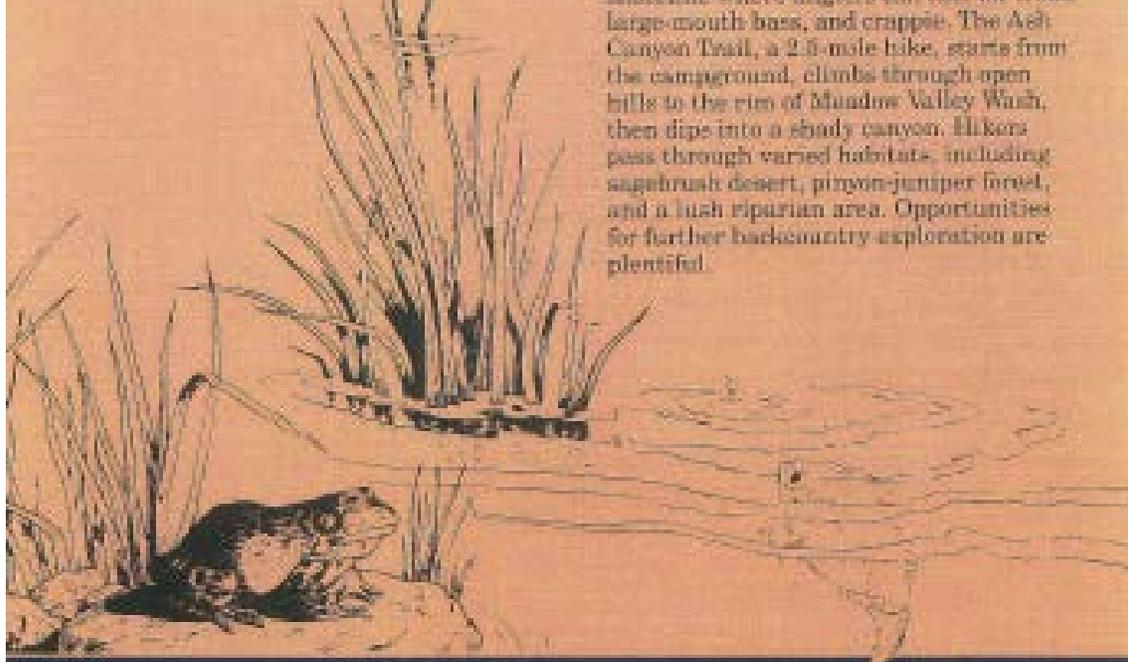


For many migrating birds, wetlands are sanctuaries in the otherwise harsh desert terrain of the Great Basin. For that reason, reservoirs like the one at Echo Canyon State Park attract numerous species of waterfowl, including mallards, loons, coots, and teal. Shorebirds such as avocets and terns also pause on their migratory journeys.



Year-round residents include great blue herons, which hunt for bullfrogs and small fish in the shallows around the reservoir and in the canyons. Swallows and hawks are among the species nesting in the cliffs that rim the eastern end of Echo Canyon. Lava flows and volcanic ash falls formed these basaltic rock walls more than 45 million years ago.

Echo Canyon has camping facilities, picnic areas, and acres of easily accessible shoreline where anglers can cast for trout, large-mouth bass, and crappie. The Ash Canyon Trail, a 2.5-mile hike, starts from the campground, climbs through open hills to the rim of Maudslowi Valley Wash, then dips into a shady canyon. Hikers pass through varied habitats, including sagebrush desert, piñon-juniper forest, and a lush riparian area. Opportunities for farther backcountry exploration are plentiful.



Hand-Painted Colors

Certain subject-matter panels may require hand-painted objects or specimens to interpret them fully. These subjects include, but are not limited to birds, fish, trees, geology. All are acceptable in black line drawings, but perhaps would be much more effective (and interpretive) if color were added.

Porcelain enamel is recommended for all panels in these design standards (with the exception of small plant-identification signs). Certain porcelain-enamel exhibit production companies are specialists in hand-coloring; it is a real art. It is important that the State contracting office set high standards for hand-coloring, if any is included in their request for bid proposals. The client and designer are responsible for providing color keys (Pantone Matching System color numbers) and full-color photographic references of bird plumage, animal colorings, etc, for hand-coloring.

The design process for production-ready (“camera-ready”) art is the same for line drawings or hand-painted illustrations. The only differences are the color specifications and references for hand coloring – and/or overlays for map or accent colors. Bids from porcelain-enamel companies can be obtained for both alternatives. The prices quote from production companies may determine how many hand-painted panels are desirable!

Color for Maps

This is probably the most important and pragmatic justification of additional color on interpretive panels. It is much easier to explain park facilities clearly and succinctly on a well-designed orientation map than any other media. Orientation maps are more effective on interpretive panels than on any other media. Clear, easily understood orientation can modify park visitor use and behavior to be less destructive and more positive – if visitors are provided sufficient information on facilities.

Additional color is effective on orientation-panel maps. It can, at a glance, distinguish historic areas from nature trails, visitor centers from restrooms, public areas from restricted areas (administrative use only), trails from roads, and parking areas from no-parking zones.

All graphics, including black-and-white as well as full-color photographs and fine line-art, reproduces extremely well on porcelain enamel. Production contracts should specify lithographic reproductions at resolution levels of 150 *lines* per inch (not *dots* per inch).

For consistency, clarity, and ease of visitor absorption, the first orientation panel designed (for a Nevada State Park) should establish a color-code for particular types of facilities. This could include, but not limited to: roads, trails, features, visitor centers, camping/picnic areas (day use vs. overnight use), public restrooms, etc. Once the color code is approved, all other Nevada State Park orientation panels should adhere to the same code colors.

Designers definitely should discuss restrictions on color overlap with porcelain enamel production companies prior to preparation and completion of camera-ready materials.

Photography

Interpretive panels (especially at historic sites) can often be enhanced by the use of good quality, high-contrast, black-and-white photographs. Color is unnecessary – if not superfluous – for much historic photography. The soft tan background color was selected partially on the basis of its ability to complement historic or other black and white photographs, line-art, or reproductions of etchings and lithographs.

Park staffs should furnish the design contractor with a wide variety of historic or other photographs appropriate to the panels under preparation. They should be eight-inch by ten-inch, high contrast, and glossy prints. Do not crop photographs – the designer will handle any decisions on cropping, drop-outs, finished size, or other treatments necessary prior to production.

Orientation Panels

Park orientation is extremely important to all phases of park management. If visitors are provided adequate orientation to the park, its features and facilities, they are much more likely to disperse to various areas that interest them, rather than congesting a central point. Orientation designations for picnicking, fishing, historic resources, parking, restrooms, ranger stations, etc., can contribute to improved resource protection, visitor safety, and interpretation.

Many of the state's parks have no visitor centers for visitors to obtain information on the facilities. Some do not even have entrance stations (or there is insufficient staff to keep them open during all visitor hours). Budget forecasts are not optimistic for additional facilities or personnel in the foreseeable future.

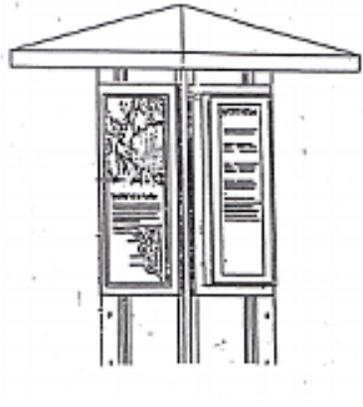
The state-park brochures are expensive to distribute free of charge and are usually quite limited in supply due to small printing budgets. Often there is no central distribution point where visitors can obtain a free folder with a map of the park. Many state park visitors depart without ever obtaining an orientation map, a park brochure, or speaking to uniformed personnel or volunteers.

Interpretive panels are the most efficient and economical method of disseminating adequate orientation information to all visitors. They contain information for visitors immediately, upon arrival at a park – when adequate, accurate, prompt information is critical to visitor safety, enjoyment and resource protection.

Triptychs

The most effective and cost-efficient manner of presenting orientation information would be in a triptych – a “trio” of panels, preferable under a protective roof or canopy. Each

panel should be 54-inches high by 36-inches wide and placed back-to-back in an equilateral triangle. The equal size of the three panels provides balanced space and emphasis to the three topics critical to orientation:



Welcome to the Park. The first of the tree panels is a general introduction to the park; its establishment, history, major features, activities, and facilities. It should feature the park's major interpretive theses. This is the best panel for introducing the natural, historic, and recreational features. Recreation areas should include at least cursory information on the geology, flora, fauna, birds, and fish.

The text should establish an upbeat mood – an invitation. The panel extends an invitation from the Nevada State Park System to appreciate and enjoy this significant resource, set aside for the visitor's benefit and enjoyment – and for posterity. It should whet the visitors' enthusiasm to see the park, study it, respect it, and help protect it.

This is also the best panel for visuals – line drawings and photographs – to set a mood and a character for the individual park. The panel should demonstrate what makes this area unique and different from other Nevada State Parks.

Orientation Map. This is a most significant panel, for its purpose is to visually include all roads, trails, features, and facilities of the park. It should clearly define public – and administrative – use areas, authorized parking areas, and trailheads.

The international symbols should always be used, whether or not there are accompanying place names, and whether the maps are in color or simply in black. If color is used, the symbol ink color should correspond to the established color-key. However, the color should be used for blocks of an area; it would be superfluous to use color only on the international symbols.

A "you are here" with an arrow should be considered if appropriate.

Many, if not most, park orientation map panels would be enhanced by a vicinity map, indicating interstate, state, and county highway routes emanating from the park to major arteries or destinations. Scenic, historic (including museums), and recreation sites in the vicinity or region should be included. Land features, such as rivers, creeks, and canyons, would also contribute to more informative and effective vicinity maps.

Avoid inclusion of any sites, road, or facilities likely to change or close within the foreseeable future. These panels are “permanent”, and too expensive to revise often.

Rules and Regulations. Though this panel does not have the exciting visual prospects of the other two, it is certainly equal in importance. The parks must have all rules and regulations prominently posted and accessible to all visitors. This can avoid tort claims, if there are safety problems or injuries. It also is critical to resource protection. If smoking is not allowed on trails, the regulation must be so posted in case citations are necessary

Many parks have rules and regulations posted on bulletin boards, often with typewritten copy. The size of the lettering and weak presentation affords them less significance and emphasis than they deserve.

A professional designer can design the panel to be extremely readable and hold the reader’s attention. The parks’ accent color would be appropriate to highlight items such as “bullets” or headings, without increasing costs.

Layout and Design

The specifications previously provided in these standards are to be the framework on which design is based. If these standards are observed for colors, typography (face and sizes), bands, agency logo/park name placement, and outer dimensions of panels, there still remains considerable flexibility for a creative professional designer.

No attempt has been made, inside the bands, to restrict opportunities for variation within an established grid. Each panel, or set of panels, should be designed by the same professional designer in such a way as to make the information represented conducive to reading and retention.

Three column layouts are often preferable to two. Two columns can appear severe and formal; there is much more potential for freshness and vitality in a layout of three columns (or simply one column).

The rigidity and repetition produced by vertical columns can be broken by carrying portions of photographs (especially those with backgrounds which have been opaque) or line-art illustrations into another column. This produces a very pleasing, loose, casual, inviting appearance in the layout.

Designers / Illustrators

A professional designer/illustrator can do much to enhance the words and messages of the interpretive panels. They are all familiar with the elements of color, typography, illustrative materials, and design and the fusion of these elements to produce the most cohesive, appealing results.

It is advantageous to contract with one person who has both graphic design and illustrative talents. The contractor's role is considerably simplified if there is one person for firm for both. Otherwise, they must be the catalyst between two differing points of view (a graphic designer may wish to emphasize their design talent and sublimate the illustrations, while the illustrator may wish their work to dominate the design). Also, it is advantageous to contract with a designer/illustrator who understands outdoor interpretive exhibits.

Whoever is chosen, they should be familiar with any and all restrictions applicable to the various production criteria. As example, both porcelain enamel and metal micro-imaged camera-ready art should have no color lines or elements crossing one another.

Quantity of Panels

An appropriate quantity of panels is a subjective judgment which can really only be determined at the planning state of each individual project. The suggestions that follow are simply meant as a general guide for planning purposes.

Park Orientation

Three panels, each 54" high by 36" wide (triptych)

Center Panel: Welcome to the Park, features, and significance

Left Panel: Orientation map

Right Panel: Rules and regulations

Locate near park entrances.

*[Orientation **could** be done in one panel of the size indicated, though it would be crowded].*

Alternative panel size: each 48" high by 36" wide.

Waysides

Individual panels, each 24" high by 36" wide. Used for overlooks, road pullouts, and individual interpretive points.

Self-guiding Trails

Ten, not to exceed twelve panels*, each 20" high by 30" wide. Used for self-guiding trails.
(*Assuming a quarter-mile trail)

Plant identification

With text: (estimate)

Twenty panels, each 12" high by 16" wide (or 5" high by 7" wide; metal micro-imaged).

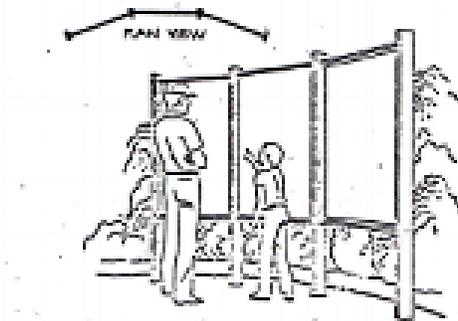
Common and scientific name only: (estimate)

Twenty signed, each 3" high by 5" wide [metal micro-imaged]

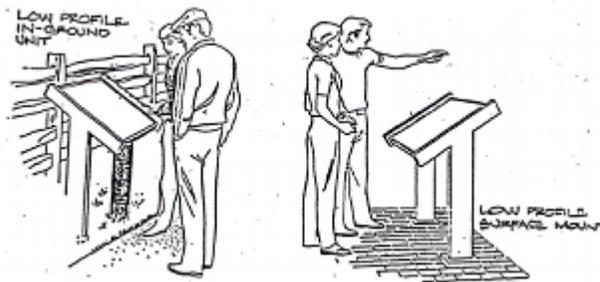
Panel Dimensions

Five recommended panel dimensions and two alternatives have been established for all orientation, wayside, trail, and plan identification interpretive panels for the Nevada State Park System. Some dimensions were selected to match standard sizes of supports available, for cost-effectiveness.

"Vertical" is suggested only for orientation / interpretive panels either 54" high by 36" wide or the alternative: 48" high by 36" wide.



"Low profile" (horizontal rectangle panels, mounted at a 30-degree angle). These are highly recommended for every panel except orientation because of the readability and the less-obtrusive appearance.



54”H X 36”W

Vertical. For orientation and in-depth interpretive panels (i.e. for kiosks and triptychs). Effective in groups of three, used in a triangle, or kiosk style. Supports and framing are standard for this use. *Maximum word count: 400.*

48”H X 36”W

Vertical. (Alternative) Recommended only as an alternative to the 54”H – by – 36”W panels, if the information to be produced on each panel (or group of panels) will not be crowded at this smaller size. *Maximum word count: 300.*

24”H X 36”W

Low profile. Recommended for the majority of waysides. Sufficiently large to accommodate appropriate text and visuals. Low, horizontal panels mounted at a 30-degree angle. Readability is excellent; subtle and unobtrusive appearance. *Maximum word count: 175.*

20”H X 30”W

Low profile. Recommended for all self-guiding interpretive trails. An introductory 24”H by 36”W panel may be effective with this size. *Maximum word count: 100.*

12”H X 16”W

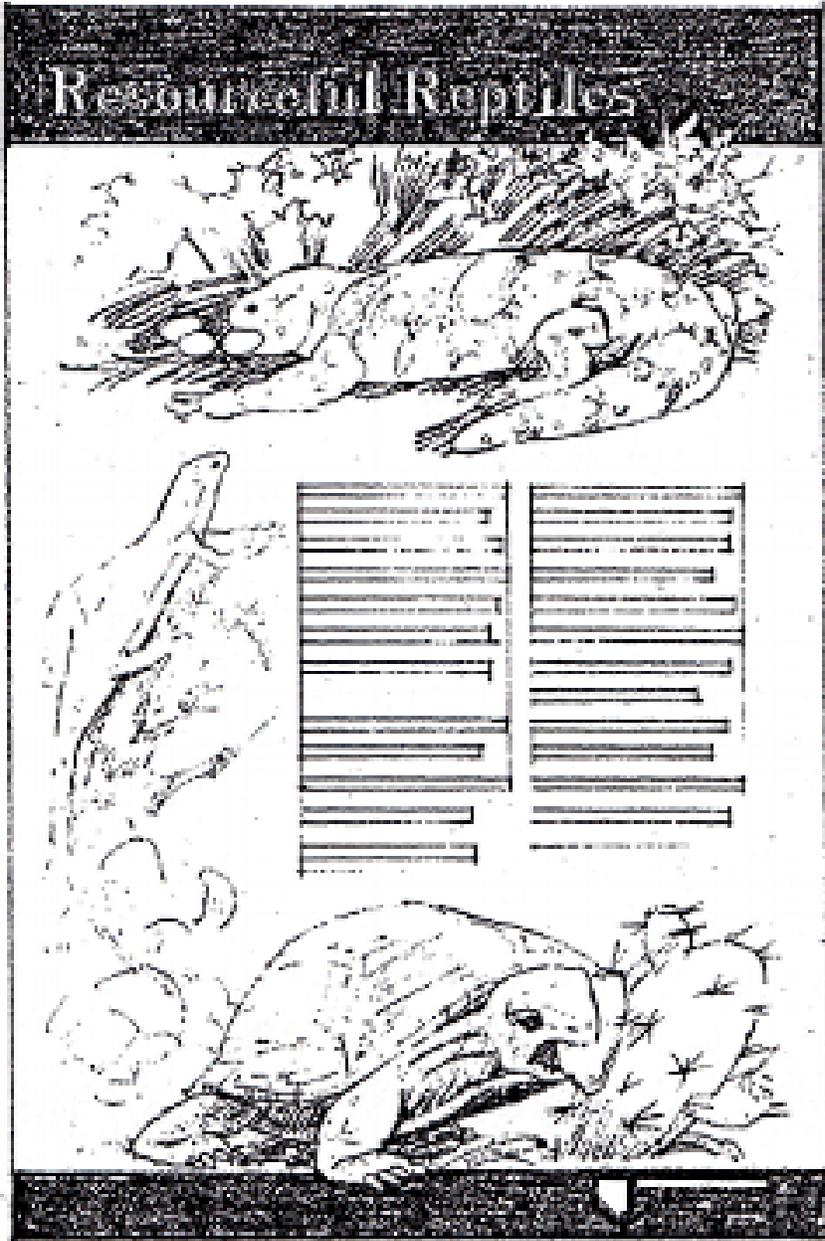
Low profile. Recommended for annotated plant identification panels with illustrations and text. *Maximum word count: 100.*

5”H X 7”W

(Alternative) [Metal micro-imaged] Recommended where one post and no framing is more effective. *Maximum word count: 75.*

3”H X 5”W

[Metal micro-imaged] For plant identification signs with common and scientific names only. *Maximum word count: 10.* May also be used vertically on post at 30-degree angle.



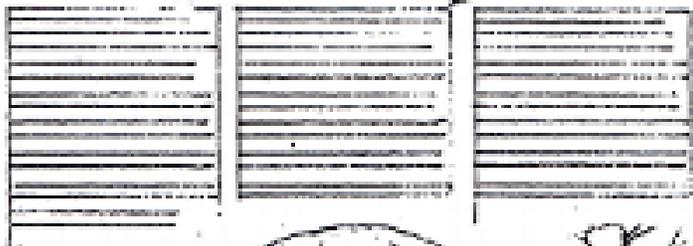
54"

36"

Type Spec
 Head 14/18 pt. Century Schoolbook
 Sub 12/18 pt. Century Schoolbook
 Text 10/18 pt. Century Schoolbook
 Credit _____

Pilley Associates /			
Title of Sheet <u>REPTILES - SNAKE - LIZARD</u> <u>INTERPRETIVE SIGN PANEL</u>			Sheet <input type="checkbox"/> of _____
Scale <u>1/4" = 1'</u>	Design <u>[Signature]</u>	Reviewed	Date

Resourceful Reptiles



36"

48"

Type Specs

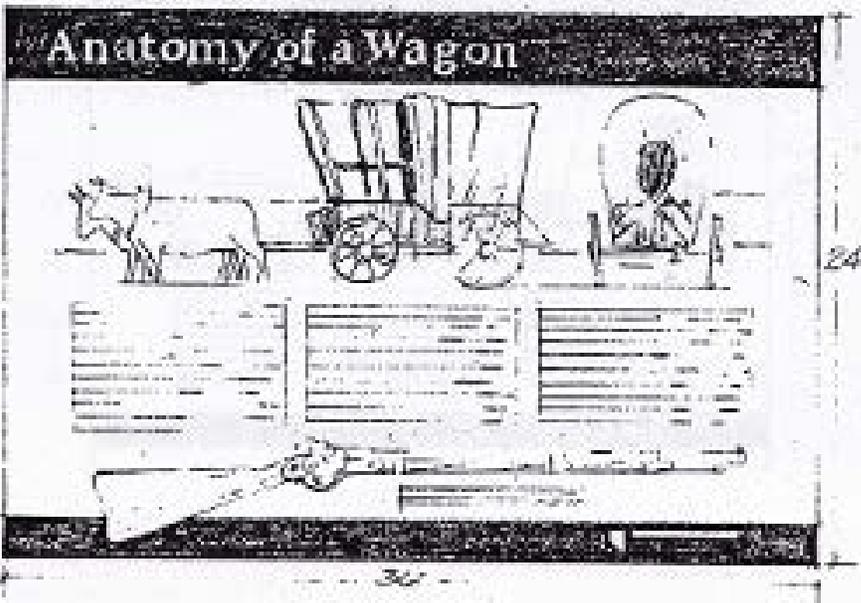
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Sub: _____

Text: 30 pt Century Schoolbook

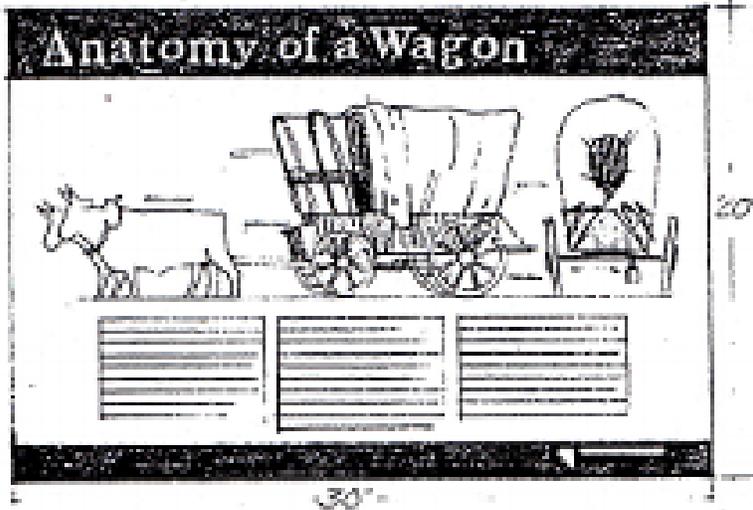
Credit: _____

Pilley Associates /			
Title of Sheet <u>Resourceful Reptiles Panel 1</u> <u>Resourceful Reptiles Panel 2</u>			Sheet <input type="checkbox"/> of _____
Scale <u>1 1/2" = 1'</u>	Design <u>J</u>	Reviewed	Date



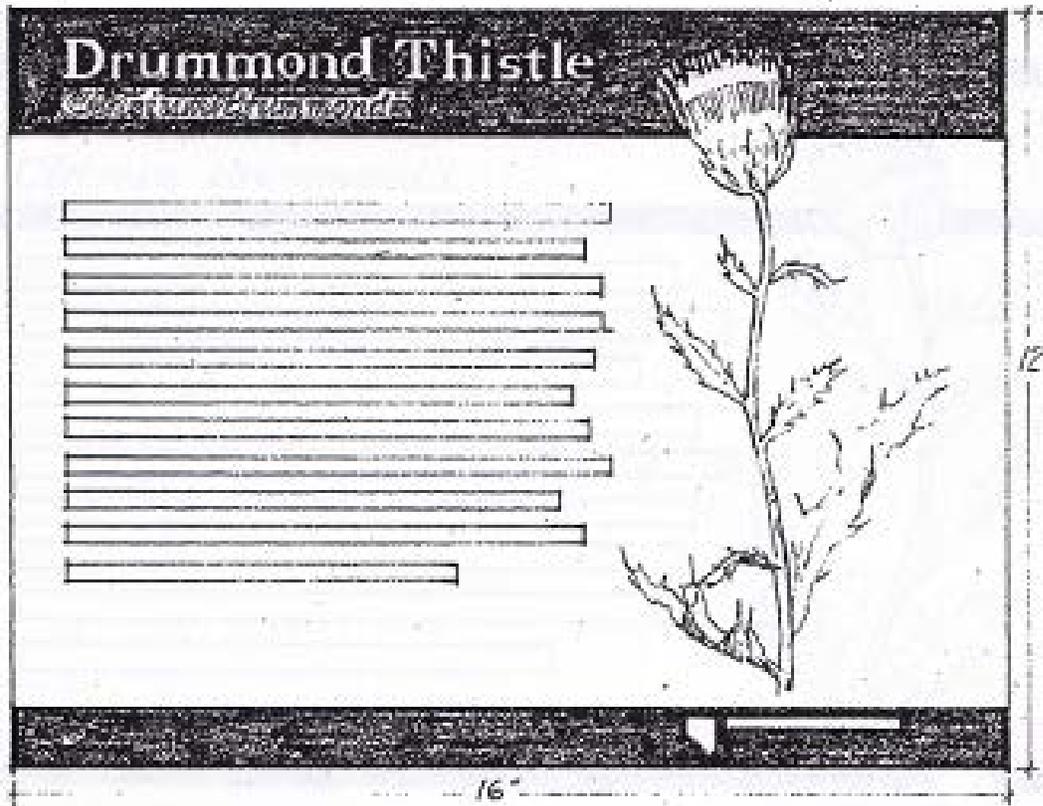
Type Books
 Head: 1870-1875 Century Encyclopedia
 Sub:
 Text: 1870-1875 Century Encyclopedia
 Credit: Century 1870-1875 Century Encyclopedia

Pilley Associates /			
Title of Sheet <u>1870-1875</u> <u>Century Encyclopedia</u> <u>Century 1870-1875</u> <u>Century Encyclopedia</u>			Sheet <input type="checkbox"/> of _____
Scale <u>1/2" = 1'</u>	Design <u>[Signature]</u>	Reviewed	Date



Type: Board
 Host: 1850s Central Pennsylvania Fair
 Sub: _____
 Text: 1850s Central Pennsylvania
 Credit: Copyright: 1850s Central Pennsylvania

Pilley Associates /			
Title of Sheet <u>1850s Central Pennsylvania</u> <u>Interpretive Panel Standard</u>			Sheet <input type="checkbox"/> of _____
Scale <u>1/2" = 1'</u>	Design <u>J.J.</u>	Reviewed	Date



Type Specs
 Head: 6 pt Century Schoolbook Bold
 Sub: 8 pt Century Schoolbook Bold
 Text: 20/18 Century Schoolbook
 Credits: _____

Pilley Associates /			
Title of Sheet <u>DRUMMOND THISTLE</u> <u>INTERP. SIGN - 70000000</u>			Sheet <input type="checkbox"/> of _____
Scale <u>3/8" = 1"</u>	Design <u>JD</u>	Reviewed	Date

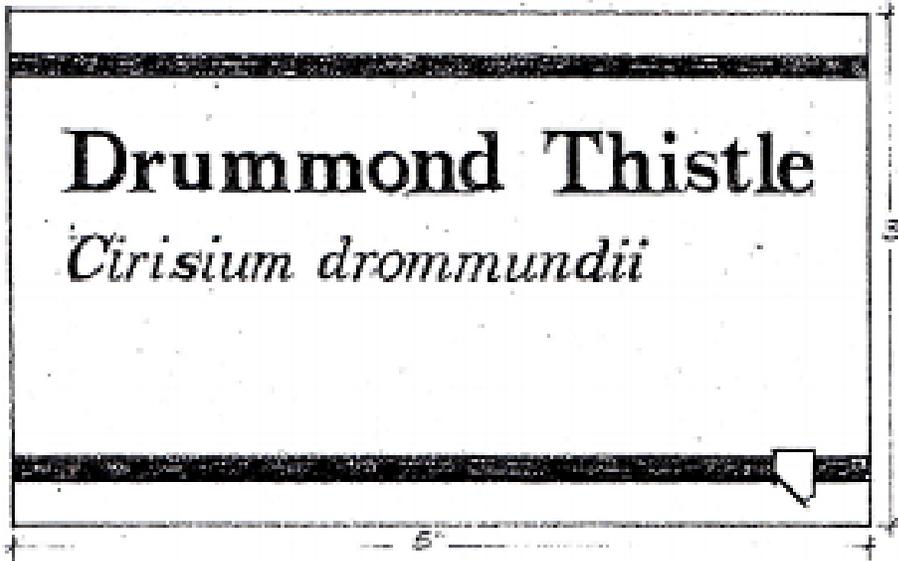
Drummond Thistle
Cirsium drummondii

7

5

Type Specs
 Head: 24 PT. COURIER, CONDENSED, BOLD
 Sub: 18 PT. COURIER, CONDENSED, ITALIC
 Text: 12/20 COURIER, CONDENSED
 Credit:

Pilley Associates /			
Title of Sheet <u>NEVADA STATE PARKS</u> <u>INTERP. SIGN STANDARDS</u>			Sheet <input type="checkbox"/> of <u> </u>
Scale <u>1/1</u>	Design <u>JD</u>	Reviewed	Date



Type Sizes
 Head: 36 pt. Century Gothic, Bold
 Sub: 24 pt. Century Gothic, Bold
 Text: _____
 Credit: _____

Piley Associates /			
Title of Sheet <i>ADDISON TRAIL PANEL DESIGN STANDARDS</i>			Sheet <input type="checkbox"/> of _____
Scale <i>1:1</i>	Design <i>JL</i>	Reviewed	Date

Fabrication

Only one production method is highly recommended for fabrication to all but the two smallest of the recommended sizes: porcelain enamel. It will accept all color requirements, it is extremely durable, and aesthetically pleasing.

Porcelain Enamel

The brightest, most crisp colors and images can be achieved with this material, for the images are not distorted by fiberglass or plexiglass protection. Any color can be matched, including all PMS colors. Halftones and four-color separations for full color photographs are produced on extremely fine-line screens (150 lines-per-inch), which obtains as fine an image as is obtained in the best printing techniques. The vivid colors do not fade. Custom hand-coloring of line art is possible without using four-color process.

The enamel surface is extremely durable and impervious to natural elements and most vandalism (ink, spray paint, lipstick, etc.). Vandal resistance of porcelain enamel is equal; to or greater than any with any other interpretive signing material.

It can be produced in custom shapes other than rectangles or squares, if unusual shapes are required.

Replacement costs are virtually the same per panel as the original.

Metal Micro-Imaged

This copyrighted term refers to the most sophisticated application of anodized aluminum available. Images are laid on by a photographic process, then dipped in vats to etch the colors and images. It is durable, fade-proof and relatively vandal resistant. Either line art or halftones can be used – and in combination. Color selection is rather limited, but the metallic colors are rich and have a great deal of dignity.

These panels require no framing; they float on the anodized aluminum base, which can match the background color of the panels. The supports are much less expensive than those required for porcelain enamel.

Serial corners and beveled edges can soften the outer corners of the panels. It is the only material that has this flexibility without incurring considerable additional cost in custom frames.

Replacement costs are virtually the same as the original panel cost. Their life expectancy is between 10 and 15 years.

This material has strict size limitations. The maximum panel dimensions are 24 by 36 inches.

For the Nevada State Park interpretive panels, metal micro-imaged is the best material to use for plant identification signs as well as for annotated, illustrated plant identification signs.

Frames and Supports

Porcelain enamel panels require both frames and supports. The effectiveness of interpretive panels is dependent upon the quality and professionalism of their framing and support system.

Frames/supports must secure the panels, hold them rigidly in place, and complement the graphics – not covering more of the surface than necessary. They must be relatively impervious to the elements, drastic temperature changes, and resistant to vandalism. Frames for low-profile panels must resist wear caused by hundreds of hands leaning on and rubbing the side framing and bear the weight without displacement. Preferably, frames and supports should be consistent in materials and color.

Though supports can be of several materials – stone, brick, concrete, wood or metal, all except the latter must be custom designed and built, adding considerably to the cost. Also, the Nevada climate must be considered, with its temperature extremes, intense summer heat, lack of humidity and, often, a minimum of shade.

The intense Nevada heat, plus the lack of humidity in most portions of the state, precludes wood as a viable alternative. It is the most susceptible to vandalism as well. Cast-concrete framing and supports are attractive and very subtle, but are more expensive in the long-run because of shipping costs to isolated sites and have strict size limitations.

Aluminum is the best material to consider for frames and supports; particularly to establish a consistency and uniformity and to minimize design and production cost. Aluminum would also be consistent with some previously established Nevada State Park wayside – panel installations, such as the east and west kiosks at Valley of Fire State Park.

One Maryland Company makes standard frames and supports in many of the sizes specified in these standards. (A rationale for some size selections!) The examples shown are an indication of the design and appearance.

Another firm, with production facilities in Nevada, is considering the manufacture of similar frames and supports within the next year (1994). There would be similar, of equal quality, but slightly different in design.

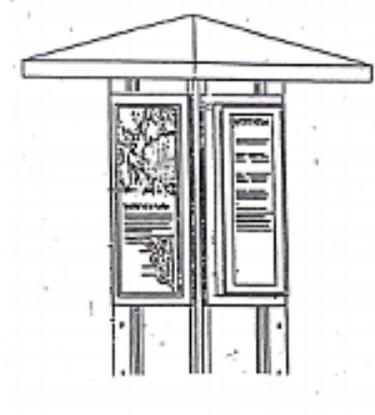
The aluminum frames and supports should be of a clean, simple design that does not overwhelm the panels they are supporting. They definitely should be sand-blasted to provide maximum adherence for the paint and a finish relatively impervious to handling.

A warm black is the color suggested for all frames and supports. Black provides continuity to the black used for all typography and line drawings in panels for every park without introducing yet another color. Also, it is a complementary contrast to the beige background consistent for all park panels.

Often a platform of stone, concrete, brick, gravel, or other materials is desirable (especially for triptychs), to prevent soil-packing and mud rings from occurring at their base in inclement weather. Visitors will not attempt to read the information on panels unless they can get close to them comfortably.

Upright units (54"H X 36"W and 48"H X 36"W) would be enhanced by having a roofing or canopy over them (unless they are to be wall mounted). This would give them more prominence, protect the visitor's eyes from sun and glare, and provide a longer life-span for the panels.

Roofing, shelters, kiosks, and bases or platforms for upright units should be designed by architects or landscape architects to blend into the park setting, using materials most appropriate to each site and situation. One example of triptych roofing is shown here.



Production Costs

There are too many variable factors in quoting prices to provide even rough estimates; the quality of the artwork submitted; the number and size of halftones; use of color (four-color process and/or hand-painting; the amount of type to be set; the complexity of the illustrations requested; the number of panels in an order (more per order usually means each will be less). Even production costs for photography and illustrations are too variable and complex to include in this proposal. Shipping costs are usually additional (FOB). And prices are usually valid for only six months from the date of quotation.

Production companies will gladly provide exact costs *after* the designer has established the size and quantity of panels, as well as final size and color specifications of all graphics, (photographs and line art) for camera-ready art.