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National Park Service Interpretive Design Center

# Wayside Exhibits Users Guide



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Division of Wayside Exhibits National Park Service Interpretive Design Center Hurpers Ferry West Virginia 1997 Most visitors to national parks are curious about what they see. They wonder how this building was used, how that mountain range formed, what birds live in this marsh, who fought in this meadow, how that old mill functioned. Although visitors are eager to learn more about the places they are visiting, too often there is no one to answer their questions or to stimulate their curiosity by asking other questions.

Wayside exhibits can do both. Because they are located outdoors, close to the features they interpret, waysides can readily answer the questions visitors have—where and when they have them and can nurture their curiosity by asking other questions as well. By providing immediate information, wayside exhibits can make visitors' experiences more meaningful and much more rewarding. Although a knowledgeable and articulate ranger will always be the most compelling way to interpret a place, wellcrafted wayside exhibits can be effective alternatives and can play essential roles in a park's interpretive program.

Wayside exhibits are effective for a number reasons. They are always on duty, available to park visitors twenty-four hours a day, every day of the year, year after year. Because of their availability, and their low-tech, user-friendly nature, waysides appeal to a wide range of visitors. Those who may be reluctant to enter a visitor center, view a motion picture, or participate in a ranger-led walk often will stop to enjoy a wayside exhibit. Despite their simplicity, wayside exhibits provide a compelling visual format. Current technologies allow the presentation of large, full-color illustrations and photographs and finely detailed maps.

The outdoor location of wayside exhibits encourage visitors to experience parks firsthand. Rather than offering virtual experiences, waysides foster a direct interaction between visitors and park environments. As visitors gain knowledge about a subject from one exhibit, they often look for related features or sites and apply what they have learned. Because wayside exhibits relate to specific places and features, they can be tailored to a variety of interpretive purposes. They can depict, for example, a place at another time—last winter, at the turn of the century, or at the beginning of the Paleocene. They can bring a feature into closer view when it is inconvenient or impossible to move closer to the feature, and they can portray processes that are too obscure or too immense to be noticed.

Wayside exhibits also serve practical purposes. They provide information about park facilities, services, and management policies. They alert visitors to safety or management issues at the point of danger or environmental impact, and they help protect resources by establishing an official presence at remote, unstaffed sites.

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Photographic exhibit on Park Avenue, Arches National Park





#### **Desert Life**

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Illustrated exhibit explaining Moab Fault, Arches National Park

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Moab Fault

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Besides their effectiveness, wayside exhibits are a good interpretive media choice because they are *economical*. They offer good value for several reasons. The cost of planning, designing, and fabricating wayside exhibits is less than it is for most other interpretive media. And, when new computerbased, large-format imaging methods are perfected, production times and costs will be even lower than they are now. Wayside exhibits also do not require the substantial investment of resources often associated with other media. They do not require the construction or remodeling of a visitor center, the hiring or training of staff, or the installation of special equipment.

Waysides are easy to maintain and repair. Exhibit panels require only an occasional cleaning with soap and water and a periodic application of wax. Common materials and simple, consistent designs ensure that most repairs to wayside bases can be made easily by park staffs.

Wayside exhibits are durable, some lasting 25 or more years. When panels do need to be rehabilitated because of environmental damage, vandalism, or new information, they can be easily replaced if original production materials have been preserved.

In short, wayside exhibits offer good interpretive value by providing convenient, useful information in an economical and durable format. The National Park Service has been producing outdoor exhibits since the first national parks were established. Since 1970, wayside exhibits have been developed through the Interpretive Design Center in Harpers Ferry, West Virginia. The people who work in the Center's Division of Wayside Exhibits believe that wayside exhibits are an effective interpretive medium and that NPS wayside exhibits are the finest available—reflecting the highest standards of editorial, design, and construction quality. They also believe that a reasonable price, rapid delivery, and a dedication to long-term service are just as important as quality.

This users guide provides a look at the various wayside products currently available to NPS interpreters. It is intended to help you determine if wayside exhibits are the best medium for your purpose, to help you select the best type of exhibit for your needs, to help you understand how wayside exhibits are produced, and to assist you in obtaining the exhibits you want. If you desire more information, or wish to discuss a specific project, please telephone the Chief of the Division of Wayside Exhibits at 304 535 6049.

**Project Initiation** Wayside exhibit projects begin with the determination that wayside exhibits can help a park meet its interpretive goals. This decision, primarily the responsibility of the park's interpretive staff, often is made during development of an Interpretive Prospectus. The IP suggests the best use for wayside exhibits and indicates how they would relate to other media. If a comprehensive prospectus does not exist, these issues can be addressed during the planning phase described below.

Funding is the other critical factor that must be addressed when initiating a project. Lineitem construction and ONPS funding are dedicated to existing or scheduled projects. Increasingly, money for wayside exhibits and other media—is coming from cyclic maintenance or repair and rehab funds, or as donations from friends groups, cooperating associations, and corporate sponsors.

**The Process** Wayside exhibits usually are developed with a team approach. Teams consist of a planner, designer, and production specialist from the Center and an interpreter and subject matter specialist from the park. Combining an interpreter's knowledge of site and subject with the technical expertise available at the Center helps ensure that exhibits are appropriate to a park's needs and that they are consistent with NPS standards. The planner and the park interpreter usually serve as team leaders to coordinate the project and to make sure that colleagues are included when needed.

Although no projects are alike, most proceed through three phases: planning, design, and production.

Briefly stated, planning is the selection of specific sites and subjects for wayside exhibits and the development of text and graphic materials. Planning usually is accomplished in three phases. During the first phase, in which the planner visits the park, interpretive themes are determined, locations and subjects for specific exhibits are identified, and resource materials are collected. Then, in the second phase, the planner drafts a project proposal listing all the recommended exhibits by site and subject and submits it to the park for review. The third and most complex part of planning is the development of content for each exhibit. Working closely with the park interpreter, the planner prepares the exhibit text, acquires photographs, and directs the creation of original graphics-maps, diagrams, and illustrations.

Using the components developed during the planning process, the designer creates a computerized layout for each exhibit panel. The designer's goal is to ensure that an exhibit's graphic components work effectively together to support the interpretive purpose. The designer's challenge is to create exhibits that are tailored to specific places while also helping to reinforce the NPS's overall identity and to do both in a way that is visually appealing to park visitors. Once completed, layouts are assembled into a wayside exhibit plan that is sent to the park for review. With approval of the plan, the project moves into its final phase-panel imaging and fabrication of the bases.

The manufacturing of wayside exhibits is accomplished by commercial vendors working under the guidance of the Center's production specialists. The various panel imaging methods and exhibit bases currently available are presented on the pages that follow along with information to help you determine which is best for your park. Exhibit bases are installed customarily by park maintenance staffs using written and videotaped instructions provided by the Center. Production specialists also are available to provide on-site assistance.

The process described above works well for most wayside exhibit projects, especially those that include many exhibits. For projects that include six or fewer exhibits, the Center's Technical Assistance Program may be appropriate. This program is designed to assist parks in obtaining wayside exhibits directly from contract sources. Although the Center can provide a complete range of professional services for those who desire them, the Technical Assistance Program allows parks to select specific services and to play a more direct role in the acquisition process. The goal is to expedite the development of wayside exhibits while ensuring that NPS quality standards are maintained.

For information about the Technical Assistance Program, please telephone 304 535 6434. The program's coordinator can provide information, help you initiate a specific project, and guide you through the project to completion. Although National Park Service wayside exhibits are offered in a variety of styles and sizes, most are of two types: low profile and upright. Low profile exhibits (see pages 14-17) are low, angled panels that provide an interpretive message related to a specific place or feature. They usually include one or more pictorial images and a brief interpretive text. Upright waysides (pages 18-21) typically provide more general *information*, rather that site specific *interpretation*. Upright waysides often are located near a visitor center or trailhead to provide information about park facilities, programs, and management policies.

**Panels** The Center presently uses three panel imaging methods: screen-printed paper embedded in fiberglass, porcelain enameled steel sheets, and digital computer prints. Other methods are available but are not recommended for most applications.

The relative merits of each imaging method are presented on the following pages. Which of the three is best suited to your needs depends on a variety of factors. Initial cost is, of course, important, but other questions should be considered as well: will the exhibits be subjected to environmental extremes; do you have enough staff to provide regular inspections and maintenance; will the information presented need to be changed frequently? Perhaps the most critical factor to consider is the behavior of your visitors. If you suspect that the exhibits will be vandalized, fiberglass panels are probably the best choice. Although not nearly as durable as porcelain, fiberglass is much less expensive to replace. In fact, under the Center's Minor Rehab Program (see page 24), fiberglass panels can be replaced at no charge to your park.

At this writing, the Center produces about 50% of panels in fiberglass, and 50% in porcelain. Although each method yields exhibits that are attractive and durable, both are somewhat expensive and require considerable time to fabricate. The third method digital computer prints—is a new technology that promises to dramatically lower costs and substantially shorten production times. When questions about its outdoor durability are resolved, this method will be broadly applied, and digital prints will begin to replace fiberglass panels.

**Bases** Wayside exhibit bases are designed to accommodate all three types of panels. A standard base consists of a frame, which holds the exhibit panel, and legs, which hold the frame and panel at the preferred viewing angle. Most exhibit bases are installed by burying the legs in the ground, but—as illustrated on pages 16, 17, and 19—bases can be adapted to a variety of site conditions.

NPS low profile bases are designed to minimize their presence by using the least material required to securely hold an exhibit panel. Although they are usually painted in either of two standard colors, bases can be painted to conform with any environment to further reduce their visibility.

After trying many other materials, aluminum was selected as best for exhibit base construction. It is lightweight, strong, reasonably priced, and can be easily cut, formed, and finished. Most important, aluminum is durable. With only limited care, aluminum wayside bases will last indefinitely, even in the most extreme environments. If they are damaged, the modular design of NPS exhibit bases allows easy repair with components supplied by the Center.

#### Porcelain Enamel Panel

Porcelain enamel panels are made by fusing ground glass that has been colored with mineral oxides to steel sheets at very high temperatures. The process allows the reproduction of full-color photographs and finely detailed illustrations and maps. Although porcelain panels are very durable—guaranteed against fading for 25 years—they can be damaged by determined vandals. An occasional application of auto wax helps to maintain porcelain's lustrous appearance.

Panel Sizes (W x H): 24x18, 24x24, 36x24, 42x24", Custom Reproduction: Full Color, Spot Color, Black and White Resolution: Fine Resistance to Weathering: Excellent Resistance to Vandalism: Very Good Maintenance: Minimal Projected Life Span: 25+ Years Relative Initial Cost: High Relative Replacement Cost: High



# Fiberglass Embedded Panel

Fiberglass embedded panels are made by screen printing graphics, maps, and text onto archival-quality paper and embedding the print in protective layers of fiberglass. Although these panels can be scratched, minor damage can be removed or diminished with marine wax. To keep replacement costs low, multiple paper prints are made and later embedded as needed. Making extensive content changes to existing prints, however, is difficult.

Panel Sizes (W x H): 24x18, 24x24, 36x24, 42x24", Custom Reproduction: Full Color, Spot Color, Black and White Resolution: Fine Resistance to Weathering: Good Resistance to Vandalism: Good Maintenance: Moderate Projected Life Span: 2 to 10 Years Relative Initial Cost: Moderate Relative Replacement Cost: Low



#### Digital Print Panel

This process reduces fabrication costs by imaging directly from a computer file, thus avoiding many production steps required by screen printing or porcelain imaging. The resulting vinyl print is adhered to a sheet of aluminum and covered with a clear protective laminate. Although visual quality and outdoor life are somewhat less than porcelain or fiberglass, this method allows revisions to be made easily and inexpensively.

Panel Sizes (W x H): 24x18, 24x24, 36x24, 42x24", Custom Reproduction: Full Color, Spot Color, Black and White Resolution: Medium Resistance to Weathering: Uncertain Resistance to Vandalism: Moderate Maintenance: Moderate Projected Life Span: 1 to 4 Years Relative Initial Cost: Low Relative Replacement Cost: Low



# Cantilevered Low Profile Base

This new version of the low profile base has become the preferred style for NPS interpretive exhibits. The base's simple, unadorned form helps to diminish its visual intrusion and makes it appropriate for any park landscape. Made entirely of welded aluminum extrusions, the base assembly will not rust or corrode, even in harsh marine environments. A textured finish, polyurethane enamel paint adds to the base's durability. When necessary, exhibit panels can be easily replaced by removing rivets that secure the top of the frame assembly.



#### Traditional Low Profile Base

Introduced into the national parks in the early 1980s, this low profile base quickly became the standard model for interpretive wayside exhibits. Like the newer cantilevered model, the traditional base is made from aluminum, is available in a variety of textured-finish, polyurethane enamel paints, and is engineered to allow easy removal and replacement of exhibit panels. The traditional base does vary slightly in design from the cantilevered style; its legs are larger and extend from the midpoint, rather than the front, of the panel frame.



# Custom Mounted Low Profile Bases

Using custom designed metal brackets, low profile panels can be securely attached to wooden rails, allowing interpretation on elevated platforms and walkways and on piers or wharfs. Special surface mounts or movable waysides may also be used in these places. Mounting brackets also allow attachment of low profile exhibit panels to railings made of metal tubing. Low profile exhibit panels can be used without legs or with modified legs by mounting the frame assembly directly to existing architectural features. Panels can be attached securely and attractively to walls made of brick, stone, stucco, or concrete with little or no harm to the wall.



Rail Mount For Panel Sizes (W x H): 24x18, 24x24, 36x24, 42x24", Custom Front Edge Height Above Grade (Z): 32" Angle: 30° or 45° Colors: Medium Gray, Dark Brown, Custom



Masonry Mount For Panel Sizes (W x H): 24x18, 24x24, 36x24, 42x24", Custom Front Edge Height Above Grade (Z): 32" Angle: 30° or 45° Colors: Medium Gray, Dark Brown, Custom



## **Portable Exhibit Bases**

Several types of movable exhibit bases are available, both in the low profile cantilevered version (illustrated below), in the low profile traditional style, and in the upright version. Movable exhibits are recommended when a fixed installation is not permitted,

when quick removal of the exhibits may be necessary (to avoid floodwaters or snowplows), or when interpreting activities that move around (archeological digs, building restorations, or seasonal animal behavior).



# Upright Base

Upright wayside exhibit bases are made of the same materials as low profile bases. They are, however, distinctly different in form and purpose. Designed to stand vertically so that they attract attention, upright waysides typically provide practical information to visitors rather than site-specific interpretation. Upright exhibits often are used at trailheads or boat ramps, near visitor centers, in parking areas or campgrounds, and at similar points of assembly or access.

For Panel Sizes (W x H): 36x48", Custom Bottom Edge Height Above Grade (Z): 28" Angle: Vertical Colors: Medium Gray, Dark Brown, Custom



#### Dunetin Cases

Visitor information that needs to be presented quickly or changed frequently is best posted in a bulletin case. Designed to be installed on legs or attached directly to a wall, the standard NPS bulletin case features a continuous-hinge door with double locks, clear 3/16" Lexan fronts, and a selection of backpanels: cork for pins, steel for magnets, or fabric for hook-and-loop attachment. The bulletin case is soundly constructed to provide maximum protection from severe climatic conditions and is ventilated to reduce interior condensation.



### Upright Cluster Bases

When more information needs to be presented than a single exhibit can accommodate, multiple upright panels and bulletin cases can be used. Two or three exhibits can be arranged in a variety of ways: in a straight line, in an angled line (as illustrated below), in a triangle, or in a square. In a straight line configuration, each exhibit section can include—back to back—two information panels, or two bulletin cases, or one of each.



#### Kiosk Kit

Three-sided upright cluster bases can be equipped with roofs to protect them and visitors from sunlight, rain, and snow. The kiosk is designed to accommodate both information panels and bulletin cases. Construction drawings and primary hardware components (including the roof "spider" bracket) are available from the Center. On-site assembly of the structure is performed by park staff using wood components obtained locally.



# Ancillaries

The Center offers several ancillary items designed to serve parks' special outdoor needs and to visually complement the wayside exhibits featured on the previous pages. Shown from left to right are an audio unit for presenting recorded messages; a pamphlet dispenser for use at trailheads or after hours at visitor centers; a coin box for trail brochure donations; and a low profile base for identifying features along trails. The latter can accommodate any of the panel materials described on pages 11-13.



Coin Collection Box Front Edge Height Above Grade (Z): 35" Angle: 30° Colors: Medium Gray, Dark Brown, Custom For Panel Sizes (W x H): 5 9/16"x11 7/16" Front Edge Height Above Grade (Z): 18" Angle: 30° Colors: Medium Gray, Dark Brown, Custom





The wayside exhibits featured in this guide are designed to be functional, attractive, and reasonably priced. Most important, they are designed to be durable. For the past 25 years, Center employees have searched for base construction materials and panel imaging methods that are suitable for long-term outdoor use in park environments, materials and methods that withstand intense sun, corrosive agents, extreme heat and cold, and vandals—plus the occasional moose in need of a scratching post.

General Maintenance Most parks lack the resources for frequent inspections and maintenance, so the materials used do not require frequent or complex care. Exhibit panels and bases can be cleaned with soap and water; most also can withstand other, harsher cleaning agents. Common glass cleaners are recommended for removing graffiti made with markers or paint. Exhibit panels also look better-and last longerwith an occasional application of wax (auto for porcelain, marine for fiberglass). Waxing will conceal minor scratches in fiberglass panels and will diminish more serious damage. Chips in porcelain panels should be covered with automotive touch-up paint so that the steel subsurface does not rust. Scratches on exhibit bases can be covered with touchup paint supplied by the Center in standard colors. If bases become seriously scratched, paint can be removed by sand blasting and new paint applied on-site with portable equipment. When bases are severely dented or bent, legs and frame assembly components can be obtained from the Center.

**Exhibit Repair** NPS wayside exhibits are very durable, but most eventually will require rehabilitation or replacement. Even those that endure will need to be replaced as information becomes dated.

The Division of Wayside Exhibits Minor Rehab Program was established to support park efforts to care for their exhibits. Besides the touch-up paint and hardware components mentioned above, the program provides information about installation, drive rivets for securing frame members after panel replacement, and instructions regarding on-site base repainting. The primary purpose of the program, however, is to provide a mechanism—and funding—to replace fiberglass exhibit panels that are aged, damaged, or outdated.

The process works like this. When fiberglass panels are initially produced, 15 prints are imaged on paper. Two of these are embedded in fiberglass and sent to the park. One is installed. When the panel needs to be replaced, the park uses its backup panel and notifies the Center that a new backup is needed. A duplicate print is embedded and sent to the park.

All costs are covered by the Minor Rehab Program, but funds are limited, so projects must be prioritized. The best bet is to request work early in the fiscal year. Once funds are depleted, parks may use their own funds or wait until the next year. Priority is given to exhibits originally produced by the Center. Because the production material for exhibits fabricated by other sources is not maintained at the Center, and because many of these exhibits are produced by non-standard techniques, it is often inordinately expensive to rehab them.

For more information about the Minor Rehab Program, please telephone the program coordinator at 304 535 6033. The Division of Wayside Exhibits will do all it can to make sure that your wayside exhibits remain an appealing and effective part of your interpretive program.

	<b>P</b>	<b>P</b>		
Ancillaries	U Audio Unit	Pamphlet Dispenser	U Coin Box	Trailside Low Profile Base
For Panel Sizes 36"w x 24"h		-	-	
42"w x 24"h				
36"w x 48"h				
24"w x 24"h				
24"w x 18"h				
5-1/2"w x 11-1/8"h				•
Custom				
				_
Angle				
30°	•	•	•	•
45°				
Vertical				
	_			_
Color				
Medium Gray	•	•	•	•
Dark Brown	•	•	•	•
Custom	•	•	•	•
				_
Mounts				
In Ground	•	•	•	•
Surface Plate	•	•	•	•
Rock Anchor	•	•	•	•
Masonry				
Rail				
Portable Sled				
Socket		•	•	•
Wall				
Custom	•	•	•	•

#### In D Hayside Limitor Options

Porcelain Enamel

Panels

Panel Sizes

36"w x 24"h

42"w x 24"h

36"w x 48"h

24"w x 24"h

24"w x 18"h

Custom

5-1/2°w x 11-1/8°h

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Fiberglass Digital Embedded Print

B

Custom

5-1/2"w x 11-1/8"h

0

	APO	<b>FP</b>	Ŵ	H
Bases	Low Profile Cantilevered Traditional Frame Only	Upright Single Bulletin Case	Cluster	Kiosk
For Panel Sizes				-
36° w x 24"h	• • •			
42"w x 24"h	• • •			
36"w x 48"h		• •	•	•
24°w x 24"h	• • •			
24"w x 18"h				

Reproduction		-		
Full Color	•	•	•	-
Spot Color	•	•	•	
Black and White	•	•	•	

Angle	A
30°	3
45"	4
Vertical	

Color						Coi
Medium Gray	•	•	•	• •	•	Me
Dark Brown	• •	•	•	• •	•	Dar
Custom	•	•	•	• •	•	Cus

Mounts			_		_	Mou
In Ground	• •		•	•	• •	in Gr
Surface Plate	• •		•	•	• •	Surfa
Rock Anchor	• •		•	•	• •	Rock
Masonry	• •	•				Masc
Rail				· ·		Rail
Portable Sled	• •					Porta
Socket	•		•	•	•	Sock
Wall		•	•	•		Wall
Custom	•	•	•	•	• •	Custo

The drawings above are representative of categories which include options not shown. All dimensions are approximate.





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