Chapter 7: Using Museum Collections in Exhibits

CHAPTER 7: USING MUSEUM COLLECTIONS IN EXHIBITS

A. Overview

1. *What information will I find in this chapter?*

This chapter explains how you develop exhibits that feature museum and archival collections. It outlines the steps that you need to take when you develop and install an exhibit, or when you arrange for the exhibit of park collections.

Although many of the principles outlined in this chapter apply to the presentation of museum collections in most types of exhibits, the chapter doesn't specifically address the following:

- collections on exhibit in furnished historic structures
- exhibits without original museum objects, specimens or archival items, such as two-dimensional poster, panel, or World Wide Web exhibits
- mobile or outreach exhibits
- office art or display of museum collections in administrative offices
- visible storage
- wayside exhibits
- traveling exhibits initiated by the park

Refer to Chapter 8 for information on furnished historic structures.

2. *What is a museum exhibit?*

A successful museum exhibit tells a good story. The exhibit connects to viewers through objects, label copy, dioramas, exhibit props, and other resources. It ensures the display of collections according to a selected rationale. Effective display techniques transmit exhibit themes and ideas. Labels give meaning and context to the exhibit. Generally, exhibits are developed through study and research of the subject and related collections. Exhibit curators select and arrange objects, specimens, images, and documents to illustrate the exhibit themes. A museum exhibit should facilitate a productive encounter between the object and the visitor. It should encourage learning and inquiry. An effective exhibit gives reign to the visitor's imagination. It should create a direct link to an authentic past, a sense of immediacy and intimacy. Exhibits should provide a deepened understanding and appreciation of a particular individual, people, places, structures, objects, processes or an event, or a habitat, including flora, fauna, and geology.

3. *Why does the NPS produce exhibits?*

Exhibits are the primary and traditional means by which the park museum reaches its public. Exhibits allow visitors to learn about park resources. Park exhibits communicate information, concepts, ideas and stories about people, events, activities, or the natural world that a park commemorates or preserves. NPS exhibits provide the "real thing," or the original object in context or in the place where people lived or worked, where events took place, or where the animals roamed or the specimens were collected. Public displays allow NPS staff to present the latest research on the park's resources and reach diverse park audiences. They should engage visitors in meaningful dialogue about issues pertinent to the museum's mission and goals. NPS preservation, collections management, research, and education goals are achieved through exhibits.

2. *Why should I use museum collections in exhibits?*

In addition to information provided by exhibit labels, objects themselves have the power to transmit a range of meanings. When you put a museum object on exhibit, you allow viewers to see the "real thing" rather than a reproduction, virtual object, or image of the item. The real object fires the imagination. Paul Perrot, in *The Smithsonian Experience* (1977) made the definitive statement on why museum objects should be used in exhibits:

"Collections are the raison d'être of museums. They are the source from which the museum's unique role in the cultural fabric of society emanates. They are the basis of its contribution to scholarship, the instruments of its education role, and the cause of its public enlightenment."

The opportunity to experience and encounter an authentic object from another time and place is invaluable. A museum object is powerful because it provides a tangible connection to a time, place, event, or person. The museum object is documented as being associated ("being there") with or used by an eminent figure at a particular time and place. The specimen, plant, or animal actually existed in what is now the park, in the recent or distant past. The "real" object communicates directly to the visitor, providing a direct link to another time. Exhibits of museum collections provide the visitor an opportunity to see original items that are directly associated with the park and the values it is dedicated to preserving.

B. Finding Background Information

The park's enabling legislation, park history, interpretive planning documents, and other park documents often yield exhibit background information and very often, an exhibit subject. The park documents noted below may provide you with information useful for developing a park exhibit.

1. *How do I identify the need to develop an exhibit?*

The need to develop a park museum exhibit is noted in several NPS documents. The park usually initiates the exhibit based on the need

identified in one or more of the following documents:

- Congressional mandate establishing the park.
- NPS *Management Policies*, Chapter 9: Visitor Facilities, indicates that visitor centers, including museums and exhibits are necessary for a quality visitor experience.
- *General Management Plan* (GMP) outlines interpretive themes, proposes locations for informational and interpretive facilities, examines visitor needs and use trends, and sets the general direction for resource interpretation, preservation and visitor use.
- *Comprehensive Interpretive Plan* (CIP) identifies all interpretive themes and needs in the park and includes a long-range interpretive plan or strategy, the annual interpretive plan, and a park interpretive database that compiles various interpretive data.
- *Long Range Interpretive Prospectus* (LRIP) that is part of the CIP, is developed for a specific project. See B.2. for additional information.
- *Interpretation and Visitor Services Guideline* (formerly NPS 6), Chapter 5, Section 2, Exhibit Design, Production and Rehabilitation discusses the development or rehabilitation of exhibits.

2. *What NPS documents have information I can use to develop an exhibit?*

The following NPS documents contain information about various aspects of planning and implementing NPS museum exhibits.

- *General Management Plan* (GMP) outlines interpretive themes, proposes locations for informational and interpretive facilities, examines visitor needs and use trends, and sets the general direction for resource interpretation, preservation, and visitor use.
- *Historic Structures Report* includes information on the historical evolution of a historic structure and recommendations for treatment and use.
- *Historic Furnishings Report* (HFR) provides information on the principal occupants or users of the structure, periods of use, and significant events that occurred at the site. It includes available information on the original historic furnishings of a particular room, rooms, or an entire structure. Historic photographs and inventories provide supporting evidence, and are used to furnish the room or structure. It also contains information on the interpretive objectives of the room or structure and the historical occupancy of the site.
- *Historic Resource Study* provides information on all of the park's historic resources, including historic structures, archeological sites, and museum collections.

- *Scope of Collection Statement* is the basic document that outlines the scope of the park's museum and archival holdings at the present, and for the future. It outlines the topical or thematic coverage, key groups and individuals, activities and events, geographic focus, and time period to which all collections must relate. It describes the types of objects that should be acquired for the collection. For additional information, refer to *MH-I*, Chapter 2: Scope of Museum Collections.

- *Long Range Interpretive Prospectus* (LRIP) identifies specific interpretive themes and objectives. It makes recommendations concerning appropriate media to blend the park's interpretive program into a coherent whole. The LRIP is a long-term strategic plan that forms the basis for all park interpretive actions. The LRIP outlines the park's primary interpretive themes and messages park management wants to impart to every park visitor. The LRIP outlines significant park resources and gives the park's legislative history.

The park's thematic and interpretive messages are multi-disciplinary. Visitor services include museum exhibits, historic furnishings, wayside exhibits, multi-media, features, and talks and walks. The LRIP identifies actions needed to achieve those goals. For additional information, refer to the *Interpretation Guideline (*formerly NPS 6) and the *Planning for Interpretation and Visitor Experience* document prepared by the Department of Interpretive Planning, Harpers Ferry Center (HFC), 1998. Both documents can be downloaded from the Web at <http://www.nps.gov/hfc>.

3. *Where do I go for help when planning an exhibit?*

When you initiate a new exhibit or update an existing one, you should consult with your regional/support office (SO) curator and HFC, Department of Exhibits, and Department of Conservation staff (<http://www.nps.gov/hfc>). HFC staff can provide you with useful advice and information about a broad range of exhibit and conservation-related activities and services, including contracting with a conservator or exhibit design companies.

- *Harpers Ferry Center, Department of Exhibits*

  HFC, Department of Exhibits services include planning, consultation, development, design, fabrication, production, and installation, as well as developing a request for proposal (RFP), and managing a contract for the park. The park usually enters into a project agreement with HFC. The project agreement outlines the role that the park, HFC, or a design and planning company will have in the planning, development and installation of the exhibit. See Figure 7.1, Sample Project Agreement between the Park and Harpers Ferry Center, Department of Exhibits. If the park plans to contract for exhibit services, then the request for proposal (RFP) outlines the exhibit's educational

goals, the look and feel of the exhibit, selection criteria, and exhibit experiences the park wants the visitor to have, as well as pertinent references.

You can find information and related software on exhibit planning, planning and design specifications, fabrication specifications, exhibit numbering system guidelines, and NPS indefinite delivery, indefinite quantity (IDIQ) contracts at <http://www.hfc.nps.gov/>.

- *Harpers Ferry Center, Department of Conservation*

  HFC, Department of Conservation can provide you with exhibit conservation information. Consult with staff when you select objects for exhibit to determine whether they will need conservation or treatment. HFC staff can either perform the work for you, or recommend conservation contractors to do the work. The Conservation Department treats and stabilizes objects for display; provides technical review of exhibit plans; reviews and recommends materials and environments for exhibits; fabricates mounts for objects; and travels to sites to install artifacts. Refer to *Exhibition Guidelines: Incorporating Conservation into Exhibit Planning and Design* prepared by HFC, Department of Conservation at <http://www.hfc.nps.gov/>. For information to help insure preservation of objects on exhibit, refer to Section E and to the bibliography in Section M. *MH-I* and the *Conserve O Gram* series also provide extensive information on object preservation, lighting and relative humidity, and mounting techniques.

- *Museum Colleagues*

  You'll also gain valuable practical advice by talking to curators at local museums and historical societies and to NPS colleagues who have developed and installed exhibits or coordinated the development and installation of exhibits.

> ***Before you approach a contractor, consult with HFC exhibit and conservation staff and colleagues who have installed exhibits. They can give you useful advice, suggestions, and names of possible contractors.***

4. *What steps do I need to take to develop an exhibit contract?*

An exhibit contract should contain the steps outlined below. The contract should also identify who is responsible for each phase of the project:

- ***Exhibit mission statement:*** The mission statement identifies the exhibit goal. It can be a short paragraph, outline, or a detailed description. The exhibit mission statement articulates the common vision held by park museum management and staff. The process of developing a mission statement ensures that there is ample discussion about the exhibit, and that all involved share the common goal. It can do much to cut down on the need for

changes once the work on the exhibit has started.

- ***Scope of work:*** The scope of work includes:
  - design firm or contractor's tasks
  - task specifications
  - deliverables, such as cases, mounts, materials, and exhibit furniture
  - structural requirements such as walls, beams, and stability of cases
  - safety requirements, including adherence to all codes such as wiring
  - performance criteria
  - performance time frame
  - evaluation criteria
- ***Inspection schedule:*** Make sure that a qualified individual does the inspection.
- ***Project schedule:*** Divide the work and deliverables into achievable phases.
- ***Budget***
- ***Payment schedule***

Refer to Figure 7.2, Sample Fabrication and Installation Contract Wording, for sample wording to include in an exhibit contract.

5. *What's the park's role in determining who'll work on an exhibit?*

The park, as the initiator or "owner" of the exhibit makes the critical decisions about the exhibit. Park management determines whether park staff, HFC, Department of Exhibits, or an outside contractor, or a combination of the three, will work on the exhibit and the role of each. When determining how involved park staff will be, the park needs to consider whether there's sufficient park subject-matter expertise, exhibit development experience, and park staff availability. The exhibit project coordinator, who oversees all aspects of the exhibit, can be a park staff member, HFC exhibit curator, or a member of a contract exhibit design and planning firm.

When evaluating potential proposals, the park should get satisfactory answers to some of the following questions:

- How well does the contractor communicate exhibit themes?
- Is the exhibit creatively designed?
- Does the exhibit use a variety of material and media?
- Are diverse audiences sensitively handled, including special populations?
- How easily can the exhibit be maintained?

C. Getting Started

1. *When do park exhibits happen?*

Park museum exhibits provide an ideal medium for sharing park resources and research with the general public and special interest groups. They allow the park to meet its legislative, interpretation and education mission. Parks initiate exhibits to interpret park resources, including museum collections. A park museum exhibit may be triggered by one of the following:

- new visitor center opening
- rehabilitation of an existing installation
- new discoveries or interpretation of park resources, including museum and archival collections
- special events
- commemoration of a significant donation to the park collection

The park usually seeks line item funding to do an exhibit, although cooperating associations and other sources may also fund exhibits. Refer to Figure 7.3, Park Exhibit Checklist, for an outline of the steps involved in developing and installing an exhibit.

2. *What kinds of museum exhibits are there?*

There are many kinds of exhibits. Exhibits can be long-term or temporary. Generally, temporary exhibits range from a few months to three years and can include display of park collections, borrowed objects, or traveling exhibits. Long-term exhibits last longer and temporary exhibits are often extended. If your park has an exhibit that will be up or has been up for an extended period, you need to make a special effort to ensure the well being of the objects on exhibit. Work with a conservator to arrange for frequent object rotation and conservation of objects, to create optimum exhibit conditions, and to provide a post-installation maintenance, monitoring and inspection schedule. Refer to Section H for information on exhibit conservation. You also need to make provisions for the study of objects on exhibit, and if necessary, the loan of items on exhibit to other museums for the duration of the

exhibit.

Regardless of duration, exhibits on selected topics may feature items from the park museum's collections. They can also be supplemented by objects borrowed from other museums. Other special exhibits may be displays obtained from traveling exhibit services or loans from another institution. Exhibits can be:

- thematic, such as U.S. Presidents or the Uniforms of the Civil War
- systematic, such as Rhododendrons of the Great Smoky Mountains
- material-oriented, such as Survey of Pueblo Ceramics or Prehistoric Tools of Tennessee

Long-term and temporary exhibits can be one or a combination of the exhibit types noted above. However, all exhibits have some things in common. All exhibits need a design and circulation layout, although they may use a variety of display techniques. All exhibits must convey information. Exhibits should involve multi-sensory experiences, appeal to different learning styles, and make good use of a well-maintained multi-media technology.

3. *What types of exhibits will fit my park's exhibit needs?*

The type of exhibit you choose to do will depend on what the park needs. Evaluate available resources, including staff and funding, as well as the time required to develop, produce, and install the exhibit. Different kinds of exhibits include:

- new long-term exhibits
- rehabilitated exhibits
- temporary exhibits
- off-site exhibits developed by the park
- traveling
- single venue
- school exhibits
- free-standing exhibits
- table-top exhibits
- recent acquisition exhibit
- featured collections case (such as "treasures from the park collections")

4. *What materials, media and resources do park exhibits contain?*

Traditional exhibits, as opposed to virtual or electronic exhibits, include some of the following:

- selected collection materials, such as:
  - cultural objects
  - natural history specimens
  - archival or manuscript materials
- individual captions
- label copy that conveys the intellectual content, themes and concepts of the exhibit
- graphics and artwork developed or reproduced expressly for the exhibit
- reproductions
  - two-dimensional reproductions, such as images and documents
  - three-dimensional reproductions of specimens or objects
- multi-media
  - audiovisual programs
  - interactive devices
  - computer programs
- dioramas
- mannequins
- exhibit furniture (props), such as stands and brackets

5. *Who should be on the park exhibit team?*

An effective and productive team includes the right people with the appropriate skills. A successful team needs management support. If the park is developing an exhibit, it is important to establish an exhibit team. Make sure museum, interpretation, conservation, and maintenance staff are on the team. Not only does the exhibit need staff input during development and installation, it will need maintenance and interpretation. The team also needs to draw on the expertise of researchers, students, and affiliated groups at all phases of planning and development. While the exhibit curator and exhibit designer are usually take the lead, the exhibit team may include any of the following:

- park staff

  - curator or staff person responsible for the museum and archival collections
  - chief of interpretation
  - chief of maintenance
  - chief of resources management
  - chief ranger
  - subject matter experts such as the archivist, archeologist, biologist, ethnographer, historian, geologist, librarian or paleontologist, as appropriate
  - superintendent
- exhibit specialists (NPS park, HFC or non-NPS contractors)
  - AV producer
  - conservator (refer to Section H, Exhibit Conservation, and Section I, Preserving and Protecting Objects in the Exhibit Process)
  - designer
  - exhibit producer
  - planner
  - writer/editor
- regional/support office staff
  - regional/support office curator
  - chief of interpretation
  - historical architect
  - regional historian, archeologist, ethnographer or scientist, as appropriate
- non-NPS specialists (can consult at the park, region, or center)
  - architecture and engineering (A&E) professional
  - educator
  - community and affiliated group representatives

  - conservator
  - construction consultant
  - media specialist
  - subject matter experts
  - visitor advocate

Because the NPS exhibit team is usually large and geographically dispersed, the project coordinator needs to:

- manage multiple tasks simultaneously
- have good people skills
  - know how to successfully coordinate diverse individuals to achieve a common goal
  - motivate team members
  - have strong negotiating skills
  - maximize the contributions of each team member
  - consult with appropriate park staff and other professionals
- know how to manage a budget
- be experienced and knowledgeable in all aspects of exhibit development and installation
- know how to obtain necessary resources
- be goal oriented
- meet deadlines

6. *How can a team work most effectively to prepare an exhibit?*

Successful exhibit design and installation is a team effort and a major undertaking.

The exhibit process involves many different tasks, including:

- planning
- development and design
- production
- installation

A well-functioning team ensures:

- the exhibit goal is developed
- high caliber research is done
- sufficient resources are available
- the right skills are used in all phases of the project
- diverse opinions are heard
- creativity is encouraged
- all the necessary work gets done
- the "message," theme, and sub-themes are communicated to the viewer
- appropriate museum collections are selected for display
- the exhibit is attractive
- the exhibit opens on time
- the exhibit is publicized and well attended

D. Defining the Purpose and Audience

1. *What steps do I take to develop exhibit themes and goals?*

Generally, your park identifies the broad exhibit topic. The theme should relate to the park mission in a meaningful way. The exhibit team is then charged with forging a cohesive story line for the exhibit. Specific sub-themes that expand and interpret the primary theme are identified. Individual team members are assigned specific tasks. The team as a whole evaluates individual components and tasks.

To develop the themes, the team or an assigned team member should take the following steps:

- *Identify exhibit themes.* The team brainstorms and identifies several exhibit themes that would further the park's interpretive and education goals. The topics should expand the visitors' understanding of the park's mission and resources.
- *Select a specific exhibit theme and objective.* The team selects the most appropriate and timely theme based on available resources, including collections and staff time. The team decides what message and concepts the exhibit should convey.

- *Develop an exhibit proposal.* The exhibit proposal provides a comprehensive overview of the exhibit themes and sub-themes. It states what experiences the visitor should have going through the exhibit and what learning should take place. The proposal includes a general description of what objects and images will be exhibited and information on potential partners and cooperators. It describes the audiences it expects to reach. Public programming, including interpretive programs, accompanying brochures and catalogs, educational packages, and a Web-based version of the exhibit are described.

- *Identify what the park's role will be* in consultation with the park management and staff. The park chooses whether to develop the exhibit in-house, contract out directly with an exhibit curator and a design firm, or enter into an agreement with HFC to manage a contract to develop the exhibit.

- *Establish what resources the park will provide*, such as curatorial staff to do research and write exhibit label copy and maintenance staff to build exhibit cases or install lighting. The park may choose to have a limited role in the development of the exhibit and have HFC coordinate the entire process of development and installation. In this event, the park may just provide a park liaison to monitor a cooperative agreement with HFC. The exhibit should showcase the park's collections, as well as other park resources. If necessary, the park may be able to borrow material to supplement the exhibit. However, you need to make sure that the park can provide security, insurance, and optimum exhibit and handling conditions for the loan.

Refer to Figure 7.3, Park Exhibit Checklist, for a listing of exhibit-related activities.

2. *How do I conduct research for an exhibit?*

If you're going to be involved in designing and developing an exhibit, you will need to do research and collect information that will be used in the exhibit design. Before you start doing research, establish what story you want your exhibit to tell. Take the following steps:

- Identify the exhibit topic.

- Read background information on the topic, including park interpretive planning documents. Refer to Planning for Interpretation and Visitor Experiences, prepared by the Division of Interpretation.

- Review your park's interpretive plans and refer to DO #6, Interpretation and Education, Section 5, Interpretive Planning guidelines

- Research the most current scholarship by:

- consulting with a librarian or an archivist
- using the World Wide Web to track down information on the exhibit and related themes
- conducting a search of library and exhibit catalogs, bibliographies, sources and materials
- reading the pertinent literature
- visiting virtual museum exhibits on the World Wide Web

- Develop exhibit sub-themes.
- Identify appropriate objects in the park collection.
- Study object documentation.
- Discuss the proposed topic with curators of similar collections and exhibits.
- Consult with subject matter specialists.
- See museum exhibits and historic house installations.
- Obtain materials analysis where necessary.
- Study collections at other institutions.
- Appoint a working group that includes diverse points of view, especially those who have a stake in the exhibit.

For detailed information on how to conduct bibliographic research, refer to Chapter 9: Bibliographic Research, and Chapter 3: Publications, Section E.13, What should I do to prepare a publication?

3. *How do I define the target audience?*

There have been relatively few studies on identifying and reaching target audiences. Useful information often is scarce and targeting audiences can be quite complex. However, the exhibit team can identify target audiences based on the exhibit theme and subject matter. Certain themes will have certain affinities with specific target groups; for example, an exhibit on camp life at Gettysburg will attract Civil War buffs. However, the same exhibit can be expanded so that it is more appealing to broader audiences and other target groups. The exhibit could include a view of community and social life during the Civil War, the role of women and African Americans, and an exploration of photography of the period. A study guide for different grade levels will attract a wide range of students and teachers. Consult with other museums, historical societies, and

visitor bureaus for an analysis of local and regional tourism and museum visitation trends. Consult with interpreters to better understand park visitor demographics.

4. *What should I know about park museum visitors?*

Getting to know your visitors is a challenging task. Museum visitor studies can yield useful information that exhibit planners and designers should incorporate into planning efforts. Visitors are not a homogenous group. They reflect age, gender, education, socio-economic, and ethnic differences. Visitors have different perspectives, learning styles, and expectations. Studies also indicate that many visit exhibits in groups (often in a family group with children), rather than alone. Different groups behave differently in the museum setting.

Several studies indicate that visitors tend to spend little time reading label copy. Studies also indicate that visitors typically spend less time per unit area in larger exhibits than in smaller exhibits, and that they don't stay in the exhibit gallery too long (usually not longer than 20 minutes, if that). In order to "grab" the visitor's attention, spaces have to be well designed and imaginative and the right objects exhibited with brief and clear labels.

It is important to get ongoing feedback from visitors. The park needs to be "self-correcting," that is, staff should rework interpretive labels, brochures, and exhibits in response to visitor feedback where possible. Refer to Section P. Rehabilitating Exhibits, for further information on updating park exhibits. Analyzing visitor information allows the park to develop well-targeted interpretation and public programs and to plan effective exhibits:

- Track the number of visitors to the museum.

  NPS visitor and other personnel collect public use information through a variety of means, such as:

  - recording each individual visitor using a hand counter
  - logging in the number of people taking a guided tour
  - reading traffic counters or electric eyes
  - observing vehicles in the parking lot at specific time periods
  - contacting concessionaires for their data

  The park records the data into a database. The electronic file is transmitted by the 15th of each month to the NPS Public Use Data mailbox.

- Obtain a general visitor profile with pertinent demographic information (such as age, gender, education) to the extent permitted by law.

The NPS had occasional visitor studies done as early as the 1950s. The Visitor Services Project (VSP) was initiated in 1982. The project, supported by the NPS Department of Interpretation, Washington, DC, provided the first sustained series of visitor studies in 1985. In 1996, the project focused on the GPRA customer service card, which became operational in 1998. Refer to *Serving the Visitor 1998*, A Report on Customers of the National Park Service, The NPS Visitor Services Project. The NPS Visitor Services Project led by the NPS Chief Social Scientist conducts two surveys that yield information on visitors:

- *Visitor Studies*

  The annual park *Visitor Study* was introduced in the late 1990s. The NPS Chief Social Scientist coordinates ten park surveys a year. The study seeks answers to specific questions. Standard multiple choice questions include queries on visitor satisfaction with park personnel, visitor centers, directional signs, facilities, ranger programs, exhibits, park brochures, and concession services. The *Visitor Study* includes a standard exhibit satisfaction question about the quality of exhibits. The park can commission additional park-specific questions concerning exhibits or any other matters to solicit detailed information that can be used when planning new or rehabilitating existing exhibits. Consult with HFC, Department of Exhibits for additional information on exhibit visitor surveys.

- Customer Satisfaction Card Surveys

  The Customer Satisfaction Card Surveys or visitor survey card was developed in response to the Government Performance and Results Act (GPRA). It measures visitor satisfaction with NPS park facilities, visitor services, and recreational opportunities.

5. *What special population issues do I need to consider?*

Your park exhibit should reach a wide range of diverse communities. In particular, work with exhibit and maintenance staff to make sure that needs of special populations are addressed by actions such as these:

- For the mobility impaired, place labels, objects, videos, and controls at a height that can be easily read by wheelchair-bound visitors. Ensure that:

  – exhibit spaces are free of architectural barriers or provide alternative means to view exhibits

  – pathways, aisles, clearances, ramps, and floors meet acceptable standards

- For the visually impaired, provide labels with large fonts, use

colors that are easily readable, and minimize unnecessary glare.

- For the hearing impaired, provide accompanying written or illustrated text for audio portions of the exhibit.

- For the learning impaired, provide supplementary material or interpretation to potentially challenging exhibit concepts.

Refer to DO #16A: Reasonable Accommodation for Applicants and Employees with Disabilities, and DO #42: Accessibility for Visitors with Disabilities in National Park Service Programs, Facilities, and Services for Americans with Disability Act (ADA) guidelines on access to exhibits.

6. *Should the local community be involved with the exhibit?*

Yes, community involvement is strongly recommended. Consult with the local community, and other affiliated and interested groups throughout the planning, development, and installation of an exhibit. You should have access to community opinions through a named community representative on your exhibit committee, if possible. Make sure that the specific (named) representative is willing to stay through the whole process or arrange to have an alternate. If you're working with a community group, provide the members with guidelines that define their role, explain how conflicts will be resolved, and that indicate that the ultimate decision rests with the park. Once you've consulted with community representatives, every effort should be made to address their concerns. If some concerns can't be adequately addressed, then management should explain to the group how and why the park has decided to proceed.

E. Planning and Designing Exhibits

Exhibits require a balance between the competing demands of preservation and use. The exhibit should never subject the object to unacceptable wear and tear (see Section H, Exhibit Conservation, and *MH-I*, Chapter 3: Preservation: Getting Started).

Planning successful exhibits demands a close, constructive working relationship between curatorial, archival, interpretation, exhibit, and conservation specialists. Exhibit design and conservation recommendations should be realistic and pragmatic. As the collections advocate, you should be involved in, or review all phases of exhibit development. Make sure that the park's interpretive mission is met. In addition to selecting the "right" objects for exhibit, make sure that the exhibit environment doesn't harm the objects on exhibit. Work with appropriate specialists to make sure the concerns are addressed.

1. *Are there policy issues to be considered?*

You need to consider these factors when planning the exhibit:

- Don't exhibit Native American human remains, refer to Management Policies, Chapter 5. ***Note:*** Exhibit of non-Native

American human remains is not prohibited.

- Don't exhibit materials subject to the Native American Graves Protection and Repatriation Act (NAGPRA) materials without consultation with affiliated group(s). Refer to *Management Policies*, Chapter 5, p.11, and *Cultural Resource Management Guideline* (formerly NPS-28) for information on consultation.
- Don't exhibit materials with privacy, confidentiality, obscenity, unresolved sensitivities or legal restrictions or issues (refer to Chapter 2: Legal Issues).
- Consult with traditionally affiliated groups regarding the items you propose to exhibit.
- Consider the concerns of affiliated groups regarding the exhibit, objects, and the installation.
- Seek input from affiliated or affected groups before displaying sensitive items.
- Determine, where possible, what culturally sensitive items can be exhibited in association with other items.
- Make sure that the exhibit is clearly demarcated and separate from the concession store or park gift shop to avoid creating an impression that collections are available for sale.

2. *What are the overall planning and design strategies?*

These are the basic strategies:

- Select only those objects that will enhance the exhibit for display. Remember that you want to 'show' the exhibit in the most effective visual way possible.
- Integrate conservation concerns early in the exhibit planning phase.
- Develop and review technical designs, case prototypes, lighting mockups, and results of materials tests.
- Plan and budget for safe handling, exhibit mount making, and installation of objects.
- Use designers experienced in developing effective exhibits.
- Use designers and firms experienced in producing preservation-responsible exhibits.
- Plan for comfortable traffic flow through the exhibit and around exhibit cases.

3. *What are the overall preservation and protection*

These are the basic strategies:

strategies?

- Incorporate conservation recommendations into the exhibit design.
- Select stable objects.
- Involve an exhibit conservator in all phases of work.
- Design for environmental stability and protection.
- Allot sufficient time and resources to safely prepare, mount and install objects.
- Select practical conservation approaches, such as grouping objects with similar conservation needs.
- Accommodate fragile items, such as pastel drawings and photographs, through rotation or reproduction.
- Rotate and rest sensitive objects in long-term exhibits.
- Don't overcrowd exhibit cases.
- Complete a written condition assessment of each object.
- Develop a practical exhibit installation proposal for objects that will be exhibited.
- Secure the necessary funding for treating unstable objects before exhibit.
- Stabilize or treat all objects as needed.
- Address other related preservation requirements such as:
  - secure mounting
  - ongoing monitoring and inspection
  - maintenance

4. *What are the collection management priorities?*

Collection management priorities:

- Use a dedicated, clean, and secure space for temporary housing of objects during exhibit development, construction, and installation.
- Protect objects during record, exhibit and condition photography.
- Limit an object's total exposure to harmful light wavelengths.
- Avoid overheating objects with studio lights or a flash system, especially for light-sensitive objects.

- Ensure safe installation of objects.
- Record exhibit status and information in the Automated National Catalog System (ANCS+).

5. *What factors should I consider when selecting objects for exhibit?*

The exhibit theme and sub-themes provide the initial selection criteria when you first consider collections for inclusion in the exhibit.

- List the objects related to the theme. Wherever possible, use items from the park's collections.
- Refine the list to the number of objects appropriate to the space.
- Ensure relative sizes of objects are compatible in space; make substitutions if necessary.
- Ensure environmental requirements of selected objects are compatible and can be met; make substitutions as necessary.
- Consult with affiliated groups.
- Identify alternate objects for rotation.

6. *What is the project coordinator's role?*

The exhibit project coordinator oversees all aspects of exhibit planning, production, and installation. The coordinator makes sure that the terms and specifications of the contract(s) are implemented and that installation proceeds according to the schedule laid out in the final planning notebook and design drawing. Refer to Figure 7.3, Park Exhibit Checklist, for a listing of exhibit activities.

7. *What steps does the team take to plan and design exhibits?*

To plan and design an exhibit, the team:

- determines the emphasis of themes
- identifies how to transmit themes and goals to audience
- develops written strategy to communicate significance of collections
- identifies educational strategy
- solicits ideas
- shares information
- voices and addresses concerns within the team, and if necessary, with park management
- develops the exhibit schedule
- gathers all pertinent visitation data

- surveys the resource materials in park files and library
- reviews local community, museum, historical society, and college resources
- prepares a list of subject matter reference material
- determines the general requirements for staffing and security
- examines the existing conditions (visitation levels, climatic conditions, seasonal closings) that may impact objects on exhibit
- determines the requirements and programs for disabled, visual and hearing impaired, and other physically challenged visitors
- visits and inspects the exhibit site
- reviews the collections, including documents, graphics, and photographs
- writes text and selects graphics
- develops a preliminary list of museum objects, specimens, and archival materials for display consideration
- identifies the preservation needs of items to go on exhibit (refer to Section H)
- determines, in consultation with the conservator and exhibit designer, the overall design, mounting, cases, monitoring and maintenance of items going up on exhibit (refer to Section J)
- works with maintenance staff to incorporate the exhibit into the park maintenance, security, fire, and emergency operation plans
- works with the exhibit contractor to develop the exhibit maintenance manual (see Section O.2)

You, the project manager and/or museum curator, need to evaluate continually the exhibit team's performance. You need to review the exhibit process. Evaluate all phases of exhibit development and installation. Incorporate recommendations throughout the process. Make improvements and adjustments to the exhibit process for the next project. Assess how well the final exhibit meets the stated goals.

8. *How do I write effective museum exhibit label copy?*

Museum labels are graphic communications that deliver their message by means of words, symbols, art, photographs, and other visual images. Creating effective exhibit label copy involves research, writing, editing, rewriting, design, and layout of the copy. These one-of-a-kind labels are usually in place for a considerable time. Successful and well-written labels will be seen by many people. Exhibit labels convey themes, concepts, ideas, and information about

the exhibit and collections that are on display. Without accompanying museum labels, exhibited objects, specimens, and archival items tend to become purely decorative or can be misinterpreted. Effective copy must be interesting, easy-to-read, and readily understandable. Exhibit labels must convey the essence of your exhibit theme. Exhibit labels should connect with multiple and diverse audiences. Effective exhibit labels should communicate information and tell a story to visitors.

Surveys and questionnaires, interviews or observations of people's behavior and learning styles help you to develop clear and objective labels that meet the needs of your park's visitors. Each exhibit label should have its purpose clearly defined before writing begins. Some of the questions you should ask include:

- Why is this label needed?
- Does the label do what is it supposed to do?
- How does it identify questions to be asked and answered by the exhibit?
- What are the different types or levels of exhibit labels? They include:
  - exhibit title or headline, which announces the exhibit
  - subhead or sub-theme label, which announces the theme and sub-themes, and clarifies the title
  - introductory label, which provides information about the exhibit theme, collections, and concepts to the visitor; also outlines main themes, sub-themes, and background
  - group labels, which focus on similar objects, specimens, or items and interpret similarities apparent in the collection
  - captions that interpret single items and contain concrete and specific information

    When writing caption labels, follow the format described in Chapter 3, Publications, Section E.18, What do I need to know about writing captions?

Good exhibit labels should be:

- brief
- clear
- simple (not simplistic)
- accurate

- legible for all to read, including the visually impaired (work with the exhibit designer to use readable fonts)
- linked to other labels in the exhibit
- appropriately placed in the exhibit

Good label copy techniques include:

- asking questions and providing the answers
- using colloquial expressions
- using apt quotations
- drawing comparisons
- relating to common visitor experiences
- engaging the visitor to find, compare, or interact

Effective writing includes:

- telling a good story
- being conversational
- starting with visual observable interpretations and facts about objects
- using word pictures or verbal illustrations
- personal pronouns such as “you” and “we”
- using active verbs
- avoiding pompous or overly technical language
- keeping sentences short (under 25 words long)

Parks can develop content material and drafts. However, HFC recommends that parks have professional exhibit writers prepare final exhibit copy. Contact HFC, Department of Exhibits for referrals on potential contractors to research and/or write exhibit label copy. Make sure that you, professional colleagues, and subject matter specialists review the label copy.

F. Producing and Installing Exhibits

1. *What steps are involved in exhibit production and installation?*

The steps in production and installation include:

- implementing contract specifications and drawings
- rehabilitating the existing building or doing new construction
- working with the park contracting officer to obtain bids for the project
- awarding the contract
- managing the contract
- coordinating the exhibit fabrication
- inspecting the:
  - exhibit spaces
  - structure
  - system power and electrical systems
  - mechanical systems
- supervising construction of:
  - cases
  - mounts
  - exhibit furniture
- monitoring conservation and preparation of objects selected for exhibit
- photographing objects for an exhibit or publication
- installing objects
- supervising exhibit installation
- checking environmental conditions inside and outside cases
- checking security
- photographing exhibits for documentation and security

2. *What are the "closeout" steps before opening an*

Work with HFC and park contracting officer to make sure the following steps have been taken when the exhibit is nearing

exhibit?

completion:

- Verify that all contract specifications have been satisfactorily met.
- Develop a punch list of problems to be corrected.
- Collate the maintenance manual (see Section O.2) and:
  - place a complete maintenance manual in secure museum storage
  - remove the maintenance manual security section and restrict access to it by placing it in a sealed envelope in a locked safe
  - provide the maintenance manual, without the security section, to the park library
- Provide maintenance training to appropriate staff.
- Amend the park fire protection plan and emergency operation plan to include the new exhibit.
- Obtain a repair kit from the exhibits producer.
- Get a full set of keys, codes, and tools for the supervisory museum curator and follow key access procedures outlined in *MH-I*, Chapter 9, Section E.7, What should I do to safeguard keys?
- Inspect the entire exhibit.
- Obtain a closeout package of all pertinent materials and information, and place with park museum records.
- Do a final walk-through with the exhibit team, appropriate park staff and the exhibit coordinator/project manager.
- Make sure all problems noted on the punch list are corrected before accepting the work and acknowledging completion.

The superintendent, chiefs of interpretation and maintenance, and the museum curator should do a walk-through inspection at the exhibit closeout.

G. Exhibit Planning, Design, Production and Installation Documents

The information in this section describes documents and procedures developed by HFC. However, professional service providers should

follow similar procedures and develop similar documents for the park.

1. *What planning and design documents do I need?*

There are usually three broad phases of exhibit planning and design. These phases are reflected in the following documents:

- schematic plan and design
- concept plan and design
- final planning notebook and design drawing

For detailed information on planning and design and fabrication specifications, refer to documents developed by HFC, Department of Exhibits, *NPS Standard Planning & Design Specifications,* February 1998 and *NPS Standard Fabrication Specifications*, July 1997, and the *Museum Exhibit Planner*, Application Software for Planning National Park Service Exhibits. These documents are available on the Web at <http://www.cr.nps.gov/hfc>.

2. *What does a schematic plan and design include?*

The schematic plan and design includes broad narrative descriptions of exhibit themes and objectives identified in the Interpretive Prospectus, and the types of collections to be exhibited. The plan reflects general ideas about the exhibit. Exhibit label copy or text isn't included in this phase. The following are included in the schematic plan and design:

- floor plan
- bubble diagram indicating the general orientation of exhibits
- rough titles that reflect ideas and themes
- rough placement of exhibit and exhibit cases
- broad description of object types to be included in the exhibit
- general discussion of exhibit media and elements, such as audiovisual or interactive media

The schematic plan and design work is usually contracted out. The contractor develops several versions of the plan. The exhibit designer and planner, and the park review each version of the plan. For additional information refer to Figure 7.1.

3. *What does a concept plan and design include?*

The concept plan and design are based on the schematic plan and design. At this stage, change is still possible. Themes and objectives can be modified or revised. Exhibit plans can be retooled. As with the schematic plan and design, there is usually a preliminary and a final version of the concept plan and design. The park closely reviews all versions of the concept plan and design. The concept

plan and design gives a general, rather than detailed view of what the exhibit will look like. It contains all the elements that make up the exhibit. See Figure 7.1 for the detailed information on a concept plan and design.

The park reviews the document to:

- ensure that appropriate goals and themes are covered
- change the emphasis of some exhibit elements, if needed
- review the park role and resource commitment to project, including staff availability
- review objects selected for exhibit. ***Note***: For easy reference, make sure that catalog numbers are included in the plan together with the HFC tracking numbers

Edits are incorporated. The concept plan and design are turned over to the exhibit designer. The exhibit designer then refines the exhibit layout and design. For additional information refer to Figure 7.1.

4. *What does the final planning notebook and design drawing include?*

Once the concept plan and design are approved, the exhibit development process moves into the final phase. This phase also can have several sub-stages. Each version of the final planning notebook and design drawings is reviewed and commented upon and the edits incorporated. Because of the extensive planning and review cycle, there should be very few corrections needed at this point. ***Note:*** For easy reference, make sure that catalog numbers are included in the plan together with the HFC tracking numbers.

The last or final version of the planning notebook and design drawing is also called the "production ready plan and design." It is put out to bid. Once a contract has been awarded to a design planning and installation firm, changes can't be made without incurring considerable cost to the park. The final planning notebook includes the finalized version of elements that were outlined in the concept plan and design. These are the requirements for the contract. Refer to Figure 7.1 for detailed information on what is included in the final planning notebook.

5. *Who gets copies of exhibit planning, design, production and installation documents?*

The park gets one copy of all exhibit-related documents, including planning, design, production, installation, and maintenance documents. Another set is filed with HFC, Department of Exhibits.

For contracts not coordinated by HFC, always require one set of all documents be deposited at HFC.

H. Exhibit Conservation

The exhibit environment can present the greatest threat to the preservation of an object, specimen, or archival material. Even in well-designed exhibits where light, temperature, and relative humidity are adequately controlled, an item on exhibit is subjected to more stress than in storage. Many exhibits, especially those installed prior to current preservation standards and the establishment of an object rotation schedule, don't meet acceptable standards. Sensitive objects that are exhibited for long periods of time will be damaged. Bear this in mind when you consider putting the best examples from your collection on long-term exhibit. You should develop a preservation strategy in consultation with a conservator that includes rotation and upgrades for existing and new exhibits.

Refer to Chapter 1, Section G, Preservation and Protection Issues, and consult with a conservator when making your selection for an exhibit or when you develop a rotation schedule for objects already on exhibit. Follow the steps outlined below to create optimum conditions for objects that are going on exhibit:

Make sure that conservation concerns are addressed early in the planning. Museum staff should stay involved throughout the entire process. Correct existing or inherited exhibit problems. Establish a rotation schedule for older exhibits.

1. *What is the role of the exhibit conservation specialist?*

Exhibit conservation has developed into a specialized field within the conservation profession. The exhibit conservator focuses on how exhibit techniques and environments affect the preservation of collections. The exhibit conservator develops conservation criteria, provides technical assistance to exhibit planners and designers, reviews conservation-related decisions, and assesses prototypes and exhibit work after installation. Include an exhibit conservator in all phases of exhibit development, from the earliest stages of planning and design, and throughout the fabrication and installation processes. Work with a conservator to make sure that conservation problems are avoided. Consult with the regional/SO curator and HFC conservation staff to help you find an exhibit conservator. Refer to the information in this section and Figure 7.4, Exhibit Conservation Checklist, for additional information on exhibit guidelines.

2. *Should a conservator be involved in selecting objects for exhibit?*

Yes, whenever and as early in the planning process as possible. The decision to exhibit an object is guided, in part on its condition, susceptibility to damage, and the exhibit environment. A conservator can help you decide which objects are suitable for exhibit, determine what conservation is needed, and advise on case design and lighting. Objects may need some cleaning, stabilization or repair before they can be safely and appropriately exhibited. Some objects may be too fragile to be exhibited without extensive treatments, complex design safeguards, or a rotation program. These issues need to be addressed early in the process to ensure that enough time and funds are available to come up with responsible solutions. You may decide not to use an object in an exhibit after considering preservation and treatment concerns.

3. *What exhibit conservation guidelines do I follow?*

Use *Exhibit Conservation Guidelines: Incorporating Conservation into Exhibit, Planning, Design and Fabrication* to help you plan an exhibit incorporating preservation principles. The document is available on CD-ROM from HFC, Department of Conservation. By following the *Guidelines* you will ensure that conservation issues are addressed throughout all phases of exhibit planning, development, design, production, and installation. The steps discussed in this section are based on the *Guidelines.* To obtain further details on the specifics of materials, techniques, and equipment, refer to the guidelines, and work with conservators and designers knowledgeable in exhibit conservation practices. Refer to Figure 7.4 and to <http://www.nps.gov/hfc/support/hfc-support.htm> on the Internet.

You can also refer to *MH-I*, Chapter 3: Preservation: Getting Started; Chapter 4: Museum Collections Environment; Chapter 5: Biological Infestation; Chapter 8: Museum Object Conservation Treatment; Chapter 9: Museum Collections Security and Fire Protection; and Chapter 10: Museum Collections: Emergency Planning. The

Conserve O Gram series also contains useful exhibit conservation information.

4. *What facility issues do I need to consider?*

In addition to exhibit cases, make sure that the spaces that house the exhibit cases also are conducive to object preservation and security. Make sure that the exhibit space, whether new or rehabilitated:

- is large enough to accommodate all exhibit cases and furniture
- allows for visitor flow
- meets all system power requirements
- has adequate mechanical systems in place
- meets Americans with Disability Act (ADA) Accessibility guidelines (refer to DO #16A: Reasonable Accommodation for Applicants and Employees with Disabilities, and DO #42: Accessibility for Visitors with Disabilities in National Park Service Programs, Facilities, and Services, on this topic
- meets NPS and museum security requirements (refer to *MH-I*, Chapter 9: Security and Fire Protection)

The NPS *Checklist for Preservation and Protection of Museum Collections* (see *MH-I*, Appendix F) provides detailed information on the standards that NPS museum storage and exhibit facilities need to meet. The *Revised Standard Facility Report* developed by the Registrars' Committee of the American Association of Museums also provides useful information on what your facility needs with regard to exhibits, security, handling, and environmental controls. (See *MH-II*, Chapter 5: Outgoing Loans.) It is a self-assessment tool much like the *NPS Checklist*. Facilities reports are generally used by lenders and insurance personnel to determine if an institution has the ability to safely borrow, insure, ship, handle, secure and install objects requested for loan. If you borrow objects from another institution for an exhibit you may have to complete this report.

5. *How do I plan for conservation treatment of exhibit items?*

You'll need to identify, together with a conservator, what conservation or stabilization treatments are needed for the objects that have been selected for exhibit. Generally funding for conservation for exhibit objects comes out of the exhibit budget. However, irrespective of the source, you need to make sure that conservation is included and funded in the budget.

The park, as the initiator or "owner" of the exhibit determines whether an NPS or a contract conservator will do conservation or treatment of objects slated for exhibit. The HFC, Department of Conservation, can provide a range of conservation services to the park. Their involve-ment ranges from consultation and advice, examination, analysis, documentation, stabilization, and treatment to extend the life of an object, to managing a conservation contract for the park. HFC is actively involved in exhibit development, and can make recommen-dations about the exhibit environment and the

fabrication of exhibit mounts. The park can enter into a project agreement with HFC. The agreement outlines the role that HFC or a contract conservator will have in conservation and treatment of objects.

6. *How long should objects be on exhibit?*

Always consider the object condition, duration of the exhibit, exhibit case lighting and relative humidity, case conditions, and the inherent value of the object when you determine how long to leave the object on exhibit. Even if you're using conservation-safe exhibit cases and maintaining an appropriate environment, most organic items and light sensitive materials such as feathers, watercolors, original historic photographs or blueprints should not be exhibited for more than several months at a time. It is advisable to exhibit reproductions of particularly sensitive items such as historic photographs or blueprints. Consult with a conservator when you determine how long an object should be exhibited.

Plan for frequent rotation of objects when you develop a long-term exhibit, or when you use fragile or sensitive materials. Don't place an object on long-term exhibit, regardless of how structurally stable it appears. Always use low intensity lighting.

You can minimize damage caused by long-term exposure to light and other variables by rotating objects, or substituting one object for another similar object. Some museums remove sensitive materials from display during periods of low visitation. Work with a conservator to identify those objects that need special care. You should budget for, and prioritize other alternatives, such as replicas and copies.

I. Preserving and Protecting Objects in the Exhibit Process

1. *How do I address temperature and humidity control in an existing exhibit space?*

After installation, monitor the exhibit space for one year to identify any environmental problems, then make modifications, and continue monitoring on an ongoing basis. Make additional modifications, as needed. You should obtain baseline information about the temperature and relative humidity (refer to *MH-I*, Chapter 4: Museum Collections Environment, for detailed information) before making any modifications. You can address temperature and humidity needs by taking the steps noted below.

Control the environment within the exhibit space and inside cases:

- Install small hygrothermographs or hygrometers in cases to evaluate the environment.
- Provide additional control for sensitive objects.
- Provide a well-sealed case that will support humidity control:

  - minimize the air exchange between the case and the room
  - use moisture impermeable construction materials
  - create a microclimate to produce a stable environment for humidity-sensitive materials
- Ensure adequate air circulation within the case.
- Provide separate access to the environmental maintenance chamber:
  - make access panels as small as practicable and seal tightly with gasket materials
  - provide large cases with several access points
- Include active and passive humidity-control in exhibit cases:
  - establish whether the goal is stabilization or control
  - select an appropriate method to stabilize or control relative humidity
  - include an appropriate and sufficient moisture-absorbent medium for passive control
  - calculate the type and quantity of silica gel or cellulosic materials to be used (refer to *Conserve O Gram* 1/8, Using Silica Gel in Microenvironments and Conserve O Gram 2/15, Cobalt Indicating Silica Gel Health and Safety Update)
  - provide safeguards for mechanical systems
  - locate equipment in a maintenance area that does not transfer heat or vibration to the objects
  - provide a constant power supply (including emergency generators)
  - use a monitoring alarm to alert staff to equipment malfunction
  - install an adequate water supply and drain lines
- Test the case before enclosing objects to make sure humidity specifications are met and:
  - monitor the interior relative humidity for the duration of the exhibit
  - install small hygrothermographs or hygrometers in cases to

evaluate the environment

Exhibit Conservation Guidelines will give you practical ways to carry out all the procedures and points noted above.

2. *How do I address particulate contamination in an exhibit space?*

To control particulate contamination:

- Enclose sensitive objects:
  - incorporate air filters into ventilated case designs
  - seal exhibit enclosures to prevent particulate entry
- Use frequently changed 'walk-off' mats at the building entrance and locate exhibit spaces for sensitive items away from the entrance to minimize particulate contamination.
- Use high-efficiency filters in environmental systems for rooms housing exhibits.
- Change filters regularly.
- Use localized filtration equipment.

Refer to *MH-I,* Chapter 4: Collections Environment, for detailed information.

3. *How do I deal with chemical pollutants in an exhibit space?*

To deal with chemical pollutants, you should:

- use stable construction materials
- air the exhibit space and cases before installing objects (determine how much time is needed in consultation with a conservator)
- design the exhibit layout to minimize the objects' exposure to pollutants
- incorporate chemical filters in the environmental systems
- monitor pollutants

Refer to *MH-I,* Chapter 4: Collections Environment, for detailed information.

4. *How do I balance exhibit lighting needs with preservation requirements?*

Develop a case lighting plan and identify lighting levels and appropriate lighting equipment with the best suited light source, fixtures, lamps, light modifying and heat reducing equipment. To balance exhibit lighting needs with preservation requirements, you should:

- Develop a lighting plan in accordance with established

conservation criteria (refer to *MH-I*, Chapter 4: Collections Environment, for detailed information) including acceptable lighting levels for objects, in particular, sensitive objects.

- Use fiber-optic lighting systems with remote lamps where possible.
- Make sure lighting ballasts don't overheat cases.
- Limit total light exposure and intensity:
  - turn off lights during nonpublic hours to limit exposure
  - provide separate lighting for security checks, exhibit cleaning, and routine maintenance
  - use occupancy sensors and pressure-sensitive mats to turn lighting on and off during visitation hours to provide a low-tech and low-energy alternative to constant lighting
- Reduce the levels of ultraviolet radiation to 10 microwatts per lumen or below.
- Control infrared radiation.
- Locate objects away from light sources:
  - at least 24 inches from filtered fluorescent lights
  - at least 36 inches from incandescent or tungsten halogen lights
- Exclude sunlight:
  - limit total light exposure during installation, exhibit, and other routine work
  - filter daylight already present in the exhibit space for UV radiation
- Construct lighting mockups to evaluate the amount and quality of light provided by the proposed lighting plan.
  - measure final light levels
  - adjust accordingly during installation
- Isolate lights from the display chamber.
  - place all lighting fixtures outside the display area of a case
  - contain any lights that are integral to the case in a separate

compartment

- seal the lighting chamber to prevent entry of insects, heat, and dust

- Reduce heat gain and temperature cycling. ***Note:*** The heat gain inside the display chamber should be no more than 2° F when lights are turned on.

- Ventilate the lighting chamber to dissipate heat from fixtures and use electric fans as needed.

- Incorporate heat-reflecting and insulating materials when necessary.

5. *How do I avoid a biological infestation in an exhibit?*

Develop an Integrated Pest Management Program (IPM) for your exhibit space. In particular:

- Isolate and observe objects for signs of infestation and active mold before placing on exhibit.

- Regularly examine all objects for signs of infestation and active mold.

- Design exhibits to inhibit infestations:

  - insect proof exhibit area by screening open windows or doors

  - fill gaps in the building and case construction

  - avoid gaps where dust can collect

- Enclose objects inside well-sealed cases.

- Avoid introducing insects through props and unexamined exhibit materials:

  - don't use wool carpets and other materials that attract and harbor insects

  - avoid using organic exhibit props

  - fumigate or freeze vegetal props before bringing them into the museum

- Don't allow food and beverage consumption during exhibit production and installation or in the exhibit area after the exhibit opens, including special events. The maintenance staff must be diligent in removing all food and beverage waste from areas adjacent to the exhibit.

- Use and monitor insect traps as part of your ongoing IPM program.

Refer to *MH-I*, Chapter 5: Biological Infestation, for additional information.

6. *What should I do about physical security in an exhibit?*

You can make sure your exhibit is physically secure:

- Conduct a risk assessment in accordance with procedures outlined in *MH-I* and in consultation with the park security officer to identify the possibility of theft and vandalism.
- Provide the appropriate protection.
- Tailor the exhibit security features to the vulnerabilities of objects.
- Use tamper resistant hardware.
- Control access to the objects in exhibit cases.
- Make each object on exhibit readily removable without disturbing or moving adjacent objects.

Refer to *MH-I*, Chapter 9: Security and Fire Protection, and Appendix G: Protection of National Park Service Museum Collections, for additional information.

7. *What should I do about emergency preparedness and fire protection for an exhibit?*

Take these precautions:

- Perform a risk assessment, in accordance with procedures outlined in *MH-I*, and in consultation with the park security officer and park emergency management staff.
- Anticipate the types of damage that may occur to display objects.
- Address potential problems where possible to avoid risk.
- Develop an emergency preparedness response plan that addresses fire, flood, earthquake, theft, and other hazards for the exhibit.

Refer to *MH-I*, Chapter 9: Security and Fire Protection, and Chapter 10: Emergency Planning, for additional information on how to develop an emergency preparedness plan.

8. *How should I protect objects during production and installation?*

Production and installation can present potential threats to objects because they're being moved, there are lots of people around, cases are being constructed, and many other variables. You can protect objects if you:

- limit transport of objects into production areas

- inspect exhibit assemblages that affect objects
- complete construction before object installation
- clear exhibit area of debris and dust

J. Exhibit Case Design

1. *What do I need to know about exhibit case design and construction?*

Work with a conservator to select exhibit cases that will meet the needs of your objects and the exhibit. Choose the most appropriate and practicable cases to do the job. Work with a security expert to make sure that your cases will provide maximum protection from vandalism and theft.

Exhibit cases provide the primary protective environment for objects on exhibit. You should make sure that the issues noted below are addressed.

Exhibit case design

- Design cases as protective enclosures to create microenvironments inside the cases.
- Establish performance criteria and design the case to provide this performance.
- Build and test a prototype case to decide whether it meets design and performance objectives.
- Provide detailed case drawings and specifications to your fabricator.
- Inspect cases during fabrication to ensure compliance with specifications.
- Test assembled case in its final location to make sure that conservation criteria are met before object installation.

Case stability, security, and access

- Construct a physically stable, structurally secure case.
- Provide appropriate security features.
- Provide for legitimate and practical access.
- Incorporate doors or other practical access options in the case design.

- Make sure that park museum staff can readily enter the case without compromising security.

2. *What do I need to know about sealed and ventilated exhibit cases?*

Work with the conservator to determine if you need sealed or ventilated cases.

Sealed exhibit cases

- Determine which objects, if any, require protective microenvironments, and design cases accordingly.
- Design cases to avoid the risks from interior contaminates.
- Design well-sealed cases with tight joints and with gaskets around all removable panels and entry doors.
- Select construction materials that limit air exchange and aren't moisture-permeable.
- Minimize leaks with adequate gaskets and caulk.
- Use non-hazardous materials for all construction.

Ventilated exhibit cases

  - Make sure that climate-control and pollutant-control system functions 24 hours a day.
  - Design and construct well-sealed, ventilated cases in consultation with a conservator and exhibit case designer.
  - Filter vents to prevent dust, insects, and chemical pollutants from being drawn into the case.
  - Use positive air-pressure cases when appropriate.

3. *What do I need to know about exhibit case materials?*

You need to follow these procedures:

- Select, in consultation with a conservator, high-quality, non-hazardous (to humans and collections) materials to construct case interiors and case furniture.
- Use mechanical fasteners in the construction of exhibit furniture, avoid adhesives when possible.
- Use 100% acrylic paints with low volatile emissions for wood and metal surfaces; powder coatings can also be used for metal surfaces.
- Allow sufficient curing time in consultation with a conservator before installing objects, such as 4 weeks for newly painted cases.

- Isolate objects from painted or varnished surfaces and other objects with a mount, foil, or another acceptable barrier, such as polyethylene or polyester sheeting.

- Check fabrics for dye stability and fastness; pre-wash, dry, and remove excess dyes and finishes.

- When necessary, incorporate a pollutant absorber or scavenger such as activated charcoal and potassium permanganate to ensure a pollutant free environment.

4. *What do I need to know about exhibit mount design and fabrication?*

Select mounts carefully and make sure they are designed to meet the object's needs. If they are made from conservation (stable museum quality) safe materials, you'll be able to prevent unnecessary damage to vulnerable exhibit items.

- Design and fabricate mounts for object installation ahead of time.

- Use a qualified mounting specialist who has preservation training.

- Protect the integrity of the item:

  – create custom-padded mounts

  – don't physically alter or dismantle objects to accommodate placement or mounting in the exhibit

  – use mechanical designs to lock mounts in place

- Support the entire object.

- Provide adequate support for flexible objects:

  – for organic materials, support the structure under its entire contour

  – don't crease, bend, or fold textiles, papers, leather, and other susceptible organic objects

  – don't place heavy objects directly on top of other items

- Support all parts independently:

  – support fragile objects over as large an area as practical

  – support attached parts

- Stabilize objects from vibration and abrasion.

- Secure framed works:

- attach frames to the wall with appropriate hardware, such as "D" hooks and braided metal wire
- anchor the wall fastener firmly to the wall
- make sure the fastener can support the weight of the framed item
- ensure that the wall, ceiling, or floor is designed to accommodate additional load and that the fastener is installed at a location, and in a way to successfully transfer this load

K. Traveling and Non-NPS Initiated Exhibits

This section only covers traveling exhibits that are received by the park. Objects in traveling exhibits are treated as incoming loans. Refer to *MH-II*, Chapter 2: Accessioning, for information on generating an incoming loan. Refer to *Museum Registration Methods* by Dudley et al (1979) and *The New Museum Registration Methods* by Buck et al (1998) for detailed information on preparing a traveling exhibit.

1. *What do I need to know about traveling exhibits at the park?*

The originating organization and the receiving park share the responsibility for the traveling exhibit. Traveling exhibits are usually scheduled well in advance. All arrangements, including financial, shipping, and insurance, are negotiated in advance, to the satisfaction of both parties. The hosting (receiving) park is responsible for:

- providing an appropriate exhibit venue
- maintaining the well-being of loaned objects, including preventive conservation
- maintaining exhibit furniture
- providing stable relative humidity and temperature controls
- ensuring security for the duration of the exhibit
- providing an exhibit staging and de-installation area
- tracking objects from receipt to the de-installation
- designing and installing exhibit, if needed
- offering public programming, if appropriate

Well before the exhibit is received, the park should have the following documents:

- exhibit contract (see Figures 7.1 and 7.2.)
- loan agreement
- relevant checklists, including object, case, and furniture numbering systems
- packing instructions from the initiating organization
- gallery layouts
- object number and display location lists

- installation instructions, photographs, and diagrams
- shipping instructions

The park may be required to complete the AAM Facilities Report (see *MH-II*, Chapter 5: Outgoing Loans).

A well-developed traveling exhibit is accompanied by the following:

- exhibit checklist
- crate list, including crate size and weights, packing lists, and diagrams
- crate contents
- object condition reports
- list of equipment needed to receive and install the exhibit
- list of accompanying exhibit furniture, mounts, and graphics
- packing list with specific instructions for each item
- list of lender's requirements
- insurance documents, such as a certificate of insurance naming the park as an additional insured, if appropriate
- customs documents for international traveling exhibits, if appropriate
- transportation arrangements

Refer to *MH-II*, Chapter 4, Section VII, Purchasing Insurance for Borrowed Objects. Park staff may be expected to pack and unpack the traveling exhibit. Always follow all unpacking and installation instructions. Carefully record object condition when you unpack, install, and de-install objects. You should also do regular checks while the objects are on exhibit. Report any damage immediately to the originating organization.

2. *What should I do if the park is solicited to provide an exhibit venue?*

The park may be approached by an individual or organization to host an exhibit. All requests must be made in writing and approved by the superintendent. The requestor should also provide information on the following:

- exhibit theme
- number and quality of items to be exhibited

- display system requirements
- space requirements
- lighting requirements
- installation requirements
- security
- storage
- associated costs
- publicity
- associated public programs
- insurance
- catalogs or brochures

The superintendent determines if the exhibit is appropriate for the park. If the exhibit is approved, a loan agreement is completed and signed.

3. *What do I need to know about photography, reproduction, and publicity for the exhibit?*

Make sure that the exhibit contract or loan agreement includes written permission for the park to photograph, telecast, or reproduce the items on exhibit for education, catalog, public programming, and publicity purposes. The contract should also outline who is responsible for doing exhibit publicity and press releases, frequency of releases, and public programming details. Include a statement in the exhibit contract or the loan agreement that photography of borrowed items on exhibit by visitors is governed by procedures outlined in DO #53 and Reference Manual #53: Special Park Uses, Chapter 6, Special Uses of Collections, and legal requirements outlined in Chapter 2: Legal Issues.

L. Exhibit Funding and Outreach

1. *How do I get support for my exhibit concept?*

To get support for an exhibit project, you'll need to give the potential backer, such as a granting agency or corporate sponsor, a clear idea of the exhibit and exhibit theme. You should also prepare a justification as to why this would be an excellent project to support. Include a comprehensive summary and overview of the proposed exhibit. An attractive presentation package should include:

- narrative description of the exhibit themes and sub-themes

- floor plan
- diagram indicating orientation of exhibit cases
- broad description of object types
- general description of exhibit media and elements, such as audiovisual or interactive media
- scale model, if possible
- schedule
- budget

The presentation package can be used for fund raising for your exhibit. The HFC, Department of Exhibits, can assist you in preparing materials, providing cost estimates, designing a brochure, and completing a business plan to include in the package. You need to work with park management and the region to raise funds, or to submit the concept to the Development Advisory Board or the National Park Foundation to raise funds. Many organizations fund museum exhibits. Refer to the Foundation Center Website at <http://www.
foundationcenter.org/> for information on funding sources for federal institutions.

2. *What are some funding sources?*

Some of NPS funding sources include:

- HFC exhibit repair/rehabilitation funds
- Recreation Fee Program funds
- cyclic maintenance funds (may provide funding for cases or for ongoing maintenance)

Some non-NPS funding sources include:

- park cooperating associations
- foundation grants
- individual and corporate donations
- partnerships with other organizations and federal agencies

Consult with your regional curator for information on how to apply to various sources for funding.

3. *How do I estimate exhibit costs?*

Costs are based on square footage of the exhibit space and complexity of the exhibit. Exhibits with lots of audio-visual needs, dioramas, and publications tend to be more expensive than traditional case

exhibits. Consult with the regional/SO curator or HFC to develop cost estimates. HFC is developing a cost-estimating guide that will be made available to parks. You can use these estimates in a fund-raising package.

4. *Can I develop a traveling exhibit?*

Yes, you can. However, NPS museum exhibits aren't usually funded to support traveling exhibits. If the park wants to do a traveling exhibit, the park will need to seek funding to support all phases of exhibit development. This includes transportation, packing and shipping, and insurance. See Section L.1 for additional information on funding. Remember that designing an exhibit to withstand the rigors of travel is often more expensive than designing a permanent or temporary exhibit that doesn't travel. You'll need to make this decision up-front, so that you can plan the budget accordingly.

5. *Should I develop an exhibit Web feature?*

Yes, by all means. The Web allows you to reach a very large audience outside the park! A finished "real" exhibit provides you a perfect opportunity to develop a Web exhibit with a relatively small investment of time and effort. Much of the research on the exhibit has already been done. You have existing label copy, which usually takes a huge amount of time to research and write. Objects and images have already been researched and identified. The major expenditure will be in getting high quality photographs of selected items on exhibit. Have the photographs and drawings scanned. Work with a Web designer to develop an exhibit feature. For detailed information on developing Web features, refer to *MH-III*, Chapter 3: Publications. Be sure you have obtained all the necessary intellectual rights to use images on the Web in accordance with Chapter 1: Evaluating and Documenting Museum Collections Use, Chapter 2: Legal Issues, and Chapter 3: Publications.

6. *Should I produce an exhibit catalog?*

Yes, if it's feasible. A paper-based catalog of your exhibit makes an important contribution to the park's resource interpretation program. An exhibit catalog is a very useful interpretive medium. It long outlives the actual and Web exhibits. Visitors who see the exhibit and come away with a catalog extend their park learning experience long after they leave the park. The exhibit catalog provides an ideal opportunity to share your collections with the general public, students of all ages, museum professionals, and colleagues. An exhibit catalog places your collections into local, regional, and national library catalogs for all to see in a way that the actual exhibit cannot. If you are on a tight budget, a low-key or park-generated catalog records the exhibit and promotes the park museum collection. Refer to Chapter 3: Publications, on how to produce an exhibit catalog.

7. *Should I train staff and volunteers to interpret a new or upgraded exhibit?*

Yes. Interpretation and education are primary NPS and museum goals. The training you provide will enable staff to develop interesting and informative talks; tours, and materials for exhibit visitors. An informed interpreter can facilitate an enjoyable and creative learning experience for students of all ages. Provide in-depth and well-organized information about the exhibit to staff and volunteers who will be interpreting the exhibit

Each park is responsible for developing its own interpretation

program. You can make an important contribution to the park interpretation program by:

- working with the park interpreter to develop an exhibit interpretation training program
- providing in-depth talks on the exhibit
- preparing a slide presentation and handouts that staff or the volunteer interpreter or docent can use for in-house talks
- designing classes or lecture series for the local community
- organizing a demonstration or film festival around the exhibit
- preparing a frequently-asked-questions handout for docents/interpreters to carry during a tour
- working with the cooperating association to make sure that the shop includes related materials, such as books, postcards, and other appropriate items for sale

Remember that interpretation is "an educational activity which aims to reveal meanings and relationships through the use of original objects by first hand experience, and by illustrative media, rather than simply to communicate factual information" (Freeman Tilden).

8. *Should I develop school programs and kits for the exhibits?*

Yes. Work closely with the interpreters to develop a school program, teaching kit, and lesson plans about the exhibit. You, as the person responsible for the park museum and archival collections, have an important contribution to make to the park interpretive and educational program. You have a wealth of information about the life ways, people, species, ecosystems, places, and events represented in your park's collections. A school program or kit provides an ideal opportunity for you to directly communicate the park's mission and the exhibit theme to local schools. The package will allow you to extend the life, range, and usefulness of the exhibit. If you participate in the development of a school program or kit, you can make sure that the park collections are integrated into the package.

Work with the local schools to develop appropriate educational materials that include park museum collections. You can also hire contractors to develop curriculum-based packages. There are extensive teaching tools on the Web. Refer to the NPS Museum Management Program Website at <http://www.cr.nps.gov/museum> and *Teaching with Historic Places* at <http://www.cr.nps.gov/toolsfor.htm>. The Department of Education site, Federal Resources for Educational Excellence <http://www.ed.gov/free/> lists hundreds of education resources that are supported by agencies across the U.S. federal government.

9. *How do I promote the exhibit within the*

To increase visitation and ensure that you meet the park's education and interpretation mission:

community, across the state, or across the nation?

- Promote the exhibit as widely as possible. Community representation on the exhibit team goes a long way to get out "word of mouth" publicity for your exhibit.

- Develop an exhibit fact sheet for NPS interpretation staff and for wider distribution.

- Work with the park public relations officer and community representatives for ideas to advertise the exhibit.

- Advertise in local newspapers and on buses.

- Do radio spots and give interviews to the press.

- Develop public programs, lectures, and events.

- Arrange for craft demonstrations and performances.

- Write and distribute effective press releases.

- Develop an exhibit brochure and make it available at the visitor center and in the exhibit.

- Submit press releases about the exhibit to newspapers, magazines, and tourist brochures.

- Partner with other historical societies, parks, and museums to do a joint marketing effort, particularly if you're able to produce thematically linked exhibits.

- Work with the state tourism bureau to make sure your park's exhibit is well publicized.

- Place exhibit announcements in specialty magazines and papers to reach specialized audiences.

- Make sure that an exhibit description and hours of viewing are placed on your park's Website.

- Establish a link between your Web exhibit and the Museum Management Program Website.

M. Documenting Collections on Exhibit

It is particularly important to document all aspects of the exhibit, from the early stages of planning to the exhibit installation and post-installation evaluation. Use long-lived media for documentation. Keep track of all the work that is done and which items are selected for exhibit. Capture the research done on the objects and record

condition and other pertinent information. Good documentation allows you to get your exhibit-related work done in a timely fashion. It also means that you're building a history of use for each object. Careful documentation means that issues and questions can be readily answered while you're working on the exhibit, and once the exhibit is up.

1. *How do I document collections going on exhibit?*

You need to document all phases of the exhibit and the objects that are installed. Use the Automated National Catalog System (ANCS+) to generate the forms noted below. Be sure to update entries in ANCS+ once the exhibit has been installed. Refer to the ANCS+ *User Manual*, Chapter 4, Associated Module sections on Exhibits, Loans In, and Conservation, for detailed information on how to enter data into ANCS+.

The documentation of collections on exhibit includes the following (refer to Figure 7.3, Park Exhibit Checklist):

- ***Accessioning and cataloging:*** All objects, specimens, and archival items must be accessioned and cataloged in accordance with the *MH-II,* Museum Records, and entered into ANCS+. Take detailed measurements of the object, where possible, and include on the catalog card. Make sure that every part of the object is numbered before it goes up on exhibit. Enter the exhibit title and the exhibit duration in the exhibit module of the ANCS+ catalog record.

- ***Exhibit folder (or binder):*** Generate an exhibit folder or binder to hold all related documentation, such as the exhibit and photo inventories, so that you can find all exhibit information readily. Keep related memos, general notes, budget, shipping and packing information, and other related information in the exhibit folder. Reference the file from the catalog or accession folders of each item as needed. Exhibit files are usually kept chronologically, by exhibit date. The information you file may prove to be very useful in the future.

- ***Exhibit inventory:*** Develop a list of all items on exhibit. The list should note the specific exhibit room and case location, catalog numbers, and object dimensions and weight. Use the exhibit inventory together with the photo inventory described below. Complete the exhibit module in ANCS+ and update the object status and location in ANCS+. Develop a case numbering system and number the cases consistently in an unobtrusive but readable place. Place a number diagram of the cases in the exhibit folder. A floor plan with object location facilitates security and condition checks.

- ***Caption sheet and credit line format:*** Develop a standard caption and credit format for all items that are going on exhibit. Refer to Chapter 3, Section E.18, What do I need to know about writing captions?

- ***Object photography:*** You should have a dated record photograph of every object, specimen, and archival item that is in the park exhibit. Refer to *MH-II*, Appendix L: Photography, for technical guidance on taking photographs of objects before they go up on exhibit. Record photographs should provide adequate visual information on the object for security and condition purposes.

  Once the exhibit is installed, take or arrange for a professional photographer to take photographs of all cases and objects as installed. Use one set of case installation shots as a photo-identification (photo-ID) for all objects on exhibit. Record individual catalog numbers on every object in the photo-ID. The photo-ID makes for ready identification for inventory and security purposes. Add a copy of the photo-ID to the exhibit folder and maintenance manual.

- ***Object condition report:*** Complete an Object Condition Report (Form 10-637) to record all structural and surface conditions such as tears, losses, cracks, chips, holes, abrasion, tape residues, mold, buckling, discoloration, and other conditions that are present when the object goes on exhibit. Record this baseline data before the object is treated or goes on exhibit. This will allow you to easily track what changes the object is undergoing while on exhibit, and whether you need to make adjustments, or remove it from the exhibit. Keep a copy of the object condition report in the accession or catalog folder, and in the exhibit folder or maintenance manual. Enter treatment and condition data on the ANCS+ catalog record and in the ANCS+ conservation module.

  Some objects may need stabilization before going on exhibit. Such work may include cleaning or re-assembly of broken parts. For additional information on conservation, refer to Section E, Exhibit Conservation, *MH-I*, Chapter 8: Conservation Treatment, and to the HFC conservation Website at <http://www.nps.gov/hfc/support/hfc>.

  All conservation treatments must be documented in writing. An adequate treatment record should be accompanied by detailed photographs. Refer to *MH-I*, Chapter 8, Section C, Documentation of Object Conservation Treatment, for detailed information on the different types of documents that are completed at different stages of conservation work.

- ***Incoming loan agreements:*** Wherever possible, include the park's collections in the exhibit. A park exhibit offers the ideal opportunity to share the collections with the public, and to achieve the park's resource interpretation and educational mission. Park collections are park resources in their own right, and should be used to interpret the park mission and goals.

However, it may be necessary to borrow materials for exhibit. Refer to *MH-II*, Chapter 2: Accessioning, for information on negotiating an incoming loan agreement. Keep all insurance documents with the appropriate catalog files. See Section O.2 below.

The conservator usually prepares the following:

- ***Object examination report***
- ***Object treatment proposal:*** The park approves all treatment before any work is begun.
- ***Object treatment report (OTR):*** You should also request a copy of an object preparation report, if one was prepared. It records information on what work was done to prepare the object for exhibit.
- ***Maintenance manual:*** Refer to Section O.2 for information on what is in the exhibit maintenance manual

2. *What do I need to know about acquiring rights to images?*

Exhibits often include photographs, drawings, and other artwork. Whether the images or artwork are part of your collection or from an outside source, make sure that you have the right to use the work in an exhibit. There are several laws, in particular, the copyright law, that affect the use of collections.

Copyrights are a bundle of rights given to creators, including economic rights to:

- publicly display (or exhibit) works
- reproduce work
- distribute copies by sale or transfer of ownership
- publicly perform work
- prepare derivative works

The Copyright Act of 1976 (17 USC 101-810 et seq. [1988 & Supp v. 1993]) covers archival and manuscript collections, including manuscripts, pictorial, print, graphic, and photographic works, electronic records, films, videotapes, and related materials and other original works, including fine and decorative art works, and architectural works, from the moment of creation.

Refer to Chapter 2: Legal Issues, for detailed information on copyright.

Check the accession and loan folders to verify that the park owns the rights to the artwork or images and can exhibit the material. It is

important when accessioning an object, to have the donor convey all rights to the NPS. If the owner chooses to retain the copyright, make sure you add a clause in the special conditions box stating that the copyright holder gives the NPS permission in perpetuity to exhibit the donated material. In the case of an incoming loan, add a clause stating that the lender gives the NPS permission to exhibit the photographs, drawings, and other artwork and include images of the borrowed material in paper and Web publications.

If the park does not own the artwork or images, make sure that you have written permission from the holder of the rights to use the artwork or images in the exhibit, paper and Web publication.

File all permissions in the accession or catalog folder. Be sure to record the institution's tracking number(s) and credit and caption formats as required by a lender. Refer to Chapter 3, Section C.18, on how to write a caption and give an appropriate credit. Make sure you label all images, including those that were not used in the exhibit, with the correct credits, caption, and identification numbers on exhibit and in the exhibit folder. It will prevent confusion if you wish to use those images for other exhibits or publications at a later date. File all the written permissions in an exhibit file.

3. *Should I insure borrowed objects?*

Yes, if the lender requires insurance. Complete insurance arrangements in accordance with the procedures outlined in *MH-II*, Chapter 4: Section VII, Purchasing Insurance for Borrowed Objects.

4. *How should I document the artwork and maps that are prepared for the exhibit?*

Make copies of the artwork and maps. Note the identifying numbers and source on each copy and file in the exhibit folder.

5. *How do I handle reproduction of an object or image?*

If you are unable to obtain an original object for the exhibit, either from the park collections or by borrowing from another institution, you may decide to reproduce the object. Similarly, if the original archival item is too fragile to exhibit, you should have a reproduction made. Refer to Chapter 4: Two-dimensional Reproductions, and Chapter 5: Three-dimensional Reproductions, for detailed information and guidance on handling reproductions.

N. Evaluating Exhibits

1. *Why evaluate exhibits?*

All exhibits should be evaluated because they absorb considerable park resources, such as funding and staff time, particularly during development and installation. Therefore, it makes good sense to understand what is needed to get the park's exhibit message across, to see what will work, how learning will take place, and how well the "product" or exhibit is received. Well-run businesses understand their customers. They know how to attract visitors, conduct market research, and test the product. They also know how to bring visitors back by refining the "product" once it has reached the market. An

exhibit that reflects so directly on the park, staff, resources, and its commitment, deserves no less. Evaluations of exhibits enable park staff to better serve the public.

2. *What kinds of exhibit evaluations are there?*

Evaluation should be done before, during, and after the exhibit is completed. The project coordinator and the exhibit team evaluate the exhibit informally throughout all phases of its development. It is essential to have exhibit content reviewed by subject matter experts. Most exhibit designers informally evaluate their work to make sure that the goals of the exhibit and specifications are met. Get substantive evaluation early on in the project. This ensures that all issues can be addressed in a reasonable and timely way. Evaluations done late in the process may mean additional costs or that the changes won't be made at all. The project coordinator should also write an

evaluation of the exhibit once it is installed, and make sure that appropriate modifications are made. It is important to evaluate early and often. Evaluations contribute to effective exhibits.

The park can also obtain formal evaluations of exhibits. These include activities such as surveying, interviewing, obtaining feedback, and observing visitor behaviors and timing movements through the exhibit. Professional exhibit evaluators do exhibit evaluations. Contact HFC exhibits or Museum Management Program staff to assist in locating professional exhibit evaluators. Different types of formal and informal evaluation yield useful information. They include the following:

- ***Front-end evaluation:*** The front-end evaluation, as its name suggests, is done very early in the planning of an exhibit. It can be formal or informal. Front-end evaluation occurs before any exhibit development. Exhibit themes and potential exhibit contents are closely examined. Subject matter experts critically review and evaluate draft exhibit documentation and copy. Visitor surveys and an analysis of the audience's pre-knowledge and interest in the topic are evaluated by exhibit evaluators, including HFC or contract staff. This information is obtained before the exhibit is developed. The front-end evaluation seeks to identify and eliminate errors before they arise.

- ***Formative evaluation:*** Ongoing or formative evaluation occurs during the process of developing the exhibit. Formative evaluation includes surveys and focus groups. Information about visitor behaviors is obtained by creating and testing mock-ups and elements of the exhibit. This allows staff to modify the exhibit to ensure a more successful exhibit. It assesses what measures to use to determine what learning will take place and what visitors understand. Lighting, signage, and visitor orientation are also examined and adjusted as necessary during this stage of evaluation.

- ***Summative evaluation:*** The final or summative evaluation takes place once the exhibit has been installed. Of course, it is important to anticipate and identify problems before the exhibit is installed. Once the exhibit is installed, it can be expensive and time consuming to correct. The summative evaluation can, however, provide very useful information for future exhibit development.

- ***Remedial evaluation:*** Remedial evaluation is undertaken to make modifications and adjustments to the exhibit once it has been up for a while. Direct observation of visitors and how they react to the exhibit is revealing and useful. Traffic flow and entrance and exit behaviors are observed. Additional information is obtained from formal interviews, informal discussions, and questionnaires. A combination of these methods will give you a better understanding of visitors, what kind of learning occurs, exhibit effectiveness, and how to make adjustments.

The project coordinator and appropriate park staff should monitor evaluations closely. This will ensure that the needed modifications are made with minimal impact on the exhibit at different stages of development. The park works with HFC or the contracting officer's technical representative (COTR) to make sure that problems are corrected in a timely way.

3. *When do I conduct the final exhibit review?*

Do a very thorough walk-through of the exhibit as it nears completion, and verify that all the contract specifications have been met. Do another walk-through once the installation has been completed. Make notes and develop a list of problems. You should also do another walk-through with members of the park exhibit team, in particular, the maintenance staff. You and other park staff will be responsible for the exhibit once the design firm leaves. Therefore, it is very important for you to make sure that all the specifications have been met. Give a copy of the list to the contractors. Don't sign off on the work until the problems on the list have been addressed to your satisfaction.

4. *How do I evaluate the exhibit's effectiveness for visitors?*

It is extremely useful to discover information about the park museum visitor. Work with interpretation staff to obtain pertinent visitor information, and to visitor responses to the exhibit. Museum visitors have different life experiences, learning styles, and demographic variables such as socio-economic background, gender, and motivation. An exhibit evaluation combined with knowledge of visitor demographics can help you plan related public programs. It is extremely helpful to solicit responses throughout the exhibit development and make necessary adjustments to the exhibit.

5. *How do I correct minor factual errors*

If you find a mistake or a minor factual error soon after the exhibit is installed, immediately contact the group that designed and installed the exhibit. If the HFC Department of Exhibits staff did the exhibit

or coordinated the contract, immediately notify HFC by phone, and follow with a memo. HFC works with the contracting officer's technical representative (COTR) to determine when the error occurred. The COTR then contacts the contractor to have the problem corrected and new signage installed in the exhibit. If new information or a new interpretation needs to be included in the exhibit, contact HFC Department of Exhibits staff. The park will need to negotiate with HFC to have minor rehabilitation of the exhibit completed. Follow the same procedure with a non-NPS contractor.

6. *How do I track visitation to the exhibit?*

Work with park interpretive staff to develop a strategy to track visitation numbers. You should also consider asking interpretive or visitor center staff to monitor and record visitor impressions. This information may be very useful for you to make any adjustments or refinements to the exhibit, and to develop some "Frequently Asked Questions" worksheets about the exhibit that visitors may find very helpful.

O. Maintaining Exhibits

1. *Who maintains exhibits?*

The park assumes responsibility for maintaining the exhibit once the installation is complete. ***Note:*** Never underestimate the importance of routine maintenance. A well-maintained exhibit reflects well on the NPS and the park. Always keep the exhibit and exhibit space clean and in excellent shape. Broken or non-functioning multi-media give a poor impression of the park, so make sure that interactive or multi-media features are always in working order. Work with park management to establish, fund, and implement a schedule for routine maintenance of exhibits. Remember that good maintenance takes time, money, and a commitment to having the park's public face look its best.

Maintain the exhibit in accordance with the manual provided by the planning and design firm that installed the exhibit. Refer to the NPS *Standard Fabrications Specifications*, Project Closeout, Section 3.1, Maintenance Manuals. The company or contractor must provide a maintenance manual for the exhibit. The park can also enter into an agreement with a contractor to maintain a particularly complex exhibit. However, this is relatively unusual.

2. *What's included in an exhibit maintenance manual?*

An exhibit maintenance manual should include the following:

- contract information, including the following for all who worked on the exhibit:
  - name
  - address
  - telephone number
- procedures and cleaning instructions for:
  - exhibit structures
  - finishes
  - graphic panels
  - tactile models
  - screened materials
- exhibit housekeeping schedule (refer to *MH-I*, Chapter 13: Museum Housekeeping, and *ANCS+ User Manual*, Chapter 4, Section VI, Maintenance Associated Module)
- conservation criteria for monitoring objects

- brand names of recommended cleaning materials for exhibit furniture with contact information (check with a conservator to ensure these materials will not damage objects)
- list of "not-to-be-used" materials and techniques
- repair instructions, including:
  - description of specific repair techniques for different materials
  - wiring diagrams for all equipment
  - instructions for repair or replacement of audiovisual equipment
- care and handling instructions for mounted objects, including:
  - care and maintenance of artifact mounts
  - how to remove objects from mounts
  - copies of all artifact mount drawings
- product list and catalog cuts of materials used in the exhibit
- equipment warranties
- access instructions
- electrical and mechanical instructions
- color, finish, and carpet samples of materials used in the exhibit
- copy of final planning notebook and design drawing, including:
  - exhibit drawings
  - construction details
- lighting information, including duration and intensity
- conservation features

The park gets one copy of the manual. Keep the manual in a secure place in the museum. File another copy of the manual with the HFC, Department of Exhibits.

For contracts not coordinated by HFC, always require that a copy of the manual be deposited at HFC.

3. *What is a park maintenance kit?*

The contractor should provide the following items to the park in a permanent container with a lid:

- touchup kit for exhibit cases and furniture
- two sets of all keys used in the exhibit (follow key control procedures outlined in *MH-I*, Chapter 9, Section E.7, What should I do to safeguard keys?)
- specialized tools needed for access to cases
- cleaning kit

The park should keep this kit in a safe but accessible place.

4. *What ongoing maintenance activities do I need to undertake?*

Work with chiefs of maintenance and interpretation to incorporate the new or refurbished exhibit into your museum housekeeping plan. Refer to *MH-I*, Chapter 13: Museum Housekeeping, for detailed information on how to develop and implement a museum housekeeping plan. Monitoring the well being of the exhibit is a team effort. Coordinate with park staff who regularly visit and interpret the exhibit. The more pairs of eyes you have focused on the exhibit, the greater the well being of the exhibited objects. A poorly maintained exhibit reflects poorly on the park. A well-maintained exhibit gives the visitor a positive impression of the park and its staff.

You'll need to:

- implement an exhibit housekeeping plan
  - develop an exhibit cleaning schedule and document it in the ANCS+ Maintenance Associated Module
  - identify cleaning and dusting tasks
  - keep the exhibit area clean
  - dust and vacuum case interiors regularly
  - train staff to observe changes to the exhibit, objects, or mounts
  - identify and acquire supplies and equipment needed to clean and dust the exhibit
- monitor and maintain the environmental conditions
  - monitor and maintain relative humidity and pollutant control systems
  - replace lamps and aim beam as described in the manual

- check light levels once new lamps have been installed

- monitor exhibit overall
  - assign a staff member to do a weekly walk-through inspection of the exhibit
  - inspect for pests and mold
  - record your observations and exhibit gallery conditions in a log
  - check object conditions annually
  - identify when maintenance is necessary, such as repairing the dehumidifier and replacing the spotlight
  - check case security
  - check security at entrances and exits
  - notify appropriate staff to correct problems
- rotate and substitute objects periodically

Follow guidance on handling objects outlined in *MH-I*, Chapter 6: Shipping and Handling Museum Objects.

5. *How do I monitor object condition?*

Each object, specimen, or archival item that goes on exhibit should have a record photograph and a detailed Object Condition Report (Form 10-637, see *MH-II*, Chapter 5: Outgoing Loans). The individual photograph and condition report allow you to monitor the condition over time. Photograph each case with its contents (see Section M, Documenting Collections on Exhibit). When you do a walk-through, use the photo-ID (installation photograph with individual catalog numbers) as an easy visual check to make sure all objects are still there.

Closely monitor items that are installed in an exhibit. No matter how well an exhibit has been designed, the exhibit environment is more stressful than the storage environment. Extended exhibit and longer exposure to light and fluctuations in temperature and relative humidity accelerate object deterioration. The photograph and the condition report provide you with essential baseline data to monitor security and the object's condition. You should routinely walk through the exhibit to spot any major problems. A weekly walk-through is recommended. Closely evaluate each object on a regular schedule. A detailed monthly check is recommended. Record and date your observations.

6. *When do I monitor the environment?*

Work with a conservator to establish baseline data on the relative humidity and temperature in the exhibit space and within exhibit

cases. Refer to Sections H, Exhibit Conservation, and I, Preserving and Protecting Objects in the Exhibit Process. Where possible, install recording hygrothermographs or data loggers to record relative

humidity and temperature. Regularly evaluate the readings. Keep a logbook to record current outside weather conditions and exhibit visitation, both of which can affect the exhibit and case environment.

7. *How do I handle requests to photograph the exhibit or the objects?*

Refer to Section I, Documenting Collections on Exhibit**;** Chapter 6, Section D, Filming and Photography in Spaces Housing Museum Collections; Chapter 2: Legal Issues; and Chapter 4: Two-dimensional Reproductions, for information on how to handle requests to photograph the exhibit and objects on exhibit.

8. *How do I establish information files to answer inquiries from staff and visitors?*

Record the most commonly asked questions and your responses. Develop subject files for the most commonly requested information. Add information, research, clippings, and photographs as you find them. You should consider developing a "frequently asked questions and answers" sheet available in the exhibit area, once you've determined what those questions are.

9. *What do I do if I need to take the object off exhibit temporarily?*

On occasion, you may need to remove an object from an exhibit temporarily. The object might require conservation or you may be developing an exhibit and need to photograph the object. Carefully remove the object from the exhibit without disturbing other items on display. Place an Object Temporary Removal Slip, Form 10-97 in its place. Follow the procedures for completing the slip outlined in *MH-II*, Chapter 4, Section C.2, How do I document temporary location changes? The slip ensures that staff and visitors know that the gap or "hole" in the exhibit is deliberate.

P. Rehabilitating Exhibits

1. *When should I rotate objects?*

During the exhibit planning and design phase, you will have worked with the exhibit project coordinator and designer to identify substitute objects for selected items, in particular, organic and other sensitive objects. Ideally, all objects in long-term park exhibits should be rested and rotated to extend their life span. Work with a conservator to determine the rotation schedule.

2. *What should I do if an object is damaged?*

If you detect damage to an object on exhibit, correct the problem as soon as possible. If the damage occurred as a result of a mount, case, lighting, or other conservation problem, consult with a conservator and maintenance staff to find a solution. If the damage is a result of a traffic flow problem or security breach, work with park maintenance to correct the deficiency.

Remove the object until the problem has been corrected. If an older exhibit doesn't have a rotation schedule, you need to identify alternate objects for rotation and establish and implement a rotation schedule. Work with a conservator and HFC exhibit staff or other exhibit service providers to address conservation or exhibit problems.

3. *What should I do if a label is damaged?*

If you detect damage to a label, correct the problem as soon as possible. Notify HFC or the exhibit contractor and request a replacement label. Use a corrected label until you can replace the damaged label.

4. *How do I update the exhibit?*

Work with HFC, Department of Exhibits, or an exhibit contractor of the park's choice to update exhibits over time. You will engage first-time and repeat visitors by keeping exhibits current. You can do that by incorporating new information or revised interpretations about people, events, or themes. You may also want to make changes as new objects come into the park collections. Dated exhibits don't reflect well on the park or its staff. It is important to keep exhibits fresh and challenging. Effective exhibits, as the public face of the park, are an integral part of achieving the park's education mission.

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R. List of Figures

Sample Wording for a Park Project Agreement with Harpers Ferry Center, Department of Exhibits

Overview

This document outlines the agreement between the Park and Harpers Ferry Center, Department of Exhibits (HFC) concerning the development of the Park's exhibit project. The agreement outlines the project description and scope, exhibit team members' roles, the proposed work plan, budget, and exhibit development schedule.

Project Description

The visitor center was built in 1965. The present exhibit was produced in the early 1980s. The Park plans to upgrade the current exhibit. The exhibit upgrade includes updating and revising the interpretive story presented in the exhibit, bringing exhibit design and production values up to current museum and NPS exhibit and conservation standards, and increasing exhibit space to 540 square feet. NPS exhibit and exhibit conservation standards are described in the NPS *Museum Handbook*, Part III, Chapter 7, and at the HFC site at <http//www.nps.gov/hfc>. The new exhibit area will include a cultural history exhibition, an information desk and an association book sales area.

HFC will assist the Park in developing a new exhibit for the exhibit space. HFC responsibilities include developing a schematic and concept plan and design, and final planning notebook and design drawings in conjunction with the Park

Project Resource Package

The project resource package is composed of a schematic plan and design, and a concept plan and design. HFC will develop the schematic and concept plans in close coordination with the Park. HFC will develop the final planning notebook and design drawing.

The schematic plan and design includes:
- a floor plan
- a bubble diagram indicating the general orientation of exhibits
- rough titles that reflect ideas and themes
- rough placement of exhibit and exhibit cases
- a broad description of object types to be included in the exhibit
- a general discussion of exhibit media and elements, such as audiovisual or interactive media

The concept plan and design includes:
- a narrative description of the exhibit
- an exhibit floor plan showing space allocation, visitor traffic flow, thematic areas
- renderings of what the installation will look like
- rough sketches of selected exhibit elements
- draft label copy
- graphics schedule or listing of artwork, photographs and pertinent identifying information

- facsimiles or drawings of:
  - specific objects or reproductions
  - actual images
  - dioramas and other exhibit furnishing

Figure 7.1. Sample Wording for a Park Project Agreement with Harpers Ferry Center, Department of Exhibits (***Note:*** The wording in this figure is based on a document developed by HFC, Department of Exhibits.)

- a list of proposed:
  - objects, specimens or archival items
  - alternate objects, specimens or archival items for exhibit rotation
  - reproductions
  - photographs of objects
- audio-visual treatments including:
  - software
  - equipment
- an exhibit model
- estimates for production of all exhibit elements
- a schedule

The planning notebook includes:

- a list of objects with:
  - catalog numbers
  - captions
  - measurements, including dimensions and weight
  - substitute items
  - object rotation schedule
- a list of graphics with:
  - identifying numbers
  - captions and credits, including source
  - cropping instructions
  - graphic facsimiles
  - graphic and text ID numbers text samples
- object photographs with catalog numbers
- sources for:
  - graphics
  - artwork
  - rights
  - reproductions
  - maps
- label copy and captions
- a floor plan showing all exhibit elements:

  - elevational views of all exhibit elements
  - location and titles of exhibits
- an exhibit elements drawing
- narrative descriptions of:
  - exhibit elements
  - type styles
  - colors
  - finishes
  - graphics
- sample boards with actual samples of:
  - paint laminates
  - finishes
  - carpet
  - type styles

Figure 7.1. Sample Wording for a Park Project Agreement with Harpers Ferry Center, Department of Exhibits (***Note:*** The wording in this figure is based on a document developed by HFC, Department of Exhibits.)

- typographic specifications
- lighting specifications
- conservation specifications
- audio-visual treatments
- performance standards for :
  - durability
  - security
  - access
  - maintenance
- an exhibit model that incorporates all exhibit elements
- a budget, including fabrication estimate
- a revised schedule
- individual task assignments

The design drawing includes:

- the final exhibit design and layout
- a fully detailed exhibit drawings
- specific case details and measurements
- floor plans and elevations including perspective view drawings
- the lighting plan

Project Work Plan

The HFC planner and designer will meet with the Park staff and Park resource people at ___ (location) in ____ (date) to develop the exhibit story-line, themes, and objectives, and to evaluate and identify potential exhibit graphics and display objects. HFC will prepare schematic drawings of the proposed exhibits.

Park staff will prepare an Interpretive Plan for the exhibit space which will describe the story-line, themes, proposed exhibit resources, and agreements reached on exhibit issues. The Park will prepare a scope of work for project research, and then begin work, with the advice and assistance of the HFC planner. The cooperating association will provide contract research assistance.

The HFC planning team will conduct a workshop to begin development of the exhibit concept plan and design. The Park, in conjunction with HFC, will identify and prepare the planning elements of the exhibit. The HFC designer will prepare the design elements such as floor plans, elevation drawings, and sample boards. The Park reviews and approves the concept plan and design package.

HFC staff, in conjunction with the Park, will prepare the schematic plan and design, and the final planning and notebook. HFC will prepare the final text, assemble the graphics, objects, and AV resources to be included in the exhibits. The HFC designer will prepare all design elements. After review and approval of the final exhibit package by the Park, the production phase will be initiated.

HFC will produce and install the exhibits. The HFC designer will serve as the production manager. The Park will acquire, or assist HFC in acquiring, reproducible graphics and intellectual use rights. Park exhibit team staff will be invited to participate in exhibit planning, design, and production meetings, and inspections. The Park will have approval authority over all phases of work.

Figure 7.1. Sample Wording for a Park Project Agreement with Harpers Ferry Center, Department of Exhibits (***Note:*** The wording in this figure is based on a document developed by HFC, Department of Exhibits.)

Exhibit Project Team

The exhibit team is composed of Park and HFC staff, and other specialists as needed. Responsibilities are outlined below. The Park exhibit team will participate in all planning, design, and production meetings and inspections. The Park exhibit team will review all phases of work. The superintendent will have final authorization of the exhibit.

HFC, Department of Exhibits Team Members

Team Member	Title	Project Role
Name	Exhibit Planning Coordinator	• Serves as Park's principal contact person at HFC during the planning and design phases of the project. • Advises Park staff on how to conduct research, write exhibit test, and prepare a production-ready planning package.
Name	Exhibit Designer and Producer	• Prepares the design elements of the exhibit production package, based on text, graphics, and objects provided by the Park. • Serves as production manager. • Serves as Park's primary contact at HFC during the design and installation phase of the project.
Name	Conservator	• Advises the planning team on matters related to object

		conservation. • Coordinates project support tasks performed by the HFC Department of Conservation.

Park Exhibit Team Members

Park Team Member	Title	Project Role
Name	Chief Interpreter	• Overall Park coordinator for the project. • Primary liaison with the superintendent. • Arranges for and participates in all major project meetings. • Reviews all project documents. • Tracks budget and schedule for the Park.
Name	Interpretive Specialist	• Serves as primary exhibit planner on the project. • Coordinates and does project research, label writing, plan document preparation. • Coordinates production-ready graphics. • Selects display objects in conjunction with the curator.
Name	Curator	• Assists in identifying, locating, and as needed, acquiring objects for exhibit. • Participates in planning meetings. • Reviews planning documents with special reference to conservation concerns. • Provides catalog data for inclusion in exhibit label copy.
Name	District Ranger	• Participates in planning meetings when available. • Reviews and comments on planning concepts and documents. • Provides information on exhibit content and visitor experience issues.
Name	Park Ranger	• Participates in planning meetings when available. Comments on exhibit content and visitor experience issues.

Figure 7.1. Sample Wording for a Park Project Agreement with Harpers Ferry Center, Department of Exhibits (***Note:*** The wording in this figure is based on a document developed by HFC, Department of Exhibits.)

Other Exhibit Team Members

Team Member	Title	Project Role
Name	Director, Historical Society	• Assists in developing the exhibit story-line, acquiring graphics and objects. • Serves as a resource person to the exhibit project team. • Reviews exhibit documents.
Name	Assistant Professor, State College	• Serves as a resource person to the Project Team. • Assists in developing the exhibit story-line, acquiring graphics and objects. • Reviews exhibit documents.
Name	Assistant Professor, State College	• Provides input regarding the association display and sales functions in the exhibit space.

Project Schedule

The schedule below is based on the timely completion of all project tasks. It is understood that if preliminary tasks are delayed or incomplete, the entire schedule will be delayed. Exhibit development will require eighteen (18) months from funding to installation.

Phase	Event	Date
Project Initiation		February Year 1
Project Initiation	Complete Project Research	August Year 1
Concept Plan	Concept Plan Workshop	September Year 1
Concept Plan	Concept Plan Presentation	October Year 1
Final Plan	Begin Final Plan	November Year 1
Final Plan	Final Plan Presentation	January Year 2
Pre-Production	Approve Revised Final Plan	February Year 2
Production	Prepare Production Contract Package	March Year 2
Production	Post Award Meeting	May Year 2
Production	Exhibit Installation	October Year 2

Project Budget

The total project budget is $130,000. All planning, design and production funds will come from this source. No other Park monies will be made available other than limited amounts for making any needed modifications to the building. Any such requirement will be negotiated with the Park. HFC and the Park will monitor the project budget to insure that the project stays within budget.

Fiscal Year	Budget Item	Amount
FY 1	HFC Exhibit Planning/Design	$25,000
FY 1	Exhibit Fabrication Contract	$75,000
FY 1	Object Conservation	$7,000
FY 1	Audiovisual Production	$6,000
FY 2	Audiovisual Equipment	$3,000
FY 2	HFC Contracting Technical Support	$6,000
FY 2	Historic Furnishings Production	$8,000
	Total	**$130,000**

Figure 7.1. Sample Wording for a Park Project Agreement with Harpers Ferry Center, Department of

Exhibits (***Note:*** The wording in this figure is based on a document developed by HFC, Department of Exhibits.)

Sample Fabrication and Installation Contract Wording

1. Background

   The Visitor Center is located X miles from the park entrance. The Visitor Center was built in 1965. It contains an exhibit space of XX square feet, which includes the museum exhibits, an information desk, and a book sales area. New exhibits for the Visitor Center will include an interpretation of the cultural history of the area. The park will install a new information desk and a new book sales area.

2. Purpose

   The purpose of this contract is to provide fabrication and installation of museum exhibits for the Visitor Center. The exhibits will include exhibit cases, object mounting, interior case labels, graphic panels, and visitor-activated audio programs.

3. Scope of Work

   The Contractor will provide all professional exhibit fabrication, and installation services, labor, facilities, materials, and travel (except as otherwise specified in this contract) to fabricate, transport, and install all exhibit elements for the Visitor Center at the Park in accordance with the attached drawings entitled "Visitor Center, Park Name." These drawings are hereby incorporated into this contract.

   Work under this contract will proceed in accordance with the steps outlined below, the *National Park Service Standard Fabrication Specifications* <http://www.nps.gov/hfc/exhibits/fabspec.pdf> and the specifications outlined in *NPS Exhibit Conservation Guidelines: Incorporating Conservation into Exhibit, Planning, Design and Fabrication.*

   The Contractor shall obtain the intellectual rights to all the copyrighted photographs and graphics and other exhibit materials used in the exhibit. The Contractor agrees to the terms outlined in the release form (see *MH-III*, Figure 3.6 and 7) that grants the Park the absolute and irrevocable right and permission, in respect of the photographs, graphics or audio or videotape materials developed for the Park exhibit, to use, reuse, publish and republish, and otherwise reproduce, modify and display the same, in whole or in part, individually or with other photographs or graphics, and with any copyrighted matter, in any and all media now or hereafter known, for illustration, promotion, art, advertising or trade, or any other purpose whatsoever.

The Contractor will provide the following:

A. Project Management

   Scheduling, coordinating, overseeing, and managing work produced and installed under this contract.

   (1) Travel to Visitor Center to meet with the COTR for a post-award conference and to perform a site visit to review existing conditions prior to fabrication of the exhibits. The Contractor will be responsible for ensuring proper fit and operation of all exhibit elements;

Figure 7.2. Sample Fabrication and Installation Contract Wording (***Note:*** The wording in this figure is based on a document developed by the Harpers Ferry Center, Department of Exhibits.)

(2) Travel to the Visitor Center, to oversee installation of exhibits at the site by the installation team. The Contractor will provide project management of all on-site work including:

(a) Coordination with park staff for delivery, unloading, and daily work operations on-site;

(b) Daily quality control inspections of all work performed by installation team;

(c) Coordination with park for final walk-through inspection, operational training session, and delivery of maintenance manuals;

(d) Documentation of all listed deficiencies that result from final walk-through inspection. Copies will be provided to the COTR and the park.

B. Exhibit Drawings

Preparation of preliminary and final exhibit drawings.

(1) Detailing of all exhibit structures included in this contract, including exhibit cases, acrylic vitrines, and graphic panels. Work includes detailing locations of audiovisual equipment and other electrical or mechanical equipment, including vents for convection cooling, shelving, access doors, and power sources;

(2) Color/finish samples for all structures and samples for picture frame molding as provided;

(3) Catalog cuts for specialized hardware, including locks, hinges, mounting hardware, ventilation grilles, metal shelving for audiovisual equipment.

C. Exhibit Structures

Fabrication of all exhibit elements including: cabinetry, panels, platforms, vitrines, or other elements that constitute the basic structural elements of the exhibits

(1) Acrylic artifact vitrines as shown on the drawings, fabricated with UV-filtering acrylic, in accordance with standard specifications provided by the park. Edges of vitrines will be beveled. Vitrines will provide concealed chamber for silica gel as detailed in reviewed and approved detail drawings;

(2) Glass exhibit cases as shown on the drawings in accordance with reviewed and approved detail drawings and the following:

(a) Glazing of cases will be one sheet of 1/2" UV-filtering laminated glass, mounted flush with surrounding exhibit panel surface. Glass will be captured with aluminum extrusion painted to match exhibit surface in accordance with specifications provided by the park. Glazing will be sealed with neutral curing silicone in accordance with specifications provided by the park;

(b) Exhibit case structures will be in accordance with standard specifications provided by the park and with the *NPS Exhibit Conservation Guidelines: Incorporating Conservation into Exhibit, Planning, Design and Fabrication.* The park will review and approve the detailed drawings. Access to interior of exhibit cases will be as shown on drawings. A section of the graphic panels will swing open, allowing access to space behind exhibit. One side of the exhibit cases will open outward, providing access to the interior (object chamber). The top of the exhibit case chamber

will be UV-filtering cast acrylic sheet. ***Note:*** all glazing of the cases will remain fixed in place;

Figure 7.2. Sample Fabrication and Installation Contract Wording (***Note:*** The wording in this figure is based on a document developed by the Harpers Ferry Center, Department of Exhibits.)

(c) Interior finishes of object chambers will be historic furnishings treatments to provide a room-like effect, such as wallpaper, floorboards, baseboards, etc. Where wallpaper is not supplied, the Contractor will finish the sides as shown on the drawings. The Contractor will be responsible for cutting and fitting all finishing treatments as required, including any additional wood finish treatments that may be required;

(d) Glass object cases are not required to include silica gel or silica gel chambers. However, the design and fabrication of these cases will prevent dust and vermin infiltration through gasketed door openings and siliconed seams.

D. Electrical and Mechanical

Purchase, fabricate, assemble, install into buildings and exhibit structures and thoroughly test electrical and mechanical devices; this includes lighting. Install audiovisual equipment into the exhibit structures, including electrical components to provide and ensure fully operational audiovisual systems for each exhibit unit.

(1) Installation, aiming, and adjustment of lighting fixtures and lamps into existing lighting track. The Contractor will install fixtures in approximate locations as shown on the drawings and make final adjustments as necessary;

(2) Provide power hookup to existing receptacles for each exhibit requiring electrical power. This includes multi-outlet power strips and other wiring as required to provide power to electrical elements in the exhibit structure, in accordance with the standard specifications and approved catalog cuts;

(3) Install audio and electronic equipment.

E. Photographs

Produce all photographic images. The contractor will obtain all necessary intellectual rights in writing, to display the images**.**

Durst Lambda C-prints by Eastman Kodak Company, subsurface laminated to 1/8" non-glare acrylic in accordance with standard fabrication specifications provided by the park.

F. Graphics

Produce all graphics.

(1) Durst Lambda output of all digital files on C-prints by Eastman Kodak Company, produced from the CD provided by the park;

(2) Digital color correction as required so that output is in accordance with color specifications;

(3) All prints will be seamless except where indicated in reviewed and approved samples;

(4) The following samples for review and approval:

(a) Digital output of all graphic panels at one-quarter final size. Example: final size = 4' x 6', sample size = 2' x 3'. Inkjet output of samples is acceptable. Samples will include proposed seam lines indicated for review and approval;

Figure 7.2. Sample Fabrication and Installation Contract Wording (***Note:*** The wording in this figure is based on a document developed by the Harpers Ferry Center, Department of Exhibits.)

(b) Test samples of portions of graphic panels at final image size, the areas chosen so as to include all specified typefaces, type sizes, colors, and graphic treatments. Test samples will be strips approximately 12" wide by 48" long, and a minimum of five (5) will be required.

Note: After review of the samples, any required changes to the text will be performed by the NPS on the government-furnished digital file, which will subsequently be returned to the Contractor for production of the prints

G. Objects

Prepare object mounts for installation, including design, production, and installation.

(1) Provide drawing of mounts for review and approval;

(2) Furnish and install silica gel as specified on the reviewed and approved detail drawings and in accordance with Standard Fabrication Specifications, Department VII, Part 2. Cases that require silica gel are listed below.

H. Setup and Installation

Setup and install all exhibit elements**.**

In addition, the Contractor will:

(1) Install all identified park objects and reproduction items;

(2) Install audio equipment and programs;

(3) Train park staff, during the course of a two-day workshop, to operate and maintain all exhibit elements, including cleaning, accessing interior of exhibit cases, removing and re-installing objects, operation and troubleshooting of audio programs, re-lamping lighting fixtures, and all other relevant maintenance questions as requested by the park.

(4) The Contractor will supply the park and HFC, Department of Exhibits each with a copy of the maintenance manuals during this workshop and be prepared to answer questions about its content.

Figure 7.2. Sample Fabrication and Installation Contract Wording (***Note:*** The wording in this figure is based on a document developed by the Harpers Ferry Center, Department of Exhibits.)

Park Exhibit Checklist

Activity	Action and Date
Initial Exhibit Planning	
Purpose of the exhibit	
Theme and sub-themes	
Develop schedule	
Develop budget	
Identify audience	
Identify partners	
Objects	
Review accession and catalog folders	
List potential objects for inclusion	
Ensure selected objects are cataloged, and include material and measurements	
Obtain object record photographs	
Provide detailed object condition descriptions	
Identify sensitive items	
Identify items needed on loan to complete the exhibit	
Complete loan agreements	
Obtain insurance	
Arrange for reproduction or copies of material	
Develop captions, including measurements, and credit lines	
Identify alternate items for exhibit rotation	

Figure 7.3. Park Exhibit Checklist

Documentation	
Create an exhibit folder to house documents such as:	
Exhibit inventory	
Case layout and object numbering schematic	
Case photographs	
Installation photographs	
Rights Acquisition	
Check accession or catalog folder to see if NPS has rights to images, photographs and artwork	
Verify transfer of copyright on accession [gift] form(s)	
Include statement on incoming loan agreement granting NPS right to exhibit item	
Obtain rights to use non-NPS images and illustrations for the exhibit, including a Web feature	
Obtain written permission and file in exhibit folder	
Conservation	
Determine conservation and preservation needs in consultation with a conservator	
Identify objects for rotation	
Obtain the following: Object Condition Report Object Examination Report Object Treatment Proposal Object Treatment Report	
Incorporate condition and treatment information in ANCS+	
Research	
Obtain background information	
Develop exhibit themes and sub-themes	
Develop thematic label copy	

Figure 7.3. Park Exhibit Checklist

Identify objects for exhibit	
Incorporate individual object captions	
Review text	
Planning and Design	
Prepare initial development and design plan	
Review plan and incorporate edits	
Schematic plan and design	
Review plan and ensure conservation needs are addressed. Incorporate edit	
Concept plan and design	
Review plan	
Work with exhibit curator to ensure concerns are addressed	
Models	
Identify and obtain one or more of the following:	
Dioramas	
Reconstructions	
Graphics	
Charts	
Illustrations	
Maps	
Multi-media	
Exhibit Fabrication	
Display systems	
Hardware	
Lumber	
Paint	
Multi-media equipment	
Electrical fixtures	
Fabric/textiles	

Figure 7.3. Park Exhibit Checklist

Photographs • black and white • sepia • color	
Framing and matting	
Banner/title poster	
Marquees/signs/labels	
Production and Installation	
Work with preparator and conservator to install the exhibit	
Change object status and location in ANCS+	
Develop monitoring schedule	
Prepare list of problems to be corrected	
Correct problems	
Maintenance	
Obtain a maintenance manual	
Develop maintenance schedule	
Ensure access for cleaning, lighting, object rotation and emergencies	
Implement monitoring schedule	
Public Programming	
Prepare and disseminate a news release	
Develop an exhibit brochure or catalog	
Organize an exhibit opening	
Do community outreach	
Develop school program and kits	
Train volunteers and student interns	
Develop a Web feature of the exhibit	

Figure 7.3. Park Exhibit Checklist

Exhibit Conservation Checklist

A. Exhibit Planning

Integrating Conservation into the Exhibit Process

__ Integrate conservation early in the exhibit planning phase.
__ Provide adequate time and resources.
__ Search for balanced conservation solutions.

The Exhibit Team

__ Work cooperatively with the team.
__ Utilize supportive design staff who have conservation experience.
__ Require detailed plans that specify performance criteria.

The Role of the Exhibit Conservator

__ Include an exhibit conservator on the exhibit team.
__ Involve the exhibit conservator in the earliest stages of the process.

Selecting Objects

__ Select appropriate display objects. Avoid selecting too many objects.
__ Take into consideration the aesthetics and treatment requirements of each object.
__ Avoid permanent exhibit of objects.
__ Allow enough time and resources to safely prepare, mount, install, or replicate exhibit objects.

Establishing Conservation Criteria

__ Determine the conservation needs of each individual object chosen for display.
__ Establish necessary but realistic conservation criteria for display.
__ Incorporate the conservation criteria into exhibit design.

Collections Management

__ Ensure safe handling of objects in all phases of exhibit development.
__ Stabilize all objects according to need.
__ Include the appropriate documentation for each object.
__ Protect objects during photography.

B. General Design

Multilevel Conservation Response

__ Design for environmental stability and protection.
__ Consider both macro and micro approaches.
__ Choose an appropriate level of response from the multiple options.

Exhibit Format and Layout

__ Use enclosed display when possible.
__ Allow sufficient room for traffic flow.
__ Group objects that have similar conservation criteria.

Figure 7.4. Exhibit Conservation Checklist (***Note:*** Checklist is based on a document developed by HFC, Department of Conservation.)

Temperature and Relative Humidity

__ Obtain baseline information about the temperature and relative humidity.
__ Control the environment within the entire exhibit space.
__ Locate sensitive objects in the most stable locations.
__ Provide additional control for sensitive objects.

Particulate Contamination

__ Monitor pollutants and enclose sensitive collections.
__ Use high-efficiency filters in environmental systems.
__ Use localized filtration equipment as needed.

Chemical Pollutants

__ Monitor pollutants and enclose sensitive collections.
__ Incorporate chemical filters in the environmental systems.
__ Provide air circulation.
__ Select stable construction materials.
__ Aerate the exhibit space before object installation.

Exhibit Lighting

__ Develop a lighting plan that responds to conservation criteria.
__ Limit total light exposure.
__ Filter all sources of ultraviolet radiation.
__ Control infrared radiation.
__ Exclude sunlight.
__ Construct lighting mockups.

Biological Infestation

__ Examine objects for signs of infestation and active mold.
__ Design exhibits to inhibit infestations.
__ Enclose objects when the risk of infestation is high.
__ Avoid introducing insects through props and unchecked exhibit materials.
__ Control human behaviors that encourage infestation.

Physical Security

__ Conduct a risk assessment.
__ Provide the appropriate level of protection.
__ Use tamper-resistant hardware.
__ Facilitate authorized curatorial access to the objects.

Emergency Preparedness and Fire Protection

__ Develop fire protection and emergency response plans.
__ Perform a risk assessment and address potential problems.

Figure 7.4. Exhibit Conservation Checklist (***Note:*** Checklist is based on a document developed by HFC, Department of Conservation.)

C. Exhibit Case Design

Designing a Conservation-Grade Case

__ Design cases as protective enclosures.
__ Establish performance criteria.
__ Provide detailed, explicit drawings and specifications.
__ Build and test complicated case designs as prototypes when possible.
__ Test the fully assembled case in its final location.

Case Stability, Security, and Access

__ Construct a physically stable, structurally secure case.
__ Provide appropriate security features.
__ Ensure practical access design for curatorial entry.

Sealed Exhibit Cases

__ Use sealed display cases when appropriate.
__ Design well-sealed cases with tight joints and with gaskets.
__ Use conservation-appropriate sealants.
__ Test case performance.

Ventilated Exhibit Cases

__ Use ventilated cases for appropriate applications.
__ Control the design and construction of ventilated cases.
__ Use positive-pressure cases when appropriate.

Lighting Design within Cases

__ Develop a case lighting plan and specify appropriate lighting equipment.
__ Isolate lights from the display chamber.
__ Reduce heat gain and temperature cycling.
__ Incorporate heat-reflecting and insulating materials when necessary.

Humidity-Control Principles

__ Provide a well-sealed case that will support humidity control.
__ Ensure adequate air circulation within the case.
__ Provide separate access to the environmental maintenance chamber.
__ Test the case before enclosing objects.
__ Monitor the interior relative humidity for the duration of the exhibit.

Active and Passive Humidity-Control

__ Establish whether the goal is stabilization or control.
__ Select an appropriate passive or mechanical system.
__ Provide safeguards for mechanical systems.
__ Include appropriate and sufficient moisture-absorber medium for passive control.
__ Test and monitor the case.

Figure 7.4. Exhibit Conservation Checklist (***Note:*** Checklist is based on a document developed by HFC, Department of Conservation)

Pollution-Control Systems

__ Incorporate enough absorber to remove pollutants for six months to one year.
__ Ensure unrestricted airflow.
__ Provide access to change the absorber.
__ Maintain the absorber.

D. Installation and Maintenance

Choosing Conservation-Appropriate Materials

__ Select conservation-safe materials for case construction.
__ Avoid adhesives within the object display area.
__ Review the composition of commercial interior finishes.
__ Allow sufficient curing time before installing objects.
__ Isolate objects from painted or varnished surfaces.
__ Select and attach decorative fabrics carefully.

Using Less Stable Materials

__ Use the least hazardous material available, and isolate objects from them.
__ Aerate the case after applying coatings and sealants.
__ Isolate objects from problematic surfaces.
__ Incorporate a pollutant absorber or scavenger.

Design and Fabrication of Exhibit Mounts

__ Design and fabricate mounts for object installation ahead of time.
__ Protect the integrity of the object.
__ Support the entire object to avoid physical stress.
__ Provide adequate support for flexible objects.
__ Support all parts independently over as large an area as possible.
__ Stabilize objects from vibration.
__ Ensure the security of framed works.

Exhibit Production and Object Installation

__ Avoid transporting objects into production areas.
__ Inspect exhibit assemblages that affect objects during the production phase.
__ Complete construction before object installation.
__ Evaluate the exhibit team's performance.

Exhibit Maintenance

__ Provide a maintenance manual that includes the conservation criteria.
__ Monitor exhibit conditions.
__ Perform necessary maintenance to ensure the continued performance.
__ Keep the exhibit area clean.
__ Plan ahead for the safe movement of objects.

Figure 7.4. Exhibit Conservation Checklist (***Note:*** Checklist is based on a document developed by HFC, Department of Conservation.)