

## **CHAPTER 2:**

**ALTERNATIVES,  
INCLUDING  
THE PREFERRED  
ALTERNATIVE**

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## INTRODUCTION AND MANAGEMENT ZONING

### INTRODUCTION

Many aspects of the desired future condition of Monocacy National Battlefield are defined in the establishing legislation, the national battlefield's purpose and significance statements, and the servicewide policies and mandates. Within these parameters, the National Park Service solicited input from the public, NPS staff, government agencies, and other organizations regarding issues and desired conditions for Monocacy National Battlefield. The first newsletter describing the planning effort was issued in December 2002. The National Park Service received written responses to the first newsletter.

Using the information mentioned above, the planning team developed a set of management directions, management prescriptions, and four alternatives to guide the future management of the national battlefield management. These alternatives reflect the range of ideas proposed by the national battlefield staff and the public.

In this chapter, the proposed management prescriptions and alternatives are described. Included are tables that summarize the key differences between the alternatives and the key differences in the impacts that would be expected from implementing each alternative. Also included are mitigating measures that would be employed to reduce or avoid adverse impacts.

### MANAGEMENT ZONING AND MANAGEMENT PRESCRIPTIONS

As a part of the planning process, the national battlefield was divided into different management zones, each with a specific management prescription. Management prescriptions define a range of desired visitor experiences, cultural and natural resource conditions, and the appropriate facilities and functions necessary to achieve those goals. Management prescriptions are generally focused on the future; they are not a description of the status quo. For this reason, management prescriptions are not applied to alternative 1, the no-action alternative.

Essentially, a management prescription articulates the desired future vision for the national battlefield that managers will strive to achieve incrementally as funding becomes available to implement the specific actions outlined in this *General Management Plan*.

The management zones may differ somewhat between alternatives according to the overall intent (concept) of each alternative. That is, each alternative represents a different way of applying the management prescriptions to the national battlefield.

A draft version of the management prescriptions was presented to the public in the second newsletter (June 2003). Thereafter, the management prescriptions were modified in response to public comments. A revised version is presented below.

Five different management prescriptions were developed for Monocacy National Battlefield: battlefield preservation, visitor services, commemoration, natural resources, and maintenance/administration. For each management prescription, a corresponding zone was designed to help guide the preservation of resources, their interpretation to the public, and the types of facilities that might be appropriate within the zone. Under each alternative, natural and cultural resources would continue to be managed in accordance with laws, regulations, and policies. Each zone is described briefly below.

### **Battlefield Preservation Zone**

The battlefield preservation zone would encompass most of the national battlefield's cultural landscape and historic structures. In this zone, preserving the battlefield resources would receive the most attention. This zone essentially would be the battlefield's primary resource that would be presented to the visiting public.

**Desired Visitor Experience.** The primary visitor experience in the battlefield preservation zone would be immersion into the battlefield setting. Visitors could experience firsthand the challenges of the terrain where troop movements occurred and opposing forces encountered each other. Visitors would have access to several battlefield areas of high interpretive value via trails and roads.

In this zone, preference would be given to using historic road and trail corridors rather than developing new means of

access. Use levels could be expected to be moderate to high, and appropriate activities could include sightseeing, photography, walking, and interpretive programs if they would not be disruptive to the setting. Self-guiding or ranger-led walking tours would be important to the visitor experience.

**Desired Resource Conditions.** The battlefield preservation zone would be managed to preserve an agrarian setting reminiscent of the battle era. Through continued agricultural practices, farm fields and hedgerows would be maintained, as would the relationship of open to wooded sections of the battlefield. Natural resources would be managed to reinforce the cultural landscape and agricultural character. Cultural resource management would emphasize the preservation of cultural landscape values, focusing on the setting, feeling, and physical features that would convey the historic character of the landscape.

**Appropriate Facilities and Functions.** Appropriate facilities in the battlefield preservation zone could be interpretive trails, wayside exhibits, and new agricultural buildings in keeping with historic viewsheds and interpretive values.

### **Visitor Services Zone**

The visitor services zone would focus on orienting visitors to the battlefield and offering a concentrated, in-depth presentation of battlefield resources and visitor use opportunities.

**Desired Visitor Experience.** Visitor concentration would be high in the visitor services zone, and services would be convenient and accessible. There

would be frequent interaction between visitors and NPS staff.

**Desired Resource Conditions.** Any existing cultural and natural resources in the visitor services zone would be managed according to NPS policies with moderate tolerance for disturbance.

**Appropriate Facilities and Functions.** Appropriate facilities in the visitor services zone would include those that would shelter programs and exhibits to promote a greater understanding of the major interpretive themes of Monocacy National Battlefield. Also appropriate would be educational sales, contact with NPS personnel, and services that would give comfort and relief for visitors. A visitor center, exhibits, waysides, accessible trails, picnic areas, restrooms, access roads, and parking areas are examples of appropriate types of facilities.

Visitor service functions would be sensitively integrated into historic structures, or they could be housed in new structures of contemporary design, compatible in scale and materials to existing historic battlefield structures. A high degree of design would be required to integrate the facilities into the agrarian setting successfully. Where new construction was needed, preference would be given to locating the new facilities in previously disturbed sites.

### **Commemorative Zone**

The commemorative zone would be those areas of the national battlefield that are set aside for the placement of monuments commemorating the efforts of the soldiers who fought in the battle of Monocacy. These areas would consist

of more formal landscapes maintained to create a peaceful, contemplative experience.

**Desired Visitor Experience.** Visitors in the commemorative zone would be moderately likely to encounter other visitors, and there would be a low likelihood of encountering national battlefield staff. The visitor experience would be primarily a peaceful, contemplative one, with interpretation available from brochures or wayside exhibits.

**Desired Resource Conditions.** Monuments and formal landscapes would be maintained in keeping with NPS policies. The immediate landscape would be highly managed to form an appropriate setting for the monuments. Any existing natural resources in this zone would be managed according to NPS policies, with moderate tolerance for disturbance.

**Appropriate Facilities and Functions.** Appropriate facilities and functions in the commemorative zone would be those necessary to allow visitor access and to promote an understanding of each monument's context and placement. These could include such amenities as wayside exhibits, sidewalks, formal landscape design, access roads, and parking areas.

### **Natural Resources Zone**

The natural resources zone would comprise areas of the national battlefield that contain significant natural resources requiring special management actions. Such areas include the Monocacy River and Bush Creek, other riparian areas, forested areas, and areas

with significant resources requiring special protection measures.

**Desired Visitor Experience.** Visitor use in the natural resources zone would be low to moderate, especially in comparison to the other zones. Visitors would experience natural areas via designated trail corridors. Areas of special resource concern would be closed to visitors. Interpretation would be available from wayside exhibits and brochures.

**Desired Resource Conditions.** Natural resources would be maintained in as natural a state as possible, given cultural resource preservation needs. This would include maintaining riparian buffers for water quality, reestablishing native species, and controlling exotic vegetation. Any existing cultural and natural resources in this zone would be managed according to NPS policies, with minimal tolerance for disturbance.

**Appropriate Facilities and Functions.** Facilities appropriate for the natural resources zone would be unpaved trails in keeping with the natural character reminiscent of the Civil War era, limited interpretive or directional signs, and wayside exhibits. Erecting temporary fencing or barriers might be necessary to identify areas needing special resource protection.

### **Maintenance and Administration Zone**

The maintenance and administration zone would consist of areas set aside to

accommodate the facilities and functions needed to manage the national battlefield. To the extent possible, these facilities would be in areas not frequented by the public, although some administrative activities could be housed in adaptively rehabilitated historic structures.

**Desired Visitor Experience.** Maintenance and administrative areas generally are not intended for visitor use; rather, they are needed for staff to attend to operational duties. Visitors might enter areas if administrative functions were housed in historic structures, but visitor access into such areas could be restricted for security reasons. In such cases interpretation would be available through brochures or exterior wayside exhibits.

**Desired Resource Conditions.** Any existing cultural and natural resources in the maintenance and administration zone would be managed according to NPS policies, with moderate tolerance for disturbance. Adaptive reuse of historic structures would be appropriate. Any effects on historic landscapes would be minimal.

**Appropriate Facilities and Functions.** Facilities and functions appropriate to the maintenance and administration zone would be office space, workshops, storage, garages, walks, roads, and parking.

## FORMULATING ALTERNATIVES AND IDENTIFYING PREFERRED ALTERNATIVE

### FORMULATING THE ALTERNATIVES

The alternatives of this *Draft General Management Plan / Environmental Impact Statement* focus on what resource conditions, visitor uses, and experiences or opportunities should be at the national battlefield rather than on details of how these conditions and uses and experiences should be achieved. Thus, the alternatives do not include many details on managing resources or visitor use.

More detailed plans or studies will be needed before most conditions proposed in the alternatives can be achieved. Implementing any alternative also would depend on future funding and environmental compliance. This plan does not guarantee that the funds to carry out the selected plan will be forthcoming. The plan is intended to establish a vision of the future that will guide the day-to-day and year-to-year management of the national battlefield, but the full execution of the plan could take many years.

### BRIEF SUMMARY OF ALTERNATIVES

This *Draft General Management Plan / Environmental Impact Statement* presents four alternatives, including the alternative preferred by the National Park Service. Alternative 1, the no-action alternative, represents a continuation of the existing management direction. It is included as a baseline for comparing the consequences of putting

each alternative into action. The “action” alternatives — 2, 3, and 4 (the agency’s preferred alternative) — entail different ways of managing resources and visitor use and improving the facilities and infrastructure at the Monocacy National Battlefield.

After public meetings and public review of a newsletter describing the preliminary alternatives, and as the alternatives became more concrete, it was clear that the public was confused about the interpretive distinctions between the different alternatives, which were not as clear as the team had originally thought. Although the interpretive concepts had helped the planning team to organize the potential actions into coherent alternatives, their usefulness had become questionable. Using the “Choosing by Advantages” process, (briefly described under “Identifying the Preferred Alternative” below), the team developed a new alternative 4, which became the agency’s preferred alternative.

The three action alternatives embody a range of what the public and the National Park Service want to see accomplished with regard to natural resource conditions, cultural resource conditions, and visitor use and experience at Monocacy National Battlefield. The actual configurations for each alternative were developed by overlaying the management prescriptions (previously described) on a map of the national battlefield.

Alternative 2 would focus relatively narrowly on the story of the Battle of

Monocacy, explaining troop movements, how the landscape affected the battle, and an understanding of the players. Alternative 3 would extend the story of the Battle of Monocacy to include its effects on Frederick and the surrounding countryside. In addition to interpreting the battle, Alternative 4 (the preferred alternative) would emphasize the national battlefield's role as a military and transportation crossroads throughout the Civil War. Even more broadly, it would focus attention on Monocacy's position as an important crossroads from prehistory to the present.

Each alternative would include a different approach to explaining the national battlefield. As an example, in alternative 3, more emphasis would be placed on the civilian story; therefore, it would involve a greater need to allow access to historic structures than in alternative 2, where the battle landscape would be of primary importance to the story.

As was mentioned under "Mandates, Laws, and Other Planning Efforts" (p. 20), the National Park Service would continue to follow existing agreements and servicewide mandates, laws, and policies regardless of the alternatives considered in this plan. These mandates and policies are not repeated in this chapter.

## IDENTIFYING THE PREFERRED ALTERNATIVE

Developing a preferred alternative involves evaluating the alternatives through an objective analysis process called "choosing by advantages," or CBA. Using this process, the planning team identified and compared the relative advantages of each alternative according to a set of factors. The benefits or advantages of each alternative were compared for each of the following CBA factors:

- preserving the battlefield
- removing modern intrusions
- using historic structures
- improving safety
- considering circulation (automobiles and trails)
- increasing opportunities for visitor enjoyment
- offering opportunities for alternative transportation

The relationships between the advantages and costs of each alternative were established. This information was then used to combine the best attributes of the four initial alternatives into the preferred alternative. This alternative gives the National Park Service the greatest overall benefits for each point listed above for the most reasonable cost. Alternative 4 was selected as the preferred alternative.



## ACTIONS COMMON TO ALL ALTERNATIVES

### INTRODUCTION

The management directions that are common to all alternatives are described in this section. In a sense, these management directions form the philosophical foundation, or vision, for managing the national battlefield, and they serve as the baseline from which the “action” alternatives were developed. These management directions follow and build upon the laws, servicewide policies, and mandates delineated in appendixes B and C.

Some actions are occurring now and will continue regardless of which alternative is selected. Other actions have been approved but have not yet been accomplished. Still others are actions required by law or policy that would occur regardless of alternative.

The order in which these management directions and actions are listed does not indicate priority or likelihood for funding. The possible actions that are listed represent actions that could be taken to support each management direction; however, it should be kept in mind that the desired condition could be achieved in variety of ways.

### RESOURCE MANAGEMENT AND PRESERVATION

#### Cultural Resources

*Cultural resources, including historic structures, landscapes, archeological sites, and monuments that contribute to the significance of the national battlefield, would be stabilized, preserved, and maintained in good condition.* Monocacy National Battle-

field has more than 51 historic structures —buildings, monuments, transportation corridors, and earthworks — on its List of Classified Structures. It also has extensive museum collections and archival materials and a variety of historic and prehistoric archeological sites. All these structures, objects, and features come together in the six component properties that compose the battlefield’s cultural landscape. Most of the daily work of the national battlefield’s maintenance and professional staff and a significant portion of the national battlefield’s annual budget are devoted to protecting, preserving, and maintaining the battlefield’s historic resources.

Archeological sites, historic structures, fence lines, viewsheds, and field boundaries are among the features that contribute to the national battlefield’s cultural landscape and are important to our understanding of the broader historical context in which the Battle of Monocacy was fought. Management decisions must be made with the preservation of these resources in mind.

The following actions would support this management direction:

- Protect historic buildings from fire
- Manage plant species to retain desirable cultural landscape characteristics such as field patterns and the composition of wooded and agricultural areas
- Stabilize and preserve historically significant buildings and maintain them in good condition

- Continue the memorandum of understanding with the Historic Preservation Training Center for administrative use of the Gambrill House
- Conduct regular routine maintenance to prevent conditions that could lead to the destruction of historic fabric
- Protect significant topographic and natural features of the battlefield from erosion
- Understand and pursue the management of the white-tailed deer population to retain desirable cultural landscape characteristics such as field patterns, the composition of wooded and agricultural areas and ornamental farmstead plantings
- Protect known archeological sites from deterioration
- Protect cultural resources from damage resulting from vandalism
- Implement a prescribed fire plan to help retain desirable cultural landscape characteristics, manage invasive exotic plants, and manage vistas

### Landscape Features

*Landscape features that are significant for understanding the Battle of Monocacy and that have been degraded by modern intrusions such as I-270 would be reestablished.* The establishing legislation for the national battlefield calls for the preservation of features associated with the Battle of Monocacy. In addition to the

constructed features such as breastworks and earthworks specifically listed in the legislation, such features are construed to include the land on which the battle was fought. Associated components include agricultural fields and their historic boundaries, forested areas, and road traces.

Like many Civil War battlefields, however, the level of knowledge concerning the battlefield's wartime appearance is limited, consisting mainly of rough sketch maps and general written accounts, with no known photographs or detailed surveys. However, research conducted to date suggests that the broader battlefield landscape changed relatively little from the time of the battle until well into the opening decades of the 20th century.

The major changes to the battlefield landscape have resulted from modern intrusions such as roads (Interstate Highway 270) or agricultural practices such as the construction of trench silos. The national battlefield staff would remove modern landscape features such as agricultural trench silos but rehabilitate or preserve historic battlefield landscape features such as hedge rows and tree lines. To the extent possible, the national battlefield staff would reestablish significant battle-related features that have been degraded by the construction of 20th century intrusions.

The following actions would support this management direction:

- Remove the borrow pit from the Worthington Farm side of I-270 and re-establish the agricultural field

- Remove noncontributing structures unless a structure would be required for an operational purpose such as restrooms or office space
- Reestablish significant vistas between the Worthington and Thomas farms
- To the extent possible, reestablish the fence line between the Worthington and Thomas Farms

### Landscape Protection

*Landscape protection strategies would ensure the integrity of the battlefield's nationally significant qualities.* The following actions would support this management direction:

- Review the status of lands within the legislative boundary in an effort to determine the most appropriate protection measure to assure the desired future; this may include acquiring private lands and upgrading easements to fee ownership
- Continually patrol and mark the boundary to preserve and protect national battlefield resources by preventing encroachments
- Preserve the battlefield viewshed by working with the state and county to obtain preservation easements on farmlands adjacent to the legislative boundary

### Agriculture

*Agricultural activities would maintain the historic agrarian character of the national battlefield's landscape while protecting natural and cultural*

*resources.* The agricultural program is a key component of national battlefield management. The fields reflect the historic agrarian character of the landscape and are an important cultural resource. The agricultural fields are one element that makes up the historic field patterns, along with fences, forested areas, and similar features. The current program, which has four permittees, is a "partnering" approach to maintaining approximately 850 acres of the battlefield. Without the agricultural program, maintaining these areas would have to become a federal function and would require additional equipment, expertise, time, and resources. Moreover, the agricultural leasing program helps to retain the national battlefield's link to the neighboring community and encourages local residents to feel that they have a stake in preserving the battlefield landscape.

The following actions would support this management direction:

- Continue to establish best management practices and conservation plans to protect significant natural resources such as soil and water. This would include erosion control, crop rotation, nutrient management, soil conservation, and integrated pest management
- Maintain a special use permit program to manage agricultural activities
- Establish strategies to maintain the economic viability of agriculture, which is critical to retaining and attracting farmers

- Understand and pursue the management of the white-tailed deer population to retain desirable landscape characteristics such as field patterns and the composition of agricultural areas
- Manage and adjust agricultural activities to protect significant archeological resources
- Schedule management activities such as mowing, seeding, fertilizing, and harvesting to protect wildlife, limit runoff, and protect water quality in streams

### Modern Intrusions

*Intrusions from modern utilities, transportation systems, and rights-of-way would be minimized to protect the integrity of the battlefield's nationally significant qualities.* Monocacy National Battlefield is crossed by a number of rights-of-way, including the CSX Railroad (the old B&O Railroad line), I-270, MD 355, and several utility lines, including water, sewer, and gas.

Burgeoning development and population growth have increased pressure to expand the existing infrastructure and install new infrastructure in the national battlefield. Such proposals include widening I-270, building a light rail line through the Thomas and Best farms, and running additional water and sewer lines through various areas of the battlefield.

Although much of the area surrounding the national battlefield has been developed extensively, the battlefield landscape itself retains remarkable

integrity. However, the concept of expanding utility and transportation corridors through Monocacy National Battlefield poses a major threat to this primary resource and to visitors' experience.

The following actions would support this management direction:

- Work with local utility companies to bury telephone, cable, and power lines along MD 355 in the Best Farm area to enhance views from the new visitor center
- Work with the Maryland State Highway Administration to minimize the impacts from any widening of I-270 and to reconnect and enhance the battlefield landscape
- Continue to work with the Maryland Department of Transportation to reduce noise and visual impacts from I-270 and MD 355
- Work with CSX to ensure that railroad operations will not negatively affect national battlefield resources
- Collaborate with Frederick County to ensure that the potential effects on the national battlefield are considered in any utility and transportation planning
- Establish agreements to control invasive vegetation on right-of-way corridors through the national battlefield
- Enforce existing agreements

## Natural Resources

*Natural Resources would be managed and monitored to encourage biological diversity and to avoid adverse impacts on the regional ecology while protecting the quality and character of the national battlefield's cultural resources.* At Monocacy National Battlefield, natural resources such as vegetation, wildlife, water resources, and soils would be managed to protect the character and quality of the national battlefield's significant cultural resources and to preserve important interpretive views. These goals would be balanced by a desire to encourage biological diversity by establishing and executing strategies to protect significant natural resources such as native plant and animal species (including state-listed and federally listed threatened and endangered species), local springs, streams, and watersheds, and plant communities of local importance (such as Brooks Hill).

Existing trails could be modified somewhat to protect wildlife and plants or to improve access, but generally the trails would be maintained in their current state. Visitors would be encouraged to stay on the trails because these important ecological areas are the most environmentally fragile areas of the national battlefield. Activities such as fishing that require off-trail access would be monitored for any damage, and areas would be closed periodically to allow vegetation to recover.

The following actions would support this management direction:

- Continue servicewide inventories of plants and animals
- Prepare Resource Stewardship Plan to identify resource management goals and implementation strategies
- Continue to cooperate with other agencies in efforts to restore water quality including the continuation of current water quality monitoring efforts and park management practices that support regional and watershed water quality objectives
- Establish monitoring programs based on the findings from completed inventories and the ongoing servicewide initiative to identify "vital signs" (attributes identified as key indicators for monitoring of ecosystem health) for each national park unit
- With the ongoing cooperation of local universities and research centers, continue to monitor the white-tailed deer population and its impacts
- Pursue the management of the white-tailed deer population to retain desirable landscape characteristics such as field patterns and the composition of wooded areas (sustainable forest regeneration)
- Establish vegetation strategies to manage invasive exotic plant species and to protect and improve native plant species populations
- Develop and continue conservation partnerships with local, state, and other federal agencies so as to protect and monitor resources (for example, the Chesapeake Bay Program and the Natural Resources Conservation Service)

- Develop a geographic information system to document the existing conditions of natural and cultural resources
- Develop thresholds for action for wildlife populations and pests, including groundhogs, Canada geese, and structural pests
- Develop strategies to preserve and restore (if appropriate) riparian buffers and nonagricultural open space by establishing native grass meadows and corridors

## INTERPRETATION AND EDUCATION

### New Visitor Center

*A new visitor center and museum exhibits provide orientation and opportunities for learning about the Battle of Monocacy within the full context of the Civil War.* A new visitor center for Monocacy National Battlefield was completed in 2007. The building is the primary facility for preparing visitors to understand and appreciate Monocacy National Battlefield. The center offers orientation, interpretation, exhibits, sales, restrooms, and other visitor services. Museum exhibits offer opportunities to learn about the Battle of Monocacy within the full context of the Civil War. (The following actions would support this management direction:

- Develop interpretive information, exhibits, and materials to orient visitors to national battlefield interpretive themes

- Provide materials, assistance, and services designed to help visitors plan their time at the national battlefield and select ways to experience the resources that match their interests and time constraints

### Visitors' Understanding

*Visitors' movement through and experience of the national battlefield's cultural landscape would be the foundation for their understanding of the national battlefield's interpretive themes.* Terrain is important in comprehending military strategy and maneuvers. However, looking at a cultural landscape in a broader context reveals "untold stories" of those who lived and traveled there earlier. This can increase the depth of the human experience and give meaning to a place. By offering opportunities for people to encounter the many stories associated with this landscape in logical and meaningful ways, visitors could gain a deeper appreciation of the national battlefield.

Personal and nonpersonal services would be expanded to meet visitors' needs and would be updated to reflect current scholarly research. Outreach programs would continue to be available to diverse audiences.

The following actions would support this management direction:

- Present programs that express and illustrate the national battlefield's seven interpretive themes on ranger tours, through living history, and a variety of other interpretive strategies

- Update non-personal services to reflect new conditions on the battlefield and the areas that can be understood by observation

## Partnerships

*Partnerships with local school districts, universities, and organizations (for example, the Catoctin Center, Frederick County Public Schools) would be expanded to afford opportunities for learning about the Battle of Monocacy.* Each year Monocacy National Battlefield receives an increasing number of requests for ranger programs to be given to educational groups and civic organizations. Curriculum-based field trip opportunities are requested, as are internship programs. The concept of “park as classroom” has great potential for development at the national battlefield with its proximity to numerous educational institutions and the interest by people of all age groups in lifelong learning experiences.

Partnering with local institutions and organizations would help to examine ways that the national battlefield and schools can work together, combining needs and resources to create new opportunities to accomplish these goals.

The following actions would support this management direction:

- Create educational programs for students of all ages to experience lifelong learning
- Arrange special events that will expand on interpretive themes, attracting diverse audiences to the national battlefield through living

history encampments and demonstrations, thematic tours, guest lectures, and a variety of other creative programs

- Continue to offer community outreach programs to expand knowledge about the national battlefield and its significance
- Initiate scholarship and public education partnerships with local entities to expand the information available to the public

## VISITOR USE AND FACILITIES

### Special Uses

*All proposed public activities would be systematically evaluated for appropriateness before they would be permitted.* Monocacy National Battlefield regularly receives requests for the use of the battlefield for activities such as weddings, parties, ceremonies, concerts, races, and filming. The National Park Service makes every effort to cooperate with local organizations and the public while ensuring that events and public activities that take place in the national battlefield are appropriate to its purposes and do not harm its resources.

The following actions would support this management direction:

- Use NPS criteria to determine if and when the use would be compatible
- Cooperate with local groups to find alternative locations for events
- Prohibit uses that would damage national battlefield resources and would not contribute to under-

standing of the national battlefield's values and resources

### Visitor Safety

*Interpretive opportunities would be designed to offer a safe and enjoyable experience for all visitors to Monocacy National Battlefield.* All interpretive experiences would continue to be developed with safety factors in mind. Visitors' movement through the national battlefield uses public highways and includes an area near an active railroad. Special programs such as living history or demonstrations of historic weapons require special training to ensure safety. Public safety would continue to be a major concern, and coordinating efforts between national battlefield staff and other agencies would remain essential to ensure a safe visit for everyone.

The following actions would support this management direction:

- Cooperate with state and local law enforcement, emergency medical service, and firefighting agencies to achieve effective visitor protection
- Use NPS criteria to ensure maximum safety in living history programs involving the use of historic weapons
- Maintain all equipment used by or near the public to ensure that it is in proper working order
- Ensure proper lighting in all public use areas
- Ensure that fire exits in public facilities are properly accessible and that all fire codes are met

- Maintain fire extinguishers and fire suppression systems in all public buildings
- Schedule patrols and protection operations to deter illegal activities, assist visitors, and enforce penalties for violations.

### NATIONAL BATTLEFIELD OPERATIONS

Monocacy National Battlefield shares some administrative functions with Antietam National Battlefield, but is an independent unit of the national park system.

The national battlefield staff would continue to protect battlefield resources and to investigate theft or damage to the resources —wildlife, plants, and archeological materials.

The national battlefield staff also would continue to carry out visitor safety patrols. This would include patrolling roads, trails, parking areas, fields, and woods areas. Law enforcement actions and investigations would be performed as appropriate.

National battlefield rangers would continue to investigate the dumping of solid wastes, motor vehicle accidents, and environmental issues associated with transportation and utility corridors throughout the national battlefield.

### DEVELOPMENT OF COST ESTIMATES

To make wise planning and management decisions for the national battlefield, NPS decision makers and the public must consider an overall picture of the advantages, disadvantages, and



general costs of the alternatives, including the no-action alternative (alternative 1). By including the no-action alternative, a comparison can be made between the action alternatives and current national battlefield management practices.

It is important that the cost estimates contain the same elements and that they be developed with the same general assumptions so that there can be consistency and comparability among alternatives. The presentation of costs within this general management plan is applied to the types and general intensities of development by alternative and in a comparative format. The following caveats apply:

- The costs are presented as estimates and allow for flexibility in application of components.
- These costs are not appropriate for budgeting purposes.
- The costs presented have been developed using industry standards to the extent available.
- Actual costs will be determined at a later date, considering the design of facilities, identification of detailed resource protection needs, and changing visitor expectations.
- Approval of the general management plan does not guarantee that funding or staffing for proposed actions will be available.
- Full implementation of the general management plan may be many years in the future.

### **Annual Operating Costs**

- annual national battlefield operating costs such as staff salary and benefits, equipment, maintenance, utilities, monitoring, contract services, and space rental

### **Deferred Maintenance**

- deferred maintenance is the cost of bringing existing assets up to NPS standards; it can vary by alternative based on the treatment of existing facilities

### **One-Time Costs**

- major rehabilitation or replacement of existing facilities and infrastructure
- new development (including NPS transportation infrastructure costs)
- interpretive media (audiovisual programs, exhibits, wayside exhibits, publications)
- resource management and visitor services (inventories of resources and visitors, implementation planning, compliance)
- other significant one-time costs, such as removing buildings, buying transportation equipment, restoring resources, or acting on specific implementation
- reports, studies, archeological excavations, and other research with substantial costs

### **LAND ACQUISITION**

This plan does not propose acquisition of any lands outside the already authorized boundary (see alternative

maps in chapter 2 for locations of properties within the boundary that have not yet been acquired). Thus no land acquisition costs are provided in this plan.

Lands within the boundary but not currently in fee ownership would receive the following consideration:

Tract #101-34 is bottomland along the Monocacy River owned by Frederick County. The national battlefield has a scenic easement on the property. No acquisition would be necessary unless the county decided to sell the property and development was imminent.

Tract #101-42 is a triangle of land on the northwest side of the national battlefield. It is on the opposite side of I-270 from the national battlefield with difficult access. A scenic easement with height restriction only is in place, and no acquisition would be necessary in the foreseeable future.

The Ladson Tract, #101-28, on the east side of the Monocacy River and

north of the CSX Railroad, is an important location within the national battlefield associated with the events surrounding the battle of Monocacy. The property will be purchased in fee on a willing-seller basis only.

Two tracts along Baker Valley Road, #101-23 and #101-31 across from the Thomas Farm, are within the battlefield sensitive viewshed and would be purchased on a willing-seller basis should they become available.

The national battlefield will seek to acquire a scenic easement on a tract adjacent to the Lewis Farm, tract #101-25. Acquisition in fee does not appear to be necessary.

The acquisition of lands may be through donation, or purchase from a willing seller only. In either case, merely adding lands to the national battlefield does not immediately make funds available for maintenance, restoration, and operation.

## ALTERNATIVE 1, THE NO-ACTION ALTERNATIVE (CONTINUE CURRENT MANAGEMENT)

### INTRODUCTION

The actions described in this section are those that would be carried out in addition to the actions that would be common to all alternatives (described beginning on p. 41). The no action alternative forms a baseline to which the action alternatives can be compared. Readers can compare the different alternatives and evaluate the effects described for each alternative. It is possible that the no-action alternative could be selected for implementation, but this is unlikely.

Each alternative is explained in relation to the management prescription / management zoning categories also described earlier. Along with the descriptions are maps illustrating the zones and actions. Table 2, at the end of this chapter, compares the alternatives (p. 97).

In the past 20 years, Monocacy National Battlefield has acquired significant new areas of the battlefield, yet little or no guidance has been in place for managing this relatively new NPS area. In addition, the national battlefield has many unmet needs as to infrastructure, staffing, and interpretation. Those needs would become more pressing over the next 20 years without a plan to address them. The actions of alternative 1 are described below.

### RESOURCE MANAGEMENT

A number of historic structures, such as the Gambrill House, the Thomas House, and many farm buildings, are in good

condition. However, many other historic structures on the battlefield require stabilization or rehabilitation to ensure their preservation and raise their condition to good. In the no-action alternative, efforts would continue to stabilize and preserve all historic structures on the national battlefield. Such action would ensure their continued existence on the battlefield landscape as markers for interpreting the battle (see the Alternative 1 map).

Agricultural leases would continue unchanged under this alternative.

Although the National Park Service has general policies regarding the placement of new commemorative monuments in national park system units, no battlefield-specific formal policy exists concerning the placement of monuments in Monocacy. Theoretically, monuments could be placed anywhere within the boundaries. There are no restrictions on size, materials, or message, nor are there provisions for the continued maintenance of new monuments. The establishing legislation allows any state that participated in the battle to erect monuments to its soldiers. In the no-action alternative, the National Park Service would work with state-sponsored organizations individually to negotiate agreements that would conform to NPS policies about the placement of new commemorative monuments in national park system units.

Most of the national battlefield's museum and archeological collections are at the NPS National Capital Region's

curatorial storage facility at Lanham, Maryland. However, some museum items are exhibited in the new visitor center well out of the Monocacy River floodplain.

### **VISITOR USE AND EXPERIENCE**

In alternative 1, visitors would continue to arrive at the national battlefield in their personal vehicles. A series of stops off MD 355, Araby Church Road, and Baker Valley Road would enable visitors to go to the sites that were open.

Orientation of visitors will take place at the visitor center. Visitors arriving on scheduled bus tours also would be oriented at the visitor center unless special arrangements were made for a staff person to accompany the tour.

The new visitor center contains educational maps and exhibits. Its location at the north end of the national battlefield allows visitors to orient themselves north to south, roughly the direction in which the battle took place.

The Gambrill Mill would become space available for group programs. Brochures would continue to be available at parking areas and trailheads. Some formal orientation would be offered outside the visitor center.

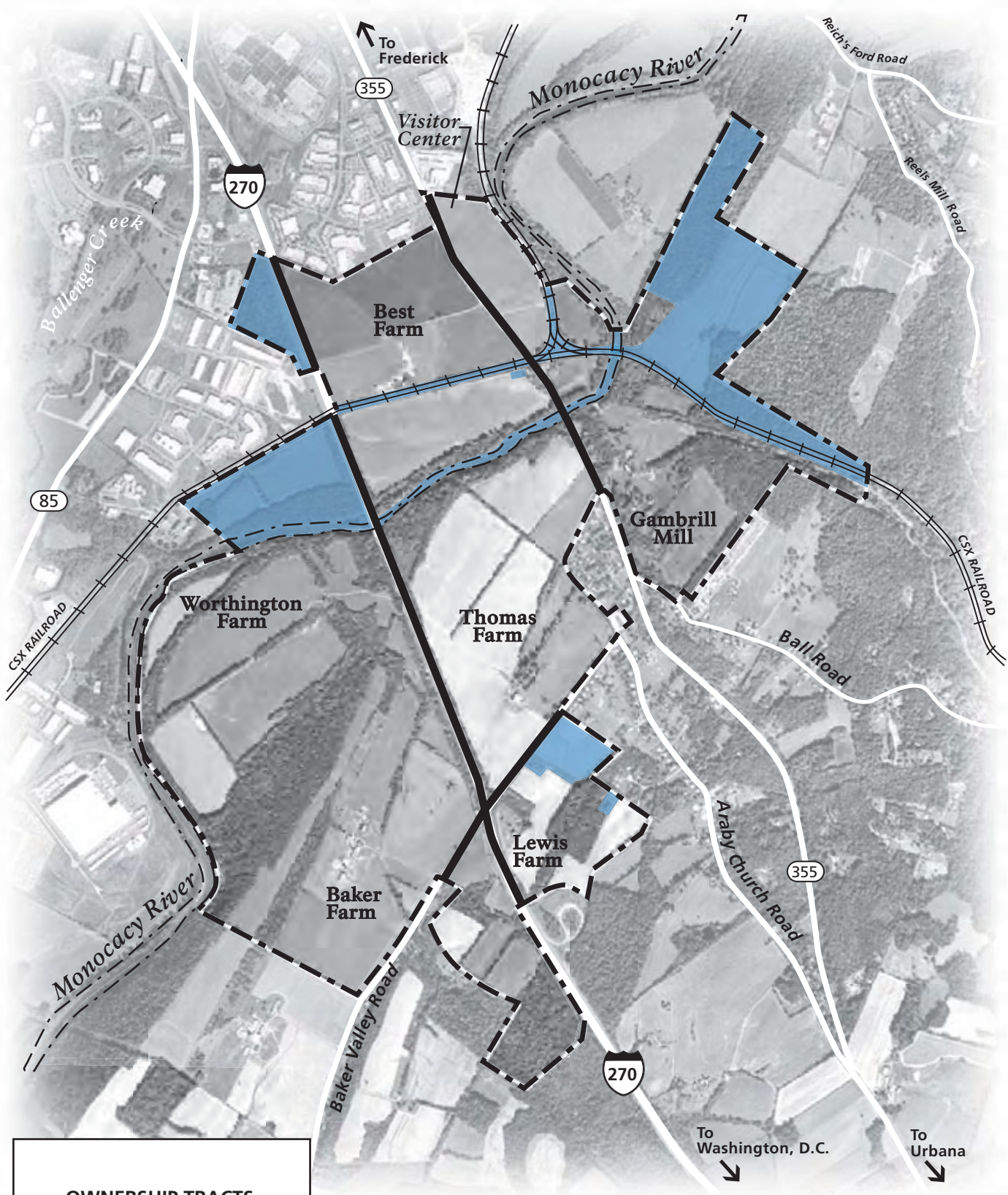
The Lewis Farm, the railroad junction, and the Baker Farm would remain closed to visitation. Access and egress for the 14th New Jersey Monument and the Gambrill Mill to and from the busy Maryland Highway 355 would continue to be difficult and unsafe. The railroad junction would remain inaccessible, and no vantage point to see it would be available.

The Worthington and Thomas farms would continue to be physically and visually separated from each other by I-270, which would make it difficult for visitors to orient themselves to the landscape and understand the battle. Parking areas and trail segments at the Worthington and Thomas farms would be open on a limited basis to provide access to the battlefield. Neither the Worthington House nor the Thomas House and outbuildings would be open to visitors.


### **NATIONAL BATTLEFIELD OPERATIONS**

Administrative offices and functions, with the exception of Visitor Services, would remain in their current location on the second floor of the Gambrill Mill, where facilities are crowded and storage is inadequate. The maintenance functions would remain cramped on the Gambrill Mill property. Vehicle and equipment storage would remain inadequate, as would project work space and offices.

Administrative records still would be stored in the 100-year floodplain. Evacuation would be required each time flooding was forecast. During flood sequences, administrative functions would be disrupted until files, equipment, and other furnishings could be removed to safety. Once flooding subsided, the process would be reversed. The productivity of the administrative staff would be greatly reduced whenever such an event was underway.



#### OWNERSHIP TRACTS

-  NON-FEDERAL
-  PUBLIC ROW

 NATIONAL  
BATTLEFIELD  
BOUNDARY

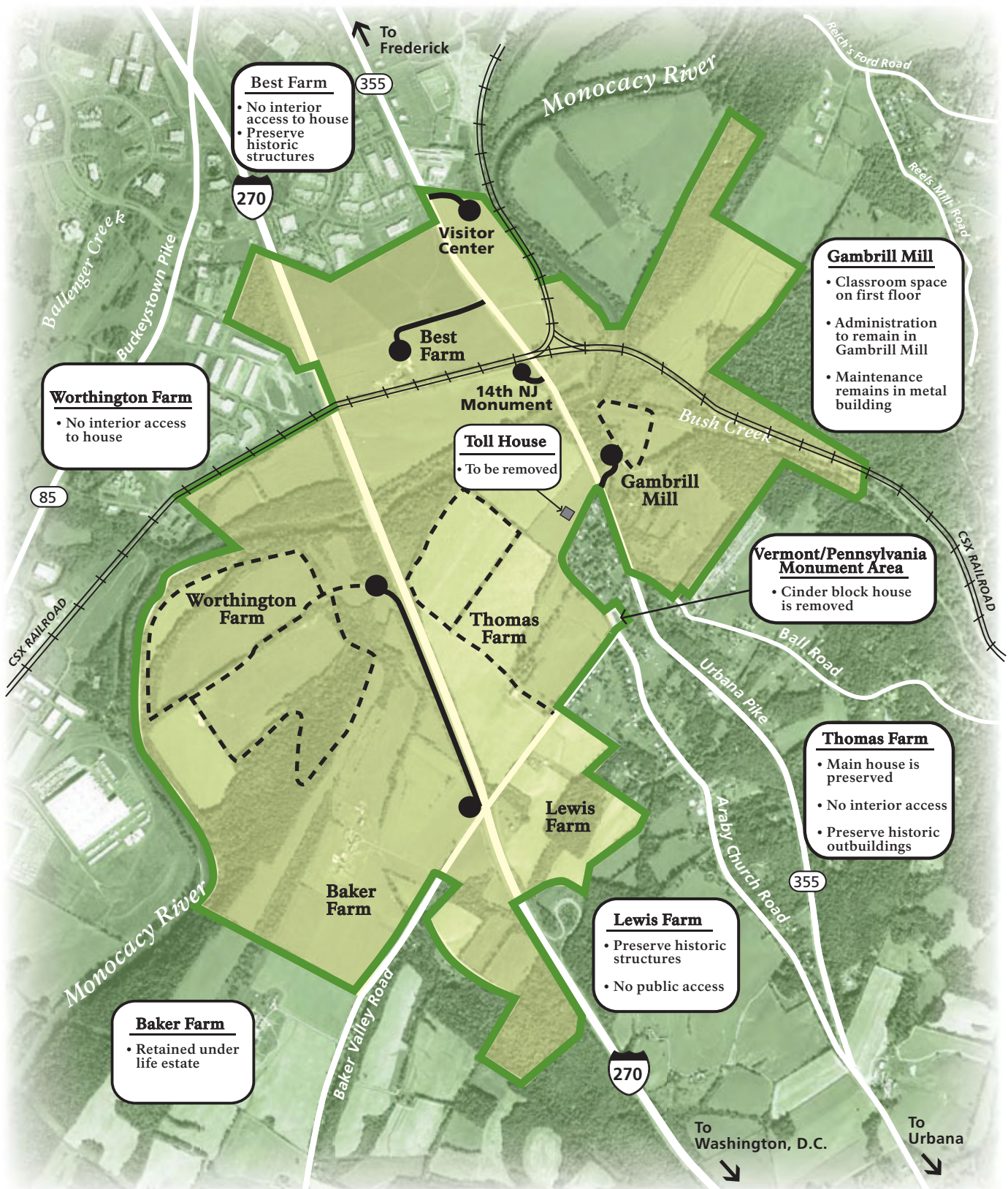


### Current Ownership

**Monocacy National Battlefield**  
United States Department of the Interior  
National Park Service  
DSC / 894 / 20019 / FEB. 2008

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- Park Boundary
- Pedestrian Trail
- Vehicular Access
- Parking Node



### Alternative 1 No-Action (Continue Current Management)

**Monocacy National Battlefield**  
United States Department of the Interior  
National Park Service  
DSC / 894 / 20015 / FEB. 2008

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## COSTS

The following applies to costs throughout this management plan:

- The costs are presented as estimates and allow for flexibility in application of components.
- These costs are not appropriate for budgeting purposes.
- The costs presented have been developed using industry standards to the extent available.
- Actual costs will be determined at a later date, considering the design of facilities, identification of detailed resource protection needs, and changing visitor expectations.
- Approval of the general management plan does not guarantee that funding or staffing for proposed actions will be available.
- Full implementation of the general management plan may be many years in the future. Costs have been broken down into annual operating costs and one-time costs. All estimates are presented in 2007 dollars.

Annual costs include the costs associated with ongoing maintenance, utilities, staffing, supplies and materials, and any leasing costs. This alternative would continue the current staffing level of 16 FTE (full time equivalent) employees. Deferred maintenance costs are those costs necessary to bring current infrastructure up to NPS standards. One-time costs are low in this alternative, due to the small number of projects that have been approved at the NPS program level and assigned to a funding source.

Annual operating costs:	\$1,600,000
Includes 16 FTE positions	
Deferred maintenance:	\$5,700,000
One-time costs:	\$105,000
Facility and non-facility costs:	\$30,000
Removal of buildings (2):	\$75,000

## ALTERNATIVE 2

### INTRODUCTION

As was mentioned previously (see page 39), alternatives 2, 3, and 4 are called the “action” alternatives. This is because each includes actions that would be carried out if that alternative was selected for implementation. Each alternative must be considered along with the actions described as common to all alternatives (beginning on p. 41).

Each alternative is described in relation to the management prescription / management zoning categories that were described earlier. Along with the descriptions are maps illustrating the zones and actions. Table 2, at the end of this chapter, compares the alternatives (p. 97).

Alternative 2 would focus relatively narrowly on the story of the Battle of Monocacy, explaining troop movements, how the landscape affected the battle, and conveying an understanding of the players. It would depend highly on visitors getting out onto the battlefield to understand the course of the battle and the strategies used. The historic farmsteads would act as reference points for interpretation, not as interpretive focal points. None of the historic houses would be open to visitors (see the Alternative 2 map).

An alternative transportation system consisting of small buslike vehicles would carry visitors around the national battlefield. Such a system could be provided through a commercial services

contract, if market conditions allow and a willing vendor could be found.

Because Monocacy National Battlefield would not have a fully internal road system, this transportation system would allow visitors to concentrate on the story of the Battle of Monocacy rather than on the logistics of getting around the battlefield — the busy traffic on MD 355, directional signs, or brochure map. Visitors’ use of this transportation system would be mandatory when the system was operating; at other times, they could use their personal vehicles in the national battlefield.

The system would begin at the new visitor center and link the interpretive locations in the national battlefield. The transportation vehicles would stop at the Best Farm, the 14th New Jersey Monument, the Worthington and Thomas farms, the Pennsylvania/Vermont commemorative area, and the Gambrill Mill, and then return to the visitor center. Information and orientation would be offered between stops by a staff person riding on the system or by an automated recording. Visitors could get off the bus at any stop and continue on a later bus.

Brochures and new wayside signs and exhibits would provide guidance and information along existing and new trails. During the primary visitor season and for special events, interpretive rangers would be stationed at key locations throughout the national battlefield to offer additional interpretation.

Although the trails would not be designed primarily for recreational use, under alternative 2 visitors could walk the trails to fish in the river or to observe wildlife. Other recreational activities such as horseback riding and bicycling would not be allowed.

### **VISITOR SERVICES ZONE**

Three areas in Monocacy National Battlefield have been zoned for visitor services: the new visitor center near the north entrance, the parking area and interior first floor of the Gambrill Mill, and part of the Thomas farm that would include parking, restrooms, and interpretive exhibits in the stone tenant house.

The new visitor offers adequate orientation through educational maps, exhibits, and interpretive programs. All visitors are expected to begin their visits here, at a location that would allow north to south orientation, roughly the direction in which the battle took place.

On the Thomas farm, a historic stone tenant house would contain additional exhibits focusing on the Battle of Monocacy. A parking area accessible for visitors with disabilities would be constructed along Baker Valley Road at the end of the farm lane, south of the existing barn, where a nonhistoric cinder block house now sits. (The cinder block house would either be removed and replaced by a small restroom facility or adaptively reused for restrooms.) A trail would lead from the parking area along a historic road trace to the Thomas Farm structures.

The first floor of the Gambrill Mill would be used as classroom space for

school groups, a lecture hall for speakers, a place for staff meetings, and public restrooms.

### **BATTLEFIELD PRESERVATION ZONE**

A trail would be built from the visitor center south to an overlook above the railroad junction and the Monocacy River bridges, where the battle opened.

The Best farmhouse would undergo exterior rehabilitation. The National Park Service would also preserve the secondary house, stone barn, and corn crib. The farm would be the first stop on the transportation system. From MD 355, the historic farm would appear much as it did during the 19th century. Special guided tours of the site for groups could be offered occasionally.

The gravel entry road from Baker Valley Road to the Worthington House would be restricted to one-way traffic.

The Worthington House interior would not be open to the public, but the porch and grounds and the Brooks Hill Trail would be accessible. Waysides, brochures, and interpretive rangers would offer information about the site's history and the house's inhabitants.

A deck would be constructed over I-270 (described on p. 84 ) to connect the Worthington Farm to the Thomas Farm. The deck, when completed, would reconnect the two halves of the battlefield and reestablish the historic fence line that once separated the two farms. A historic lane through the Thomas Farm would be improved to facilitate visitor flow through the national battlefield.

The Thomas House would be leased out under the NPS historic leasing program. Public access would be restricted. The National Park Service would preserve all other historic outbuildings, including a stone tenant house where exhibits would be provided.

Visitors would have access to the grounds around the Thomas farmstead and to a new trail over the battlefield. Exhibits, brochures, and other media explaining the importance of the Thomas Farm to the Battle of Monocacy would supplement information available in the stone tenant house.

### **COMMEMORATIVE ZONE**

Under alternative 2, no actions would be proposed for the Maryland and United Daughters of the Confederacy monuments, which are on the west side of MD 355 just inside the boundary of the national battlefield. The maintenance of these monuments would be continued. No additional monuments would be added at this location, and no changes would be made to the surrounding landscape.

To make access to the 14th New Jersey Monument safer, the entrance would be shifted south, allowing better sight distances for vehicles on MD 355. The national battlefield staff would consult with the state of New Jersey (which owns the monument) and with the Maryland State Highway Administration to develop a plan to improve parking, access, and egress at the monument.

A designed commemorative area would be developed along Araby Church Road near the existing Pennsylvania and Vermont monuments. Any new monu-

ments would be located here under guidelines to be developed regarding their size, design, color, placement, and maintenance. A cinder block house now on the site would be removed, to be replaced by a designed landscaped area with parking.

### **NATURAL RESOURCES ZONE**

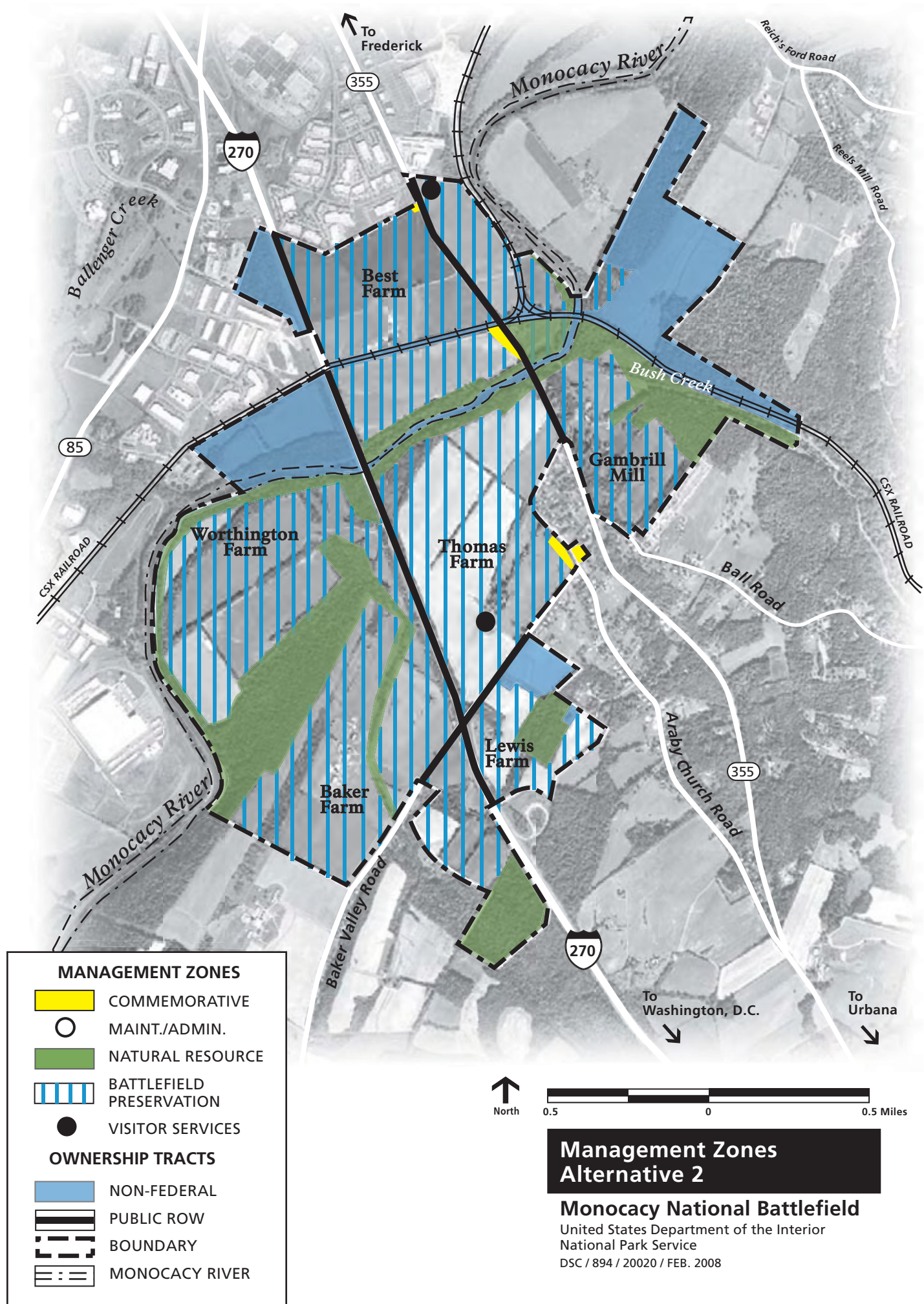
The existing short circular trail from the Gambrill Mill parking area would be extended through the natural resources zone to the Wallace's headquarters site and the Union entrenchments. The trail would cross over Bush Creek via a new bridge and under the heavily used CSX railroad line by way of a walkway under the Monocacy River trestle. A barrier fence would be constructed along the rail line to keep visitors off of the active tracks.

Upgraded interpretation along trails would include wayside exhibits and possibly brochures designed to help people observing wildlife and to give historical information or information on trees and plant species.

### **MAINTENANCE AND ADMINISTRATION ZONE**

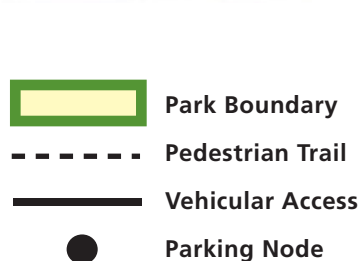
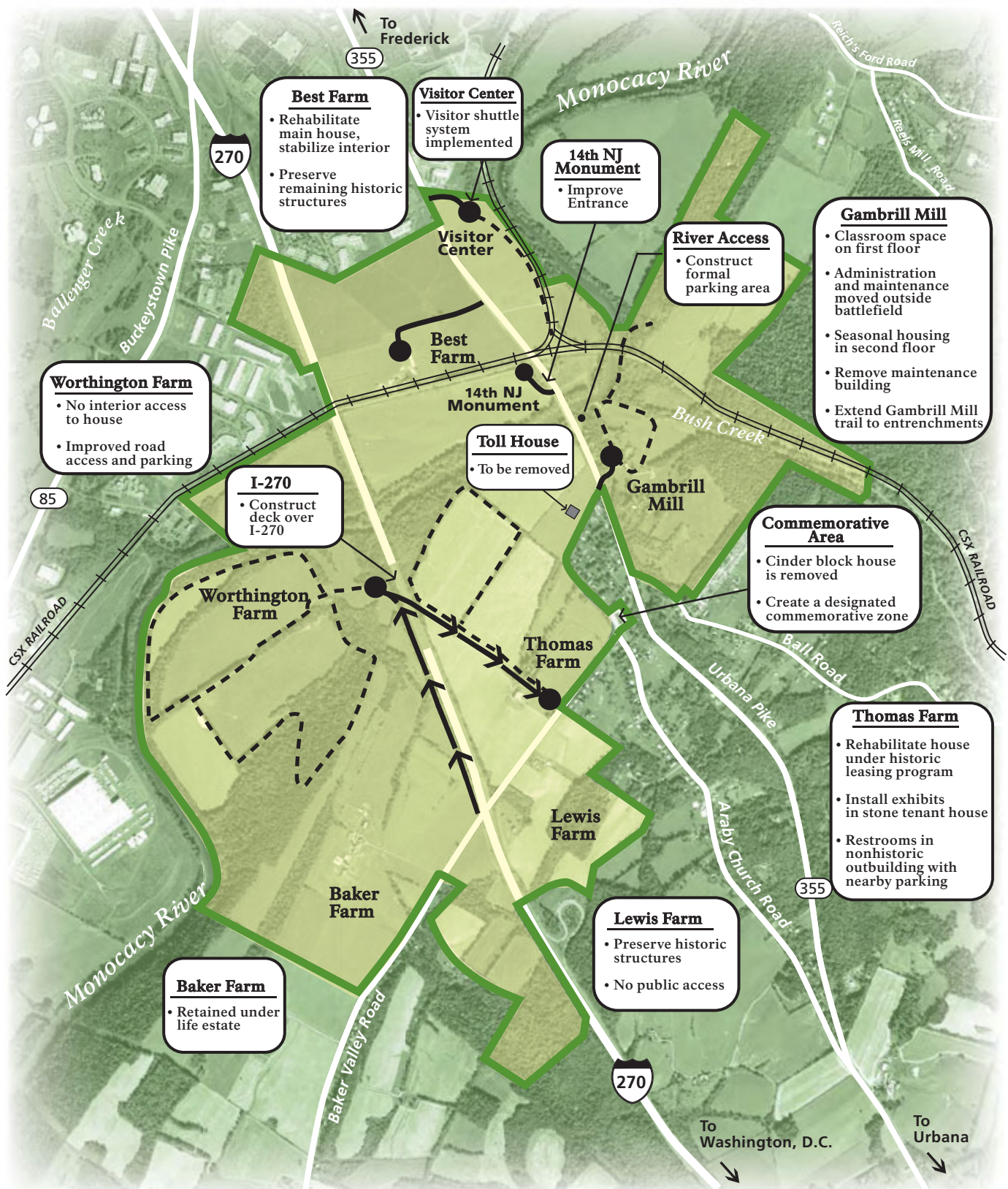
In alternative 2, the national battlefield's administrative functions would be consolidated into one location and moved into leased space outside the boundary.

The maintenance function would be moved into leased space from its current location near Gambrill Mill. The metal building that now houses maintenance would be removed and the site re-landscaped as a part of the battlefield preservation zone.



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## Alternative 2

### Monocacy National Battlefield

United States Department of the Interior  
National Park Service

DSC / 894 / 20016 / FEB. 2008

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The second floor of the Gambrill Mill would be used for temporary housing for seasonal employees, who have a difficult time finding affordable short-term housing in the Frederick area. The Gambrill Mill and parking area would be the only area in alternative 2 in the maintenance and administration zone.

## COSTS

The following applies to costs throughout this management plan:

- The costs are presented as estimates and allow for flexibility in application of components.
- These costs are not appropriate for budgeting purposes.
- The costs presented have been developed using industry standards to the extent available.
- Actual costs will be determined at a later date, considering the design of facilities, identification of detailed resource protection needs, and changing visitor expectations.
- Approval of the general management plan does not guarantee that funding or staffing for proposed actions will be available.
- Full implementation of the general management plan may be many years in the future.

Costs have been broken down into annual operating costs and one-time costs. All estimates are presented in 2007 dollars.

Annual costs include the costs associated with ongoing maintenance,

utilities, staffing, supplies and materials, and leasing costs associated with the off-site maintenance facility.

Staffing levels needed to fully implement the alternative are proposed at 20 full-time equivalent positions (FTEs), four more than alternative 1. The complexity of the operation at the national battlefield now requires an administrative function to work on budget and personnel issues. A law enforcement ranger was recommended in the “Law Enforcement Needs Assessment” completed for the national battlefield. An already funded, but unfilled, biological technician position is needed to assist the growing workload of natural resource projects and the Youth Conservation Corps program. Opening up of the Thomas farm to visitation along with new exhibits will require an additional ranger presence at the farm.

Deferred maintenance costs are those costs necessary to bring current infrastructure up to NPS standards.

Among the projects included in the one-time costs are new trails, a new vehicular entrance at the 14th New Jersey Monument, visitor use enhancements at the Thomas Farm, removal of a non-historic house and development of a Civil War commemorative area, road improvements, and rehabilitation of the exterior of the Best farmhouse. The removal of the maintenance building and treatment of the site after demolition are also included in one-time costs. These projects constitute the majority of capital investments proposed in alternative 2 (for a complete list of actions, see table 2 at the end of chapter 2). The “Other” category

includes research projects, studies, and documentation.

Annual operating costs: \$2,000,000

Includes 20 FTE positions

Deferred maintenance: \$5,400,000

One-time costs: \$2,025,000

Facility and

non-facility costs: \$1,700,000

Removal of buildings (3) \$125,000

Other \$200,000

Note: The proposal for the I-270 deck (automobile use) at a cost of \$11,400,000 would be funded only if it can be accomplished as part of the I-270 impact mitigation. It does not represent a cost to the National Park Service.

## ALTERNATIVE 3

### INTRODUCTION

Alternative 3 would expand the story of the Battle of Monocacy, not only explaining the troop movements but describing the impact of the battle and the Civil War on Frederick and the surrounding countryside. More emphasis would be placed on the human story in alternative 3 than in alternative 2 (in which the landscape would be of primary importance). Exhibits in the Best and Worthington houses would focus attention on the lives of the local people who were caught up in the maelstrom of battle. To fully comprehend the course and impact of the battle, visitors would need to go to the visitor center and the historic houses and walk the trails of the battlefield.

Each alternative must be considered along with the actions described as common to all alternatives (beginning on p. 41). Each alternative is explained in relation to the management prescription / management zoning categories also described earlier. Along with the descriptions are maps illustrating the zones and actions. Table 2, at the end of this chapter, compares the alternatives (p. 97).

Visitors would traverse the national battlefield at their own pace, using their own vehicles. Much of their knowledge of the site would be gained at the visitor center. Beginning at the visitor center inside the north boundary, visitors would proceed to the 14th New Jersey Monument, Worthington Farm, and on to the Thomas Farm. Then they would return along Baker Valley and Araby

Church roads to the Pennsylvania and Vermont monuments commemorative area and finally to the Gambrill Mill area. This circulation pattern would enable visitors to view the battlefield in the chronological sequence of the battle.

Brochures and new wayside signs and exhibits would provide guidance and information along existing and new trails. During the primary visitor season and for special events, interpretive rangers would be stationed at key locations throughout the national battlefield to offer further interpretation.

Although the trails would not be designed primarily for recreational use, under alternative 3 visitors could walk the trails to fish in the river or to observe wildlife. Other recreational uses such as horseback riding and bicycling would not be allowed.

### VISITOR SERVICES ZONE

Areas of the national battlefield that would be zoned for visitor services under alternative 3 are the new visitor center near the north entrance, the interior first floor of the Best Farmhouse, the first floor of the Gambrill Mill, part of the Thomas farm (including the interior of the stone tenant house), and the first floor of the Worthington Farmhouse.

The new visitor center offers exhibits and orientation to the battlefield, and serves as the staging point for each visitor's tour. At this location at the north end of the national battlefield, visitors will orient themselves north to south, roughly the direction in which

the battle took place. Visitors arriving on scheduled bus tours also would be oriented at the visitor center.

The interior first floor of the farmhouse on the Best Farm would be used for exhibits focusing on the role of the farm in the battle and the history of the Vincendière family that lived there. This would supplement the more general information available at the visitor center.

Exhibits on the first floor of the Worthington Farmhouse would highlight the effects of the battle on the Worthington family. Other exhibits there would help visitors to understand the Confederate troop movements on this side of the battlefield.

A historic stone tenant house on the Thomas Farm would contain exhibits focused on the role of the farm in the battle and the history of the battlefield's cultural landscape. A nonhistoric cinder block house along Baker Valley Road would be rehabilitated for restrooms or replaced by a similar facility. Parking also would be available at this site.

The Gambrill Mill space would become classroom space for school groups, a lecture hall for speakers, a place for staff meetings, and public restrooms.

## **BATTLEFIELD PRESERVATION ZONE**

At the Best Farm, the secondary house, the barn, and other outbuildings would be preserved, and their interiors would be either open to visitors or visible through windows. Interpretive signs would help visitors understand the

importance of the structures and the farm as a whole.

There would be no trail to the railroad junction from the visitor center in alternative 3, but a new parking area for the 14th New Jersey Monument on the east side of MD 355 would enable visitors to see the junction.

The Lewis Farm would be accessible by footpath from the Worthington parking area along Baker Valley Road. The house, barn, and corncrib would be rehabilitated but no structure would be open for visitation. Wayside exhibits would provide interpretation.

The gravel-surfaced entry lane from Baker Valley Road to the Worthington House would be widened to two lanes, and a small parking area accessible for people with disabilities would be developed so that vehicles could be parked closer to the Worthington House. The parking area would be created on ground reclaimed from a 20th century borrow pit. It probably would be adjacent to I-270 and about 300 yards east of the house, but it would not be visible from the Worthington House.

No deck would be constructed in alternative 3 over I-270 (described on p. 84) to connect the Worthington Farm to the Thomas Farm.

A recently designated trail around the Thomas Farm, would allow visitors to tour the battlefield on the Thomas Farm.

## **COMMEMORATIVE ZONE**

In alternative 3, no actions would be proposed for the Maryland and United Daughters of the Confederacy

monuments, which are on the west side of MD 355 just inside the boundary of the national battlefield. The monuments would continue to be maintained. No monuments would be added, and no changes would be made to the surrounding landscape.

The entrance to the 14th New Jersey Monument would be moved to the east side of MD 355, and a new parking area would be added. A trail under the MD 355 railroad overpass would lead to the monument. The old parking area would be removed and the land rehabilitated. These improvements would increase the safety of access from MD 355.

A designed commemorative area would be developed along Araby Church Road near the existing Pennsylvania and Vermont monuments. A cinder block house now on the site would be removed, to be replaced by a landscaped area with parking. No new monuments would be allowed in the national battlefield.

#### **NATURAL RESOURCES ZONE**

An existing informal parking area on the east side of MD 355 used by fishermen would be closed and the area re-landscaped. Fishermen would be allowed to park at the 14th New Jersey Monument parking area and take a trail down to the river.

The Gambrill Mill Trail would be extended to the railroad crossing. Interpretive waysides and selective vista clearing would allow visitors to see the junction where fighting began.

#### **MAINTENANCE AND ADMINISTRATION ZONE**

The interior of the Thomas House would be adaptively used for administrative offices. Visitors generally would not have access to it, but they could get some understanding of the house and the events that occurred there through waysides and exhibits in the stone tenant house.

Maintenance would remain in the metal building on the Gambrill property. The structure would be expanded to meet the needs for offices, vehicle storage, and work space for a fully developed national battlefield.

When administrative offices are moved from the Gambrill Mill to the Thomas House, the first floor of the Gambrill Mill would serve as classrooms, employee meeting space, and public restrooms. The second floor would be used for office space.

#### **COSTS**

The following applies to costs throughout this management plan:

- The costs are presented as estimates and allow for flexibility in application of components.
- These costs are not appropriate for budgeting purposes.
- The costs presented have been developed using industry standards to the extent available.
- Actual costs will be determined at a later date, considering the design of facilities, identification of detailed resource protection needs, and changing visitor expectations.

- Approval of the general management plan does not guarantee that funding or staffing for proposed actions will be available.
- Full implementation of the general management plan may be many years in the future.

Costs have been broken down into annual operating costs and one-time costs. All estimates are presented in 2007 dollars.

Annual costs include the costs associated with ongoing maintenance, utilities, staffing, supplies and materials, and leasing costs. Staffing levels needed to carry out the alternative are proposed at 22 full-time equivalent positions (FTEs). The complexity of the operation at the national battlefield now requires an administrative function to work on budget and personnel issues. A law enforcement ranger was recommended in the “Law Enforcement Needs Assessment” completed for the national battlefield. An already funded biological technician position is needed to assist the growing workload of natural resource projects and the Youth Conservation Corps program. The opening up of the Thomas farm to visitation along with new exhibits will require an additional ranger presence at the farm. A museum technician will be needed to care for exhibits at the Worthington and Thomas farms and to free up an interpretive position. An additional maintenance mechanic will

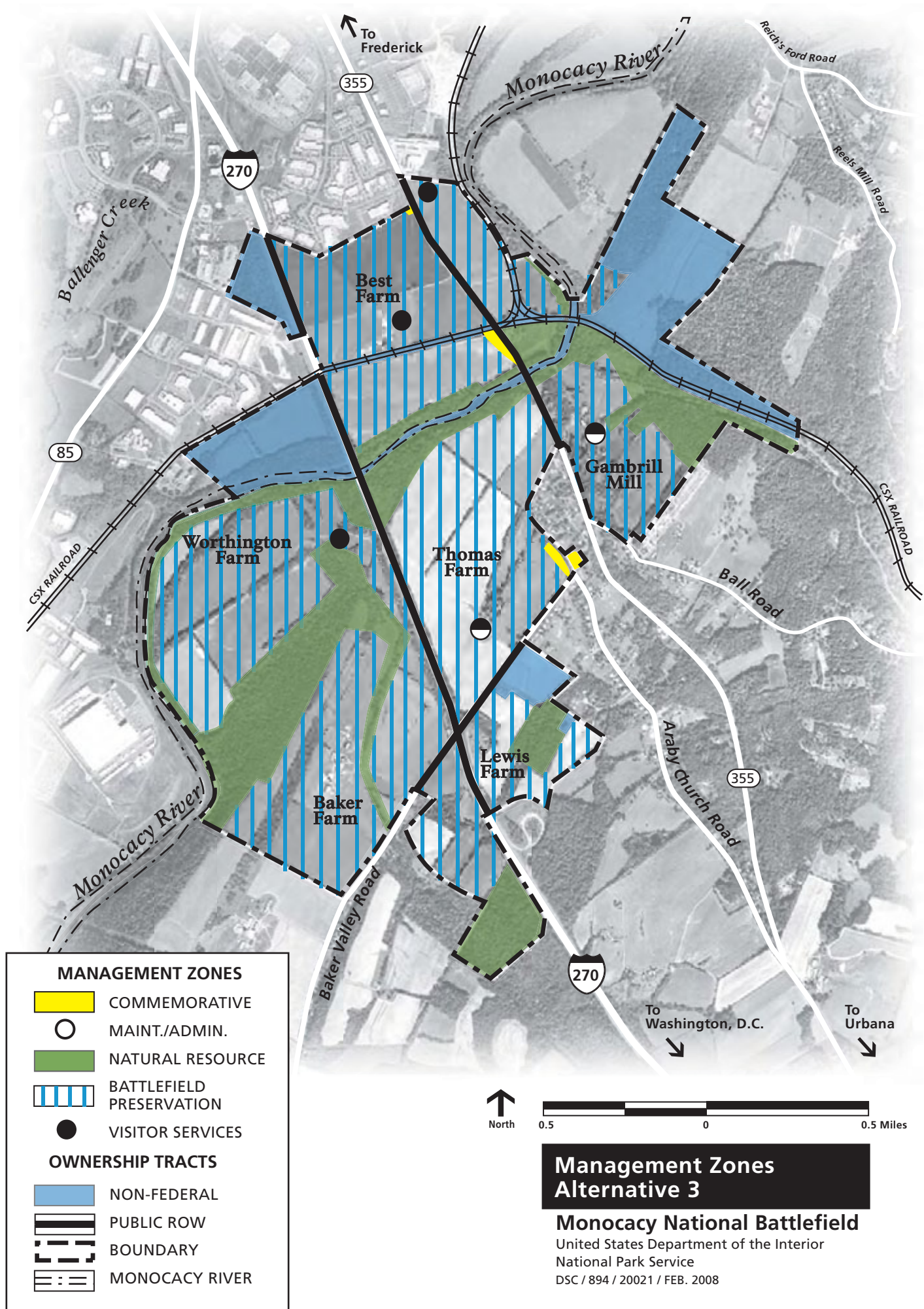
allow better maintenance of structures that will be opened to the public.

Deferred maintenance costs are those costs necessary to bring current infrastructure up to NPS standards.

Among the major one-time cost items in alternative 3 are a new vehicular entrance, parking area, and site treatment at the 14th New Jersey Monument; visitor use enhancements at the Worthington House, including exhibits on the lives of local residents at the time of the Civil War, entry lane widening, and development of an accessible parking area; the adaptive use of the Thomas House for administration; and expansion of the maintenance facility. These capital investments would constitute the major portion of the NPS development in the national battlefield during the next 20 years. For a complete list of actions see table 2 at the end of chapter 2.

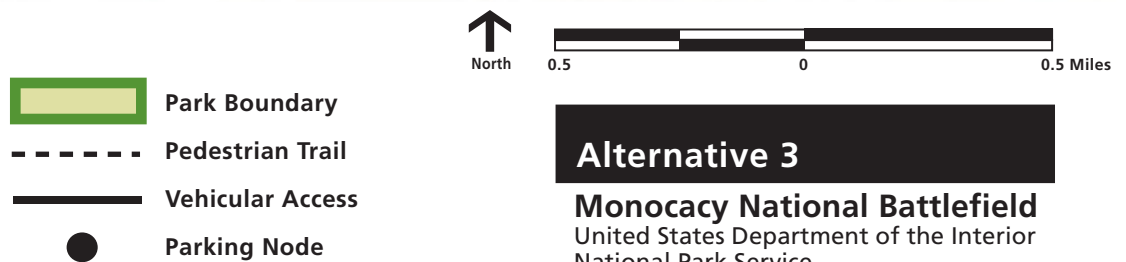
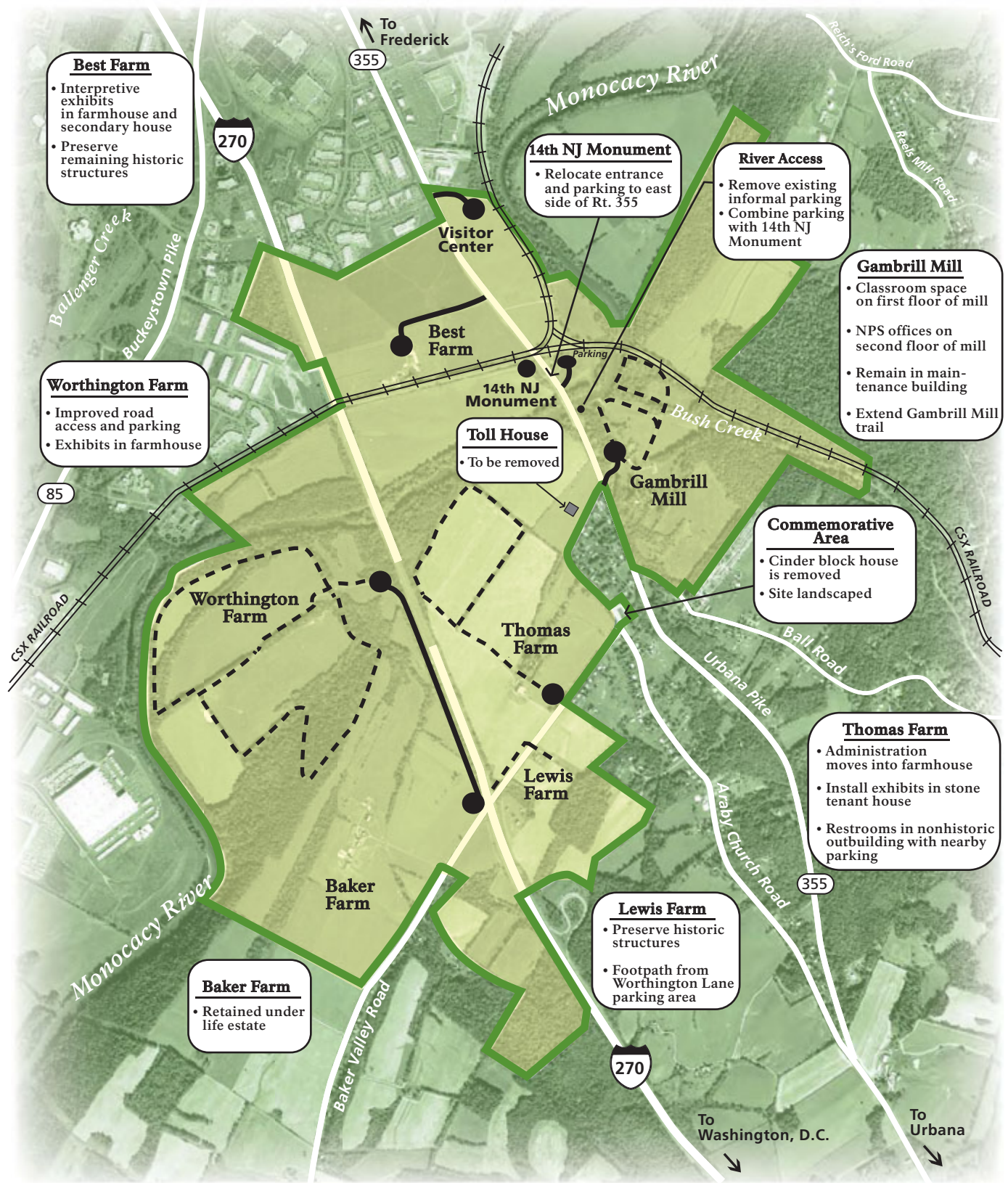
The “Other” category includes research projects, studies, and documentation.

Annual operating costs:	\$2,200,000
Includes 22 FTE positions	
Deferred maintenance:	\$2,000,000
One-time costs:	\$5,975,000
Facility and	
non-facility cost:	\$5,700,000
Removal of buildings (2):	\$75,000
Other:	\$200,000



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## ALTERNATIVE 4 (THE PREFERRED ALTERNATIVE)

### INTRODUCTION

Alternative 4 has been identified as the future direction preferred by the National Park Service. It is a combination of features and actions from the other alternatives. The benefits of the alternatives were evaluated with the use of an objective analytical process called “choosing by advantages,” or CBA, which is discussed on page 40. The features that appeared to impart the most benefit (considering cost, staffing constraints, and management concerns) were selected.

Each alternative must be considered along with the actions described as common to all alternatives (beginning on p. 41). Each alternative is explained in relation to the management prescription / management zoning categories also described earlier. Along with the descriptions are maps illustrating the zones and actions. Table 2, at the end of this chapter, compares the alternatives (p. 97).

In a manner similar to that of alternative 3, alternative 4 would involve expanding the story of Monocacy beyond the battle of July 9, 1864. In addition to interpretation of the battle, in this alternative emphasis would be placed on the national battlefield’s role as a military and transportation crossroads throughout the Civil War. Even more broadly, this alternative would focus attention on Monocacy’s position as an important crossroads from prehistory to the present.

Visitors would traverse the national battlefield at their own pace, using their

own vehicles. Much of their knowledge of the site would be gained at the visitor center. Beginning at the visitor center inside the north boundary, visitors would walk to the 14th New Jersey Monument, the Worthington Farm, and across the deck bridging I-270 to the Thomas Farm. Then they would return along Baker Valley and Araby Church roads to the Pennsylvania and Vermont monuments commemorative area and finally to the Gambrill Mill area. This circulation pattern would enable visitors to view the battlefield in the chronological sequence of the battle.

Brochures and new wayside signs and exhibits would provide guidance and information along existing and new trails. During the primary visitor season and for special events, interpretive rangers would be stationed at key locations throughout the national battlefield to offer additional interpretation.

Although the trails would not be designed primarily for recreational use, under alternative 4 visitors could walk the trails to fish in the river or to observe wildlife. Other recreational uses such as horseback riding and bicycling would not be allowed.

### VISITOR SERVICES ZONE

Four areas in the national battlefield would be zoned for visitor services under alternative 4: the new visitor center near the north entrance, the Worthington House, part of the Thomas Farm (which would include parking, restrooms, and interpretive exhibits in the stone tenant house), and the parking

area and the first floor of the Gambrill Mill.

The new visitor center provides adequate space for orientation of national battlefield visitors. The new center also contains educational maps and exhibits. Its location at the north end of the national battlefield allows visitors to orient themselves north to south, roughly the direction in which the battle took place.

As with alternative 3, in alternative 4 all visitors would be expected to begin their visits at the new visitor center. Visitors arriving on scheduled bus tours would be oriented at the new visitor center or on the bus by accompanying staff.

The first floor of the Worthington House would be open to visitors. It would contain exhibits explaining the history of the site and its role in the battle.

A historic stone tenant house on the Thomas Farm would contain additional exhibits focusing on the cultural history of the battlefield landscape and the concept of Monocacy as a crossroads through time.

A nonhistoric cinder block house along Baker Valley Road, also on the Thomas Farm, would be rehabilitated for use as restrooms, or it would be replaced by a similar facility. Parking also would be available at this site.

The first floor of the Gambrill Mill would be used for classrooms. The second floor would continue to house NPS offices.

## **BATTLEFIELD PRESERVATION ZONE**

The Best farmhouse exterior would be rehabilitated but visitors would have no access inside. The secondary house, the barn, and other outbuildings would be preserved, and their interiors would be either open to visitors or visible through windows. Interpretive signs would help visitors understand the importance of the structures and the farm as a whole.

The gravel-surfaced entry lane from the Baker Valley Road to the Worthington House would be widened for two-way access, and a small parking area accessible for visitors with disabilities would be developed so that vehicles could be parked closer to the Worthington House. The parking area would be added on ground reclaimed from a 20th century borrow pit. It probably would be adjacent to I-270 and about 300 yards east of the house, but it would not be visible from the Worthington House.

A pedestrian deck would be constructed over I-270 (described on p. 84) to connect the Worthington Farm to the Thomas Farm and to reestablish an important historic fence line. In conjunction with improvements to a historic lane through the Thomas Farm, the deck trail would be a means for visitors to tour the site without backtracking down the Worthington Lane and Baker Valley Road. The wedge-shaped deck would be planted with crops and fence rows to help visitors visualize the area's historic appearance without the interstate highway.

The circle trail around the Thomas Farm would connect over the deck to the Worthington Farm. Visitors could then

walk out on the most significant areas of the battlefield. Wayside exhibits and brochures explaining the importance of the Thomas Farm to the Battle of Monocacy would supplement information available in the stone tenant house.

### **COMMEMORATIVE ZONE**

No actions would be proposed for the northernmost commemorative zone on the west side of MD 355 just inside the boundary of the national battlefield.

This area, which encompasses the Maryland and United Daughters of the Confederacy monuments, would continue to be maintained. No monuments would be added, and no changes would be made to the surrounding landscape.

To improve visitor safety, the entrance to the 14th New Jersey Monument would be shifted south. The National Park Service would consult with the state of New Jersey (which owns the monument) and with the Maryland State Highway Administration to improve the safety of access and egress to MD 355, as well as to improve the appearance of the parking area.

To accommodate any new monuments, a commemorative area would be developed along Araby Church Road near the existing Pennsylvania and Vermont monuments. A cinder block house now on the site would be removed, to be replaced by a landscaped area with parking. All new monuments would be placed in this area, and guidelines would be developed regarding their size, design, color, placement, and maintenance.

### **NATURAL RESOURCES ZONE**

An existing informal parking area on the east side of MD 355 used by fishermen would be closed and the area re-landscaped. Fishermen would be allowed to park at the 14th New Jersey Monument parking area and take a trail down to the river.

The existing short circular trail from the Gambrill Mill parking area would be extended through the natural resources zone to the Wallace's headquarters site and the Union entrenchments. The trail would cross over Bush Creek via a new bridge and under the heavily used CSX railroad line by way of a walkway under the Monocacy River trestle. A barrier fence would be constructed along the rail line to keep visitors off of the active tracks.

Upgraded interpretation along trails would include wayside exhibits and possibly brochures designed to help people observing wildlife and to give historical information or information on trees and plant species.

### **MAINTENANCE AND ADMINISTRATION ZONE**

As in alternative 3, the interior of the Thomas House would be adaptively used for administrative offices. Visitors generally would not have access to it, but they could gain some understanding of the house and the events that occurred there through waysides and exhibits in the stone tenant house.

Maintenance would remain in the metal building on the Gambrill property. The structure would be redesigned to meet

the needs for offices, vehicle storage, and work space for a fully developed national battlefield.

## COSTS

The following applies to costs throughout this management plan:

- The costs are presented as estimates and allow for flexibility in application of components.
- These costs are not appropriate for budgeting purposes.
- The costs presented have been developed using industry standards to the extent available.
- Actual costs will be determined at a later date, considering the design of facilities, identification of detailed resource protection needs, and changing visitor expectations.
- Approval of the general management plan does not guarantee that funding or staffing for proposed actions will be available.
- Full implementation of the general management plan may be many years in the future.

Costs have been broken down into annual operating costs and one-time costs. All estimates are presented in 2007 dollars.

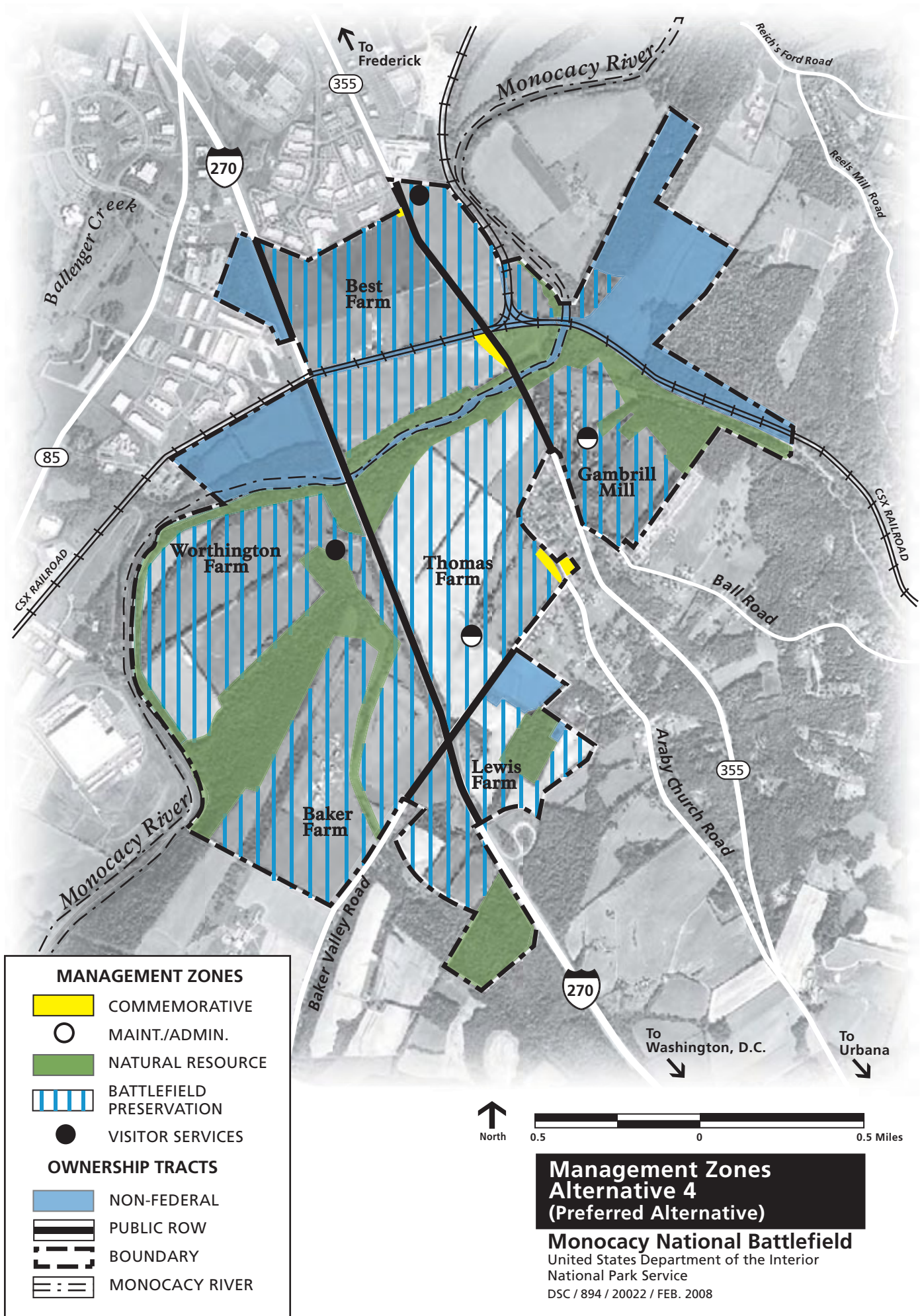
Annual costs include the costs associated with ongoing maintenance, utilities, staffing, supplies and materials, and any leasing costs. Staffing levels needed to carry out the alternative are proposed at 22 full-time equivalent positions (FTEs). The complexity of the

operation at the national battlefield now requires an administrative function to work on budget and personnel issues. A law enforcement ranger was recommended in the “Law Enforcement Needs Assessment” completed for the national battlefield. An already funded biological technician position is needed to assist the growing workload of natural resource projects and the Youth Conservation Corps program. The opening up of the Thomas farm to visitation along with new exhibits will require a presence at the farm. A museum technician will be needed to care for exhibits at the Worthington and Thomas farms and to free up an interpretive position. An additional maintenance mechanic will allow better maintenance of structures that will be opened to the public.

Deferred maintenance costs are those costs necessary to bring current infrastructure up to NPS standards.

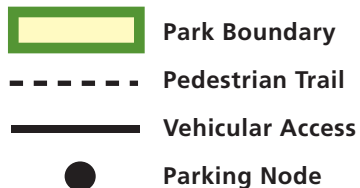
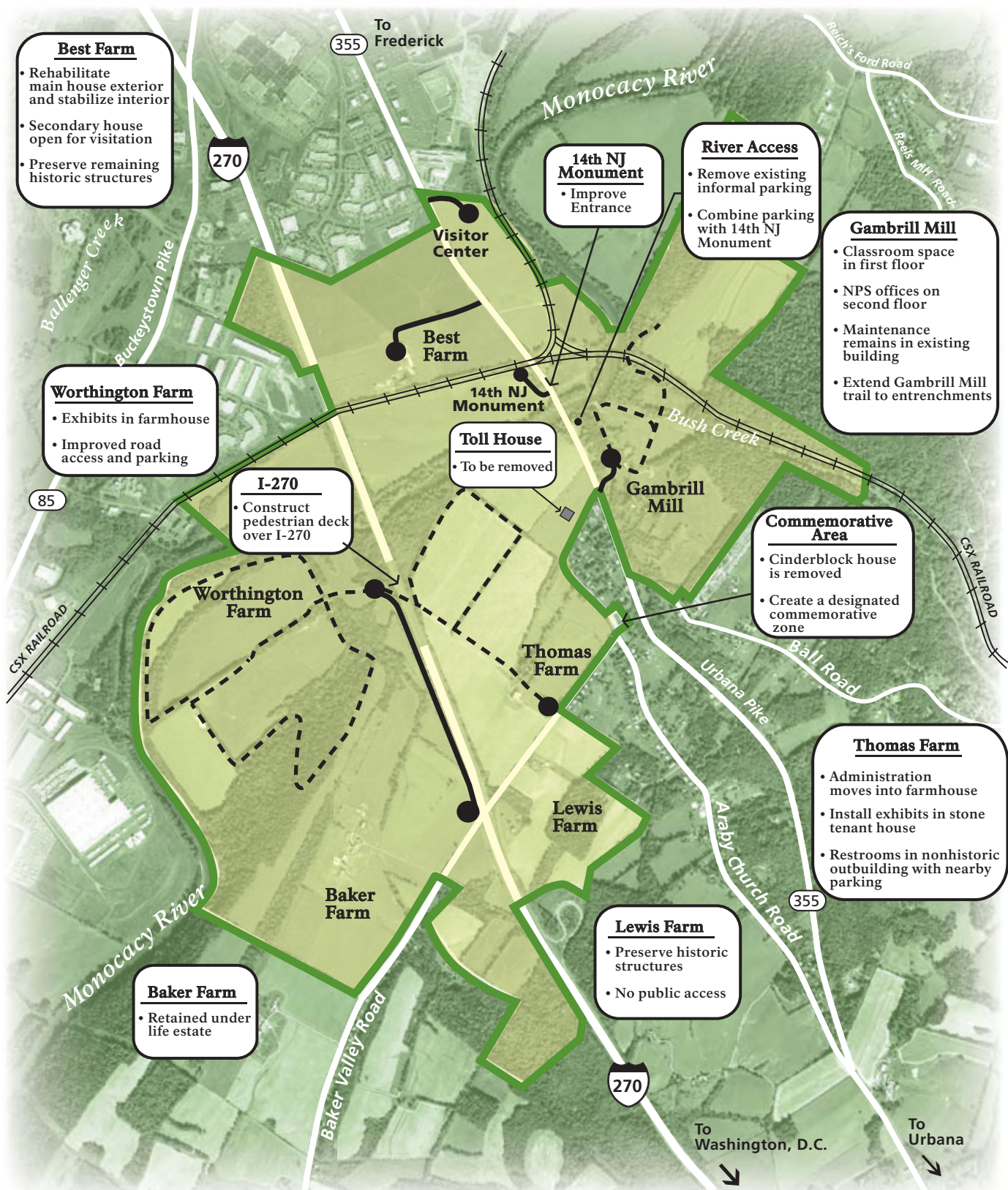
A new vehicular entrance at the 14th New Jersey Monument; exhibits at the Thomas Farm; visitor use enhancements at the Worthington House, including exhibits, entry lane widening, and accessible parking area; the adaptive use of the Thomas House for administration; removal of cinder block house and site treatment in the new commemorative area; and redesign of the maintenance facility to meet national battlefield needs constitute the majority of capital investments in alternative 4. These one-time costs would constitute the major portion of development of the national battlefield during the next 20 years. For a complete list of actions see table 2 at the end of chapter 2.





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## Preferred Alternative Alternative 4

**Monocacy National Battlefield**  
United States Department of the Interior  
National Park Service  
DSC / 894 / 20018 / FEB. 2008

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The “Other” category includes research projects, studies, and documentation.

Annual operating costs:	\$2,200,000
Includes 22 FTE positions	
Deferred maintenance:	\$3,100,000
One-time costs:	\$4,575,000
Facility and	
non-facility cost:	\$4,300,000
Removal of buildings (2):	\$75,000
Other:	\$200,000

Note: The proposal for the I-270 deck (pedestrian use only) at a cost of between \$4,600,000 and \$6,800,000 depending upon deck width, would be funded only if it can be accomplished as part of the I-270 impact mitigation. It does not represent a cost to the National Park Service.

### PROPOSAL FOR DECK ON INTERSTATE HIGHWAY 270

In 2002, the Federal Highway Administration and the Maryland State Highway Administration released a *Draft Environmental Impact Statement and Section 4(f) Evaluation*, which included several alternatives for widening Interstate 270 through the national battlefield. The alternatives range from constructing one more lane in each direction — for a total of six lanes — (alternatives 3 and 4) to adding two lanes in each direction — for a total of eight lanes (alternative 5).

Widening the interstate would cause the loss of battlefield acreage. The national battlefield acreage required for the new lanes was calculated initially at 11.74 for alternatives 3 and 4 of the FHWA/Maryland draft document, and up to 22.52 acres under alternative 5. The draft document included consideration of three measures for minimizing impacts on the battlefield: steeper slopes, retaining walls, and reduced width of the inside shoulders. These measures would reduce the battlefield acreage required for road construction to a little more than 5 acres under alternatives 3 and 4, and from 0.07 to 2.92 acres for alternative 5. However, reducing the acreage under alternative 5 would require the use of substantial retaining walls averaging 7 feet in height.

Although reducing the amount of national battlefield land needed for the widening is important, none of the mitigative measures would resolve the visual or auditory impacts on the national battlefield from I-270, nor would it solve the ongoing access problems caused by I-270 bisecting the battlefield. None of the suggested mitigative measures would diminish the interpretive difficulty of “painting” the battlefield landscape for visitors with such a massive intrusion separating resources. Added traffic would only make these problems worse.

One proposed mitigating measure is to construct a deck or bridge over the interstate highway between the Worthington and Thomas farms. This would reconnect the two halves of the battlefield. This likely would be a wedge-shaped structure covering a depressed part of the roadway. The wedge — or trapezoidal shape — would minimize the amount of roadway covered, reducing costs and negating the need for a safety air-handling system. To achieve a sense of the original surface of the land between the two farms, the deck would be covered over with soil and crops, fence rows, and trees. It also would serve as a bridge between the two farms, resulting in an interpretive connection that is difficult to convey at present. While hiding vehicles from view, such a deck also could mask some of the dull highway roar that has become part of the visitor experience everywhere on the national battlefield.

The estimated cost of the deck (\$20 million–\$30 million) could be wholly or partly covered as mitigation for impacts on Monocacy National Battlefield under section 4(f) of the Department of Transportation Act of 1966, as amended (PL 89-670).

## FUTURE STUDIES AND MITIGATING MEASURES

### FUTURE STUDIES

After a *Final General Management Plan* for managing Monocacy National Battlefield is completed and approved, other, more detailed studies and plans will be needed for implementing specific actions. As required, the National Park Service will carry out additional compliance with the National Environmental Policy Act, the National Historic Preservation Act, and other relevant laws and policies. Consultation and public involvement will be carried out as necessary. The additional studies that may be needed are listed in appendix D.

### MITIGATING MEASURES

#### Background

Congress has charged the National Park Service with managing the lands under its stewardship “in such manner and by such means as will leave them unimpaired for the enjoyment of future generations” (NPS Organic Act, 16 USC 1). As a result, the National Park Service routinely evaluates and applies mitigative measures whenever conditions could adversely affect the sustainability of national park system resources.

The National Park Service would conduct appropriate environmental review as required by the National Environmental Policy Act, the National Historic Preservation Act, and other relevant legislation for any future actions. As part of the environmental review, the National Park Service would avoid, minimize, and mitigate adverse impacts when possible.

The following mitigating measures and best management practices would be used to avoid or minimize potential impacts on natural and cultural resources from construction activities, use by visitors, and NPS operations. These measures would apply to all alternatives.

#### Cultural Resources

To the greatest extent possible, the National Park Service would preserve and protect resources that reflect human occupation of Monocacy National Battlefield. Specific mitigative measures would be as follows:

- Continue to inventory and research archeological, historical, and ethnographic resources to better understand and manage the resources. Continue to follow federal regulations and NPS guidelines in managing cultural resources and collections
- Apply site-specific planning and compliance to projects. Avoid adverse impacts by applying *The Secretary of the Interior’s Standards for Archeology and Historic Preservation* and by using screening or sensitive design that would be compatible with historic resources. If adverse impacts are unavoidable, mitigate them through consultation with all interested parties
- Document structures to be adaptively reused according to the standards of the Historic American Buildings Survey / Historic American Engineering Record as defined in the

*Re-engineering Proposal* (October 1, 1997)

- Wherever possible, place trails, parking areas, and other facilities in previously disturbed areas or in existing developed areas. Design facilities to avoid known or suspected archeological resources
- As appropriate, use vegetative screening to minimize impacts on views to and from the cultural landscape
- Complete project-specific archeological inventories prior to final decisions on project location and prior to finalizing construction designs
- Conduct archeological site monitoring during construction. If protection or site avoidance during design and construction is infeasible, conduct data recovery excavations at archeological sites threatened with destruction. Should archeological resources be discovered, stop work in that location until the resources can be properly recorded and evaluated under the eligibility criteria of the National Register of Historic Places
- Complete or update cultural landscape plans for all areas of the national battlefield

### Natural Resources

The National Park Service would protect natural resources or mitigate effects on natural resources through the following measures:

- Practice a dust abatement program during construction. Standard dust

abatement measures could include watering or otherwise stabilizing soils, covering haul trucks, establishing speed limits on unpaved roads, minimizing vegetation clearing, and revegetating areas with native plants after construction.

- Build new facilities on soils suitable for development. Minimize soil erosion by limiting the time that soil is left exposed and by applying other erosion control measures such as erosion matting, silt fencing, and sedimentation basins in construction areas. Such measures would reduce erosion, surface scouring, and discharge to water bodies. After work is finished, revegetate construction areas in a timely manner with native plants where appropriate.
- Build stormwater management systems to minimize water pollution from large parking areas.
- Site trails to minimize impacts on steep slopes, highly erodible soils, hydric soils, wetlands, and floodplains. Where possible, plan trails to avoid high quality wildlife habitat.
- In trail construction, use switchbacks in areas where steep slope crossings are unavoidable.
- Conduct surveys for rare, threatened, and endangered species as warranted. In riparian areas and Brooks Hill, conduct surveys before initiating any actions or changes in visitor activity levels. If sensitive species are found, before designing trails, consult with the U.S. Fish and Wildlife Service (for federally listed species) or with the Maryland

Department of Natural Resources (for state-listed species) to determine the most appropriate routes, construction methods, and mitigating measures.

- During construction, put into practice a program for spill prevention and pollution control for hazardous materials. Standard measures might include procedures for storing and handling hazardous materials, spill containment, cleanup, and reporting procedures, as well as limiting refueling and other hazardous activities to upland or nonsensitive sites.
- Delineate wetlands and perform protection measures during construction. Qualified NPS staff or certified wetlands specialists should use the Cowardin system used by NPS to delineate wetlands, and the wetlands should be clearly marked before construction work can begin.
- Put into operation a noxious weed abatement program for construction activity. This could include ensuring that construction equipment arrives on the site free of mud or seed-bearing material, certifying that all seeds and straw material are weed-free, identifying areas of noxious weeds before construction, treating noxious weeds or noxious weed topsoil (by segregating topsoil or treating with herbicides) before construction, and revegetating with appropriate native species.

### **Visitor Experience and Visitor Safety**

Measures that would be carried out to protect the visitor experience and visitor safety are as follows:

- Establish a traffic control plan as warranted. Standard measures could include strategies to maintain safe and efficient traffic flow during construction.
- Perform measures to reduce the adverse effects on visitor safety and experience from construction.

### **Socioeconomic Environment**

In implementing the approved *General Management Plan* for Monocacy National Battlefield, the National Park Service would work with local communities and county governments to further identify the potential impacts of the plan and the mitigative measures that would best serve the interests and concerns of the National Park Service and the local communities. Partnerships would be pursued to improve the quality and diversity of community amenities and services.

### **Sustainable Design and Aesthetics**

The National Park Service would attempt to avert or minimize adverse effects caused by projects on natural or cultural resources through the following measures:

- Design, locate, and construct facilities to avert or minimize adverse effects on natural and cultural resources and visual intrusion into the landscape.
- Design development projects (such as buildings, facilities, utilities, roads,

bridges, and trails) or reconstruction projects (such as road reconstruction, building rehabilitation, or utility upgrades) to work in harmony with the surrounding areas.

- Plan projects so as to reduce, minimize, or eliminate air and water nonpoint source pollution.
- Cause projects to be sustainable whenever practicable by minimizing the materials used, recycling and reusing materials, minimizing energy consumption during the project and throughout the life of the project.
- Carry out standard noise abatement measures during battlefield construction by using the best available noise control techniques whenever feasible, using hydraulically or electrically powered impact tools when feasible, and locating stationary noise sources as far from sensitive areas as possible.
- Place and design new facilities in ways that will minimize objectionable noise.
- Work with the Federal Highway Administration to find ways to minimize the noise from Interstate Highway 270.

## CARRYING CAPACITY

The 1978 Parks and Recreation Act requires units of the national park system to address carrying capacity, and addressing carrying capacity is essential to protect resources and provide a high quality visitor.

There are three principal components that relate to determining the carrying capacity for a national park unit, as follows:

- Ecological or physical capacity, which includes the capabilities of the natural and cultural resources to sustain levels of visitor use without unacceptable damage.
- Sociological carrying capacity, which includes the ability of visitors to enjoy and appreciate these resources without undue interference by other visitors.
- NPS management, which includes the efforts that have been or can be applied to the national battlefield to mitigate unwanted impacts. This component relates to the management of things such as roads, parking lots, buildings, trails, and visitor information.

Table 1 summarizes the desired conditions, indicators, and standards that Monocacy National Battlefield would use to ensure that it stays within its carrying capacity. The national battlefield does not currently have a quantitative system for measuring carrying capacity, and relies instead on qualitative observations about the use and crowding of various national battlefield resources.

Maryland Highway 355 bisects the national battlefield. It is the route visitors take to get to the national battlefield from north and south. It also serves as an integral part of the internal tour route used by visitors to navigate the national battlefield. Although visitor counts have, until the opening of the



visitor center, been taken at the Gambrill Mill, the overall number of commercial and commuter trips on this highway makes it difficult to obtain accurate visitation information for the national battlefield as a whole.

The difficulties posed by commercial and commuter traffic and limited staff availability make it difficult for the national battlefield to maintain a system of quantitative indicators and standards. Thus, many of the indicators and standards in table 1 are constructed in a way that enables qualitative measurement by staff as part of their ongoing duties.

Monocacy National Battlefield does not currently approach its carrying capacity. This observation reflects the experience of national battlefield staff. As a relatively new national park system area, the site has undergone a period of rehabilitation and restoration of historic structures and natural and cultural resources research. Most of the structures and much of the battlefield landscape has been closed to visitation.

For much of the time the national battlefield has been open, only the Gambrill Mill visitor contact station has been open to the public. Several trails were developed to provide visitors with some ability to see the battlefield landscape. Special events have not been frequent because staffing has not been equal to that needed to manage such events. School groups visit the national battlefield, resulting in some temporary crowding at the visitor contact station, but these are short-lived occurrences that result in no appreciable damage to natural or cultural resources.

The national battlefield will continually update the indicators and standards described in the table 1 below to reflect any changed conditions within the national battlefield. For example, should visitation increase sharply, or if staff notice undue wear and tear on cultural or natural resources or on trails and facilities, NPS staff may choose to implement more specific indicators and standards.

**TABLE 1: CARRYING CAPACITY INDICATORS AND STANDARDS**

Visitor Experience and Services	Desired Condition	Visitors will be able to obtain park information, orientation, and services and will be able to access cultural resources and interpretive materials, exhibits, and sites without experiencing frequent delays. Museum space will be adequate to accomplish the national battlefield's interpretive goals.
	Indicator	<p>The number of times per year that the visitor center and major interpretive sites and parking areas (Best Farm, 14th New Jersey Monument, Commemorative area, Gambrill Mill, Thomas Farm, Worthington Farm) experience crowding</p> <p>The magnitude of the crowding.</p> <p>The amount of space available for museum activities, including laboratory space and storage of records and files</p>
	Standard	<p>Visitors will experience crowded conditions a few times per year occurring during special events and the fall leaf season</p> <p>Visitors will always be able to find uncrowded conditions elsewhere in the national battlefield</p> <p>Museum space will be adequate to accomplish interpretive goals</p>
Circulation and Parking	Desired Condition	Visitors should be able to follow the tour route through the national battlefield by car and use the existing parking areas while experiencing no more than moderate traffic congestion and rare parking difficulties
	Indicator	<p>The number of times per year that the tour route and other park roads experience delays due to excess visitor traffic</p> <p>The number of times per year that parking lots are full for an extended period of time</p> <p>(It should be noted that Maryland Highway 355 is a major state highway and that the national battlefield has little ability to measure congestion on it—it can however measure internal park roads and parking areas)</p>

	Standard	<p>Visitors will experience crowded conditions (heavy traffic congestion and a lack of parking) rarely—possibly once or twice a year</p> <p>Congestion would occur primarily during special events or during the fall leaf season</p> <p>Visitors would be able to find uncrowded parking areas elsewhere in the national battlefield</p>
Recreation	Desired Condition	Visitors participating in approved recreational activities such as trail walking, bird watching, and fishing, will be able to enjoy natural and cultural resources without causing damage to those resources
	Indicator	Damage to natural habitats, stream banks, cultural resources, interpretive waysides and exhibits, or landscape features due to unsanctioned activities or inappropriate use
	Standard	<p>“Social trails”— undesignated trails created by repeated use — will not occur</p> <p>Damage to fields, meadows, forests, rivers and streams does not occur due to unsanctioned or inappropriate recreational uses</p>
Operations and Maintenance	Desired Condition	The national battlefield will have adequate staff and resources to perform needed maintenance and management activities, and will do so without causing undue distraction to visitors
	Indicator	<p>The ability of staffing levels, maintenance facilities, resources, and supplies to meet park needs;</p> <p>The number and severity of visitor concerns and comments about the operations and maintenance activities</p>
	Standard	<p>Staffing and resources will not delay or prevent normal operation and maintenance activities</p> <p>Visitor concerns and comments about operations and maintenance activities will not increase in frequency or severity</p>

## THE ENVIRONMENTALLY PREFERABLE ALTERNATIVE

*Environmentally preferable* is defined as “the alternative that will promote the national environmental policy as expressed in section 101 of the National Environmental Policy Act of 1969.” Section 101 states that

It is the continuing responsibility of the Federal Government to

1. fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
2. assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
3. attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
4. preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity, and variety of individual choices;
5. achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and
6. enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

The environmentally preferable alternative for Monocacy National Park is the National Park Service's preferred alternative in this plan. This alternative satisfies the following national environmental goals:

- Hold resources in trust for future generations.
- Ensure safe, healthful, productive, aesthetically pleasing surroundings.
- Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable consequences.
- Provide a high level of protection for natural and cultural resources while maintaining an environment that supports diversity and a variety of individual choices.
- Decrease the use of depletable resources by NPS staff and visitors.

Each of the four alternatives would hold natural and cultural resources in trust for future generations.

Alternative 2 meets the second criteria best because it is the safest alternative, including an alternative transportation system that transports visitors, worry-free, around the national battlefield. It also includes a vehicular deck that allows visitors to pass from the Worthington to the Thomas farms by bus or car without having to backtrack onto busy Baker Valley Road. All of the alternatives meet the healthful, productive, and aesthetically pleasing criteria but alternative 2 provides an opportunity to use the deck to mask the

visual and audible impacts of I-270 while restoring the views between the Worthington and Thomas farms (placement of crops and hedgerows on the deck, masking the visual impact of the roadway and helping to re-create the pastoral scene).

Criteria 3 is best met by alternative 2 as it provides the most new trails into previously inaccessible areas and because the proposed deck provides a way to turn a visual disadvantage (I-270) into an advantage. Construction of the deck would cause the most environmental disruption of all alternatives with tree removal and some access road construction. These would be in already disturbed areas along the I-270 right-of-way.

Criteria 4 is met by all alternatives as they all preserve natural and cultural resources of significance for future generations and provide a variety of individual visitor choices for the use of national battlefield resources, both cultural and natural.

Alternatives 2 and 4 utilize depletable resources in the construction of either a vehicle or pedestrian deck across I-270. Alternative 2 uses nonrenewable fuel in the alternative transportation system but could actually save fuel if enough visitors use it rather than personal

vehicles. All alternatives will utilize depletable resources in the preservation of historic structures. Alternatives 3 and 4 both make use of existing structures for office and maintenance space. However, alternative 3 utilizes the Best House interior for exhibit space while alternative 4 stabilizes the interior but does not make it useable space. The Best House is in the most critical condition of any of the battlefield structures and any work required to make it usable would result in the loss of deteriorated original fabric. Therefore, any differences between alternatives 3 and 4 would be minuscule.

Alternative 2 is the environmentally preferable alternative. It preserves all cultural resources, provides an additional level of visitor safety, and improves access and circulation. Although it causes a relatively minor environmental disturbance by removing trees and other vegetation along I-270 that area is already greatly disturbed by the construction of I-270.

Alternatives 3 and 4 do not present the same high level of benefit to the visitor experience that alternative 2 does. Access and circulation is not as safe as alternative 2. The benefit to the cultural landscape is not as high as with alternative 2.

## **ALTERNATIVES AND ACTIONS CONSIDERED BUT REJECTED**

During the planning process for Monocacy National Battlefield, several alternatives and actions were analyzed for inclusion in this document but later eliminated from further study. These alternatives and actions are listed below, along with the reasons they were not analyzed further.

### **COMMEMORATIVE AREA AT NEW VISITOR CENTER SITE**

Creating a commemorative area at the new visitor center site was discussed. This concept involved placing all new monuments at the site, where visitors would have had easy access. The landscape could have been appropriately developed for the contemplation of the people and events associated with the Battle of Monocacy. The proposal was ultimately dismissed from consideration because the number of new monuments likely at Monocacy is small, and existing space near the Vermont and Pennsylvania monuments is available if any new commemorative monuments should be added.

### **COMMEMORATIVE MONUMENTS IN THE FIELD**

At public meetings, several people expressed interest in placing monuments on the battlefield in the locations where the units fought, as has been done at other national battlefields. In considering this possibility, the planning team concluded that this action would have seriously affected the national battlefield's ability to retain the historic appearance of the landscape and would have required a more extensive trail

system to allow access to each monument. It also would have made leasing under the agricultural leasing program more difficult. Therefore, this concept was rejected.

### **RE-CREATING BEST GROVE**

Some people attending public meetings suggested replanting the grove or wood lot that grew on the north side of the Best farm before the Civil War. The suggestion was ultimately rejected because the area is archeologically sensitive, and a general decision had been made not to re-create missing elements of the historic landscape of the national battlefield.

### **RESTORING BATTLEFIELD STRUCTURES**

The National Park Service received many requests that planners consider restoring and refurbishing historic structures, particularly houses, to the Civil War period. However, the planners concluded that preserving the structures, rather than restoring them to a particular period, would be in keeping with NPS historic preservation policy, and that this would allow the focus of interpretation to remain on the battlefield, rather than on the buildings and their furnishings.

### **CONTINUOUS TRAIL LINKING BATTLEFIELD SITES**

In developing this plan, NPS planners considered creating a continuous trail that would have connected all the important sites and features of Monocacy National Battlefield. However, such a

trail would have had several shortcomings: the number of physical barriers — roads, railroad, and watercourses — would have made safe design difficult, and the trail itself could have become an attraction, luring people into the national battlefield for a

recreational amenity far removed from the mandate of Congress to preserve, commemorate, and interpret the Battle of Monocacy. The continuous trail was rejected in favor of several short trails and a loop trail around the Thomas farm.

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## COMPARISON OF ALTERNATIVES AND ENVIRONMENTAL CONSEQUENCES

The actions of the alternatives are compared in table 2; the environmental consequences that would result from each alternative are compared in table 3.

**TABLE 2: COMPARISON OF ALTERNATIVES**

Alternative 1 (No Action)	Alternative 2	Alternative 3	Alternative 4 (Preferred)
<b>INTERSTATE 270 DECK</b>			
No deck constructed	Deck constructed over I-270 to connect Thomas and Worthington farms visually and physically with continuous farmscape	No crossing of I-270	Pedestrian deck over I-270
<b>INTERNAL CIRCULATION</b>			
Visitors' personal vehicles would use existing roads	Alternative transportation system mandatory for visitors when operating, personal vehicles used when not operating One-way lane over I-270 deck between Worthington and Thomas farms Interpretation provided on ATS	Personal vehicles used for access to sites Self-guiding interpretation	Same as alternative 3
<b>NEW VISITOR CENTER</b>			
New visitor center completed Spring 2007 Primary facility for helping visitors to understand and appreciate battlefield. Offers orientation, interpretation, exhibits, sales, restrooms, and museum exhibit of Battle of Monocacy			
<b>NATIONAL BATTLEFIELD ADMINISTRATION</b>			
Remains in Gambrill Mill and in metal building on Gambrill tract	In rental space outside national battlefield boundaries	In Thomas House	Same as alternative 3
<b>MAINTENANCE</b>			
Remains in metal building on Gambrill tract	Moved to location outside national battlefield boundaries	Remains in metal building on Gambrill tract	Same as alternative 3

TABLE 2: COMPARISON OF ALTERNATIVES

Alternative 1 (No Action)	Alternative 2	Alternative 3	Alternative 4 (Preferred)
<b>BEST FARM</b>			
Historic structures preserved Brochure will interpret the site Open to the public with no new trails	First stop on transportation system Main house exterior rehabilitated and the interior stabilized Secondary house, stone barn, and corn crib preserved Main house and secondary house closed to visitors Interpretation by waysides	Main house first floor interior rehabilitated for exhibits Secondary house preserved and visitors allowed access to interior Stone barn and corncrib preserved Interpretation by waysides and exhibits	Main house exterior rehabilitated and the interior stabilized Secondary house preserved and visitors allowed access to interior Stone barn and corn crib preserved Interpretation by waysides
<b>RAILROAD JUNCTION</b>			
Not accessible to visitors Interpreted at visitor center	Visible from trail from visitor center (north of junction) and from accessible trail from Gambrill Mill with access over Bush Creek and railroad (south of junction) Railroad fenced to protect visitors Interpretation primarily by waysides	No access from visitor center Visible from Gambrill Mill trail, which would be extended to railroad crossing Vista cleared so visitors can see junction Interpretation at visitor center and by waysides	Same as alternative 3
<b>14TH NEW JERSEY MONUMENT</b>			
Monument and access would be unchanged	Entrance shifted south to improve sight distances NPS would work with Maryland State Highway Administration to reduce speed limit on MD 355 NPS and New Jersey would evaluate parking	Parking area and lane to monument west of MD 355 would be closed Access to monument would be available by trail under MD 355 railroad overpass NPS would work with Maryland to reduce speed limit on MD 355	Same as alternative 2
<b>Rt. 355 River Access</b>			
Unrestricted access No defined parking area	Construct formal parking area with gates Fix drainage issues	Remove existing informal parking area and landscape Parking at the Junction with a trail to the river for recreational access (fishing, canoeing)	Same as alternative 3

Table 2: Comparison of Alternatives

Alternative 1 (No Action)	Alternative 2	Alternative 3	Alternative 4 (Preferred)
<b>GAMBRILL MILL TRACT</b>			
Mill preserved, with classroom space on first floor, administrative offices on second floor Entrance road unchanged Interpretation mainly at visitor center	Mill preserved, with classroom space on first floor, seasonal housing on second floor Trail from mill extended to overlook railroad junction and Wallace's headquarters Interpretation mainly by waysides and exhibits	Mill preserved, with classroom space on first floor, NPS offices on second floor Interpretation mainly by waysides and exhibits	Mill preserved, with classroom space on first floor and NPS offices on second floor Trail from mill extended to overlook railroad junction and Wallace's headquarters Interpretation mainly at visitor center but some waysides
<b>TOLL HOUSE</b>			
Structure was moved to its current site from elsewhere and has no relationship to its current location. Structure would be made available to a historic preservation group that would agree to move it out of the national battlefield. Otherwise it would be razed No interpretation.			
<b>THOMAS FARM</b>			
Main house mothballed - Existing parking south of house unchanged Agricultural use unchanged Interpretation at visitor center	Main house leased out under NPS historic leasing program (with no public access) Exhibits would occupy stone tenant house Public restrooms in a nonhistoric structure Parking near Baker Valley Road Historic lane through farm improved for vehicle traffic Interpretation mainly in stone tenant house and through waysides	Main house used for administrative offices Exhibits would occupy stone tenant house Public restrooms in a nonhistoric structure Parking near Baker Valley Road Interpretation mainly in stone tenant house and through waysides	-Same as alternative 3
<b>COMMEMORATIVE AREA ALONG ARABY CHURCH ROAD</b>			
When tenant vacates in 2007, cinder block house removed and site landscaped No established policy on placement of monuments	When tenant vacates in 2007, cinder block house removed and site landscaped New monuments placed in designated zone along Araby Church Road Design guidelines for new monuments developed	When tenant vacates in 2007, cinder block house removed and site re-landscaped No new monuments placed anywhere in national battlefield	Same as alternative 2

TABLE 2: COMPARISON OF ALTERNATIVES

Alternative 1 (No Action)	Alternative 2	Alternative 3	Alternative 4 (Preferred)
<b>LEWIS FARM</b>			
House, barn, and corn crib preserved as part of cultural landscape No public access <i>Interpretation at visitor center</i>	Same as alternative 1	Footpath from Worthington parking lot House, barn, and corn crib preserved as part of cultural landscape <i>Interpretation mainly by wayside exhibits</i>	Same as alternative 1
<b>WORTHINGTON FARM</b>			
Parking at Baker Valley Road and near house No visitor access into house Interpretation at visitor center and by waysides	Entry lane from Baker Valley Road will be a one-way access No visitor access into house Interpretation at visitor center and by waysides	Entry lane from Baker Valley Road widened for two-way access First floor of house rehabilitated for exhibits Exhibits in house, and via wayside exhibits	Same as alternative 3
<b>BAKER FARM</b>			
Farm would remain in life estate	Same as alternative 1	Same as alternative 1	Same as alternative 1

TABLE 3: COMPARISON OF ENVIRONMENTAL CONSEQUENCES

Alternative 1 (No Action)	Alternative 2	Alternative 3	Alternative 4 (Preferred)
CULTURAL RESOURCES			
<i>Historic Buildings and Other Structures</i>			
<p>Stabilizing and preserving historic buildings would reduce loss of historic fabric over time — long-term beneficial effect</p> <p>No adverse effect on historic structures</p> <p>Resources and values not impaired</p>	<p>Stabilizing and preserving historic structures would reduce loss of historic fabric</p> <p>No adverse effect from rehabilitating structures for adaptive use — effects generally beneficial</p> <p>No adverse effect on historic structures</p> <p>Maintaining commemorative monuments would not be adverse</p> <p>Resources and values not impaired</p>	<p>Stabilizing and preserving historic structures would reduce deterioration — no adverse effect</p> <p>Modifying historic buildings for visitor access would retain integrity — no adverse effect</p> <p>Adaptively reusing Thomas House for administrative offices would necessitate work on utility systems, but no adverse effects on building</p> <p>Adaptively reusing Best and Worthington houses for interpretation might cause adverse effects, depending on level of intervention</p> <p>Retaining commemorative monuments would not be adverse</p> <p>Resources and values not impaired</p>	<p>Stabilizing and preserving historic structures would reduce deterioration — no adverse effects</p> <p>Removing nonhistoric buildings would not affect historic properties</p> <p>Adaptively reusing Thomas House for administrative offices would necessitate work on utility systems, but no adverse effects on building</p> <p>Adaptively reusing Best and Worthington houses and Gambrill Mill for interpretation or battlefield operations might cause adverse effects, depending on level of intervention</p> <p>Effects from alternative 4 generally beneficial</p> <p>Resources and values not impaired</p>

TABLE 3: COMPARISON OF ENVIRONMENTAL CONSEQUENCES

Alternative 1 (No Action)	Alternative 2	Alternative 3	Alternative 4 (Preferred)
<i>Cultural Landscapes</i>			
<p>Stabilizing buildings, maintaining roads, trails, and agricultural features generally beneficial</p> <p>Along with past, present, and reasonably foreseeable future actions, no adverse effect on cultural landscape</p> <p>Resources and values not impaired</p>	<p>Stabilizing and preserving buildings would ensure long-term presence on historic landscape</p> <p>Removing noncontributing structures would cause no adverse effect on cultural landscape</p> <p>Adding nonhistoric deck across I-270 would restore vegetative patterns and disguise modern highway, reestablishing viewshed — no adverse effect on cultural landscape, but deck would be a modern intrusion</p> <p>Adding trails and roads on existing alignments could visually affect cultural landscape</p> <p>Removing exotic plant species and revegetating historically vegetated areas would benefit overall cultural landscape — no adverse effect on vegetation patterns</p> <p>Along with past, present, and reasonably foreseeable future actions, no adverse effect on cultural landscape</p> <p>Resources and values not impaired</p>	<p>Stabilizing and preserving buildings would ensure long-term presence on historic landscape</p> <p>Removing noncontributing structures would cause no adverse effect on cultural landscape</p> <p>Removing exotic plant species and revegetating historically vegetated areas would benefit overall cultural landscape — no adverse effect on vegetation patterns</p> <p>Along with past, present, and reasonably foreseeable future actions, no adverse effect on cultural landscape</p> <p>Resources and values not impaired</p>	<p>Stabilizing and preserving buildings would ensure long-term presence on historic landscape</p> <p>Removing noncontributing structures would bring historic landscape closer to historic appearance — no adverse effect on cultural landscape</p> <p>Adding nonhistoric pedestrian deck over I-270 would be a modern intrusion, but no more so than I-270</p> <p>Removing exotic plant species and revegetating historically vegetated areas would benefit overall cultural landscape — no adverse effect on vegetation patterns</p> <p>Along with past, present, and reasonably foreseeable future actions, no adverse effect on cultural landscape</p> <p>Resources and values not impaired</p>

Table 3: Comparison of Environmental Consequences

Alternative 1 (No Action)	Alternative 2	Alternative 3	Alternative 4 (Preferred)
VISITOR USE AND EXPERIENCE			
<p>Moderate long-term beneficial effect on orientation from new visitor center</p> <p>No change in visitor circulation and access</p> <p>Negligible long-term beneficial effect on visitor safety</p> <p>Major long-term beneficial effect on interpretive opportunities and visitor experience resulting from new visitor center</p>	<p>Major long-term beneficial effect on interpretive opportunities and visitor experience from new visitor center</p> <p>Long-term minor beneficial effect on orientation from opening stone tenant house at Thomas Farm</p> <p>Major long-term beneficial effects on circulation from deck across I-270 and improved entrance to 14th New Jersey Monument</p> <p>Moderate long-term beneficial effects on safety from improved entrance to 14th New Jersey Monument, deck across I-270, and new trail crossing under railroad to see railroad junction</p> <p>Long-term major beneficial effect on interpretive opportunities from new trail to Wallace's headquarters, deck over I-270 (unobstructed view of battlefield between Worthington and Thomas farms), and exhibits in Thomas Farm stone tenant house</p> <p>Long-term major beneficial effect on visitors' ability to experience resources from new trails</p> <p>Transportation system would give long-term major beneficial effects on access and circulation from not worrying about driving</p> <p>Moderate overall long-term beneficial effect on visitor experience from new trails, more exhibits in stone house, and visitor access to battlefield</p>	<p>Moderate long-term beneficial effect on orientation from new visitor center</p> <p>Unchanged circulation and access</p> <p>Long-term minor beneficial effect on orientation from opening stone tenant house at Thomas Farm</p> <p>Major long-term beneficial effect on interpretation and visitor experience from new visitor center</p> <p>Negligible long-term beneficial effect on visitor safety</p> <p>Major long-term beneficial effect on interpretive opportunities from opening historic structures to visitors at Best and Worthington farms</p>	<p>Moderate long-term beneficial effect on orientation from new visitor center</p> <p>Long-term minor beneficial effect on orientation from opening stone tenant house at Thomas Farm</p> <p>Major long-term beneficial effect on interpretation and visitor experience from new visitor center</p> <p>Long-term moderate beneficial effect on visitor access and circulation resulting from pedestrian deck over I-270</p> <p>Interpretive opportunities somewhat less than in alternative 3 because only Worthington House and several Best Farm outbuildings open to visitors</p> <p>Moderate long-term beneficial effect from more interpretive opportunities available from added trails on Thomas Farm and to Wallace's headquarters, and Union entrenchments</p>

TABLE 3: COMPARISON OF ENVIRONMENTAL CONSEQUENCES

Alternative 1 (No Action)	Alternative 2	Alternative 3	Alternative 4 (Preferred)
<b>SOCIOECONOMIC ENVIRONMENT</b>			
Direct and indirect long-term negligible beneficial effects on socioeconomic environment.	Direct and indirect long-term negligible beneficial effects on socioeconomic environment	Direct and indirect long-term negligible beneficial effects on socioeconomic environment	Direct and indirect long-term negligible beneficial effects on socioeconomic environment
<b>ACCESS AND CIRCULATION</b>			
Long-term minor adverse effects on MD 355 and long-term moderate adverse effect on Araby Church and Baker Valley road networks from more traffic Resources and values not impaired	Long-term minor adverse effects on MD 355 Long-term moderate adverse effects on Araby Church and Baker Valley road networks from more traffic caused by more visitors Moderate long-term beneficial effects on pedestrian and car access from circulation improvements in battlefield Resources and values not impaired	Same as alternative 2	Same as alternative 2
<b>OPERATIONS AND FACILITIES</b>			
The no-action alternative would result in a long-term minor beneficial effect on national battlefield operations.	Long-term major beneficial effect on national battlefield operations compared with effects of no-action alternative	Long-term major beneficial effect on national battlefield's operations compared with effects of no-action alternative	Long-term major beneficial effect on national battlefield's operations compared with effects of no-action alternative



## COST COMPARISON

The following applies to costs presented throughout this general management plan:

- The costs are presented as estimates and allow for flexibility in application of components.
- These costs are not appropriate for budgeting purposes.
- The costs presented have been developed using industry standards to the extent available.
- Actual costs will be determined at a later date, considering the design of facilities, identification of detailed resource protection needs and changing visitor expectations.
- Approval of the general management plan does not guarantee that funding or staffing for proposed actions will be available.
- Full implementation of the general management plan may be many years in the future.
- All estimates are in 2007 dollars and are rounded to the nearest \$100,000.

**TABLE 4: COMPARISON OF ESTIMATED COSTS FOR IMPLEMENTING THE ALTERNATIVES**

	Alternative 1	Alternative 2	Alternative 3	Alternative 4 (Preferred Alternative)
<b>Annual Operating Costs (ONPS)<sup>(1)</sup></b>	\$1,600,000	\$2,000,000	\$2,200,000	\$2,200,000
<b>Staffing - FTE<sup>(2)</sup></b>	16	20	22	22
<b>Deferred Maintenance<sup>(3)</sup></b>	\$5,700,000	\$5,400,000	\$2,000,000	\$3,100,000
<b>Total One Time Costs</b>	\$100,000	\$2,000,000	\$6,000,000	\$4,600,000
Facility and non-facility cost	\$0	\$1,700,000	\$5,700,000	\$4,300,000
Removal of buildings	\$100,000	\$100,000	\$100,000	\$100,000
Other <sup>(4)</sup>	0	\$200,000	\$200,000	\$200,000
<b>I-270 Deck</b>	none	\$11,400,000 <sup>(5)</sup>	none	\$4,600,000– \$6,800,000 <sup>(5)</sup>

(1) Annual operating costs are the total annual costs for maintenance and operations associated with each alternative, including: maintenance, utilities, supplies, staff salaries and benefits, leasing, and other materials.

(2) Total full-time equivalents (FTEs) are the number of staff required to maintain the assets of the national battlefield at a good level and provide acceptable visitor services, protection of resources, and other operational support. Managers would explore opportunities to work with partners, volunteers, and other federal agencies to effectively and efficiently manage the national battlefield. FTE salaries and benefits are included in the annual operating costs. The staffing numbers include the conversion of subject to furlough employees and temporary employees to full time equivalents, to facilitate comparison among the alternatives.

(3) Deferred maintenance costs are those needed to improve park assets to a "good" condition based on NPS standards and calculating tools. Deferred maintenance costs vary by alternative because specific building treatments proposed may exceed a "good" condition or may no longer qualify as maintenance. These, then, are represented in the one-time cost category.

(4) Other costs include resource studies or inventories and archeological research.

(5) Construction of a deck over I-270 for automobile use (alternative 2) or pedestrian-only use (alternative 4) would occur only if it could be accomplished as part of the impact mitigation resulting from the widening of I-270, currently being proposed under a *Draft Environmental Impact Statement* by the Maryland State Highway Administration and the Federal Highway Administration. No cost would accrue to the National Park Service.

Both bridges would be approximately 200 feet in length. The highway bridge would be wedge-shaped: 200 feet wide on the Worthington side, and 400 feet wide on the Thomas Farm side. The pedestrian bridge would be either 100 feet wide or wedge shaped: 100 feet wide on the Worthington side, 200 feet wide on the Thomas side.

Estimates were developed by the NPS Denver Service Center Design Branch based on similar highway construction projects.