

National Park Service
US Department of the Interior

Pea Ridge National Military Park
Garfield, Arkansas



Pea Ridge National Military Park Trail Master Plan / Environmental Assessment

November 2017



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PROJECT SUMMARY

The National Park Service (NPS) proposes to implement a Trail Master Plan (Trail Plan) for Pea Ridge National Military Park (henceforth “the park”) in Garfield, Arkansas. The NPS seeks to improve visitor access to the park’s historical and interpretive sites while avoiding or minimizing impacts to these sites by consolidating and restructuring the existing trail network. The overall purpose of the Trail Plan is to: 1) improve multi-modal connections within the park; 2) make external connections for the regional trail network; 3) develop procedures and priorities for the proposed changes to the current trail network; 4) improve accessibility within the park; 5) reduce the need for trail maintenance; and 6) enhance interpretation opportunities throughout the park. This environmental assessment (EA) describes two action alternatives and the no-action alternative; it also analyzes the environmental consequences of implementing each alternative.

Under the no-action alternative, the NPS would maintain the current conditions at the park. Alternative 2 would be an enhanced trail network focused on interpretation. Under alternative 2, the NPS would implement a series of improvements to the existing trail network that would provide for expanded and enhanced opportunities for interpretation of the park’s resources. Alternative 3 (NPS Preferred and Proposed Action) would be an enhanced trail network focused on interpretation with expanded opportunities for recreation. Alternative 3 would have many of the same elements as alternative 2 and include additional hiking trails and adding a paved shoulder to the tour road in sections with narrow curves and steeper uphill and downhill grades to enhance bicycle safety.

This document has been prepared in accordance with the National Environmental Policy Act of 1969 (NEPA); regulations of the Council on Environmental Quality (CEQ) (40 CFR 1500-1508); NPS *Director’s Order #12: Conservation Planning, Environmental Impact Analysis, and Decision-Making* (NPS 2001); and the NPS NEPA Handbook (NPS 2015). The NPS is also separately and concurrently preparing an assessment of effect to comply with the requirements of Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended (54 USC 306108), and its implementing regulations (36 CFR 800).

NOTE TO REVIEWERS AND RESPONDENTS

Comments on this EA may be submitted electronically at the NPS Planning, Environment and Public Comment (PEPC) website (<http://parkplanning.nps.gov/peri>) or you may mail written comments by December 22, 2017 to the address listed below. Before including personal identifying information in your comment, you should be aware that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Attn: Superintendent
Pea Ridge National Military Park
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Garfield, AR 72732

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CHAPTER 1: PURPOSE AND NEED

INTRODUCTION

Pea Ridge National Park (henceforth “the park”), established in 1956 and opened to the public in 1963, preserves and commemorates the site of the March 1862 Civil War battle that helped Union forces maintain physical and political control of the State of Missouri. Administered by the NPS, the 4,300-acre battlefield is situated in the foothills of the Ozark Mountains 10 miles north of Rogers, Arkansas, just off of US Highway 62 (**Figure 1**). The park is divided into two sections: the main portion of the park is located north of US Highway 62 and encompasses a majority of the historic battleground. The main portion consists of a dedicated series of soft surface trails for equestrians and pedestrians, as well as the tour road, which bicyclists share with vehicle users. The second, smaller portion is located to the south of US Highway 62 along the bluffs of Little Sugar Creek and contains the Federal Trenches of the Union troops. This non-contiguous section is currently accessible from a small parking lot along Sugar Creek Road, which intersects with US Highway 62, with an eroded trail leading to the trenches.

The park contains a portion of the northern route of the Trail of Tears, including campsites along the trail at Elkhorn Tavern and Ruddick’s Field. This segment is one of the few places the Trail of Tears passes through Arkansas. Eleven Cherokee Removal contingents used this route in 1837 and 1839. Through the park, the Trail of Tears generally followed the route of Telegraph Road, which is eligible for the National Register of Historic Places.

The National Park Service (NPS) is proposing to implement a Trail Master Plan (Trail Plan) for the park. The NPS seeks to improve visitor access to the park’s historical and interpretive sites while avoiding or minimizing impacts to these sites by consolidating and restructuring the existing trail network. Furthermore, the NPS seeks to improve multi-modal trail connections within the park while linking to a regional trail network outside of the park.

This environmental assessment (EA) describes three alternatives for the proposed Trail Plan, including two action alternatives and the no-action alternative and analyzes the environmental consequences of implementing the alternatives. This EA has been prepared in accordance with the National Environmental Policy Act of 1969 (NEPA); regulations of the Council on Environmental Quality (CEQ) (40 CFR 1500-1508); NPS *Director’s Order #12: Conservation Planning, Environmental Impact Analysis, and Decision-Making* (NPS 2001); and the NPS NEPA Handbook (NPS 2015). The NPS is also separately and concurrently preparing an assessment of effect to comply with the requirements of Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended (54 USC 306108), and its implementing regulations (36 CFR 800).

PURPOSE OF AND NEED FOR ACTION

The purpose of the Trail Plan is to: 1) improve multi-modal connections within the park; 2) make external connections for the regional trail network; 3) develop procedures and priorities for the proposed changes to the current trail network; 4) improve accessibility within the park; 5) reduce the need for trail maintenance; and 6) enhance interpretation opportunities throughout the park.

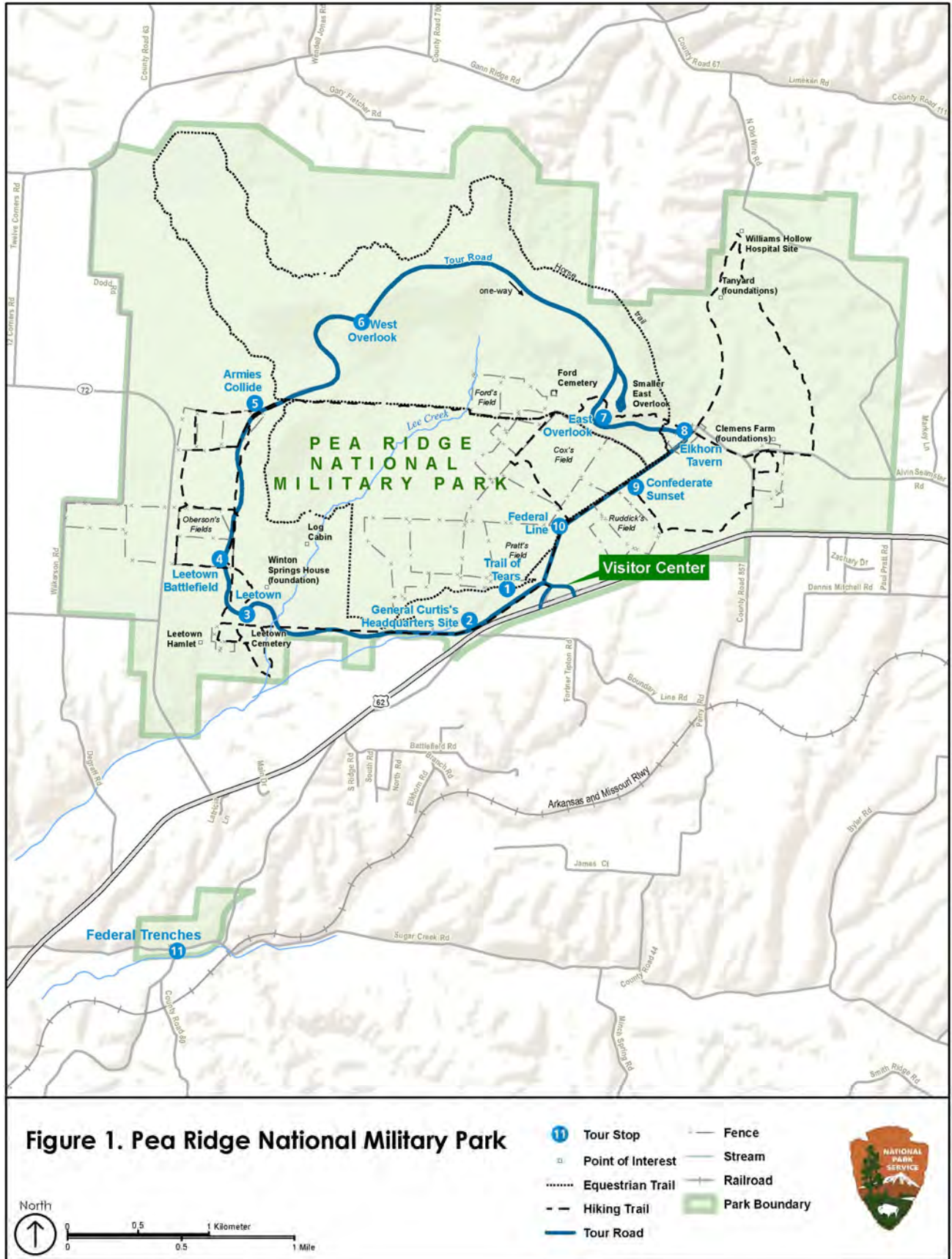
The proposed Trail Plan is needed in order to address the following issues:

- Resource Degradation. Many equestrian and hiking trails are experiencing extensive damage from erosion. These issues should be addressed to sustain a trail network that protects and enhances cultural and natural resources within the park and provides for an enjoyable visitor experience.
- Interpretive Opportunities for Multi-Modal Users. Most of the existing transportation infrastructure at the park was designed to accommodate automobiles; therefore, pedestrian and bicycling visitors must use a shared roadway with vehicles and wayfinding between interpreted sites is limited.
- Regional Growth. Local and regional changes, including the relocation of United States (US) Highway 62 and the *Northwest Arkansas Regional Bicycle and Pedestrian Master Plan (2015)*, have created opportunities for increased visitation and changes to how people can access the park.
- Operational Efficiency. The park has limited resources for park maintenance of the trail network. Where feasible, there is an opportunity to combine trails or locate trails adjacent to other types of facilities (e.g., water, restrooms, phones) to maximize park maintenance efficiency. By removing duplicative trails and related facilities, the park can reduce overall maintenance needs.

PROJECT OBJECTIVES

Objectives are more specific statements of purpose that provide additional bases for comparing the effectiveness of alternatives in achieving the desired outcomes of the action (NPS 2015). All alternatives carried forward for detailed analysis must meet all objectives to a large degree and must resolve the purpose of and need for action. The following objectives were identified by the planning team for this project:

- Develop a trail network that enhances visitor experience and safety, incorporates internal wayfinding, and improves interpretation opportunities while protecting the natural and cultural landscapes.
- Improve connections between trails within the park, accommodate different trail users, and reduce maintenance by using established historic road beds that have suitable soil compaction and minimizing the park's infrastructure.
- Determine feasible options for connecting the park with the regional trail network identified in the *Northwest Arkansas Regional Bicycle and Pedestrian Master Plan (2015)*.
- Provide expanded interpretative opportunities for people with disabilities by enhancing accessibility.



PLANNING ISSUES AND CONCERNS IDENTIFIED DURING SCOPING

The NPS, participating agencies and stakeholders, and members of the public identified specific issues and concerns during scoping. Some of these issues and concerns were considered by the NPS, but were ultimately dismissed from detailed analysis because they were determined not central to the proposal or of critical importance. Other issues and concerns were retained for detailed analysis and are included in the impact topics that are discussed in the *Affected Environment and Environmental Consequences* chapter of the EA. Four impact topics dealing with these issues were retained for analysis: Water Resources, Vegetation, Cultural Resources, and Visitor Use and Experience.

Planning Issues and Concerns Retained for Detailed Analysis

Stream Impacts. Overall, the Trail Plan would correct areas of erosion caused by trail use and runoff; however, the introduction of new trails or changes in trail alignments or surface could result in erosion, increased runoff, and sedimentation that may contribute to degraded water quality of nearby streams. Select trail maintenance or renovation locations and rehabilitation of the culvert on Ford Road would have the potential to slightly change the physical characteristics of streams within the park. These actions are excepted actions in accordance with the DO-77-1 Wetland Protection Handbook under *1.0 scenic overlooks and foot/bike trails or boardwalks* and *7.0 maintenance, repair, and renovation of current serviceable facilities or structures*. This issue is evaluated in the *Water Resources* section.

Vegetation Removal. Trail construction may require selective tree removal within upland forest areas, removal of herbaceous vegetation within meadows, and removal of riparian vegetation, which could result in disturbances to wildlife and habitat. This issue is evaluated in the *Vegetation Including Rare, Threatened, and Endangered Species* section and is also addressed in the *Pea Ridge National Military Park Vegetative Management Plan and Environmental Assessment* (NPS 2014b).

Invasive Species Introduction. The construction of new trails and trail improvements through natural areas, primarily forest tracts, may result in the introduction of invasive species along newly created edge habitats. This issue is evaluated in the *Vegetation Including Rare, Threatened, and Endangered Species* section.

Archeological Resources Impacts. Portions of several proposed trails and/or trailheads are located near known archeological sites. Ground disturbance from grading and other site preparations during trail and/or trailhead construction may uncover currently unknown archeological resources. This issue is evaluated in the *Archeological Resources* section.

Bicycle Use. The change in designation of bike routes and managing bicycle use within a national park system unit has the potential to impact park resources, and the proposed action should be consistent with the NPS Bicycle Rule found in 36 CFR 4.30. Although most of the trails would not change the designation of trail use for bicyclists, there are small segments of the trails that qualify for review under the NPS Bicycle Rule (36 CFR 4.30). Impacts are described in the *Affected Environment and Environmental Consequences* chapter, where applicable.

Planning Issues and Concerns Dismissed from Further Analysis

Special Concern Species Impacts. Trail construction could result in disturbances to vegetation or streams that potentially serve as habitat to support federal- and state-listed plant species.

Rationale for dismissal: Consultation under Section 7 of the Endangered Species Act of 1973 (ESA) was initiated with the USFWS in 2016. Based on the consultation, there is a “may affect, not likely to adversely affect” determination for eight threatened or endangered species due to the potential need for tree clearing (USFWS 2017). These species include: gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), northern long-eared bat (*Corynorhinus townsendii*), Ozark big-eared bat (*Corynorhinus townsendii*), piping plover (*Charadrius melodus*), Ozark cavefish (*Amblyopsis rosae*), cave crayfish (*Cambarus aculabrum*), and Neosho mucket (*Lampsilis rafinesquenana*). USFWS also stated that there would be no direct or indirect effects to the rabbitsfoot (*Quadrula cylindrica cylindrica*) because this species does not occur in the project area.

Floodplain Impacts. The introduction of new trails and changes to stream crossings could impact floodplains. Proposed asphalt and other hard-packed trail surfaces could add impervious surface area that may reduce the infiltration potential of the floodplain of several streams. The installation of small- to medium-sized culverts for stream crossings to accommodate new trails could act as obstructions to the flow of floodwaters, potentially increasing upstream flooding.

Rationale for dismissal: There are no regulated 100-year floodplains that occur in the core study area for the trail network. The 100-year floodplain does transect the national park system property near the Federal Trenches; however, there would be negligible impacts to floodplain storage or values because the proposed improvements lie outside the floodplain.

Wetlands Alteration. Select trails may be constructed near wetlands, potentially resulting in impacts to wetlands and associated wildlife habitat.

Rationale for dismissal: The total impact to wetlands is anticipated to be minor (less than 0.1 acres). The NPS would seek appropriate Clean Water Act Section 404 permits, as necessary, during the design phase when more design detail is available. However, at less than 0.1 acre for pedestrian/bicycle trails, these impacts are expected to be small enough to be excepted from a Statement of Findings under the NPS Procedural Manual 77-1.

Cultural Landscapes and Historic Structures Impacts. The construction of trails, trailheads¹, and associated facilities could result in effects to historic structures and could add new elements within cultural landscapes of the park.

¹ A trailhead is defined as a central hub for where a grouping of trails converges and/or where ranger-led tours begin. New trailheads in the park may include amenities such as parking areas, bicycle racks, trail signage, seating, restroom facilities, and hitching posts.

Rationale for dismissal. The proposed elements are small in scale and would not noticeably change the landscape of the Park. Based on the findings of an assessment of effect and consultation with the Arkansas Historic Preservation Program, the proposed action would have no adverse effect to historic structures or cultural landscapes.

Trust Land Impacts. The proposed action could impact lands held in trust by the Secretary of the Interior for the benefit of Indians.

Rationale for dismissal: No lands held in trust for the benefit of Indians are located in the vicinity of the park.

Environmental Justice Considerations. The proposed action could disproportionately impact minority or low-income populations.

Rationale for dismissal: Equal consideration was given to all public input from persons regardless of age, race, income status, or other socioeconomic or demographic factors; the proposed action would not result in any identifiable adverse human health effects; the proposed action would not disproportionately affect any minority or low-income population or community; and the proposed action would not result in any identified effects that would be specific to any minority or low-income community.

OTHER RELEVANT PLANNING DOCUMENTS

Several other planning documents exist to guide and inform the Trail Plan/EA. These plans and reports provide information relating to the park's landscape, historical importance, and future plans and developments. The most relevant plans to this Trail Plan/EA include:

- *Pea Ridge National Military Park Trail Master Plan, Phase I Planning Process, Alternatives, and Program Elements* (NPS 2017);
- *Pea Ridge National Military Park General Management Plan and Environmental Impact Statement* (NPS 2006a);
- *Pea Ridge National Military Park Foundation Document* (NPS 2016);
- *Pea Ridge National Military Park Cultural Landscape Report and Environmental Assessment* (NPS 2014a);
- *Pea Ridge National Military Park Vegetative Management Plan and Environmental Assessment* (NPS 2014b);
- *Pea Ridge National Military Park Long-Range Interpretive Plan* (NPS 2011); and
- *Pea Ridge National Military Park Mitigations for Expansion of Highway 62 Environmental Assessment & Assessment of Effect* (NPS 2014c).

CHAPTER 2: ALTERNATIVES

This EA analyzes a no-action alternative and two action alternatives for the Trail Plan. The elements of these alternatives are described in detail in this section. Impacts associated with the actions proposed under each alternative are outlined in the *Affected Environment and Environmental Consequences* chapter of this EA. In addition, several trail options and concepts were dismissed from further consideration, which are described in this chapter under the *Trail Alignments Considered But Dismissed* section.

ELEMENTS COMMON TO ALL ALTERNATIVES

The park has a number of other projects ongoing that influenced the development of alternatives and are treated as an existing condition to the Trail Plan. Each alternative considered the planned mitigation efforts from the relocation of US Highway 62, which would be implemented and constructed in the near future. These plans, which are currently in design, also are considered an existing condition for the purpose of the Trail Plan. The key mitigation activities from the US Highway 62 Mitigation Project that influence the program alternatives include:

- Improvements at Elkhorn Tavern – Conversion of the tour road to a two-way road between the visitor center and Elkhorn Tavern, a new parking and trailhead location, and a trail expansion consistent with the requirements of the Architectural Barriers Act of 1968 (ABA)² *Accessibility Guidelines for Outdoor Developed Areas* (2014);
- A new equestrian trailhead located off the new US Highway 62 entrance into the park; and
- A redesign of the entrance road and parking area around the visitor center which includes pedestrian and bicyclist trail elements.

The removal of the Boy Scout bridge over Lee Creek and relocation of the associated trail, which is currently in progress, is also considered as an existing condition to the Trail Plan/EA. This action would remove the wooden bridge and eliminate a stream crossing on this segment of the trail which is proposed for abandonment. Presently, this trail has been closed due to the condition of the bridge. This portion of the trail would be routed across the roadway bridge over Lee Creek and have no direct impacts to the stream.

ALTERNATIVE 1: NO-ACTION

Under alternative 1, the no-action alternative, the NPS would maintain the current conditions at the park, including the US Highway 62 Mitigation Project improvements that would be implemented in the near future. Additionally, improved wayside interpretive signage would still be implemented for the Federal Trenches. The NPS would continue to conduct maintenance to resolve drainage problems at

² These guidelines ensure that facilities, such trails, picnic and camping facilities, and viewing areas, are readily accessible to and usable by people with disabilities (39 CFR 1191).

certain low lying areas of the park. The equestrian trail along the northeast portion of the park would continue to close during rain events. The park wayfinding and circulation needs would not be addressed fully. The park would still have very limited ABA-accessible trails to many of the key interpretive areas. Trailheads and connections to the regional trail system would not be accommodated. No other improvements are proposed, including the improvements or additions of any trailheads. The existing trail network for alternative 1 is presented in **Figure 2**.

The existing trail system (including the Federal Trenches trail) consists of a total of 32 miles of trail, including 7.6 miles of asphalt trail, 13.9 miles of off-road hiking trail, and 10.8 miles of horse trail.

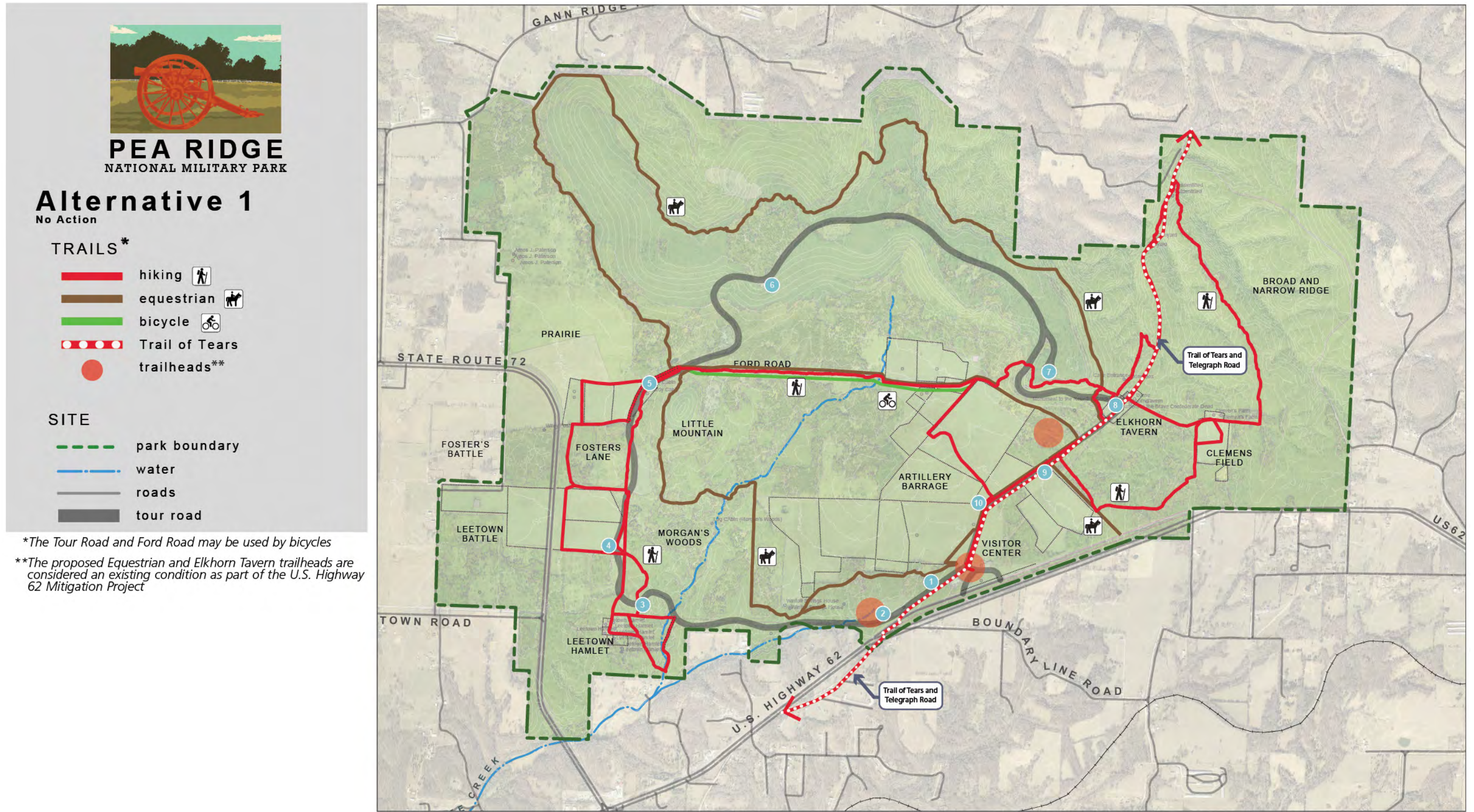


Figure 2. Alternative 1 (No-action): Existing Trail Network

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ALTERNATIVE 2: ENHANCED TRAIL NETWORK FOCUSED ON INTERPRETATION

Alternative 2 provides for an enhanced trail network, including expanded and enhanced opportunities for pedestrian trail interpretation, construction of additional trailheads, modification of trail loops for simplicity and interpretive value, construction of additional ABA-accessible trails, installation of signage for the Trail of Tears, improvements to multi-use trails, installation of bicycle racks, and improvements to equestrian trails to avoid erosion prone areas. The enhanced trail network for alternative 2 is presented in **Figure 3**. Typical trail section guidelines for each user group described are presented in **Figure 4**. Trails built in accordance with ABA guidelines, as shown in **Figure 4**, require additional surface disturbance and trail materials as compared with off-road hiking trails, which may result in a higher level of impacts to the environment.

This alternative provides expanded and enhanced opportunities for pedestrian trail interpretation throughout the park. Unnecessary trails would be removed and trail access would be provided along existing historic roads and trails, increasing the interpretive opportunities within the park. **Figure 5** depicts the unnecessary and/or duplicative trails to be removed as a part of alternative 2. New trail segments would establish trail connections between significant locations within the park and would follow historic trails and fence lines where possible.

This alternative also proposes two additional trailhead locations within the park intended to serve either pedestrians, bicyclists, or equestrians. The visitor center currently serves as a trailhead but has no clear signage or logical trail termini. The planned US Highway 62 Mitigation Project would further enhance the visitor center area to include bicycle racks, a bicycle lane, and reconfiguration of the parking lot; however, there is a need to create clear trails to and from the visitor center.

A second trailhead is proposed at the West Overlook. Due to the rise in topography, many bicyclists dismount and walk their bicycles up the hill to stop at the overlook, and the area is a natural respite zone for bicyclists and pedestrians. The proposed trailhead would include an ABA-accessible expanded interpretive area with bicycle racks.

As part of alternative 2, the following hiking trails would be modified for simplicity and interpretive value:

- Leetown Hamlet – The trails would be clearly defined and simplified. A defined loop using Leetown Road would take users to Leetown Battlefield. The bridge near Leetown Hamlet would be removed.
- Leetown Battlefield – Leetown Road would connect to Foster’s Lane and Leetown Hamlet.
- Morgan’s Woods – A proposed trail would provide a loop trail connecting Leetown Hamlet, Leetown Road, Leetown Battlefield, and Foster’s Lane.
- Foster’s Battlefield and Lane – This interpretive path would also include a spur that takes people west of Arkansas Highway 72 toward Foster’s Battlefield.
- Ford Road – This trail would continue to provide east-west access past the orchard, cemetery, and several fields.
- Ford Road to East Overlook – The trail segment from Ford Road to the East Overlook would be removed due to flooding and erosion problems.

- Artillery Barrage – A loop would take a visitor to Welfley’s Knoll and an interior view of the battlefield.
- Elkhorn Tavern and Clemens Farm – In addition to the US Highway 62 Mitigation Project improvements at Elkhorn Tavern, a loop trail is proposed connecting the tavern to Clemens Farm. A portion of this trail would be on the historic Huntsville Road. This trail also connects back to the visitor center using the historic South Road.
- Broad and Narrow Ridge – This loop trail would extend along Old Wire Road north to the tanyard and hospital site. The loop trail would also connect to Clemens’ field.

The following ABA-accessible trails are also proposed for this alternative (**Figures 3 and 6**):

- Leetown Hamlet – An ABA-accessible trail is proposed at Leetown Hamlet. This trail may be constructed of concrete that can be colored to minimize impact, compacted stone dust, or bituminous pavement. The trail would lead from the parking lot to an enhanced interpretive area with signage. This experience may be enhanced if the historic building footprints of Leetown are highlighted.
- West Overlook – ABA-accessible parking and interpretive elements would be included with the proposed construction of the West Overlook.
- East Overlook – The existing asphalt path is proposed to be replaced with a colored concrete path.

Additional signage would be installed along the Trail of Tears under alternative 2. The Trail of Tears would be clearly delineated running along Telegraph Road at the northern end of the park past Elkhorn Tavern, where the trail then travels southwest until it exits the park. Signage would be installed periodically along the trail so that the trail is clearly marked. Signage would include a post-in-ground sign with the Trail of Tears logo. Where the Trail of Tears follows the tour road, the signs would be located adjacent to the road, and would be designed to minimize visual intrusion in the landscape.

A multi-use (i.e., non-motorized uses including bicyclists and pedestrians) trail option that conforms with the park’s general management plan (GMP) is proposed along the western boundary of the park, continuing to provide access to both the park and the regional trail system. This trail connects Arkansas Highway 72 to the north then heads south uses existing roads on the boundary of the park. The trail then follows Lee Road to enter the park where the GMP identifies the location of the future visitor center. This multi-use trail would provide interpretive opportunities for the restored prairie, Foster’s Field, and Leetown Battlefield. This alternative would direct all traffic on multi-use trails to enter in one location at the future new main entrance to the park.

Additionally, Ford Road would continue to be used as an east-west path for equestrians, hikers, and bicyclists. Rehabilitation of the existing culverts are planned on the western side of Ford Road to allow for better drainage and intermittent stream flow. The eastern and western ends of Ford Road would be resurfaced with compacted earth with a stone base to allow for better drainage and avoid dips in the road. Bicyclists would continue to use the tour road, Ford Road, or the multi-use trail. Other planned improvements include the installation of bicycle racks at some tour road stops.

The equestrian trails would be rerouted to avoid erosion-prone locations, which would limit disturbance in environmentally sensitive areas. Specifically, a northwest trail segment would be removed due to

flooding and erosion problems. The equestrian trails would also be removed from the Elkhorn Tavern area to avoid damaging the historic resources while also minimizing potential conflicts between equestrians and other users. Two equestrian trail loops are designed in a 'figure-8' to allow equestrian riders a shorter and a longer trail option for touring the park.

Federal Trenches

Due to the isolated nature of the Federal Trenches, the proposed changes to this portion of the park are common to all action alternatives. Currently, the Federal Trenches are accessible from a small parking area along Sugar Creek Road with a steep, asphalt path to the top of the trenches. The steep topography of the area has caused severe erosion and deterioration, creating challenging conditions for trail users. To address this concern, a reconstructed hiking path is proposed for the Federal Trenches. For the portion of the path with the steepest slopes, a series of stairs and boardwalks would be constructed on top of the existing paths, improving drainage and access. This structure is estimated to be less than 150 feet long, and would remain less than 5 feet above the ground. In addition to improved access to the trenches, the design would reduce staff maintenance requirements in this area of the park. The structure may be composed of various materials, including steel grate, pressure treated wood, or a wood substitute such as permatrak. No improvements to the parking lot or access to the trail are proposed under this plan.

Although not part of the implementation of this plan, it should be noted that if land acquisition became feasible, the park's future plans include a new parking area on the north side of the trenches for better access to the trenches. The parking lot would be accessible from US Highway 62 and would include a visible entrance sign into the site. In addition, an expanded trail network would include a new hiking loop around the Federal Trenches and additional interpretive signs. This long-term plan cannot be implemented at this time as the NPS does not own the property providing the needed access. Possible land acquisition is identified as a desirable condition to protect park resources as outlined in the GMP (NPS 2006a).

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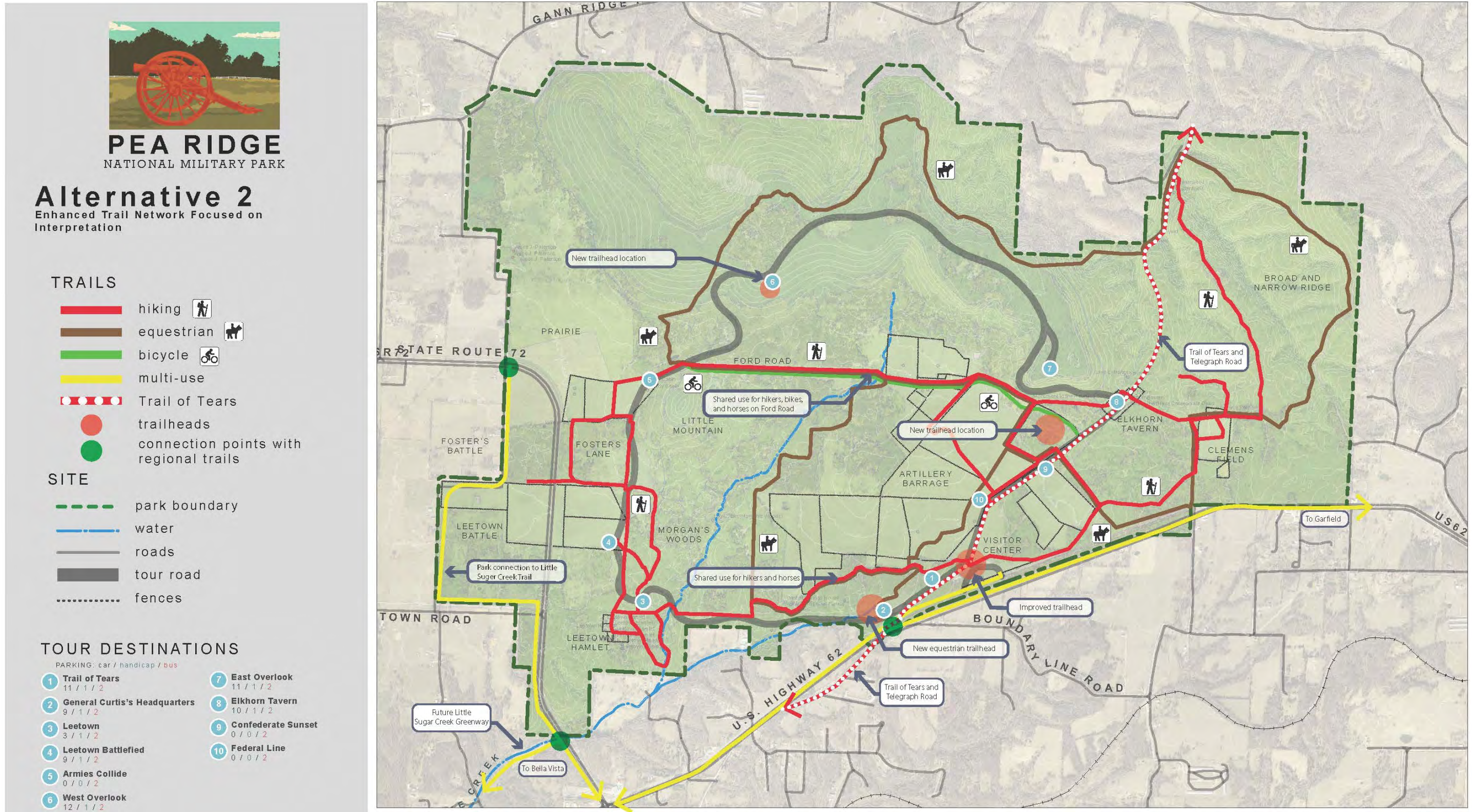
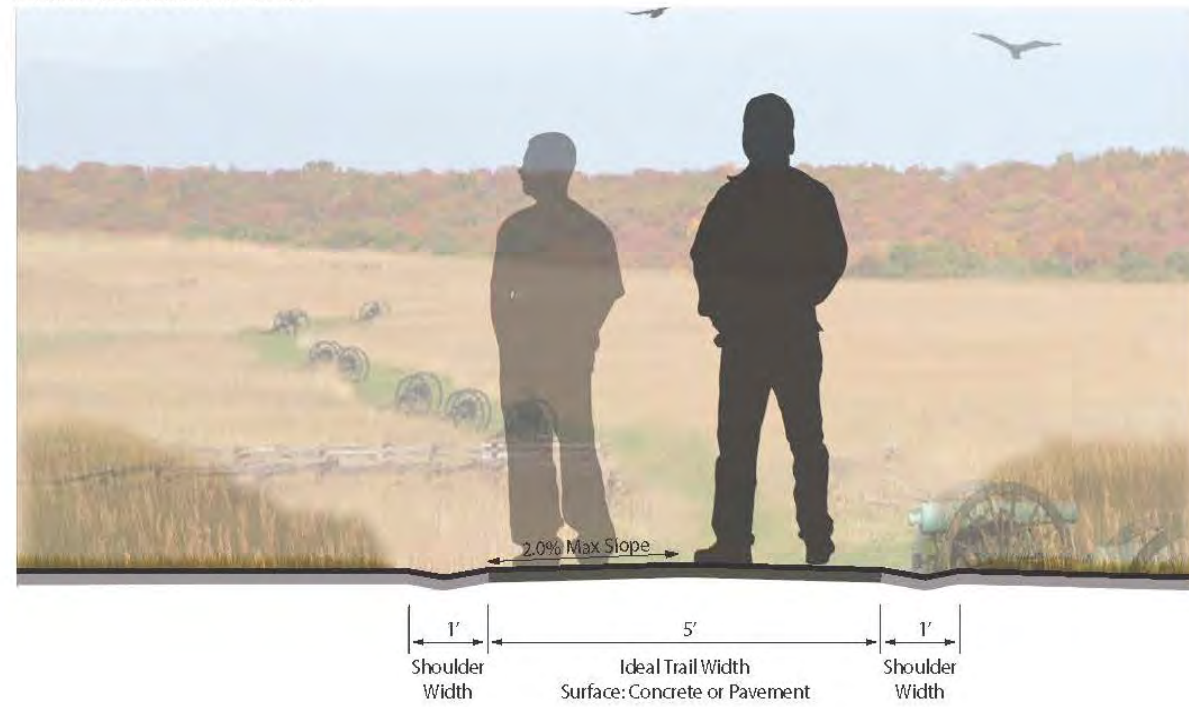
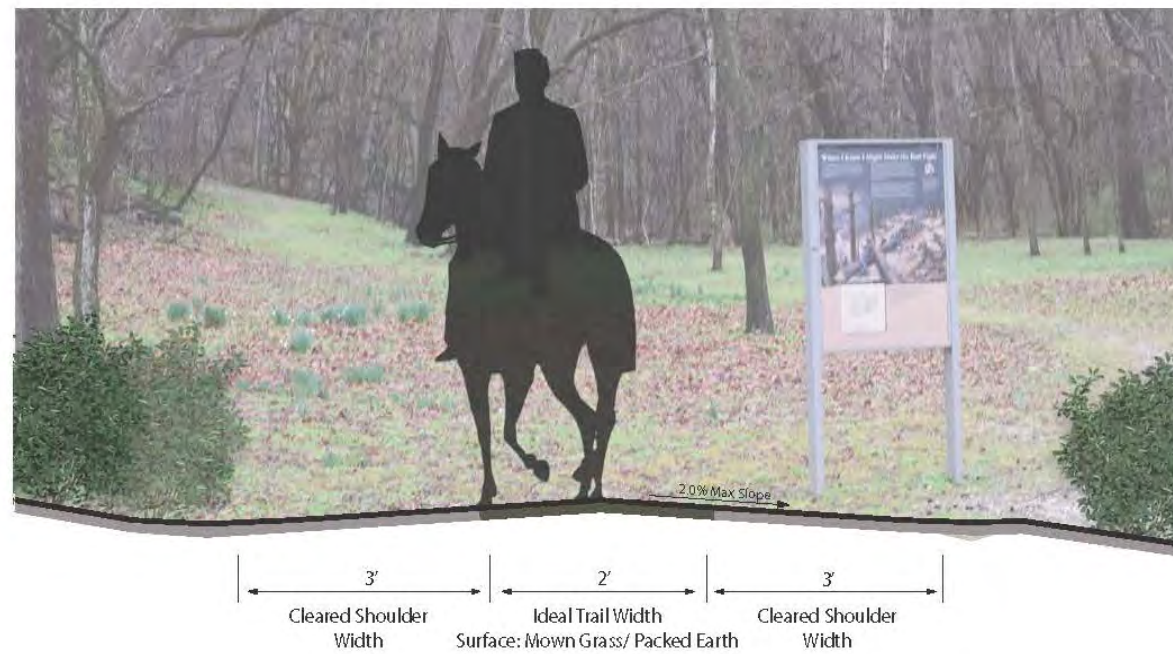


Figure 3. Alternative 2 Trail Network

ABA accessible trail



Off-road hiking trail



Equestrian trail



Tour road with bicycle shoulder

Figure 4. Typical Trail Section Guidelines for Each User Group

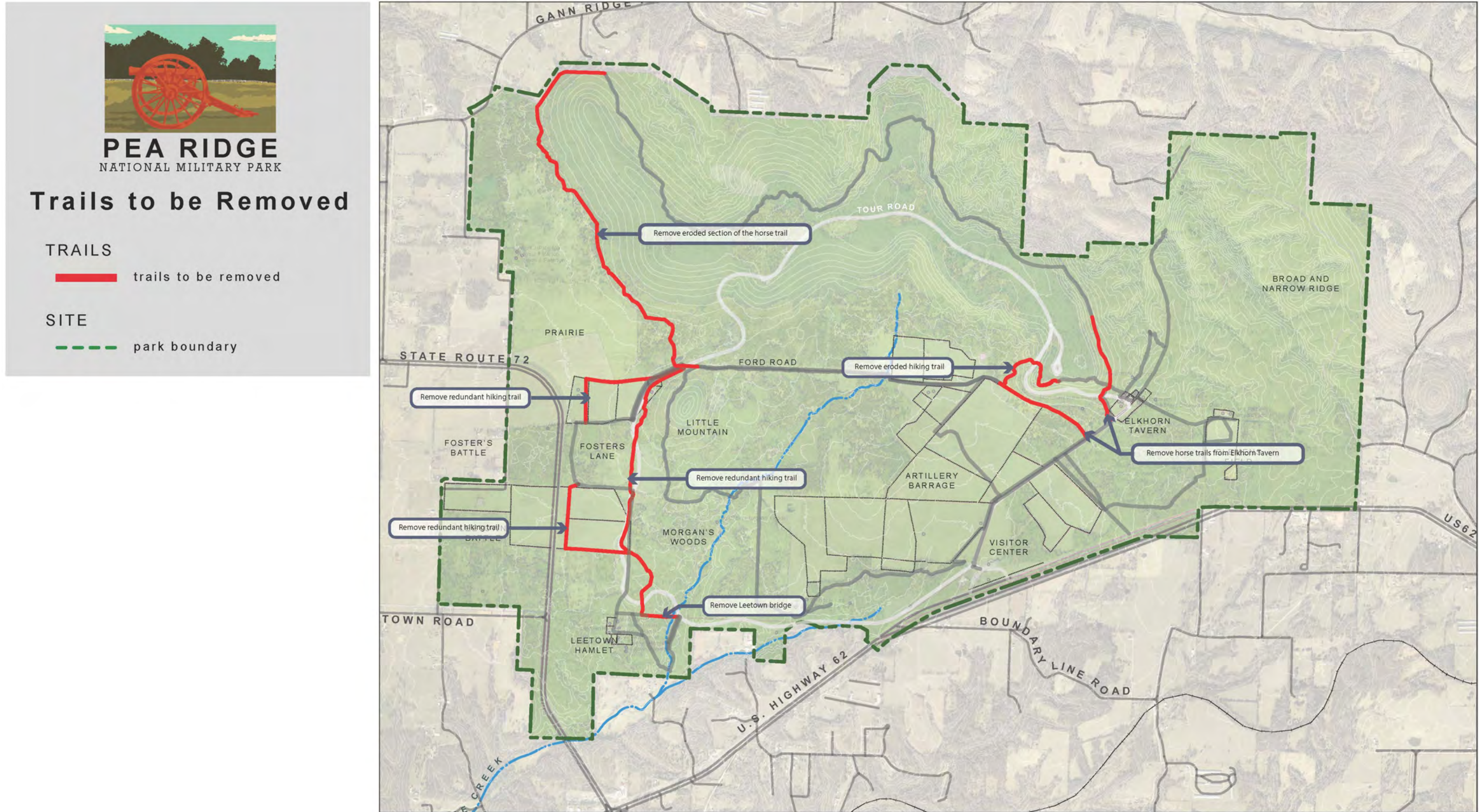


Figure 5. Duplicative Trails to be Removed as Part of Alternative 2

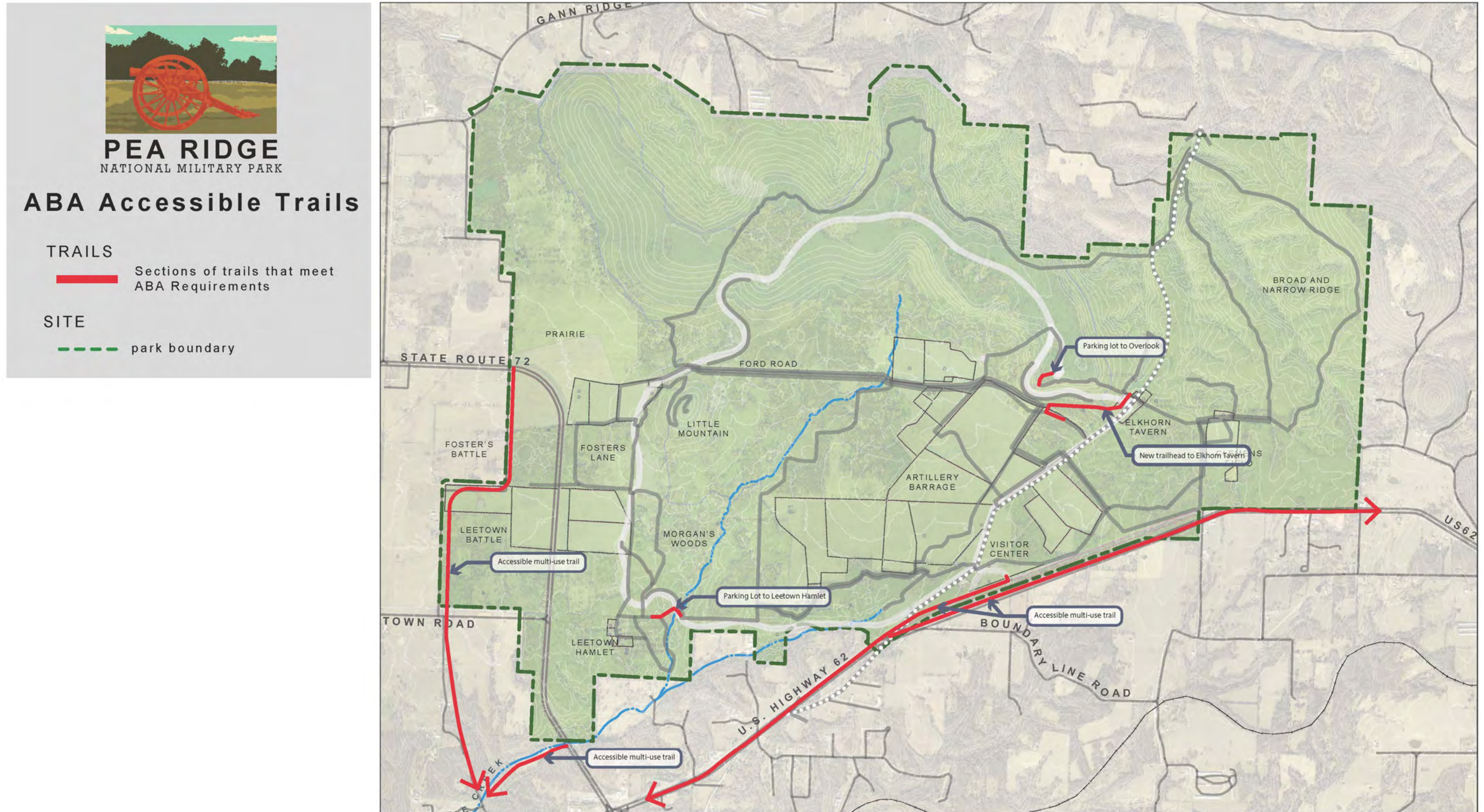


Figure 6. Trails Accessible in Accordance with Architectural Barriers Act Requirements

ALTERNATIVE 3: ENHANCED TRAIL NETWORK FOCUSED ON INTERPRETATION WITH EXPANDED OPPORTUNITIES FOR RECREATION (NPS PREFERRED ALTERNATIVE)

Alternative 3 would have the same primary objectives as alternative 2, which include enhancing the trail network to allow for increased interpretation of the Battle of Pea Ridge. All elements proposed in alternative 2 would be implemented in alternative 3 with the exception of an alternate configuration for the multi-use trail along the park's western boundary. Alternative 3 also would add an additional level of focus on recreational opportunities for hiking and biking within the park. Alternative 3 would provide additional trails that are not directly connected to the interpretive elements within the park, but are connected to significant landforms and natural features that expose the natural beauty of the area. The enhanced trail network for alternative 3 is presented in **Figure 7**. Specifically, the following hiking trails are proposed:

- Little Mountain – A new hiking trail to Little Mountain is proposed. Although it would be a primitive hiking trail, the trail may offer additional interpretive viewsheds not previously provided for the battlefield.
- Headwaters Creek Trail – A nature path is proposed that creates a short loop north of Elkhorn Tavern and ties into Telegraph Road. This was previously a nature trail but was never maintained and eventually became overgrown.
- Nature Trail and Overlook Access – This trail would originate off of Ford Road past Ford Cemetery intersecting with, and continuing along, the tour road to the East Overlook.

A multi-use trail option that conforms with the GMP also is proposed along the western edge of the park, continuing to provide access to both the park and the regional trail system. This option is being considered as an alternate route to the multi-use trail shown in alternative 2. This route was chosen to prevent another uncontrolled access point into the park. This route would follow existing public roads on the west side of the park and there would be no access into the park. Under alternative 3, widened areas to accommodate bicycles would be provided along certain narrow curves north of Ford Road on both the east and west segments of the tour road and over Lee Creek near Leetown Hamlet. These areas would provide an additional paved shoulder to enhance bicycle safety by increasing sight lines around the curves and providing ample space for vehicles and bicycles to pass one another. This option is preferred to alternative 2 because it eliminates a second uncontrolled entry into the park, and implementation of a future site for the visitor center is not programmed for the foreseeable future.

NPS BICYCLE RULE COMPLIANCE CONSIDERATIONS

Bicycle Rule Requirements

The proposed Trail Plan must comply with 36 CFR 4.30 (the Bicycle Rule), which contains regulations that manage bicycle use within national park system units.

The Bicycle Rule requires a special regulation to authorize bicycle use on new trails outside of developed areas. Prior to doing so, a planning document must evaluate the suitability of existing trail surfaces and

soil conditions for accommodating bicycle use, including any maintenance, minor rehabilitation, or armoring that would be necessary to upgrade the trail to sustainable condition.

Lifecycle maintenance costs, safety considerations, strategies to prevent or minimize user conflict, and methods to protect natural and cultural resources and mitigate impacts also must be analyzed. An EA or environmental impact statement must be completed that evaluates the effects of bicycle use in the park and on the specific trail. An EA must provide for a 30-day comment period. If there is no finding of significant impact, the superintendent must then provide a written determination that the addition of bicycle use on the existing trail would be consistent with the protection of the park area's natural, scenic and aesthetic values, safety considerations, and management objectives and would not disturb wildlife or park resources, as well as obtain written approval from the Regional Director.

New trails requiring construction activities would be developed and constructed in accordance with sustainable trail design principles and guidelines.

The Bicycle Rule also addresses bicycle use on administrative roads that are closed to motor vehicle use by the public, but open to motor vehicle use for administrative purposes. The Bicycle Rule requires that bicycle use may be authorized on administrative roads upon a written determination that such bicycle use is consistent with protection of the park area's natural, scenic and aesthetic values, safety considerations and management objectives, and will not disturb wildlife or park resources. The Bicycle Rule allows the use of bicycles on park roads that are open for motor vehicle use by the general public.

Bicycle Use under Alternative 3

Alternative 3 (NPS preferred alternative) would allow bicycle use on two proposed multi-use trails that would require trail construction activities and, therefore, qualify as new trails under the Bicycle Rule. These segments include a proposed trail from US Highway 62 to the visitor center and a proposed trail from Arkansas Highway 72 to the Sugar Creek Greenway on the western edge of the park (**Table 1**). Under alternative 3, bicycles would also be allowed on Ford Road, which qualifies as an administrative road under the Bicycle Rule, and on segments of the Tour Road, which is paved and open to motor vehicle use by the public (**Table 1**).

Table 1. Proposed Bicycle Use Trails in Alternative 3 (NPS Preferred Alternative)

Trail Segment Description	Distance (miles)	Trail Width	Trail Surface	Existing or Proposed Trail
US Highway 62 to Visitors Center	0.55	6 to 8 feet	Concrete	Proposed
Ford Road (terminating at tour road)	0.40	5 feet	Compacted surface	Existing
AR Highway 72 to Sugar Creek Greenway	1.17	8 to 10 feet	Concrete	Proposed
Tour road segments (stops 2, 5, 7)	1.17	5 to 8 feet	Asphalt	Proposed

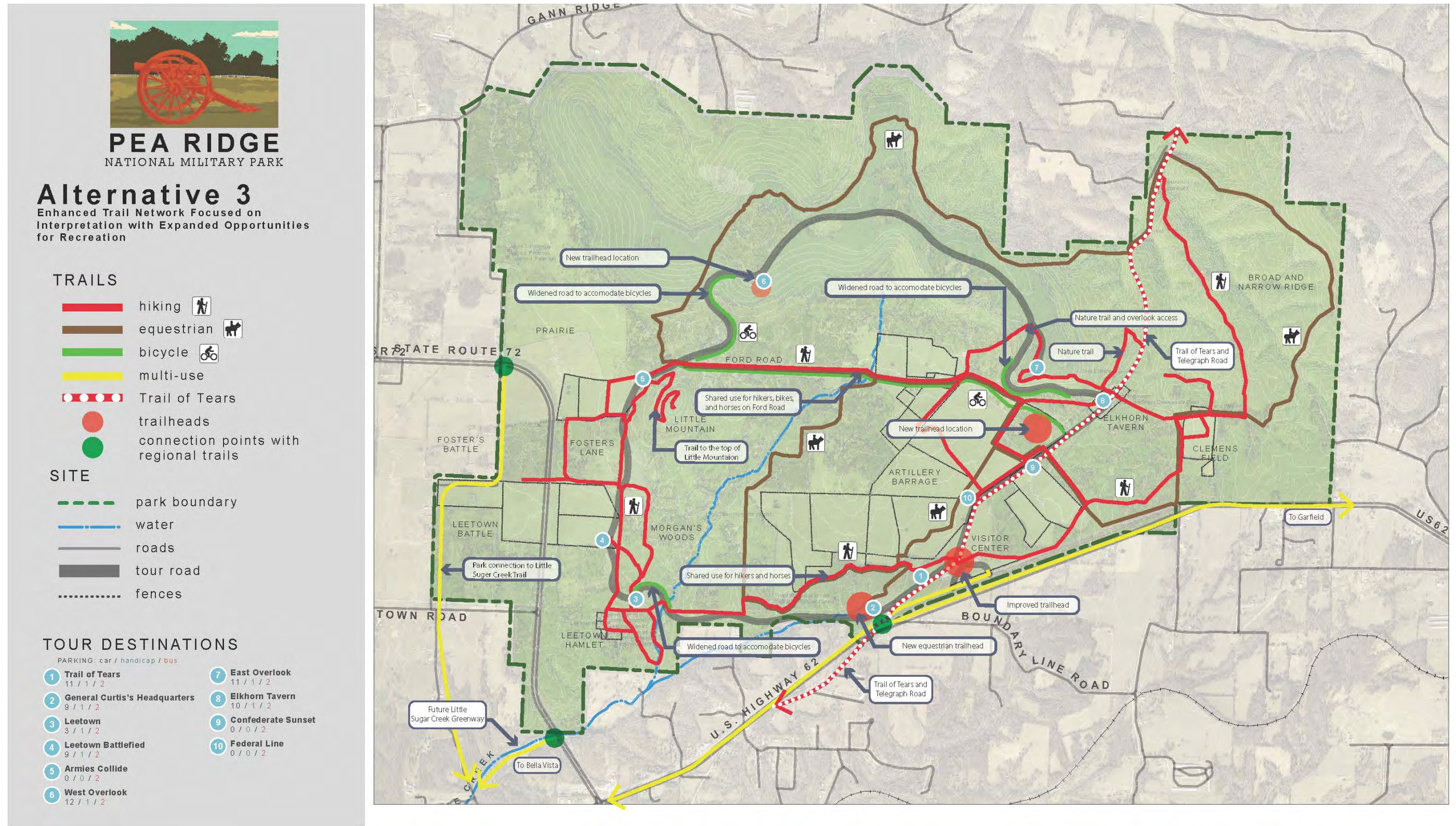


Figure 7. Alternative 3 Trail Network

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The NPS considered Ford Road's consistency with the parameters of the Bicycle Rule in this Trail Plan/EA. The superintendent has determined that use and enhancements of Ford Road are consistent with the Bicycle Rule and will have negligible impacts on park resources. Ford Road has a compacted natural hard surface and proposed enhancements include pothole repair and culvert installation, which are being proposed in order to maintain Ford Road's historical characteristics.

According to the Bicycle Rule, the NPS must evaluate the suitability of the trail surface and soil conditions for accommodating bicycle use. If well designed, built, and maintained, a sustainable trail minimizes braiding, seasonal muddiness, and erosion. This Trail Plan/EA incorporates a sustainable trail design for the proposed trails under Alternative 3.

Park planning documents must consider the cost of initial construction as well as ongoing maintenance in the park. As such, a lifecycle cost estimate by trail segment and type for alternative 3 (NPS preferred alternative) was developed and includes general annual maintenance costs and planning level cost estimates. The cost estimate included assumptions in order to account for uncertainties at this stage in the planning process, including a 20% contingency cost. **Table 2** provides a summary of the cost estimate conducted for the two proposed trail segments that would be constructed under Alternative 3 as part of the preliminary trail alternatives assessment completed in fall 2016.

Table 2. Lifecycle Cost Estimate for Alternative 3 (NPS Preferred Alternative)

Trail Segment Description	Distance (miles)	Operations and Maintenance Cost	Construction Cost Estimate	Total Planning Level Cost Estimate (20% Contingency)
US Highway 62 to Visitors Center	0.55	\$830	\$330,000	\$396,000
AR Highway 72 to Sugar Creek Greenway	1.17	\$1,760	\$702,000	\$842,400
Total	1.72	\$2,590	\$1,032,000	\$1,238,400

Impacts Associated with Bicycle Use under Alternative 3

In chapter 3, the NPS describes the impacts to water resources, vegetation, archeological resources, and visitor use and experience associated with the proposed and existing trails allowing for bicycle use. The two trail segments that would be constructed under Alternative 3 were evaluated based on suitability of the trail surface and soil conditions; lifecycle maintenance costs; safety considerations; strategies to prevent or minimize user conflicts; and methods of protecting natural and cultural resources.

TRAIL ALIGNMENTS CONSIDERED BUT DISMISSED

The NPS considered a number of different trail alignments for the trail network that were ultimately dismissed from further consideration. Where possible, existing and proposed trail alignments that were carried forward in the analysis would parallel historic or disturbed roadbeds or be rerouted in order to avoid impacts to undisturbed areas. Descriptions of the general types of alignments that were considered but dismissed are provided below with reasons for dismissal.

Pedestrian Trail Alignments. A variety of pedestrian trail alignments were considered under the proposed action. Trail alignments were ultimately dismissed due to sensitive resource concerns, drainage and erosional issues, and lack of interpretive quality or historical context. Safety concerns stemming from crossing Arkansas Highway 72 and leading visitors too far away from the main trail loops were also considered in the dismissal of pedestrian trail alignments.

Equestrian Trail Alignments. During scoping, public comments were received suggesting the NPS consider expanding equestrian trail opportunities and adding equestrian amenities, such as hitching posts, picnic tables, and water faucets. The NPS analyzed the feasibility of constructing various alignments along drainages on the east side of the park. However, site constraints, including flooding, drainage, and erosional issues as well as presence of archeological resources, present challenges to trail construction. Additional equestrian trail alignments were closely explored but did not meet the purpose and need due to impact on resources, topography, and operational inefficiencies due to duplication of trails or lack of a connection to the revised equestrian trailhead. Therefore, these alignments were dismissed.

Bicycle Trail Alignments. A limited number of new dedicated bicycle trail alignments were proposed under this project. Instead, modifications to existing trails were considered under the proposed action, such as shoulder work and installation of bicycle racks. Construction of a dedicated bicycle trail along the tour road was considered but ultimately dismissed due to safety and resource concerns. Additionally, constructing a duplicate trail would not meet the purpose and need of the project and management objectives since the park aims to increase operational efficiency and decrease maintenance needs. Therefore, this alignment was dismissed.

Multi-Use Trail Along Arkansas Highway 72. An option was considered that involved the addition of a multi-use trail along Arkansas Highway 72. Arkansas Highway 72 splits the battlefield into two sections, making the west portion inaccessible to park visitors and difficult for park staff to manage. Furthermore, as identified in the park's Cultural Landscape Report/EA (NPS 2014a), the highway is visible from within the park, diminishing the integrity of the battlefield, which does not align with the purpose and need of the project. A desired future condition has been identified by the park which includes rerouting Arkansas Highway 72 to outside park boundaries in compliance with the GMP recommendations. This would assist in the rehabilitation of the cultural landscape and in reestablishing the historic agrarian setting. Therefore, this option was dismissed.

Additional constraints were identified for other multi-use trail alignments, such as width of potential roadways, complexity of crossings with other roads, and the need for additional infrastructure to maintain these trails. The addition of maintenance facilities would not meet the purpose and need and management objectives as operational efficiency is a key concern due to limited resources for park maintenance of the trail network.

MITIGATION MEASURES

Mitigation measures would be implemented, whenever feasible, to avoid and/or minimize environmental impacts under the proposed action. The exact mitigation measures to be implemented would depend upon the final design and approval of plans by relevant agencies. The following mitigation measures would be considered:

Water Resources

- During more detailed design and prior to construction activities, conduct site specific investigations to determine the presence, extent, location, and classification of any wetlands or other jurisdictional waters of the US located within and adjacent to proposed trail alignments.
- Utilize stormwater best management practices to reduce soil erosion and loss from construction areas into nearby wetlands.
- Identify appropriate permits and, if necessary, compensatory mitigation in coordination with the US Army Corps of Engineers and the Arkansas Department of Environmental Quality in the event of an unavoidable loss of wetlands, wetland conversion, or other permanent disturbance.

Archeology

- For the protection of archeological resources, follow the process and provisions identified in the project Archeological Resource Protection Plan. The Archeological Resource Protection Plan addresses the superintendent's responsibility to notify culturally affiliated tribes upon discovery in compliance with the Native American Graves Protection and Repatriation Act of 1990.

Visitor Use and Experience (Wayfinding)

- Develop maps and brochures of the improved trail network that would identify trails by user group, provide safety instructions, and provide other information to help visitors get the most out of their visit to the park.

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CHAPTER 3: AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter describes the affected environment, which is intended to document the existing conditions of the park. These descriptions serve as a baseline for understanding the resources that could be impacted by implementation of the proposed action. This chapter also includes an analysis of the environmental consequences or “impacts” of the no-action alternative and action alternatives, immediately following the affected environment descriptions for each resource topic. The resource topics presented in this section correspond to the environmental issues and concerns described in the *Purpose and Need* chapter of this EA.

In accordance with CEQ regulations, the environmental consequences analysis includes the direct, indirect, and cumulative impacts (40 CFR 1502.16). The intensity of the impacts is assessed in the context of the park’s purpose and significance and any resource-specific context that may be applicable (40 CFR 1508.27). The methods used to assess impacts vary depending on the resource being considered, but generally are based on a review of pertinent literature and park studies, information provided by on-site experts and other agencies, professional judgment, and park staff knowledge and insight.

CUMULATIVE IMPACTS METHODOLOGY

This EA also considers cumulative impacts, namely “the impact on the environment which results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions” (40 CFR 1508.7). Cumulative impacts have been addressed in this EA by resource, and are considered for the no-action alternative and the action alternatives. Some of these actions are in the early planning stages; therefore, the evaluation of the cumulative impact is based on a general description of the projects. The projects considered in the cumulative impact analysis are as follows.

Past Actions

Expansion of the US Highway 62. The Arkansas Highway and Transportation Department and Federal Highway Administration as lead agencies reconstructed and expanded US Highway 62 from two lanes to four lanes in northwestern Arkansas. An EA/assessment of effect for the project was completed in 2014 that evaluated five alternatives: a no action alternative and four action alternatives. The US Highway 62 widening relocated the highway along and outside the southern park boundary to minimize impacts on park resources. Section 4(f) of the US Department of Transportation Act, governs the use of land from publicly owned parks, recreation areas, wildlife and waterfowl refuges, and public or private historic sites for federal highway projects. The project proposed a series of mitigation for Section 4(f) impacts on the park. The mitigation measures under the proposed action allowed for a new connection to the park from the relocated US Highway 62, which was built in 2015. Other mitigation activities are ongoing and are described in the current and future actions. The proposed expansion had direct impacts on visual

resources, cultural landscapes and historic structures, archeological resources, and visitor use and experience.

Current and Future Actions

Pea Ridge National Military Park Mitigations for Expansion of US Highway 62 (US Highway 62 Mitigation Project). To mitigate use of park lands for the reconstruction and widening of US Highway 62 and to avoid impacts on sensitive cultural and natural resources, the following mitigation is in design: improved visitor circulation from the visitor center to the Elkhorn Tavern including improvements to the tour road; new parking lot locations for the Elkhorn Tavern and horse riding trailhead; and an expanded parking lot at the visitor center with design features to improve pedestrian and bicycle use. The mitigation activities support the park's long-term goals in terms of resource protection and management, visitor use, and other applicable factors.

As part of the US Highway 62 Mitigation Project, the park is seeking to remove and realign approximately four miles of the main asphalt tour road. Specifically, the project would include the removal of two miles of asphalt paving and construction of two miles that will align with US Highway 62 upon completion of the US Highway 62 relocation. Directional signs, culverts, and parking lots will also be relocated. The NPS has reached an agreement with the Arkansas Highway and Transportation Department on the provision of planning, designing, and funds required for portions of this project. Without the tour road realignment, access to the battlefield would be eliminated as a result of other components of the US Highway 62 Mitigation Project. The completion of this project will also remove modern intrusions on the battlefield within the Elkhorn Tavern Complex and alleviate visitor and employee health and safety concerns as well as improve visitor use and experience.

Elkhorn Tavern Rehabilitation Project. Rehabilitation of the Elkhorn Tavern in the park is proposed as a result of an inspection during the development of the park's Historic Structure Report. The Elkhorn Tavern, which was built in the 1890s and is visited by over 90% of park visitors, is in danger of continuing to deteriorate, and loss of historic fabric would result. Improvements would include the repair and replacement of shingles, walls, windows, doors, and porches. Doors and ramps will also be added or reinstalled in accordance with ABA requirements. This project would substantially improve the structural and safety conditions of the Elkhorn Tavern and would help the park achieve preserving interpretive opportunities of its visitors. The project is anticipated to be completed by October 2018 and would have beneficial impacts on historic resources and visitor use and experience from the rehabilitation of this prominent site at the Park.

Well Water System Replacement Project. The park is seeking to connect to the local rural water department less than one mile away from the park, which will require upgrades to the plumbing, connection piping, and demolition of the existing failing water system installed in the 1960s. As a result of the US Highway 62 Mitigation Project, the park can now bring the water line down the old highway bed reducing the compliance needed for a previously disturbed area. This project, once completed, will allow the park to meet primary goals and objectives, as well as significantly decrease annual expenditures of personnel, equipment, and training and annual repair of the system. It will provide fire flow capability for the entire visitor center, museum, and artifacts; remove intrusions from the cultural landscape; and provide a reliable system of fire protection for the park's facilities and other resources. This project also will provide a service to the visitors and will serve to help the park achieve the call to

action connecting people to parks. The project is anticipated to be completed by winter 2017 and would result in ground disturbance primarily along an existing disturbed corridor with minimal impacts to park resources.

Northwest Arkansas Regional Bicycle and Pedestrian Master Plan. The Northwest Arkansas Regional Planning Commission, with the support of communities and advocates throughout northwest Arkansas, developed a plan to build upon previous regional bicycle and pedestrian initiatives in setting a clear path for northwest Arkansas to link its communities and regional destinations with a cohesive transportation network. The project will include creating a regional network of bicycle and pedestrian on-road and off-road trail facilities and routes within 32 communities in Benton and Washington counties, including the towns of Pea Ridge and Garfield as well as the park. With the increased connectivity made possible by the project, the park would likely see increased visitor use which could increase impacts on park resources. The implementation of the plan would have beneficial impacts to recreational activities in the region, and construction of new trails would have minor long-term impacts to vegetation, soils, water resources, and potential wetlands.

WATER RESOURCES

Affected Environment

The park is located within the Elk watershed (HUC # 11070208). The park is split fairly evenly between two subwatersheds: Big Sugar Creek, and Little Sugar Creek. There are limited surface water sources in the park. Two small streams, Lee Creek, and Pratt Creek, originate within the boundaries of the park. Lee Creek and Pratt Creek join just outside the park boundaries and flow southwest. Little Sugar Creek flows along the southern boundary of the southern unit. All the streams in the park are part of the Arkansas River Watershed. Wetlands may occur along these streams. There a number of stock ponds in the park that are remnants from the agricultural activities prior to the establishment of the park. Winton Spring is located along Pratt Creek.

About the Analysis

In order to analyze the potential impacts of each alternative on water resources, a review of the surface water features within the park boundaries and their downstream connections was performed. Descriptions and locations of the park surface water features were compiled from the various park management documents (NPS 2006a; NPS 2011; NPS 2014b); the National Hydrography Dataset (US Geological Survey 1999); and the National Wetland Inventory data (US Fish and Wildlife Service [USFWS] 1980). Potential impacts to streams were evaluated based on the potential impacts from trail construction, usage, and ongoing maintenance associated with new trails or changes in trail alignments. Correction of areas of erosion caused by trail use and runoff and subsequent vegetative establishment in the formerly disturbed areas was also considered.

Impacts of Alternative 1: No-Action

Under alternative 1 (no-action), the NPS would maintain the existing system of formal trails within the park. The NPS would continue to conduct maintenance to temporarily resolve drainage problems at certain low lying areas of the park. The equestrian trail along the northeast portion of the park would continue to close during heavier rain events. Where maintenance activities resolve drainage issues in certain low lying areas of the park, there would most likely result in improved water quality or conditions for the nearby streams, such as Lee Creek. Where drainage issues continue to be an issue, there would continue to be potential degradation of water quality due to sedimentation and run-off into streams. Under this alternative, in general, the existing condition of the water resources at the park would remain the same.

Cumulative Impacts. Under the no-action alternative, maintenance activities and areas of continuing drainage issues would not substantially contribute to the overall cumulative impacts. In combination with the project described in this EA, cumulative impacts to water resources would be negligible.

Conclusion. Under alternative 1 (no-action), minor improvements in water quality or stream conditions would be expected from the maintenance activities, and minor adverse impacts would continue from ongoing drainage issues. When the adverse and beneficial impacts of the no-action alternative are combined with the impacts of other past, present, and reasonably foreseeable future projects, the cumulative impact would be negligible to water resources.

Impacts of Alternative 2

Under alternative 2, the actions for an enhanced trail network would seek to avoid impacts to the park's two perennial streams. Alternative 2 would not involve any actions that would impact Winston Spring or stock ponds at the park.

The trail improvements along Ford Road include maintenance of and/or rehabilitation of the culverts at the crossing of Ford Road over Lee Creek (**Figure 8**). These actions would allow for better drainage and intermittent stream flow. Pipe culverts exist today at these locations, but ponding and drainage is an issue during heavier rainfall events. Culverts would be cleaned out and evaluated if they are properly sized to resolve ponding and drainage issues. In addition, the road would be minimally regraded and potholes and depressions filled to allow for better road surface drainage.



Figure 8. Ford Road Over Lee Creek Where Road Depression and Occasional Flooding Occurs

The culvert rehabilitation and backfill would result in temporary disturbances within the stream channel and may require temporary stream diversions or pump-around practices be implemented. With the implementation of best management practices for erosion and sediment control, any effects to the stream and water quality due to construction and maintenance activities would be minimized. In the long term, the improvements would allow for more efficient drainage and intermittent stream flow, as well as fix drainage issues on Ford Road.

The equestrian trails in the northwest portion of the park would be removed and rerouted due to flooding and erosion problems. The NPS would restore the areas at the locations where trails would be removed. Restoration of these areas would result in re-establishment of vegetation resulting in decreased sediment loss and runoff. The decline in horse manure in these flood prone areas also would benefit water quality.

Cumulative Impacts. Under alternative 2, rehabilitation of culverts along Ford Road, would have minor temporary adverse impacts to Lee Creek. Restoration efforts along the closed equestrian trails would result in improved water quality at those locations, as the areas that are proposed for closure currently have flooding and erosion issues. Overall, alternative 2 would contribute small adverse and beneficial incremental impacts to the cumulative impacts to water resources. Alternative 2 would not substantially change the overall cumulative impacts, which are minor in the context of the park and regional water resources.

Conclusion. Under alternative 2, the actions for an enhanced trail network would have minor short-term adverse impacts to water resources from the maintenance and/or installation of culverts at the Ford Road crossing over Lee Creek. In the long term, the improvement would allow for better drainage and intermittent stream flow, as well as fix drainage issues on Ford Road. Best management practices for erosion and sediment control would be implemented to minimize these impacts to water quality. The trail realignments would increase water quality as equestrian trails would be rerouted out of areas prone to flooding and erosion issues. Overall, alternative 2 would contribute small adverse and beneficial incremental impacts to the cumulative impacts to water resources, but would not substantially change the overall cumulative impacts which are minor.

Impacts of Alternative 3 (Proposed Action and NPS Preferred Alternative)

The analysis for the elements proposed in alternative 2 that would be implemented in alternative 3 is the same as described under alternative 2. The two proposed hiking trails and the multi-use trail option included under alternative 3 are not located near water resources in the park, and as such, would not have impacts on water resources.

Cumulative Impacts. The additional components included under alternative 3 would not have impacts to water resources. The cumulative impacts for water resources would be the same as described for alternative 2.

Conclusion. The additional components included under alternative 3 would not have impacts to water resources. The conclusions for water resources would be the same as described for alternative 2.

VEGETATION

Affected Environment

The park is located in the Ozark Highlands ecoregion, and is split by the Springfield Plateau and Dissected Springfield Plateau-Elk River Hills sub-ecoregions. Historically, the vegetation in the park was predominantly deciduous woodlands and forest with cropland found in the south-central and southeast portions of the park. Currently, the dominant vegetation types present in the park are grasslands and woodlands and forests. Vegetation types that cover only a small portion of the park include ruderal grassland and shrubland, restored prairie, orchards, a marsh in the small ponded area in the southwestern portion of the park, and glade-like open areas in the forests underlain by limestone, sandstone, or other bedrock.

The grass fields are mowed and are dominated by fescue and other pasture grasses. The agriculture fields and pastures present at the historic battle were converted to grass for maintenance purposes. Woodland and forested areas are the dominant vegetation type in the park and include upland deciduous woodland and forests, dry deciduous woodland and forests, bottomland deciduous woodland and forests, eastern red cedar woodland and forests, and a small area of silver maple forest. The upland deciduous woodland and forests are common vegetation types within the park and are dominated by black oak (*Quercus velutina*), other oaks (*Quercus* spp.), and mockernut hickory (*Carya alba*). Dry deciduous woodland and forests are found on the top and slopes of Elkhorn Mountain and are dominated by post oak (*Quercus marilandica*), other oaks, and black hickory (*Carya texana*). In elevated portions and on the ridgetop, this vegetation type has a grass understory composed of Virginia wildrye (*Elymus virginiana*) and is more of an open woodland. The Bottomland deciduous woodland and forest is found along Lee Creek and other small creeks within the park. Dominant species include early successional species. Eastern red cedar (*Juniperus virginianais*), a pioneer species, has invaded approximately 1,000 acres of the park since the historic battle but has been reduced to approximately 200 acres via the 2006 General Management Plan and 2014 Vegetation Management Plan. It forms dense stands in areas of old croplands and other disturbed areas. The silver maple forest is found in a poorly drained area on the northwestern boundary of the park.

There are twelve post oaks and three white oaks that have been designated as historic trees as they were alive at the time of the 1862 battle. Invasive and exotic species are found throughout the park. Inventories of vascular plants in the park were conducted in 2003 and 2009. The 2003 inventory identified two species, Ozark chinquapin (*Castanea pumila* var *ozarkensis*), and lobed spleenwort (*Asplenium pinnatifidum*) that occur in the park near the East Overlook and are tracked by the Arkansas Natural Heritage Commission because they are uncommon or have conservation concerns (NPS 2014b). The 2009 inventory identified three state threatened species (forked aster [*Eurybia furcatus*], ovateleaved catchfly [*Silene ovate*], and royal catchfly [*Silene regia*]) and two state endangered species (caric sedge [*Carex opaca*] and small headed pipewort [*Eriocaulon koernickianum*]) that are present or potential habitat exist to support these species in the park (NPS 2014b).

About the Analysis

In order to analyze the potential impacts of each alternative on vegetation, a review of the documentation on the vegetation resources was performed. Descriptions and locations of the vegetation were compiled from the various park management documents (NPS 2006a; NPS 2011; NPS 2014b). Potential impacts to vegetation were evaluated based on the potential impacts from trail construction, usage, and ongoing maintenance associated with new trails or changes in trail alignments. Correction of areas of erosion caused by trail use and due to drainage issues, along with subsequent vegetative establishment in the formerly disturbed areas, was also considered.

Impacts of Alternative 1: No-Action

Under alternative 1 (no-action), the NPS would maintain the existing system of formal trails within the park. Maintenance activities would include minor selective tree removal or pruning for acceptable clearance to maintain safe conditions for trail users on existing trails. Vegetation impacts associated with drainage issues would continue in areas where drainage issues cannot be resolved; however, in the context of the park setting, adverse impacts would be very minor.

Cumulative Impacts. Additional minor impacts to vegetation at the park would result from other past, present, and reasonably foreseeable future projects and actions including the US Highway 62 Mitigation Project. The no-action alternative would contribute small adverse incremental impacts to the cumulative impacts to vegetation, but would not substantially change the overall cumulative impacts. Thus, when the impacts of the no-action alternative are combined with the adverse and beneficial impacts of other past, present, and reasonably foreseeable future projects, an overall adverse cumulative impact would be negligible.

Conclusion. Under alternative 1 (no-action), the NPS would maintain the existing system of formal trails within the park. There would continue to be potential degradation of vegetation where drainage issues are present. When the adverse impacts of the no-action alternative are combined with the adverse and beneficial impacts of other past, present, and reasonably foreseeable future projects, an overall cumulative impact would be negligible to vegetation resources.

Impacts of Alternative 2

Under alternative 2, the NPS would seek to avoid impacts to vegetation, but some activities, such as new trail alignments, construction of additional ABA-accessible trails, construction of two additional trailheads, and new stairs or a boardwalk at the Federal Trenches could have impacts to vegetation. In general, these activities would take place in previously disturbed areas free of existing large trees and shrubs. However, the majority of the disturbance to vegetation would occur in the woodlands and forest vegetation. The construction of new trails, and the new trailhead locations would be designed to minimize impacts to vegetation by following historic road alignments, but in some instances, minor amounts of vegetation would have to be removed. This disturbance could also result in limited spread of invasive species in the park. There would be limited disturbance to riparian vegetation. The culvert maintenance or installation of new culverts at the crossing of Ford Road over Lee Creek could impact a small area of vegetation due to construction. Overall, impacts to vegetation would be small in scale (a

few tree or shrubs) and localized to the trail edge. No large-scale clearing of vegetation is proposed for any location. No historic trees will be impacted.

The vegetative establishment in the former trail areas would enhance existing vegetation communities. The reestablishment of vegetation and long-term maintenance would be consistent with the park's Vegetation Management Plan/EA (NPS 2014b). With the change in the trail network, there would not be a noticeable change in maintenance activities that would affect vegetation at the park, which includes mowing, minor pruning of trees for clearance, and maintaining an acceptable clear zone. Overall, the impacts to vegetation from the construction of new trails and the closing of unnecessary trails would be minimal. The use of best management practices for erosion and noxious weed control would be implemented to minimize effects to vegetative resources.

Generally, the installation of signage along the Trail of Tears would result in minimal impacts to vegetation. Only a small area would be required for each sign along the trail and would be adjacent to the roadway. The proposed improvements along Ford Road would occur within already disturbed areas, would seek to improve drainage and minimize erosion resulting in minimal impacts to vegetation, and may improve vegetation in some areas with decreased erosion issues. The proposed improvements to the Federal Trenches would occur in disturbed areas along the existing trail and would minimize erosion, sedimentation, and drainage issues, lessening impacts on nearby vegetation

Cumulative Impacts. Under alternative 2, the actions for an enhanced trail network would have minor long-term adverse impacts to vegetation. In addition, the abandonment and consolidation of trails would result in benefits to vegetation by allowing the NPS to reestablish vegetation in accordance with the NPS Vegetative Management Plan (NPS 2014b). Additional minor impacts to vegetation at the park would result from other past, present, and reasonably foreseeable future projects and actions, including the US Highway 62 Mitigation Project. Alternative 2 would contribute small adverse and beneficial incremental impacts to the cumulative impacts to vegetation, but would not substantially change the overall cumulative impacts. Thus, when the impacts of alternative 2 are combined with the adverse and beneficial impacts of other past, present, and reasonably foreseeable future projects, the overall cumulative impact would be negligible.

Conclusion. NPS would minimize impacts to vegetation to the extent practicable. There would be a reduction in the woodland and forest vegetation in some areas, which would be replaced by the closure of trails in the same vegetation type in other areas. In the context of the park setting, impacts to vegetation would be minor. Best management practices for erosion and noxious weed control would be implemented to minimize impacts to native vegetation. When the adverse and beneficial impacts of the proposed action are combined with the adverse and beneficial impacts of other past, present, and reasonably foreseeable future projects, the overall cumulative impact would likely be minimal.

Impacts of Alternative 3 (Proposed Action and NPS Preferred Alternative)

Alternative 3 consists of the same primary objectives as alternative 2, which include enhancing the trail network to allow for increased interpretation of the Battle of Pea Ridge. All elements proposed in alternative 2 would be implemented in alternative 3 with the exception of an alternate configuration for the multi-use trail along the park's western boundary, which connects to the regional trail system outside of the park. Alternative 3 would include additional recreational opportunities for hiking and

biking within the park as compared to alternative 2. Alternative 3 would provide additional trails that are not directly connected to the interpretive elements within the park but are connected to significant landforms and natural features that expose the natural beauty of the area.

The analysis for the elements proposed in alternative 2 that would be implemented in alternative 3 is the same as described under alternative 2. Under alternative 3, there would be further vegetation removal for the additional trails that would be constructed. In addition, the construction of expanded paved shoulders on the tour road to accommodate bicycle use could have impacts to vegetation where the forest is encroaching on the roadway corridor. Best management practices for erosion and noxious weed control would be implemented to minimize impacts to native vegetation.

Cumulative Impacts. The additional components included under alternative 3 would have a slight increase in impacts to vegetative resources resulting primarily from the addition of the hiking trail at Little Mountain and nature trail near Elkhorn Tavern. These trails would be sited to avoid clearing of trees and it is anticipated that only minor pruning of trees may be necessary. Overall, the cumulative impacts for vegetative resources would be the same as described for alternative 2, which would be negligible in the context of the park setting and region.

Conclusion. The additional components included under alternative 3 would have a slight increase in impacts to vegetative resources over that of alternative 2. The conclusions for vegetative resources would be the same as described for alternative 2.

ARCHEOLOGICAL RESOURCES

Affected Environment

Numerous archeological resources exist within the park boundaries, including both prehistoric and historic sites. The historic sites consist of material remains from the battle as well as farmsteads, cemeteries, and historic roads and trails. In order to analyze the potential impacts of each alternative on archeological resources, a review of recently conducted archeological surveys within the park was performed. This review included consulting a summary of recent metal detector surveys conducted along existing and proposed trails and trailheads. Metal detector surveys of multiple trail segments were undertaken in 2001-2003, 2015, 2016, and 2017 (Carlson-Drexler et al. 2008; De Vore 2016a, b, c, 2017a). Also, included in the 2016 and 2017 investigations were archeological surveys of a number of areas within the park (De Vore 2016b, 2017b). In 2017, fifteen archeological sites were identified based on results of the 2001-2003 metal detector survey and tribal consultation with the Osage Tribal Preservation Office and the Arkansas Historic Preservation Program, and ten sites were subject to further investigation. Based on the results of this investigation sites 4, 5, 7, 8, 9 and 10 were recommended eligible for listing on the National Register of Historic Places. Sites 1 and 6 were recommended for further work while the remaining sites were recommended to not retain significance.

The park also contains a segment of the northern route of the Trail of Tears and two associated campsites at Elkhorn Tavern and Ruddick's field. In 1830, Andrew Jackson signed the Indian Removal Act, which gave the Federal government the power to remove Indians from their native lands and give the lands to white settlers. Starting in 1837, under the authority of Martin Van Buren, federal troops

rounded up Cherokee in several states and forcibly marched them to reservations in Indian Territory, now Oklahoma. The segment of the trail that passes through the park was traversed by 11 of the 17 Cherokee Removal contingents between 1837 and 1839. More than 5,000 of the 16,000 Cherokee died of starvation, disease, and exposure during the march, which was one of many that forced tribes to relocate west of the Mississippi River.

About the Analysis

Potential impacts to archeological resources were evaluated based on the potential impacts from trail construction, usage, and ongoing maintenance associated with new trails or alignment changes. Additionally, the results of the recent archeological surveys conducted along the existing and proposed trail segments were considered, as were corrections of areas of erosion caused by trail use and runoff.

It should be noted that Section 106 consultation is being conducted as a separate but parallel process with the Trail Plan/EA as described in chapter 4, *Consultation and Coordination*. A separate assessment of effect has been prepared for the NPS preferred alternative which will be sent to the Arkansas Historic Preservation Program for review. The impact analysis in this EA is consistent with the assessment of effect but is written to satisfy the NEPA evaluation for each of the alternatives.

Impacts of Alternative 1: No-Action

Under alternative 1 (no-action), the NPS would maintain the existing system of formal trails within the park, which has been in use for an extended period of time. Where erosional issues continue to be an issue, there could be potential impacts to archeological resources due erosion. These impacts are anticipated to be negligible. In general, the existing condition of the archeological resources at the park would remain the same.

Cumulative Impacts. Under alternative 1 (no-action), there would be no to negligible impact to archeological resources because conditions would generally remain the same; thus, there would be no cumulative impact.

Conclusion. Under alternative 1 (no-action), existing condition of the archeological resources at the park would remain the same. Trail erosion could result in impacts to archeological resources. There would be no cumulative impact.

Impacts of Alternative 2

Under alternative 2, the proposed undertaking would include an enhanced trail network including construction of additional trailheads, modification of existing trail loops, construction of additional ABA-accessible trails, installation of signage for the Trail of Tears, improvements to multi-use trails, and improvements to equestrian trails to avoid erosion prone areas. Unnecessary trails would be removed and trail access would be provided along existing historic roads and trails. The closing of unnecessary trails and the removal and/or rerouting of equestrian trails from erosion prone areas would decrease erosional issues caused by usage of existing trails. New trails would be routed through areas less prone to erosion.

New trail segments would establish trail connections between significant locations within the park and would follow historic trails and fence lines where possible. Trail surface materials would be mowed or maintained at a width of 3 to 4 feet with a 1-foot shoulder for off-road trails and a width of 5 feet with a 1-foot shoulder for ABA-accessible trails. Trail surfaces would mainly be left as mowed or compacted earth for the off-road trails. The construction of new trail alignments may result in limited disturbances to archeological resources; however, there would not be a noticeable change in future trail use compared to current trail use and the impact would be minor. The changes to the trail systems would not diminish the integrity of the archeological resources to the extent that they would be rendered ineligible for listing in the National Register of Historic Places. The NPS has prepared a project-specific Archeological Resource Protection Plan and would follow the provisions of this plan to future minimize the likelihood of impacting archeological resources.

Cumulative Impacts. Under alternative 2, minor long-term adverse impacts from the construction and usage of trails in areas with archeological resources would likely occur; however, with the implementation of the provisions in the Archeological Resource Protection Plan, effects to archeological resources due to construction and maintenance activities would be minimized through the implementation of the provisions in the Archeological Resource Protection Plan. Other past, present, or reasonably foreseeable future actions have or will potentially have minor impact on archeological resources at the park, such as the US Highway 62 Mitigation Project and Elkhorn Tavern Rehabilitation Project; however, the NPS would carefully plan and site these projects to minimize impacts to the extent feasible. Overall, alternative 2 would contribute a small adverse incremental impact to the cumulative impacts to archeological sites. Overall, cumulative impacts to archeological resources would be minor.

Conclusion. Actions under alternative 2 could have impacts to archeological resources due to earth disturbance necessary for construction. However, the impact would be minor because the changes to the trail systems would not diminish the integrity of the archeological resources to the extent that they would be rendered ineligible for listing in the National Register of Historic Places. The NPS has prepared a project-specific Archeological Resource Protection Plan and would follow the provisions of this plan to further minimize the likelihood of impacting archeological resources.

Impacts of Alternative 3 (Proposed Action and NPS Preferred Alternative)

Alternative 3, which has the same primary objectives as alternative 2, includes enhancing the trail network to allow for increased interpretation of the Battle of Pea Ridge. All elements proposed in alternative 2 would be implemented in alternative 3 with the exception of an alternate configuration for the multi-use trail along the west boundary of the park. Alternative 3 would include additional recreational opportunities for hiking and biking within the park as compared to alternative 2. Alternative 3 would provide additional trails that are not directly connected to the interpretive elements within the park but are connected to significant landforms and natural features.

The analysis for the elements proposed in alternative 2 that would be implemented in alternative 3 is the same as described under alternative 2. The two proposed hiking trails and the multi-use trail option included under alternative 3 would not likely impact archeological resources.

Cumulative Impacts. The cumulative impacts for archeological resources would be the same as described for alternative 2.

Conclusion. The additional components included under alternative 3 would have similar impacts to archeological resources as the components proposed in alternative 2. Actions under alternative 3 could have impact to archeological resources due to earth disturbance necessary for construction. However, the impact would be minor because the changes to the trail systems would not diminish the integrity of the archeological resources to the extent that they would be rendered ineligible for listing in the National Register of Historic Places. The NPS has prepared a project-specific Archeological Resource Protection Plan and would follow the provisions of this plan to further minimize the likelihood of impacting archeological resources.

VISITOR USE AND EXPERIENCE

Affected Environment

The park is attractive to visitors because the park encompasses nearly 90% of the battlefield in which the two-day battle between the Confederate and Union troops took place on March 7-8, 1862. The park includes numerous interpretive opportunities for visitors to learn about cultural resources, including archeological sites, historic sites, structures, and cultural landscape features associated with the battle and the agrarian community once found at Pea Ridge. The park attracts nearly 120,000 visitors per year. Open year-round, visitors experience the battlefield through walking paths, hiking trails, bicycle riding on park roads, horseback riding on designated trails, and a self-guided auto tour, which includes 11 stops along tour road and remains one of the major interpretive resources at the park. Most visitors begin their park experience at the visitor center, which provides important context for exploring the park and valuable information about visitor services and tour information. Currently, there is no visible trailhead or trail beginning point at the visitor center for those visitors who wish to walk or bike. However, planned improvements to the visitor center as part of the US Highway 62 Mitigation Project will provide additional opportunities to establish a logical beginning point for bicyclists and pedestrians. A network of trails and pathways is available for visitors who wish to experience the battlefield outside of their vehicle. There are limitations to the trail network as it currently exists because of limited signage, poor wayfinding, and duplicative trails alignments, which often can confuse users. Park visitors who want a less vehicle-oriented experience often walk on the park roads. Bicycle riding is authorized on paved park roads and Ford Road, which is made of a gravel, compacted earth surface material. There is also a similar limited network of designated equestrian trails throughout the park that is accessed by visitors who bring their own horses to the park.

Numerous other visitor experiences exist at the park, including unique views and vistas, as well as a collection of historic structures, farmscapes, and earthworks that help to define the 1862 landscape. The park is currently undergoing planning efforts to preserve the topographic, landscape, and cultural features that were significant to the outcome of the Battle of Pea Ridge. In addition to the cultural resources present within the park, valuable natural resources may also be observed by visitors, such as forests, wetlands, streams, and associated terrestrial and aquatic life. The park is also planning to implement improvements to parking areas through the US Highway 62 Mitigation Project to accommodate the projected future increase in visitor use resulting from the popularity of the park and growth in the northwest area of Arkansas.

About the Analysis

In order to analyze the potential impacts of each alternative on visitor use and experience at the park, potential impacts to typical user groups were analyzed and opportunities to access and experience interpretational and cultural resources were considered. Visitor circulation and accessibility through the park on park roads, roadways, and existing trails was considered along with the authorized uses of these circulation features.

Impacts of Alternative 1: No-Action

Under alternative 1 (no-action), the NPS would maintain the existing system of trails within the park. The NPS would continue to provide pedestrians, hikers, bicyclists, and equestrians with quality interpretative and recreational opportunities, and overall, implementation of alternative 1 would have no impact on the visitor use and experience. However, the existing trail network would not be enhanced to accommodate future park visitation levels, and a comprehensive plan for a series of cohesive trail improvements, as discussed in this EA, would be not implemented to improve wayfinding, amenities, accessibility, circulation, and access to promote interpretation at the battlefield.

Cumulative Impacts. Under alternative 1 (no-action), the existing trail network would remain unchanged and there would be no impact to the visitor use and experience; therefore, there would be no cumulative impact.

Conclusion. Under alternative 1 (no-action), the NPS would continue to provide pedestrians, hikers, bicyclists, and equestrians with interpretative and recreational opportunities, and overall, implementation of alternative 1 would have no impact on the visitor use and experience. There would be no cumulative impacts on visitor use and experience.

Impacts of Alternative 2

Under alternative 2, an enhanced trail network would be implemented, including expanded and enhanced opportunities for pedestrian trail interpretation, construction of additional trailheads, modification of trail loops for simplicity and interpretive value, construction of additional ABA-accessible trails, installation of signage for the Trail of Tears, improvements to multi-use trails, and improvements to equestrian trails to avoid erosion prone areas. Two additional trailhead locations would be added at the visitor center and at the West Overlook, giving visitors additional wayfinding and direction on how to experience the park. At the Federal Trenches, a reconstructed hiking path is proposed to improve drainage and access, as well as enhance the visitor experience by providing better infrastructure to access the site. These actions would have beneficial impacts on visitor use and experience.

Construction of new pedestrian trails and simplification and reconstruction of existing trails would improve the visitor experience within the park by providing for increased interpretation opportunities within the battlefield landscape, as well as improved access to areas of the park, such as the Federal Trenches. Construction of a new multi-use trail option along the western boundary of the park would connect different areas of the park and improve visitor access to a wider range of interpretive experiences.

No new trail segments are proposed solely for bicycle use, but bicycle use would continue on Ford Road, the tour road, as well as the proposed multi-use trail. Improvements would include installation of bicycle racks at a number of tour road stops, which would improve bicycle experience along the tour road. The rerouting and simplification of equestrian trails would minimize potential interactions between equestrians and other users, thus enhancing the experience. The proposed changes would allow equestrians a shorter and a longer trail option for touring the park, thereby enhancing equestrian use and experience within the park. Additionally, amenities along equestrian trails, such as hitching posts, would allow horseback riders to access areas of the park that are in the vicinity of, but not accessible to, equestrian use.

New trailheads would enhance access to existing and proposed trails and would further improve opportunities to experience the park by providing amenities for pedestrians, bicyclists, and equestrians to encourage non-motorized uses. Trailheads and construction of ABA-accessible trails also would provide accessibility for persons with disabilities, which would increase opportunities for this group of visitors to experience the park. New trailheads and connections to the regional trail system would also be accommodated, improving visitor access to the park. Improved wayfinding along the Trail of Tears would inform visitors on historic properties or important landscape features that may be visible from the trailheads.

A number of existing trails would be closed under alternative 2. Upon closing the trails, the NPS would restore the areas to a natural condition. There would not be a noticeable decrease in trail availability to park users during trail closures. The improved trail conditions would benefit park visitors and trail restoration efforts along closed trails would improve the experience for visitors who also appreciate the natural landscape.

Cumulative Impacts. Under alternative 2, the trail network would be enhanced and expanded to increase visitor use and experience within the battlefield landscape resulting in a beneficial impact. Other past, present, or reasonably foreseeable future projects have resulted in net beneficial impacts, such as the Elkhorn Tavern Rehabilitation Project and Northwest Arkansas Regional Trail Network Project. Together, there would be a net beneficial cumulative impact on visitor use and experience.

Conclusion. Overall, alternative 2 would be beneficial to the visitor use and experience within the park. The park would be made more accessible to a wider range of park visitors with enhancements to wayfinding, amenities, and interpretative opportunities. There would be a beneficial cumulative impact.

Impacts of Alternative 3 (Proposed Action and NPS Preferred Alternative)

Alternative 3, which has the same primary objectives as alternative 2, includes enhancing the trail network to allow for more interpretive and recreational opportunities within the park. All elements proposed in alternative 2 would be implemented in alternative 3 with the exception of an alternate configuration for the multi-use trail along the west boundary of the park. Alternative 3 would include additional recreational opportunities for hiking and biking within the park as compared to alternative 2. Alternative 3 would provide additional trails that are not directly connected to the interpretive elements within the park but that are connected to significant landforms and natural features. Additional recreational trails are located in areas that would not detract from users who wish to visit the park to gain an appreciation of the battle and history of the site.

The analysis for the elements proposed in alternative 3 is the same as described under alternative 2. The two proposed hiking trails and the multi-use trail option included under alternative 3 would further enhance and expand recreational opportunities in combination with the elements proposed under alternative 2.

Cumulative Impacts. The additional components included under alternative 3 would have similar impacts to visitor use and experience as those proposed in alternative 2, and thus, the cumulative impacts for visitor use and experience would be the same as described for alternative 2.

Conclusion. Overall, alternative 3 would be beneficial to the visitor use and experience within the park with added opportunities for recreation as compared to alternative 2. The park would be made more accessible to a wider range of park visitors with enhancements to wayfinding, amenities, and interpretative opportunities. Hiking trails and added shoulders for bicyclists would add to the recreational visitor's experience. There would be a beneficial cumulative impact.

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CHAPTER 4: CONSULTATION AND COORDINATION

The NPS places a high priority on public involvement in the NEPA process and on giving the public an opportunity to comment on the proposed action. Consultation and coordination with federal, state, and local agencies, as well as American Indian tribes, were also conducted to identify issues and concerns related to natural and cultural resources within the park. This chapter provides a summary of the public and stakeholder involvement and agency and tribal consultation that occurred in the preparation of the Trail Plan/EA.

PUBLIC AND STAKEHOLDER INVOLVEMENT

Public Scoping

A public scoping period was held from April 11, 2016 to May 10, 2016 for the Trail Plan/EA. The NPS issued a news release and posted project information, including the scoping press release, to the NPS PEPC website to provide a project overview and to invite the public to participate in the planning process. In addition, a public open house was held on April 22, 2016 at the park's visitor center located at 15930 US Highway 62 East, Garfield, Arkansas to provide the public with an opportunity to learn about the project; to provide input as to their issues and/or concerns about the project; and provide comments or feedback. In total, 11 pieces of public correspondence were received during the scoping period and were in support of the proposed trail expansions and improvements. Several commenters specifically requested improvements to equestrian trails, including increased signage and trail markers, hitching posts, water faucets, and restroom facilities. Commenters also discussed the need for trail sharing educational information for multi-use trails with pedestrians, bicycle, and equestrians. Comments collected during scoping were used to help define the issues and proposed action that are examined in detail in this EA.

Alternatives Workshop

The NPS held a stakeholder alternatives workshop on May 17, 2016 at the Northeast Benton County Fire Department in Garfield, Arkansas. The NPS provided stakeholders with information and solicited input regarding the proposed Trail Plan, ideas and strategies currently being considered to improve the trail network, and a sample of potential trail segments under consideration. Comments, issues, and concerns collected during the alternatives workshop were used to help define the issues and proposed action that are examined in detail in this EA.

AGENCY AND TRIBAL CONSULTATION

Section 106 of the National Historic Preservation Act

The NPS separately and concurrently prepared an assessment of effect to comply with the requirements of Section 106 of the NHPA, as amended (54 USC 306108), and its implementing regulations (36 CFR 800).

Section 106 consultation was initiated on April 7, 2016. Letters seeking consultation and participation in the alternatives workshop meeting discussed in the previous section were sent to the Arkansas Historic Preservation Program, Absentee Shawnee Tribe, Caddo Nation, Cherokee Nation of Oklahoma, The Chickasaw Nation, Jena Band of The Choctaw Indians, United Keetoowah Band of Cherokee Indians, Muscogee (Creek) Nation, The Osage Nation, Quapaw Tribe of Oklahoma, and Shawnee Tribe of Oklahoma. Subsequently, representatives from The Osage Nation conducted a site visit with park staff in May 2017 and identified additional sites to be surveyed as discussed in chapter 3. Park representatives also attended a meeting with the Tribal Historic Preservation Officer from the Cherokee Nation of Oklahoma in June 2017 to discuss park projects, including the Trail Plan/EA.

A draft Archeological Resource Protection Plan was submitted to state and tribal representatives for review in March 2017. A response was received from the Arkansas Historic Preservation Program on March 27, 2017 stating their concurrence with the proposed undertaking as long as the provisions in the Archeological Resource Protection Plan are followed and that the final archeological survey report is submitted to the Arkansas Historic Preservation Program for review. A response was also received from the Jena Band of The Choctaw Indians on April 11, 2017 stating their concurrence with the draft Archeological Resource Protection Plan and proposed area of potential effect. Both entities noted that they would make an official determination upon review of the final archeological survey report.

Subsequently, the NHPA Section 106 assessment of effect was submitted to the Arkansas Historic Preservation Program and tribal representatives for review on August 8, 2017. This submittal also included the final Archeological Resource Protection Plan and summaries of the NPS archeological investigations conducted in spring 2017. To date, responses have been received from the Arkansas Historic Preservation Program on August 30, 2017, as well as the Absentee Shawnee of Oklahoma, the Osage Nation, and the Caddo Nation of Oklahoma on August 31, September 12, and September 14, 2017, respectively, stating their concurrence of *No Adverse Effect on Historic Properties* with regard to the implementation of the NPS preferred alternative (alternative 3 in this EA).

Section 7 of the Endangered Species Act

Section 7 of the ESA requires federal agencies to consult with the USFWS to ensure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. The NPS submitted a letter to the USFWS on April 8, 2016 to initiate informal Section 7(c) consultation including a list of species identified as being found in Benton County, Arkansas as well as an anticipated “no effect determination” concerning the project. The NPS sent follow-up letters on September 29, 2016 and December 27, 2016 providing the USFWS with additional project information and soliciting agency feedback on the Trail Plan/EA draft alternatives. The USFWS replied via email on November 9, 2016 requesting the NPS

change their determination to a “may affect, not likely to adversely affect” determination given the potential need for tree clearing.

The USFWS sent a follow-up letter on January 25, 2017 concurring with the determination that the project “may affect, but not likely to adversely affect” the following species: gray bat, Indiana bat, northern long-eared bat, Ozark big-eared bat, piping plover, Ozark cavefish, cave crayfish, and Neosho mucket (USFWS 2017). The USFWS did not concur with the determination of “may affect, but not likely to adversely affect” for rabbitsfoot (*Quadrula cylindrica cylindrica*) on the grounds that rabbitsfoot does not occur in the project area and/or there will be no direct or indirect effects due to the absence of suitable habitat within the project footprint and areas outside the project footprint (USFWS 2017). Therefore, these species were not evaluated during the development of this EA.

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CHAPTER 6: REFERENCES

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As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under US administration.

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