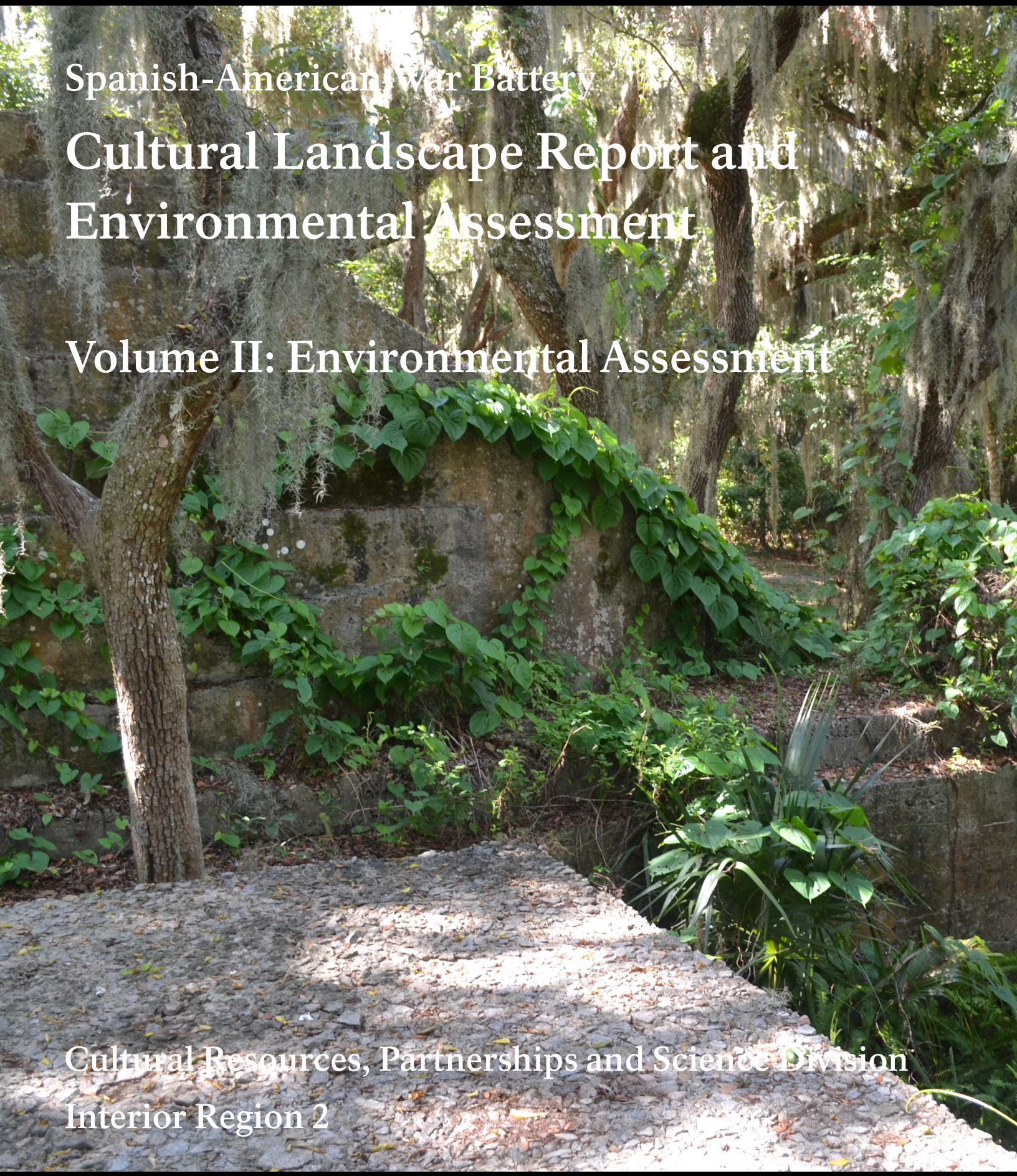
National Park Service
U.S. Department of the Interior

Timucuan Ecological and Historic Preserve
Florida



Spanish-American War Battery

Cultural Landscape Report and Environmental Assessment

Volume II: Environmental Assessment

Cultural Resources, Partnerships and Science Division
Interior Region 2

Spanish-American War Battery

Timucuan Ecological and Historic Preserve

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About the front cover: View of the Spanish-American War Battery, looking northeast, July 2019.

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Spanish-American War Battery

Timucuan Ecological and Historic Preserve

Florida

Cultural Landscape Report and Environmental Assessment

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FINDING OF NO SIGNIFICANT IMPACT

The Spanish-American War Battery lies within Timucuan Ecological and Historic Preserve (Preserve), a unit of the National Park System that protects, manages, and interprets one of the last unspoiled Atlantic coastal wetlands, including areas with cultural resources. In addition to inland waterways, wetlands, and an extensive estuarine system of salt marsh, coastal hammock, and marine and brackish waters, the 46,000-acre preserve encompasses nearly 200 archeological sites and a varied collection of historic buildings and structures and cultural landscapes associated with more than 6,000 years of human habitation in the area. The Spanish-American War Battery was part of a 2.96-acre parcel acquired for inclusion within the Preserve in 2018. Protection of the Battery is considered and identified as a top priority in the Preserve's General Management Plan (GMP).

The National Park Service (NPS) considered a series of actions in association with the treatment recommendations and design concept plan developed in the 2021 Cultural Landscape Report (CLR) for the Spanish-American War Battery. The CLR was prepared to provide park staff with a long-term vision for protecting, managing, sustaining, and interpreting the historic landscape and structure and guidance on integrating the cultural resources with the visitor experience. The NPS prepared an Environmental Assessment (EA) to identify and disclose potential impacts resulting from the implementation of a no action alternative and an action alternative for providing visitor access and associated amenities and expansion of interpretation at the Spanish-American War Battery. The EA was prepared in accordance with the National Environmental Policy Act of 1969 (NEPA; 42 United Stated Code [USC] 4321 et seq.) and its implementing regulations (40 Code of Federal Regulations [CFR] 1500-1508); the Department of the Interior NEPA regulations (43 CFR Part 46); and with NPS Director's Order 12: Conservation Planning, Environmental Impact Analysis, and Decision making (2011) and its accompanying handbook (2015). The EA meets compliance review requirements under NEPA while addressing potential impacts to natural and cultural resources anticipated to result from implementation of visitor access, infrastructure, and site management recommendations provided in the CLR.

The assessment and conclusions described in the EA resulted in the determination that no significant impacts will result from implementation of the selected action. This Finding of No Significant Impact (FONSI) describes the action alternative the NPS has selected for implementation, provides the rationale for its selection, and explains why it will not result in significant impacts. The statements and conclusion reached in this FONSI are based on the documentation and analysis provided in the EA and associated decision file. To the extent necessary, relevant sections of the EA are incorporated by reference below.

SELECTED ALTERNATIVE

Two alternatives were analyzed in detail within the EA: the no action alternative and one action alternative. The NPS selected the action alternative for implementation, which was the proposed action and preferred alternative identified in the EA. Several other design concept alternatives were identified during the development of the CLR, but they did not meet the purpose and need for the project, were not feasible, or posed potential for significant environmental impact. These alternatives were dismissed from detailed analysis in the EA.

Within the framework of the Secretary of the Interior's Standards for the Treatment of Historic Properties, the selected Alternative is based on the design concept plan presented in the CLR treatment plan. The alternative preserves significant characteristics of the historic landscape while adapting the site to meet contemporary needs and park management objectives. Several local public entities and nonprofit groups were instrumental in acquiring the Spanish-American War Battery parcel and supported its inclusion in the Timucuan Ecological

and Historic Preserve. These groups support the National Park Service goal of opening the property to the public. The alternative identifies an appropriate means to allow visitors to access the property, circulate through the site, and gain an understanding of its historical events and associations through the provision of interpretive information. The alternative carefully addresses these needs in such a way as to limit the impacts on significant cultural and natural resources.

Under the Selected Alternative the public will be allowed to enter the property during prescribed hours to experience the character of the site and to learn about the history of the Spanish-American War Battery. The property will be fenced and gated to limit access when the park is closed. A one-way road will lead a short distance into the property from Fort Caroline Road and will provide access to a small parking area composed of eight parking spaces, two of which are designed to meet ABAAS standards for accessible parking. Design of the pedestrian circulation system within the site meets ABAAS standards for accessibility except in areas near the battery structure that are limited by steep topography. A paved walk will lead into the property from Fort Caroline Road and connect to an accessible walkway located to the north of the parking spaces. The walk will provide access to an orientation space edged by interpretive panels and benches and will afford views to the battery structure. From this space, visitors may follow an accessible, elevated, and winding boardwalk up the slope through the existing trees toward the battery structure.

In addition to the canopy of existing hammock trees, the property will be maintained with a groundcover layer of native grasses augmenting or replacing the existing turf grass. Native forbs or wildflowers and ornament bunchgrasses will be included as part of a meadow planting within the open space southwest of the battery.

Within the implementation process, a preservation protocol guide for the battery as described in the CLR addresses appropriate treatment based on best practices for repair and maintenance of concrete and metal materials associated with the structure.

A clear site line will be created between the Fort Caroline Road and the battery structure for the benefit of visitors. In addition, there will be clearing and ongoing maintenance of woody vegetation that currently obscures the view toward the St. Johns River from the bluff. In order to ensure that views are fully screened to neighboring properties, a combination of perimeter fencing and vegetation screening will be provided along the property boundary.

RATIONALE FOR DECISION

The alternative selected for implementation is -Alternative B, the action and preferred alternative analyzed within the EA- because it will provide for long-term preservation of significant cultural and natural resources and rehabilitation of the site for expanded visitor services within the framework of the Secretary of the Interior's Standards for the Treatment of Historic Properties. Implementation of the selected alternative provides an appropriate means for allowing visitors to access the property, circulate through the site, and gain an understanding of the historical events and associations through the provision of interpretive information. The selected alternative carefully addresses these needs in such a way as to limit the impacts on significant cultural and natural resources. Although there will be short-term and minor adverse impacts to soils, water resources, and vegetation as a result of implementing the selected alternative, these impacts are small compared with the overall significant benefits of providing visitor access to and expanded interpretation of the Spanish-American War Battery and cultural landscape and extensive repair, maintenance and management protocols for long-term preservation of the battery structure. The selected alternative best meets the NPS goals of preserving the historic landscape and structure while adapting the site to meet contemporary needs and park management objectives.

MITIGATION MEASURES AND BEST MANAGEMENT PRACTICES (BMPs)

The selected alternative incorporates mitigation measures and best management practices to minimize the degree and/or severity of adverse effects on natural resources, historic structures, cultural landscapes, historic viewsheds, visitor use and experience, and human health and safety. The complete list of mitigation measures and BMPs are in Appendix A of this FONSI.

PUBLIC INVOLVEMENT

Public input received during scoping and civic engagement was important in the development of the no action and action alternatives. The review process helped the planning team understand the public's values and preferences regarding controlled visitor access, proximity to residential dwellings, site parking, recreational use, Architectural Barriers Act Accessibility Standard-compliant walkways, boardwalk trail alignment and surfacing, expanded interpretation, and connections of the Spanish-American War Battery to existing trails, the Timucuan Ecological and Historic Preserve Visitor Center at Fort Caroline National Memorial, and the Theodore Roosevelt Area, all located within the preserve and in close proximity to the battery site.

In support of the process of developing planning documents to guide future use of the property, the NPS invited stakeholders to attend a civic engagement meeting to learn more about the CLR project. The public was given the opportunity to provide comments and ask questions about the NPS process of developing planning decisions for the Spanish-American War Battery and its associated landscape. Given the circumstances at the time surrounding the coronavirus pandemic, the Friends of Timucuan Ecological and Historic Preserve hosted a virtual civic engagement meeting on November 12, 2020. Key project stakeholders invited to participate in the meeting included the Florida State Historic Preservation Office (SHPO) Division of Historical Resources, City of Jacksonville Parks and Recreation Department, US Fish and Wildlife Service (USFWS) North Florida Ecological Services Office, North Florida Land Trust, US Army Corps of Engineers, Jaxport, and forty-seven residents of the neighborhood surrounding the Spanish-American War Battery property. Participants were invited to comment in writing during the meeting and/or through the NPS Planning, Environment, and Public Comment (PEPC) system. The approximately one-hour meeting was recorded and made available for viewing during the entire thirty-day comment period to allow interested parties who could not attend the live event to access and understand the process laid out during the presentation.

The meeting centered on a presentation by the NPS and CLR team including a summary of the site history, landscape features and conditions, summary of the National Register of Historic Places significance of the property, and the draft conceptual plans being prepared to address NPS goals for the property pertaining to resource management and providing visitor access and interpretation. Because accommodating visitors to the Spanish-American War Battery may occur in a variety of ways and use a range of approaches with the potential to impact the property in different ways, the CLR team initially considered several options that were reviewed by park and regional NPS personnel. The options were refined through discussions that occurred during several conference calls held by the team with the NPS. The concept plan presented during the civic engagement meeting was the option considered to best meet the goals provided to the team by the NPS. Comments provided by the public during the civic engagement meeting were generally positive and supportive of the concept. No controversial comments were received, and stakeholders showed support. Comments and questions were documented in the Public Review Analysis and taken into consideration as the CLR was further developed and refined. The resulting concept plan is the Selected Action Alternative analyzed in the EA.

AGENCY CONSULTATION

Section 7 of the Endangered Species Act requires federal agencies to ensure that the actions they authorize, fund, or carry out do not jeopardize the continued existence of listed species or destroy or adversely modify critical habitat. NPS communicated and coordinated with the USFWS North Florida Field Office, as documented in the letter sent to the Project Review and Consultation Section on April 14, 2021, to begin consultation to determine if the area contains habitat suitable for threatened or endangered species. Preliminary research and investigation by park staff indicated there were no endangered species on the site or habitat suitable for endangered species. A letter of concurrence with this determination was sent to the park by the USFWS on June 30, 2021, that stated: "Your findings fulfill compliance with the Endangered Species Act of 1973, as amended (16 U.S.C. et seq.). The Service does not have any additional information for listed species at the proposed site."

On May 12, 2021, the Director of Historical Resources and State Historic Preservation Officer sent a letter of concurrence to the Superintendent of Timucuan Ecological and Historic Preserve after review of the project in accordance with Section 106 and 110 of the *National Historic Preservation Act of 1966,* as amended, and its implementing regulations in *36 CFR Part 800: Protection of Historic Properties.* The letter stated: "This office concurs with the approach to the project and with the National Park Service's determination that the proposed infrastructure outlined in the CLR would have no adverse effect to the National Register-eligible Spanish American War Battery historic property."

FINDING OF NO SIGNIFICANT IMPACT

As documented in the EA, adverse impacts on soils, vegetation, and surface water flow will occur as a result of implementing the selected alternative; however, no significant adverse impacts were identified. The NPS considered the degree of effects to resources as indicated in 40 CFR 1501.3(b)(2) and summarized below.

The EA considered both the beneficial and adverse impacts of the Selected Action Alternative. The selected action will impact resources as described in the EA. See the relevant sections cited below for more information.

The beneficial effects of the selected action include:

- Promoting comprehensive vegetation management including preservation of native species, removal and control program for invasive species, and silviculture mitigation methods, thus protecting both natural and cultural resources and guiding vegetation management well into the future (EA Section 4.3 – Vegetation).
- Preserving large canopy trees, the open landscape setting for the battery structure, and protecting and restoring of native plant communities including the meadow plantings of native grasses and forbs (EA Section 4.3 – Cultural Landscape).
- Providing a preservation protocol guide for the Spanish-American War Battery as described in the CLR, addressing appropriate treatment based on best practices for repair and maintenance of concrete and metal materials associated with the structure (EA Section 4.3 – Buildings and Structures).
- Providing opportunities for visitors to view the structure without directly accessing it by opening up expansive views of the battery without potential impacts of direct foot traffic on the structure, thus ensuring in long-term preservation of the structure and protection from human contact (EA Section 4.3 – Buildings and Structures and Visitor Use and Experience).

- Reversing the trend of continued growth of vegetation further blocking the historic viewshed, minimalizing disturbance due to clearing operations, and subsequent maintenance and management due to mitigation measures (EA Section 4.3 – Historic Viewsheds).
- Providing for public access to the site and interpreting the history of the battery structure and landscape within Timucuan Ecological and Historic Preserve and presenting the stories and themes essential to understanding the significance of the structure, site, and the ecological systems and features of the unique landscape (EA Section 4.3 – Visitor Use and Experience).
- Providing controlled visitor access to the site, thus minimizing risk of injury due to unauthorized visitor access and implementing vegetation management including removal of unhealthy trees and dead limbs thus preventing accidental injury to the public while on the boardwalk, the bluff, or in the parking area (EA Section 4.3 – Human Health and Safety).

The adverse effects of the proposed action include:

- Short-term localized surface soil disturbance due to construction of the vehicular access, parking, pedestrian circulation, and orientation space within a 7,500-square-foot section of the site, adjacent to Fort Caroline Road (EA Section 4.3 – Geology and Soils).
- Short-term localized surface soil disturbance due to clearing non-historic woodland from the viewshed atop the bluff to the north of the battery structure and providing lower growing native species or regularly cutting woody growth that impacts the view (EA Section 4.3 – Geology and Soils and Historic Viewsheds).
- Short-term localized water absorption and surface flow disruption due to ground disturbance associated with the implementation of the infrastructure within a minimalized section of the site and subsequent project staging, construction, and subsequent temporary soil compaction (EA Section 4.3 – Water Resources).
- Short-term localized disturbance to vegetation due to installation of tree protection barriers; removal of selected trees for construction of the parking, walkways and boardwalk; re-grading to restore site elevations; and planting of the new native grass and forb ground cover (EA Section 4.3 – Vegetation).

The selected action will improve visitor safety due to controlled visitor access, minimizing risk of injury due to unauthorized visitors, and vegetation management that includes removal of unhealthy trees and dead limbs, preventing accidental injury to the public while on the boardwalk, the bluff, or in the parking area. Vegetation management will also help control insect infestation or nesting, offering further long-term protection of site visitors. New infrastructure and associated visitor amenities offer the public opportunities for rest, shade, and choices for the extent of engagement with the site based on individual mobility challenges. Parking will be provided near the trail for easy access to visitor vehicles in case of emergency. Information signage will be provided to remind visitors of safety protocols while on site and directions for contacting NPS staff or emergency responders. Management and maintenance of facilities throughout the extent of the specified actions will ensure the well-being of park staff, visitors, and neighbors for many years into the future.

There are no prime farmlands or designated wilderness lands in close proximity to the geographic area. The Spanish-American War Battery is located within the southeastern portion of the 46,000-acre Timucuan Ecological and Historic Preserve, one of the remaining unspoiled Atlantic coastal wetlands and prehistoric and historic sites in the area. The eastern-northeastern margin of the Spanish-American War Battery property follows St. Johns Creek, a small tributary that connects to the St. Johns River. The St Johns River has been recognized as both an American Heritage River and as an America's Great Water. The entire Preserve provides

evidence of over 6,000 years of human habitation as well as numerous historic structures and sites including the Kingsley Plantation, home to one of the most extensive collections of tabby slave quarters in the nation, and historic sites and structures including Fort Caroline National Memorial, the Ribault Monument, the Spanish-American War Battery, and the Theodore Roosevelt Area. The Preserve is managed under the GMP by the National Park Service to ensure that both natural and cultural resources are protected. The selected alternative includes treatments for preservation and maintenance of the battery structure and for vegetation management that controls invasive species and allows native vegetation to rejuvenate and flourish.

The effects of vegetation treatments, using the treatment methods outlined in the selected alternative are known land management practices. These actions are well-documented, are not highly controversial, and are employed to meet resource objectives. The actions will preserve native species, provide removal and control programs for invasive species, and establish silviculture mitigation methods protecting both natural and cultural resources and guiding vegetation management well into the future. The actions will provide ongoing vegetation management to preserve the historic character of the historic site and improve biodiversity and ecosystem functions. The selected alternative includes management designed to be adaptive, providing options that may be needed to adjust management decisions and actions to meet desired future conditions as determined through monitoring. Management can then emphasize informing actions during implementation. The management principles will be used to ensure treatments are meeting objectives and minimizing adverse impacts over the course of project implementation, while also considering other factors (such as drought and climate change) in the success of treatments and any adjustments in treatment methods that may be needed for future treatments to ensure success. Any future projects outside the scope of the EA analysis will be analyzed on their own merits, independent of the actions currently selected.

The selected alternative was evaluated in the context of past, present, and reasonably foreseeable actions. Significant effects are not predicted. Any adverse impacts identified, in conjunction with any adverse impacts of other past, present, or reasonably foreseeable future actions will not result in adverse impacts to natural and cultural resources. A disclosure of the effects of the action combined with future operations, management strategies, mitigation measures, and the potential project for the expansion of Fort Caroline Road is contained in Chapter 4 of the EA.

Implementation of the selected alternative and associated mitigation measures will have direct, beneficial, and long-term impacts to archeology, the cultural landscape, and the battery structure. Archeological resources are protected due to previous investigation of the area planned for construction, and preservation management of the integrity of archeological resources including treatment protocols in the event of discovery of any previously unknown resources. The cultural landscape is protected and enhanced due to preservation of large canopy trees, the open landscape setting for the battery structure, and protection and restoration of native plant communities including the meadow plantings of native grasses and forbs. The historic battery structure is preserved and maintained due to development of a preservation protocol guide addressing treatment for the battery based on best practices for repair and maintenance of concrete and metal materials associated with the structure. The battery will be maintained free of vegetation.

On May 12, 2021, the Director of Historical Resources and State Historic Preservation Officer sent a letter of concurrence to the Superintendent of Timucuan Ecological and Historic Preserve after review of the project in accordance with Section 106 and 110 of the *National Historic Preservation Act of 1966,* as amended, and its implementing regulations in *36 CFR Part 800: Protection of Historic Properties.* The letter stated: "This office concurs with the approach to the project and with the National Park Service's determination that the proposed infrastructure outlined in the CLR would have no adverse effect to the National Register-eligible Spanish American War Battery historic property."

All improvements will be designed in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties,* reducing the potential for adverse impacts on the historic setting. No known archeological sites will be disturbed. There are no adverse effects on historic districts, cultural sites, highways, structures, or contributing features listed in or eligible for listing in the National Register of Historic Places from implementation of the selected action. The action does not cause loss or destruction of significant scientific, cultural, or historic resources.

The NPS communicated and coordinated with the USFWS North Florida Field Office as documented in the letter sent to the Project Review and Consultation Section on April 14, 2021, to begin consultation to determine if the area contains habitat suitable for threatened or endangered species. Preliminary research and investigation by park staff indicated there were no endangered species on the site or habitat suitable for endangered species. A letter of concurrence with this determination was sent to the park on June 30, 2021, that stated: "Your findings fulfill compliance with the Endangered Species Act of 1973, as amended (16 U.S.C. et seq.). The Service does not have any additional information for listed species at the proposed site."

CONCLUSION

As described above, the selected alternative does not constitute an action meeting the criteria that normally requires preparation of an Environmental Impact Statement (EIS). The selected alternative will not have a significant effect on the human environment in accordance with Section 102(2)(c) of NEPA. Based on the foregoing, it has been determined that an EIS is not required for this project and, thus, will not be prepared.

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APPENDIX A: MITIGATION MEASURES AND BEST MANAGEMENT PRACTICES (BMPs) FOR THE SELECTED ACTION ALTERNATIVE

This section considers the mitigation measures and best management practices (BMPs) associated with the Selected Action Alternative intended to protect natural and cultural resources and the quality of the visitor experience. Within the design development and construction document phases of implementation, the NPS will establish an agreed upon number of pre-construction meetings with the contractor and all sub-contractors in order to ensure that protective measures for the site are in place and methods of construction for maximum protection of natural and cultural resources are utilized. The NPS will also conduct daily monitoring throughout the construction process to ensure that protective measures are properly implemented and achieving their intended results.

The observable and anticipated future effects of climate change on landscape conditions is a substantial factor that affects park ecosystems, resources, infrastructure, and visitor experiences. Management and mitigation related to the selected action would encompass potential effects from a changing climate in order to protect park resources.

The information that follows details monitoring and management guidelines and mitigation measures for impact topics retained for analysis. It is intended that any past and ongoing monitoring and mitigation measures including NPS control of site access, maintenance of vegetation, and removal of trash and debris from the site be continued upon implementation and supplemented by the monitoring guidelines and mitigation measures indicated below.

Natural Resources

General

- Develop multi-step and multi-scale (species, communities, ecosystems, and key ecosystem processes) prioritization to efficiently allocate limited resources to address climate-related risks. All prioritization relies on best available science but must also consider legal mandates, stakeholder values, and other non-scientific attributes.
- Adapt strategies and actions aimed at reducing climate-related risks and enable the park to meet its management goals for the Spanish-American War Battery and landscape.
- Integrate the programs for natural and cultural resource management to address climate change vulnerabilities when treating the historic landscape and the Spanish-American War Battery structure.

Soils and Geology

- Minimize soil excavation, erosion, and offsite soil migration during ground disturbance due to clearing and grading for the construction of the vehicular access, parking, pedestrian circulation, and orientation space within a 7,500-square-foot section of the site adjacent to Fort Caroline Road. Implement best management practices (BMPs) for drainage and sediment erosion control including planted swales and bio-retention areas, as well as use of straw mulch for soil stabilization and silt fencing for temporary sediment control.
- Implement similar BMPs for drainage and sediment erosion control at the temporary staging areas to prevent or reduce non-point source runoff and minimize soil loss. Consider the information available in the *Florida Department of Environment Protection Statewide Best Management Practice (BMP) Efficiencies*

for Nonpoint Source Management of Surface Waters (July 2020) in developing additional green BMPs for staging areas.

- Minimize the use of heavy vehicles and equipment; use low tire-pressure vehicles; protect the ground from compaction using plywood or other protective material; and avoid accessing the site when the soil is wet to reduce the potential for ruts and compaction.
- Inspect regularly and clear erosion control structures as needed to ensure efficacy. Remove temporary erosion control structures only after staging areas are no longer needed and the associated landscape is fully restored.
- Use biodegradable matting with a large-diameter natural fiber when employing erosion control netting to prevent entrapment of wildlife.

Water Resources

- Adopt a range of engineering and landscape architectural BMPs that will serve to enhance water quality without affecting the integrity of the historic landscape. These BMPs include:
    - Use of porous, pervious, or permeable pavement for the new parking facilities associated with implementation of the project to enhance drainage of paved surfaces. This type of pavement is composed of a permeable or perforated surfacing material, or pavers set with spaces between them, that allow transmission of water to an aggregate or subsoil base beneath. Runoff is temporarily stored in the base for infiltration into subsoils or for slow release into a storm drain system or catchment.
    - Planting of trees around paved areas will reduce the heat island effect caused by solar absorption and reflection.
    - Development of a rain garden, or planted bioretention area, integrated into the parking lot located downhill from the sloping topography of the site, will both capture and cleanse stormwater before it infiltrates into the ground.
    - Use of vegetated swales and filter strips will convey, retain, infiltrate, and cleanse overland flow serves to remove sediment, nutrients and other contaminants, increase infiltration, and enhance aesthetics. Vegetated swales will be used along the margins of the proposed paved road and walkway features.
    - Due to the importance of vegetation in biodiversity, aesthetics, habitat, cooling of ambient air, and storm water management, native landscaping will be utilized on site as a BMP. Native landscapes benefit stormwater management through the infiltration and cleansing of run-off. Native species will be used for new plantings on the site associated with the parking area, screen plantings, and treatment of the ground plane south of the battery.
- Delineation of the location and design of the drainage features will be accomplished throughout the implementation process for the selected action. Soil survey maps, topographic maps, aerial photographs, and field inspection will guide decisions for potential location of drainage features. Drainage features will be designed to allow for a minimum of disturbance of the natural drainage patterns while sufficiently draining surface and subsurface water away from the site and dissipating it in a way that prevents excessive collection of water in unstable areas.

Vegetation

- Minimize soil disturbance whenever possible to reduce the potential for erosion and the introduction or spread of non-native invasive plants.
- Inventory invasive vegetation both on-site and in the adjacent area before initiating any ground-disturbing activity in support of monitoring.
- Establish areas for staging, parking, and cleaning equipment during construction that are not already infested with invasive plant species. Avoid or minimize construction vehicle or equipment access to areas infested with invasive plants, especially during periods when spread of seed or propagules are likely. Once invasives have been cleared, potential staging areas will be delineated in the most unobtrusive locations possible, away from site perimeters. Off-site staging locations will be considered if feasible.
- Consider the value of retaining a closed tree canopy as a measure to suppress the growth of invasive plants.
- Quarantine soil from infested areas to prevent off-site spread.
- Revegetate disturbed soils in a manner that optimizes native plant establishment.
- Monitor all revegetation efforts regularly and evaluate the results to determine the need for additional intervention in terms of seeding, planting, fertilization, and/or mulching.
- Evaluate existing topsoil in and around any unpaved staging area for non-native invasive plant infestations.
- Establish protocols for NPS inspection of vehicles and equipment prior to entry into the property or active staging areas for evidence of invasive plant material.
- Follow BMPs for tree care and removal to protect environmental resources.
- Avoid clearing woodland in areas with slopes that are steeper than 15 percent, and on soils that are classified as highly erodible. Invasive species removal is the exception and should be undertaken as possible.
- Avoid clearing or thinning vegetation within sensitive ecological areas and plant communities. Delineate wetlands prior to conducting any clearing.
- Provide temporary barriers to protect existing trees and shrubs that are identified to be retained, particularly when planning for construction of the elevated boardwalk and clearing the viewshed from the bluff to the St. Johns River.
- Conduct viewshed clearing in phases to ensure that the minimum amount of vegetation possible is removed to meet interpretive needs.

Cultural Resources

- Comply with the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 Federal Register 44716, revised) when conducting all projects that might impact known or potential archeological resources.
- Minimize any contact with the surface of the battery structure during construction of the boardwalk and observation platforms. Follow guidance afforded from NPS Technical Preservation Services, Technical Brief 14: *New Exterior Additions Related to Historic Buildings or Structures*.

- Employ silvicultural methods that minimize the impacts and threats to cultural and natural resources and known and potential archeological resources. To improve the health and productivity of the large trees on the site and protect cultural resources, silvicultural mitigation methods will include removal of a portion of the trees in the early stages (ten to fifteen years) so there is less competition for sunlight, water, and nutrients. The remaining trees will grow faster, stronger, and larger. This diminishes the threat of limb or tree damage to the Spanish-American War Battery structure and to visitor walkways and orientation space. The thinning will also improve the growth of the proposed understory such as native grasses and forbs by increasing the amount of sunlight that reaches the floor of the site, thus protecting and stabilizing the soil throughout the site.

Visitor Use and Experience

- Provide educational and interpretive information to the public during the establishment of viewsheds that require clearing to convey the historic associations of the Spanish-American War Battery with military coastal defense and the battery's command of the St. Johns River.
- Interpret any natural resource benefits associated with viewshed clearing, such as habitat enhancement.
- Continue to monitor areas used by visitors for signs of vegetation community disturbance, trampling, erosion, and the development of social trails.
- Meet Leadership in Energy and Environmental Design (LEED) standards when constructing new amenities to demonstrate NPS commitment to protect natural and cultural resources for future generations.

Human Health and Safety

- Monitor incidences of human and wildlife interactions.
- Monitor proposed screen plantings along the boundary of the property and manage growth inside the fence line with proper pruning and associated maintenance.
- Continue the ongoing and required measures already in place that ensure visitor safety when implementing the selected action. These measures include controlled access to the site area; vegetation management and removal of debris from the site; signage to inform visitors that the site is closed for construction; illustrative signage to inform visitors of new site amenities that will be available; and communications on the park website to inform and warn visitors of potential severe summer storms, hurricanes, flooding, heat and humidity, and the presence of biting insects and reptiles.

APPENDIX B: NON-IMPAIRMENT DETERMINATION

TIMUCUAN ECOLOGICAL AND HISTORIC PRESERVE / SPANISH-AMERICAN WAR BATTERY DECEMBER 2021

By enacting the National Park Service (NPS) Organic Act of 1916 (Organic Act), Congress directed the US Department of Interior and the NPS to manage units "to conserve the scenery and the natural and historic objects and wildlife therein and to provide for the enjoyment of the same in such a manner and by such a means as will leave them unimpaired for the enjoyment of future generations" (54 USC 100101). Congress reiterated this mandate in the Redwood National Park Expansion Act of 1978 by stating that the NPS must conduct its actions in a manner that will ensure no "derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress" (54 USC 100101).

NPS *Management Policies 2006,* Section 1.4.4, explains the prohibition on impairment of park resources and values:

> While Congress has given the Service the management discretion to allow impacts within parks, that discretion is limited by the statutory requirement (generally enforceable by the federal courts) that the Park Service must leave park resources and values unimpaired unless a particular law directly and specifically provides otherwise. This, the cornerstone of the Organic Act, establishes the primary responsibility of the National Park Service. It ensures that park resources and values will will continue to exist in a condition that will allow the American people to have present and future opportunities for enjoyment of them.

IMPAIRMENT DETERMINATION

The NPS has determined that preserving significant characteristics of the historic Spanish-American War Battery cultural landscape while adapting the site to allow visitors to access the property and circulate through the site, and to meet contemporary needs and park management objectives, will not result in impairment of the park resources and values. This determination on impairment has been prepared for the selected action alternative described in the Finding of No Significant Impact (FONSI). An impairment determination is made for the following resource topics: geology and soils, water resources, vegetation, federal species of concern and habitat, archeological resources, cultural landscape, historic viewsheds, and historic buildings and structures. These natural and cultural resources are considered fundamental to the Timucuan Ecological and Historic Preserve (Preserve) and the Spanish-American War Battery site. An impairment determination is not made for visitor use and experience or health and human safety because these impact areas are not generally considered to be park resources or values according to the Organic Act and cannot be impaired in the same way that an action can impair park resources and values.

Geology and Soils

Potential short-term adverse impacts on soils within the selected alternative are associated with the earthwork and grading necessary to clear the site and for construction of the circulation infrastructure. Ground disturbance for the construction of the vehicular access, parking, pedestrian circulation, and orientation space will be within a 7,500-square-foot section of the site, adjacent to Fort Caroline Road. Soils will be disturbed within a localized area of the battery site and are susceptible to short-term impacts due to compaction, erosion and migration, and contamination during staging and construction. Long-

term impacts will be avoided through construction methods and materials detailed in the construction drawings and specifications for the implementation of the alternative and mitigation measures during construction. Cut and fill amounts will be balanced to the extent possible to minimize the need to import or export soils during construction and to avoid short and long-term impacts. The elevated boardwalk will be designed to limit the impact of the structure on the historic topography of the site and any ground disturbance that might impact soils and archeological resources. A foundation system for sensitive soils, difficult terrain, or where a high-water table prevents access or pouring of footings will be implemented as necessary.

Mitigation measures associated with short-term impacts to soils will include BMPs for drainage and sediment erosion control. BMPs will include planted swales and bio-retention areas and use of straw mulch for soil stabilization and silt fencing for temporary sediment control. Similar BMPs for drainage and sediment erosion control at the temporary staging areas will be implemented to prevent or reduce non-point source runoff and minimize soil loss. Because BMPs will be used to minimize impacts to the maximum extent and ground disturbance will be minimized to the extent possible, the adverse impacts to soils and geology will be localized and short-term and will not diminish the Preserve's purpose of preserving and interpreting the natural and cultural history of the Spanish-American War Battery and landscape, and therefore will not result in impairment of geology and soils.

Water Resources

Specific actions resulting from the implementation of the selected alternative include ground disturbance for the construction of the vehicular access, parking, pedestrian circulation and orientation space within a 7,500-square-foot section of the site adjacent to Fort Caroline Road. These actions will have a short-term adverse impact on water resources, including surface water drainage due to project staging and construction and associated temporary soil compaction. Implementation of mitigation measures is essential in this phase of the project to prevent long-term adverse impacts and additional costs for clean-up and potential replacement of washed-out soils. Mitigation measures associated with BMPs for stormwater runoff will be implemented and include use of porous pavements, filter strips, and naturalized detention structures such as rain gardens. A rain garden or planted bioretention area, integrated into the parking lot, which is located downhill from the sloping topography of the site will help to both capture and cleanse stormwater before it infiltrates into the ground. There will be no disturbance on or near wetlands, estuarine marsh, or the waterways, including the St. Johns Creek, St. Johns River, and the drainageway arising from the bluff and emptying into the creek at the northeastern corner of the property. The short-term adverse impacts on water resources will not diminish the Preserve's purpose of preserving and interpreting the natural and cultural history of the Spanish-American War battery and landscape. Because the impacts are localized, short-term and adverse and mitigation measures will be used to minimize impacts due to stormwater runoff, there will be no disturbance on or near wetlands, estuarine marsh, or the waterways and the selected alternative will not result in impairment to the water resources associated with the Spanish-American War Battery site and its landscape context.

Vegetation

Specific actions resulting from the implementation of the selected alternative and associated with vegetation include selected tree removal and clearing of understory plantings and invasive species for construction of an access drive, vehicular parking, pedestrian walkways, and a raised boardwalk. There are fourteen trees that will potentially be removed to accommodate the infrastructure of the selected alternative. Tree and stump removal techniques will be used to minimize ground disturbance and protect surrounding vegetation. Alignments of pedestrian walks and the elevated boardwalk will be verified in the

field before construction to ensure minimal removal of trees and protection of trees adjacent to new construction. Use of pile supports for the elevated boardwalk will have minimal impact on surrounding vegetation. The selected alternative will have short-term adverse impacts on vegetation due to installation of tree protection barriers; removal of selected trees for construction of the parking, walkways, and boardwalk; and re-grading to restore site elevations and introduction of the new native grass and forb ground cover. Implementation of mitigation measures and a vegetation management plan implemented as part of the selected alternative will minimize the short-term impacts and restore the landscape once construction is complete.

Impacts on vegetation with the implementation of the selected alternative will primarily be beneficial and long-term. Recommendations within the selected alternative for comprehensive vegetation management including preservation of native species, removal and control program for invasive species, and silviculture mitigation methods will protect both natural and cultural resources and guide vegetation management well into the future. Protection and ongoing vegetation management on the site is imperative to preserve the character of the historic site defined by the large live oaks with hanging moss and the spatial organization between open space and closed shady areas. Long-term beneficial effects will result from comprehensive vegetation management, which is not currently occurring. There will be short-term adverse impacts on vegetation due to tree removal and management of grasses and ground cover; however, the removal of vegetation would occur on a small portion of the site and the overall impact, when considering mitigation measures and vegetation management, will not diminish the Preserve's purpose of preserving and interpreting the natural and cultural history of the Spanish-American War Battery and landscape and will not result in impairment of vegetation.

Federal Species of Concern and their Habitat

Specific actions resulting from the implementation of the selected alternative will have no direct impacts on federal species of concern or their habitats, as none were determined to be located at the Spanish-American War Battery and its associated cultural landscape. NPS staff will continue to monitor the site during and after construction and consult with the US Fish and Wildlife Service (USFWS) to ensure the status of critical habitat and species of concern within the project site in the future. Because protected species are not present on the site, the selected alternative will not result in impairment of federal species of concern and their habitats.

Archeological Resources

During previous archeological field surveys, no archeological sites were found that represent a potentially significant cultural resource worthy of inclusion in the National Register of Historic Places. Implementation of the proposed actions in the selected alternative will have no adverse impacts on archeological resources within the landscape associated with Spanish-American War Battery due to previous investigation of the area planned for construction and preservation management of the integrity of archeological resources, including development of treatment protocols in the event of discovery of any previously unknown resources. If previously unknown archeological resources are discovered during earth-moving, grading or installation of piles to support the proposed boardwalk the NPS will suspend operations at the site and immediately contact the appropriate NPS archeologist or cultural resource specialist, who will arrange for a determination of eligibility in consultation with the Florida Department of State, Division of Historical Resources and State Historic Preservation Officer and, if necessary, will develop a recovery plan. Because previous surveys have not identified archeological sites and measures have been put into place to protect any inadvertent findings, the selected alternative will not result in impairment of archeological resources.

Historic Buildings and Structures

Potential adverse impacts associated with implementation of the selected alternative are associated with construction methods or materials used in and around the battery structure for the elevated boardwalk and viewing platforms at the base of the structure and on top of the bluff. Design development of the infrastructure will minimize any contact with the surface of the battery during construction of circulation features. Design drawings and specifications will adhere to construction techniques presented in NPS *Preservation Brief 14: New Exterior Additions Related to Historic Buildings or Structures*. The design will also be required to meet Leadership in Energy and Environmental Design (LEED) standards for construction of new amenities to demonstrate NPS commitment to protect natural and cultural resources for future generations. Within this context, adverse impacts to the structure will be avoided.

Implementation of mitigation measures associated with vegetation management will be necessary to avoid adverse impacts to the battery structure and assist in the long-term preservation of the structure. These measures include removal and eradication of vegetation growing on or within the structure, management of nearby trees to prevent damage from falling limbs, and removal of invasive species with continued management and maintenance. Development of specific planning documents including a Historic Structure Report with treatment recommendations, as well as a stabilization and repair plan and preservation protocols based on best management practices, will ensure future maintenance and repair of the battery in accordance with the Secretary of the Interior's Standards for Preservation. Impacts associated with implementation of the selected alternative when combined with future operations, management strategies, and expanded interpretation of the battery and its associated landscape will be long-term and beneficial to the battery structure. Because the purpose of the project is to preserve and interpret the natural and cultural history of the Spanish-American War Battery and landscape, and the site will be preserved under the selected alternative, including implementation of mitigation measures for vegetation management, there will not be an impairment of the historic Spanish-American War Battery as a result of implementing the selected alternative.

Cultural Landscape

Specific actions resulting from the implementation of the selected alternative will retain and enhance the characteristics and features of the cultural landscape. The historically important view from the top of the bluff to the St. Johns River will be established through clearing of prescribed vegetation on the bluff slope. This clearing will have a direct and beneficial impact on the cultural landscape due to removal of selected limbs, understory, and invasive species, thereby restoring the historic cultural landscape that contains the viewshed. Potential adverse impacts to the landform topography will be minimized due to the limited area of construction and a detailed grading plan to restore original elevations. The proposed curvilinear alignment of the elevated boardwalk will preserve large canopy trees and thus the overall character of the cultural landscape. The open landscape allowing views to the battery from the new walkways and nodes will be preserved and enhanced with low meadow plantings. The setting of the battery structure will be preserved and enhanced by keeping the accessible boardwalk within the trees and out of the viewshed to the battery. These actions implemented in the selected alternative will have direct and long-term beneficial impacts on the cultural landscape due to preservation of large canopy trees and the open landscape setting for the battery structure, and protection and restoration of native plant communities including the meadow plantings of native grasses and forbs, and therefore will not result in impairment of the Spanish-American War Battery cultural landscape.

Historic Viewsheds

Specific actions resulting from the implementation of the selected alternative and associated with the historic viewsheds include clearing non-historic woodland from the viewshed atop the bluff to the north of the battery structure and maintaining the area in lower growing native species, or regularly cutting woody growth that impacts the view. The NPS will identify an appropriate approach for conducting clearing efforts and any recommended thinning and vista establishment. Native shrub and fibrous rooted grass species will be planted to stabilize the bluff and control erosion. Other mitigation measures pertaining to removal of vegetation, soil stabilization, and control of invasive species will be utilized. Implementation of the selected alternative will have direct and beneficial impacts on the historic viewshed and reverse the trend of continued growth of vegetation further blocking the view. Because the overall actions will help to reestablish the historic viewshed and disturbances due to clearing operations and subsequent maintenance and management will be minimalized with implementation of mitigation measures, implementation of the selected alternative will not result in impairment of historic viewsheds within the Spanish-American War Battery site and its greater landscape context.

Summary

The NPS has determined that the implementation of the NPS selected alternative for the Spanish-American War Battery site will not constitute an impairment of the resources or values of the Timucuan Ecological and Historic Preserve. As described above, implementing the selected alternative is not anticipated to impair resources or values that are essential to the purposes identified in the establishing legislation of the Preserve, key to the natural or cultural integrity of the Preserve, or identified as significant in the Preserve's relevant planning documents. This conclusion is based on consideration of the Preserve's purpose and significance, a thorough analysis of the environmental impacts described in the Environmental Assessment, the comments provided by the public and others, and the professional judgment of the decision-maker guided by the direction of the NPS *Management Policies 2006*.

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1-1 View of the Spanish-American War Battery, looking northwest.

1-2 There is currently no public access to the battery site. The gate at Fort Caroline Road remains locked but is opened by staff for periodic monitoring and maintenance of the site.

1-3 The battery structure has condition issues and is susceptible to damage from overgrown and invasive plants and other environmental factors.

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3-1 Layered woodland on the site with canopy and understory trees, shrubs, vines, and grass, looking toward the battery from Fort Caroline Road.

3-2 Woodland species include live oak, magnolia, and southern hackberry with oak saplings in the understory and shrub layer, looking from the battery toward Fort Caroline Road.

3-3 Vines and ferns are abundant throughout the landscape, along property boundaries, and within the battery area and structure.

3-4 Abundant and varied plant material at a boundary fence with view into the site and to the battery.

3-5 Air potato vine, an invasive species, has colonized much of the site along the boundaries and covers many of the trees that have fallen in place.

3-6 Native and invasive species growing in abundance at the northeast boundary of the site, adjacent to a private residential property.

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3-9 Concrete wall of the battery exhibits cracking, spalling, and plant growth within the concrete.

3-10 Current condition of concrete walls, steps, and gun emplacement with evidence of cracking, spalling, and moisture.

3-11 Gun emplacement structure exhibits cracking, spalling, and moisture.

3-12 Field assessment conducted by the project team to document the battery and its existing conditions.

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3-15 View from the battery structure to Fort Caroline Road.

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3-18 NPS staff and CLR/EA project team on a tour of the Ribault Monument.

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Chapter 1 – Purpose of and Need for Action



FIGURE 1-1. View of the Spanish-American War Battery, looking northwest. (Source: NPS Archives)

1.1 Introduction

The Spanish-American War Battery is located on St. Johns Bluff on the south side of the St. Johns River. The river was recognized for its strategic military and economic value by American Indian groups and later by European and American explorers and settlers. St. Johns Bluff has been the site of five fortifications over a period spanning more than three centuries, beginning in 1564 with Fort Caroline, associated with a short-lived French occupation of northeast Florida. The permanent concrete gun emplacement that survives today was constructed by the United States government in 1898 during the Spanish-American War. Overlooking the river, the structure represents the last defensive work built on the bluff. The battery, which consists of two concrete gun emplacements and a munitions magazine, was built to emplace two 8-inch breach-loading rifles to protect Jacksonville, Florida, from naval attack along the river. The concrete battery survives in relatively good condition and continues to convey its historic associations with military coastal defense strategy related to the position's commanding views of the St. Johns River. The key view from the bluff today is partially obscured by woody vegetation.

The battery lies within Timucuan Ecological and Historic Preserve, a unit of the National Park System that protects, manages, and interprets one of the last unspoiled Atlantic coastal wetlands, including areas with cultural resources. In addition to inland waterways, wetlands, and an extensive estuarine system of salt marsh, coastal hammock, and marine and brackish waters, the 46,000-acre preserve encompasses nearly 200 archeological sites and a varied collection of historic buildings and structures and cultural landscapes associated with more than 6,000 years of human habitation in the area. Protection of the Spanish-American War Battery is considered and identified as a top priority in the preserve's General Management Plan (GMP).

The National Park Service (NPS) is considering a series of actions in association with the treatment recommendations and design concept plan developed in the 2021 Cultural Landscape Report (CLR) for the Spanish-American War Battery as part of a 2.96-acre parcel acquired for inclusion within the preserve in 2018. The CLR was prepared to provide park staff with a long-term vision for protecting, managing, sustaining, and interpreting the historic landscape and structure and guidance on integrating the cultural resources with the visitor experience. The purpose of preparing the Environmental Assessment (EA) is to identify and disclose potential impacts resulting from the implementation of a no action alternative and an action alternative (design concept plan) for providing visitor access and associated amenities and expansion of interpretation at the Spanish-American War Battery. The EA meets compliance review requirements under the National Environmental Policy Act (NEPA) while addressing any and all potential impacts to natural and cultural resources anticipated to result from implementation of visitor access and site management recommendations provided in the CLR.

1.2 Purpose of and Need for Action

The purpose of the proposed action is to preserve the Spanish-American War Battery and associated cultural landscape while guiding rehabilitation for enhancing the visitor experience and enjoyment of the site. This would be accomplished through:

- Integration of interpretation within the cultural landscape;
- Development of Architectural Barriers Act Accessibility Standard (ABAAS)-compliant walkways, boardwalk, and waysides for expanded interpretive experiences for all visitors in coordination with the enhanced stewardship of the site's significant cultural and natural resources; and
- Restoration of the historic viewshed from the bluff to promote a stronger understanding of the significance of the battery and its location overlooking the St. Johns River.

The project is needed to address key issues including the following:

- Battery preservation and accessibility to visitors
- Management and maintenance of natural resources and cultural resources
- Viewshed restoration and management
- Site accessibility by the public, including controlled entrance access and compliance with ABAAS once visitors are on the site
- Pedestrian and vehicular circulation to accommodate visitors
- Vehicular parking
- Visitor amenities including orientation areas, raised overlooks, landings, walkways, waysides, benches, and signs
- Interpretive signage integrated with the cultural landscape

- Privacy screening from adjacent residential properties
- Protocols to ensure visitor safety while on the site
- Management and maintenance protocols for the battery structure
- Development of an operationally efficient site
- Potential connections to city and regional trail systems



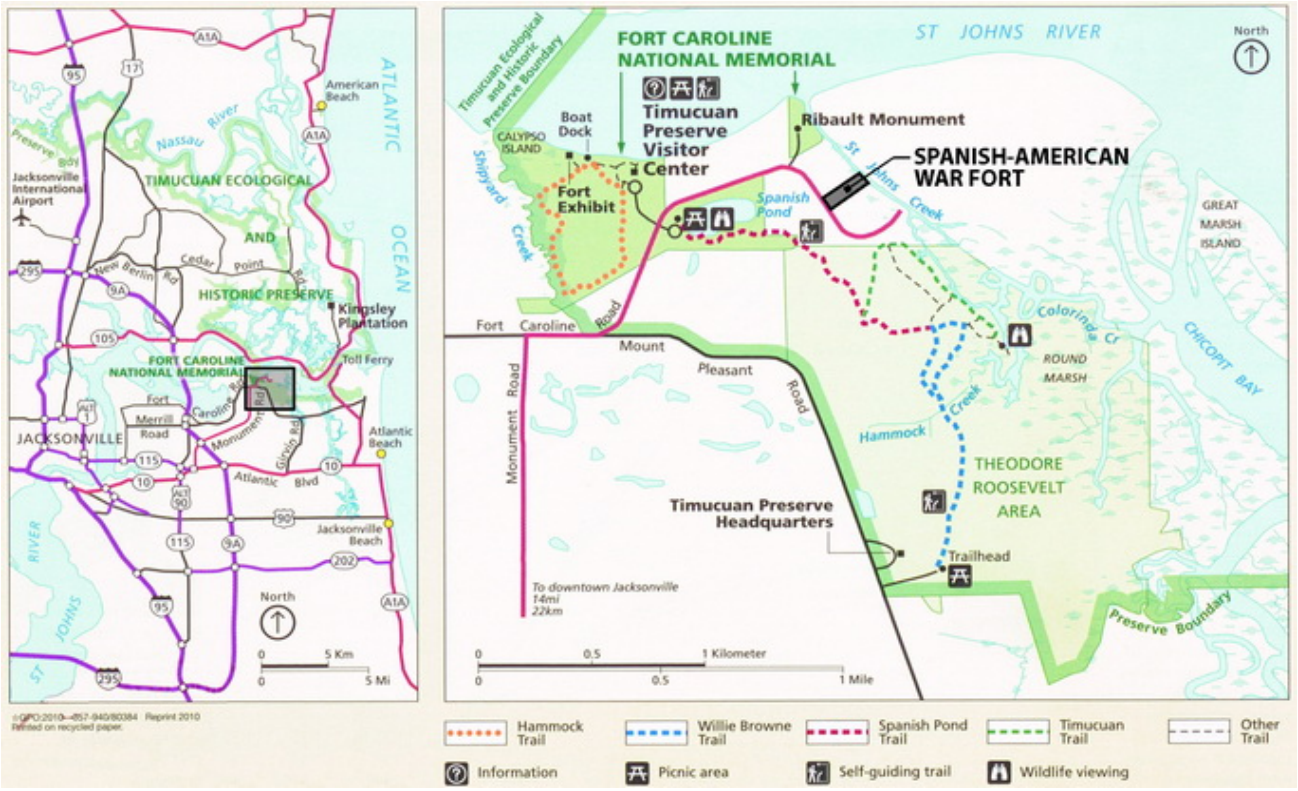
FIGURE 1-2. There is currently no public access to the battery site. The gate at Fort Caroline Road remains locked but is opened by staff for periodic monitoring and maintenance of the site.



FIGURE 1-3. The battery structure has some concrete deterioration and is susceptible to damage from overgrown and invasive plants and other environmental factors.

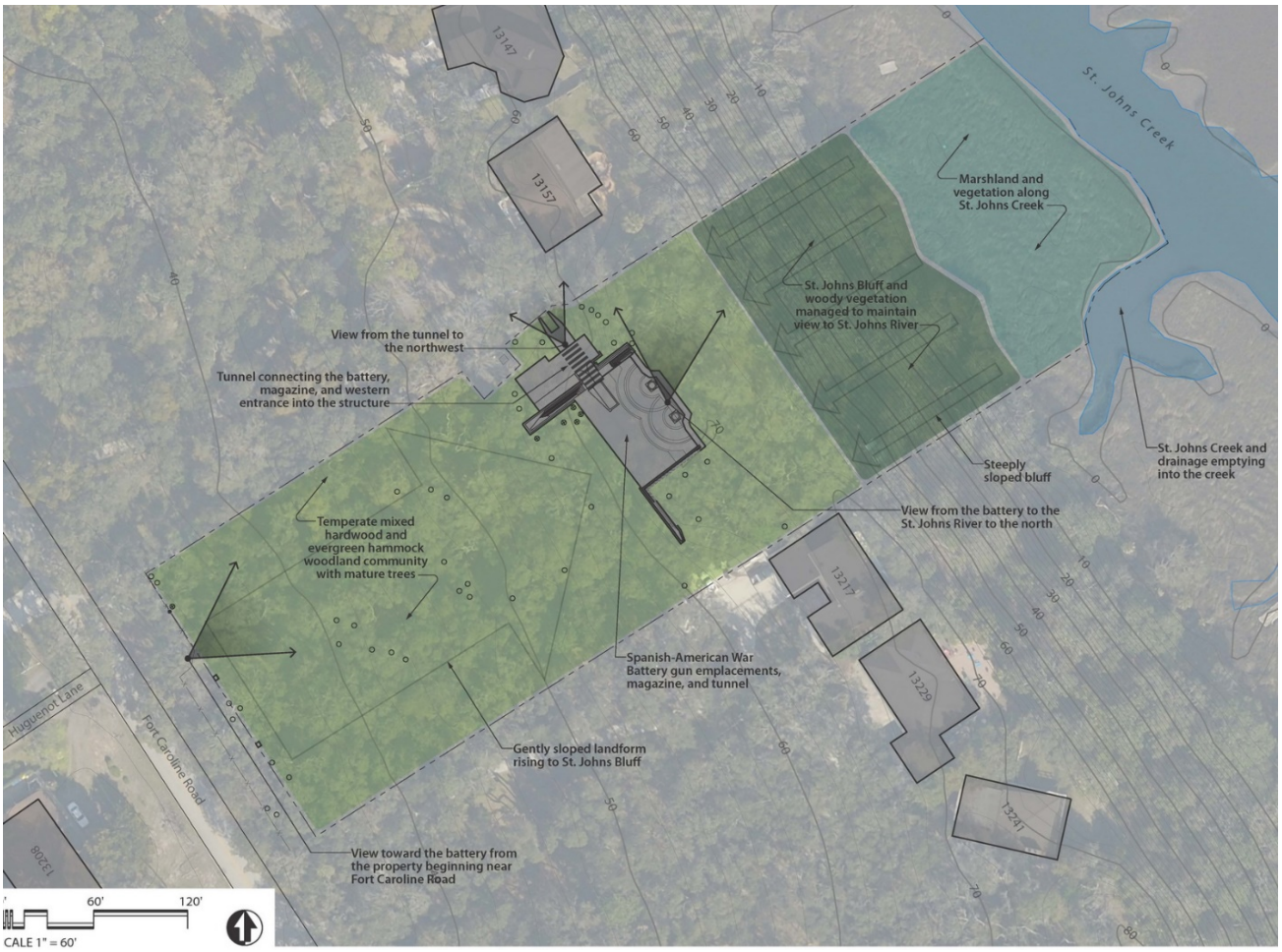
1.3 Site Context and Boundary

The Spanish-American War Battery site is located within the southeastern portion of the Timucuan Ecological and Historic Preserve. Northwest of the project site is the Timucuan Preserve Visitor Center, located at Fort Caroline National Memorial. South of the site is the 600-acre Theodore Roosevelt Area. The project site occupies approximately 2.96 acres in a residential subdivision located within Duval County, Florida.



MAP 1-1. Map of Timucuan Ecological and Historic Preserve. (Source: National Park Service, available online at https://www.nps.gov/timu/planyourvisit/maps.htm, annotated by CLR/EA team to show the Spanish-American War Battery within the context of the Preserve and within the context of Fort Caroline National Memorial and the Theodore Roosevelt Area.)

The Spanish-American War Battery property is rectangular in plan and extends in a northeast-southwest direction between Fort Caroline Road and St. Johns Creek. The east-northeastern margin of the property is irregular where it follows St. Johns Creek and a small tributary. The property is 200 feet wide and 518.06 feet long. It is composed of Lots 33 and 34 of the St. Johns Bluff Estates, a residential neighborhood subdivided in 1945. The Spanish-American War Battery occupies an undeveloped parcel within a residential neighborhood where property affording views of the river is desirable.



MAP 1-2. Existing conditions at the Spanish-American War Battery.

1.4 Issue and Impact Topics

Impact Topics Retained for Analysis

Impact topics address the resources of concern that may be affected by the alternatives reviewed in the EA. Impact topics were identified to ensure that alternative comparisons were based on the most relevant issues. Impact topics are derived from issues raised during scoping and from NPS guidelines concerning topics that should be taken under consideration when conducting NEPA analysis.

The impact topics carried forward for analysis are related to the following resources and values: soils and geology; water resources; vegetation; federal species of concern and their habitat (terrestrial); archeological resources; cultural landscapes; buildings and structures; viewsheds; visitor use and experience and health and human safety. A brief rationale for the selection of each impact topic is provided and each impact topic is discussed in detail in the Affected Environment and Environmental Consequences sections of this document.

Natural Resources

Geology and Soils

The NPS actively seeks to understand and preserve the soil resources within Timucuan Ecological and Historic Preserve and to prevent, to the extent possible, the erosion and physical removal or contamination of the soil or its contamination of other resources. There is potential for soil disturbances from the implementation of an action alternative. Therefore, this topic was retained for further analysis.

Water Resources

NPS policies require protection of water resources consistent with the federal Clean Water Act. Timucuan Ecological and Historic Preserve includes the seaward confluence of the Nassau and St. Johns Rivers, which forms an extensive estuarine system of predominately salt marsh, coastal hammock, and marine and brackish waters. The US Fish and Wildlife Service (USFWS) has classified the majority of the preserve as an estuarine, intertidal wetland with persistent, emergent vegetation. The migration of soils from the slope and bluff into the marsh and river could impact those water resources. The watershed hydrology may also be affected, as well as stormwater runoff and drainage on or near the Spanish-American War Battery property and neighboring residential properties. Therefore, this topic was retained for further analysis.

Vegetation

There is potential disturbance to vegetation, and further introduction of invasive species is possible due to interventions proposed in the alternatives. The Spanish-American War Battery site, including the landscape from Fort Caroline Road to the battery structure, the apex of the bluff, the bluff slope, and the marsh at the base of the bluff, contains a variety of vegetation and plant communities. Therefore, this topic was retained for further analysis.

Federal Species of Concern and Their Habitat

The landscape and vegetation of Timucuan Ecological and Historic Preserve supports a variety of estuarine ecosystems that serve as habitat for pods of dolphins, flocks of migratory birds, and a number of rare or sensitive species such as the Atlantic loggerhead sea turtle, the West Indian manatee, the wood stork, and the bald eagle. While these species as well as many others are not necessarily present within the landscape of the Spanish-American War Battery, the site does support a variety of birds, small mammals, and reptiles. Disturbances from proposed alternatives could potentially impact some species and their potential habitats. Therefore, this topic was retained for further analysis.

Cultural Resources

Archeological Resources

Ground-disturbing construction activities and vegetation removal associated with implementation of the alternatives have the potential to impact as yet undiscovered archeological resources. Therefore, this topic was retained for further analysis.

Cultural Landscapes

The preservation and integration of the cultural landscape into visitor use and experience of the Spanish-American War Battery and the interpretation of the landscape are key concerns in the CLR. Potential actions within the alternatives may require ground disturbances or removal of vegetation with potential impact to the cultural landscape. Therefore, this topic was retained for further analysis.

Historic Buildings and Structures

The preservation, management, and maintenance of the historic Spanish-American War Battery structure is central to the purpose and need of the proposed actions. There is potential disturbance to the structure due to implementation of alternatives. Therefore, this topic was retained for further analysis.

Historic Viewshed

As part of interpretation at Timucuan Ecological and Historic Preserve, views have been maintained in association with various interpretive waysides. Actions within the alternatives associated with restoration of

historic viewsheds could have potential impacts due to ground disturbance and removal of vegetation. Therefore, this topic was retained for further analysis.

Additional Impact Topics

Visitor Use and Experience

The alternatives would impact overall visitor understanding of the battery and the context landscape as well as the stories and themes essential to understanding the significance of the structure and site. Therefore, this topic was retained for further analysis.

Health and Human Safety

Due to proposed actions within the alternatives, visitor use would increase. As a result of the increase in visitors, the need for continual maintenance and management of visitor amenities to ensure the safety and welfare of the public would also increase. Natural conditions of heat and weather-related storms and associated damage are also ongoing. Therefore, this topic was retained for further analysis.

Impact Topics Dismissed from Further Analysis

Environmental Justice

Presidential Executive Order 12898, General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing the disproportionately high and/or adverse human health or environmental effects of their programs and policies on minorities and low-income population and communities. According to the Environmental Protection Agency, environmental justice is the fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations and policies. The goal of fair treatment is not to shift risks among populations, but to identify potentially disproportionately high and adverse effects and identify alternatives that may mitigate these impacts.

Environmental justice is dismissed as an impact topic for the following reasons:

- Implementation of all alternatives would not result in any identifiable adverse human health effects. Therefore, there would be no direct or indirect adverse effects on any minority or low-income populations.
- The impacts associated with implementation of all alternatives would not disproportionately affect any minority or low-income population or community.
- Implementation of all alternatives would not result in any identified effects that would be specific to any minority or low-income community.
- The impacts to the socioeconomic environment resulting from implementation of any of the action alternatives would be beneficial. In addition, NPS and the planning team do not anticipate the impacts on the socioeconomic environment to alter the physical and social structure of the nearby communities.

Ethnographic Resources

Because no ethnographic resources or traditional cultural properties exist in the areas under consideration in this document, this topic was dismissed from further analysis.

Indian Trust Resources

Indian trust resources include tribal lands, assets, resources, and treaty rights. Any anticipated impacts to Indian trust resources that would result from a federal action must be explicitly addressed in environmental

documents. There are no Indian trust resources within the boundaries of the Spanish-American War Battery site. Therefore, this topic was dismissed from further analysis.

Carbon Footprint

For the purposes of this planning effort, "carbon footprint" is defined as the sum of all emissions of carbon dioxide and other greenhouse gases, including methane and ozone, that would result from implementation of an alternative. Understanding the carbon footprint of the alternatives is important for determining contribution to climate change. This impact topic was dismissed from further analysis for several reasons: 1) no changes would occur in the way visitors reach the project area either by vehicle, bicycle, or walking; 2) the minimal new actions proposed in the project area would not noticeably increase greenhouse gas emissions; and 3) newer sustainable construction practices should help limit additional greenhouse gas emissions.

Natural or Depletable Energy Resource Requirements and Conservation Potential

In accordance with NPS Management policies (2006) and Executive Orders 12873 and 12902, the NPS is mandated to improve the environmental footprint (green buying and sustainable building materials, etc.). However, individual changes at the Spanish-American War Battery site are unlikely to impact the wider universe of energy use and depletable resources. Therefore, this impact topic was dismissed from further analysis.

Lightscape

In accordance with NPS Management policies (2006), the NPS strives to preserve natural ambient lightscapes, which are natural resources and values that exist in the absence of human-caused light. Lighting currently does not exist on the Spanish-American War Battery site, and none of the alternatives recommends lighting of the structure or the landscape. The site would be closed after dark year-round. The alternatives would not increase any use of night lighting. Therefore, lightscape was dismissed as an impact topic.

Chapter 2: Alternatives

2.1 Development of Alternatives

This chapter describes alternatives developed in the 2021 Cultural Landscape Report for the preservation and rehabilitation of the Spanish-American War Battery and associated cultural landscape, consistent with the purpose of and need for action. Two alternatives are analyzed in detail: the no action alternative (Alternative A) and one action alternative (Alternative B). Alternative B is the NPS proposed action and preferred alternative. During alternative development, it was determined that the purpose and need for the plan could be met with a single action alternative. Several other alternatives were identified during development of the CLR, but it was determined that they did not meet the purpose and need, were not feasible, or posed potential for significant environmental impact. Therefore, those alternatives were dismissed from detailed analysis in the Environmental Assessment. (For further information, see Appendix A – Alternative Options Considered but Dismissed from Further Analysis.)

Alternative A preserves and maintains existing conditions at the Spanish-American War Battery and associated cultural landscape. With this alternative, current management strategies would remain the same. There would be no provision of expanded visitor access to the battery structure and site, no provision of parking or visitor amenities, and no integrated and expanded interpretation associated with the cultural landscape. There would also be no protocols for preservation of the battery.

Alternative B provides visitors with vehicular and pedestrian access to the property and an understanding of the history and significance of the battery, including the context within which it was built. The alternative is intended to address the issues, challenges and opportunities, and goals and objectives outlined in park planning documents and identified by park staff through meetings and discussions, communications, and the project scope of work. Meetings and a virtual workshop held to review the CLR concept plan that forms the basis for Alternative B allowed for critical input from stakeholders which was used to guide decision-making during the development of both the CLR and the EA.

2.2 Alternative A (No Action Alternative)

Alternative A entails a continuation of current practices, with minimal improvements for visitor accommodation and accessibility. No provision would be made for additional parking beyond the grass strip between Fort Caroline Road and the boundary of the property. The view from the bluff to St. Johns Creek would remain partially obscured by woody vegetation. Grass would continue to be maintained and mowed when possible or when the NPS seeks to access the site. Mowing would also continue to be used to control growth of potato vine and other invasive plant species present on the property. Visitors would continue to gain the majority of their knowledge of the Spanish-American War Battery from exhibits located elsewhere, such as the Timucuan Preserve Visitor Center, the Fort Caroline National Memorial site, the Ribault Monument, and online.

Given the fact that the property is the only vacant lot in the neighborhood, neighbors are likely to continue to place their trash containers on the grass strip between Fort Caroline Road and the boundary fence and gate of the property. With no controlled public access, the battery would potentially be subject to unauthorized entry by visitors, resulting in damage to the vulnerable concrete structure, causing additional decline in condition.

The following challenges identified by park staff that are associated with current conditions and management protocols would not be addressed:

- There is currently no long-term preservation management strategy or plan for the battery structure.
- There are unaddressed maintenance needs associated with the structure that include cracking and spalling of the concrete, corrosion of metal elements, and vegetation growing in and around the structure.
- Invasive vegetation has colonized portions of the property and requires regular maintenance to control.
- Informal parking occurs on the grass between Fort Caroline Road and the property boundary.
- There is no authorized entrance/access to the property unless scheduled with NPS park staff.
- There are open views from the Spanish-American War Battery property to adjacent residential dwellings to the north and south.
- There is the likelihood that unauthorized entry to the site will continue, and that those visiting without NPS oversight will continue to climb on the battery structure.

Alternative A (No Action Alternative) is illustrated in Map 2-1, which follows.



KEY

- Parcel boundary
- Contour line
- Fence
- Building / Structure
- Existing tree, 10"+ diameter at breast height, surveyed by NPS (2021)
- Existing tree canopy, observed in the field (2019)

MAP 2-1

PLAN ALTERNATIVE A: NO ACTION ALTERNATIVE

Existing Conditions and Continued Current Management & Maintenance Strategies

Environmental Assessment for Timucuan Ecological and Historic Preserve Spanish-American War Battery

National Park Service

2.3 Alternative B (Preferred and Proposed Action Alternative)

Within the framework of the Secretary of the Interior's Standards for the Treatment of Historic Properties, the action alternative is based on the concept plan presented in the CLR treatment plan. The alternative preserves significant characteristics of the historic landscape while adapting the site to meet contemporary needs and park management objectives. Several local public entities and nonprofit groups were instrumental in acquiring the Spanish-American War Battery parcel and supporting its inclusion in the Timucuan Ecological and Historic Preserve. These groups support the National Park Service goal of opening the property to the public. Alternative B identifies an appropriate means for allowing visitors to access the property, circulate through the site, and gain an understanding of the historical events and associations through the provision of interpretive information. The concept plan carefully addresses these needs in such a way as to limit the impacts on significant cultural and natural resources. Below are detailed descriptions of elements of the concept plan within Alternative B.

Access/Entrance

Alternative B assumes that the public will be allowed to enter the property during prescribed hours to experience the character of the site and to learn about the history of the Spanish-American War Battery. The property would be fenced and gated to limit access when the park is closed.

Vehicular Circulation and Parking

A one-way road would lead a short distance into the property from Fort Caroline Road and provide access to a small parking area composed of eight parking spaces. Two of the parking spaces would be designated as accessible. The parking area would be located under a canopy of existing and proposed additional trees to provide shade for visitors and their cars, and to diminish the visual impact of the new road and parking from the battery.

Pedestrian Circulation

A paved walk would lead into the property from Fort Caroline Road and connect to an accessible walk located to the north of the parking spaces. The walk would provide access to an accessible orientation space edged by interpretive panels and benches, and affording views to the battery structure.

From the orientation space, visitors could follow an accessible, elevated boardwalk that would wind its way through the existing trees up the slope toward the battery structure. At the base of the structure, the walk would turn to follow the southwestern edge of the battery to a platform where views would be afforded of the structure and wayside exhibits available to help interpret the features. The platform would be contained by barrier fencing to prevent visitors from accessing the structure.

Also located at the base of the structure would be a second walk leading to the top of the bluff. Due to the steep nature of the slope, the second walk would include several stairs and would not meet accessibility standards. At the top of the bluff, the walk would end in a platform serving as an overlook for the battery to the southwest and the expansive view of the St. Johns River to the north, northeast, and northwest. The platform would similarly be edged by barrier fencing to protect the structure, to provide safety for visitors, and to contain integral interpretive panels.

Vegetation

Trees will be evaluated as to general health and stability. Decisions for selected removal would be based on management issues, general health of the trees, visitor access, and preservation of historic viewsheds.

Limbing-up of selected trees would occur in order to maintain the view to the battery from the orientation space adjacent to the parking area.

Boundary fencing would edge the property to the southeast and northwest. Closer to Fort Caroline Road, this fencing would potentially have an open form such as chain link. Where the Spanish-American War Battery property closely edges neighboring properties and dwellings, a privacy-style fence would be used. Screen plantings of trees and shrubs would be added to further screen views between the battery and neighboring properties.

In addition to the canopy of existing hammock trees, the property would be maintained with a groundcover layer of native grasses augmenting or replacing the existing turf grass. Native forbs or wildflowers and ornamental bunchgrasses would potentially be included as part of a meadow planting within the open space southwest of the battery. The grasses and forbs, in combination with shrub plantings ranging in height from 18 to 36 inches, would help to hide the posts and elevated structure of the boardwalk.

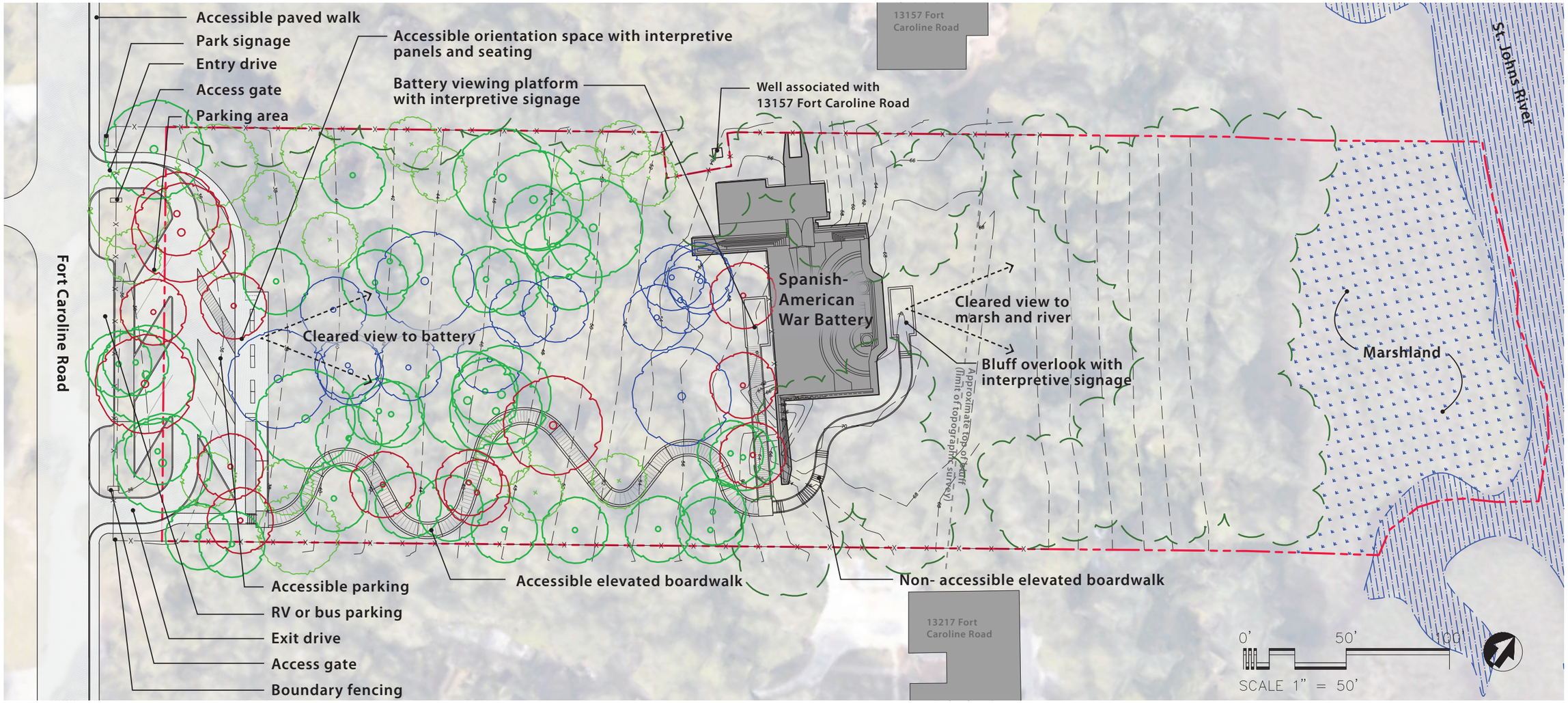
Spanish-American War Battery Structure

Those visiting the site for self-guided tours would not be permitted to access the battery structure itself. It is possible that the park would provide limited guided tours that could potentially include access to the battery, but a decision about access would be based on park administrative policy. Within the implementation process for this alternative, a preservation protocol guide for the battery as described in the CLR would be prepared that addresses appropriate treatment based on best practices for repair and maintenance of concrete and metal materials associated with the structure. Treatment would include cleaning of the concrete; repair of cracks and spalls in the concrete; repair of corroded iron and steel elements; repair of the deteriorated cementitious parge coating; and repair of deteriorated paving materials. Repairs to historic features would be performed only by those with proven experience in the preservation of historic materials. There would be appropriate care of the battery based on condition issues of concern and development of maintenance tasks such as inspection, monitoring of cracks, cleaning of concrete, and coating of exposed steel, as well as vegetation management tasks. Appropriate maintenance cycles to reduce the need for large-scale repair projects in the future would be determined. The battery would be maintained free of vegetation. All vegetation growing and within cracks and crevices associated with the structure would be removed based on preservation protocols and long- range vegetation management goals for the site. Instances of vandalism, including graffiti, would be addressed as outlined in the preservation protocol guide.

Views

A clear site line would be maintained between the property near Fort Caroline Road and the battery structure for the benefit of visitors. The park would plan for the clearing and ongoing maintenance of woody vegetation that obscures the view toward the St. Johns River from the top of the bluff. In order to ensure that views of neighboring properties are fully screened, there would be a combination of perimeter fencing and vegetation along the property boundary of the Spanish-American War Battery site.

Alternative B (Action Alternative) is illustrated in Maps 2-2, 2-3, and 2-4, which follow.



KEY

- Parcel boundary
- Contour line
- Fencing
- Building / Structure
- Existing tree to be removed
- Existing tree to be limbed up
- Tree planted for additional screening
- Existing tree, 10"+ diameter at breast height, surveyed by NPS (2021)
- Existing tree canopy, observed in the field (2019)

MAP 2-2

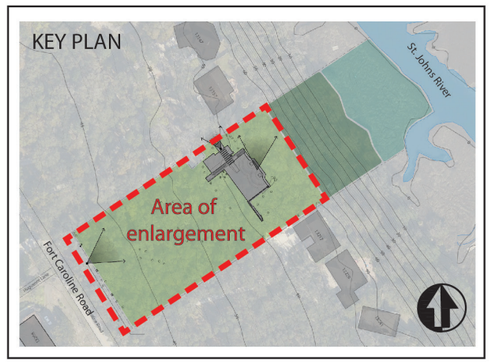
PLAN ALTERNATIVE B: ACTION ALTERNATIVE

Implementation of CLR Conceptual Site Plan

Environmental Assessment for Timucuan Ecological and Historic Preserve Spanish-American War Battery

National Park Service





TREE KEY

- Existing tree (10" + dbh) *surveyed in the field*
- Existing tree (10" + dbh) *lower limbs trimmed to provide clear views*
- Existing tree *observed in the field*
- Tree planted to provide additional screening

dbh = diameter at breast height

MAP 2-3

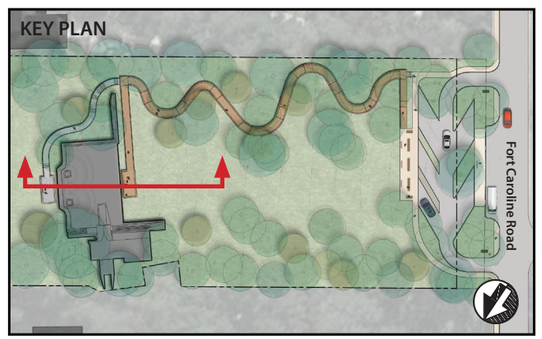
ILLUSTRATIVE PLAN ALTERNATIVE B: ACTION ALTERNATIVE

Implementation of CLR Conceptual Site Plan

Environmental Assessment for Timucuan Ecological and Historic Preserve Spanish-American War Battery

National Park Service





MAP 2-4

ILLUSTRATIVE SECTION ALTERNATIVE B: ACTION ALTERNATIVE

Implementation of CLR Conceptual Site Plan

Environmental Assessment for Timucuan Ecological and Historic Preserve Spanish-American War Battery

National Park Service

2.4 Ongoing Management Activities and Mitigation Measures for the Preferred Alternative

This section considers the mitigation measures and best management practices (BMPs) associated with Alternative B intended to protect natural and cultural resources and the quality of the visitor experience. Within the design development and construction document phases of implementation of the preferred alternative, the NPS would establish an agreed upon number of pre-construction meetings with the contractor and all sub-contractors in order to ensure protective measures for the site are in place and methods of construction for maximum protection of natural and cultural resources are utilized. The NPS would also conduct daily monitoring throughout the construction process to ensure that protective measures are properly implemented and achieving their intended results.

The observable and anticipated future effects of climate change on landscape conditions is a significant factor that affects park ecosystems, resources, infrastructure, and visitor experiences. Management and mitigation related to Alternative B would encompass potential effects from a changing climate in order to protect park resources.

The information that follows details monitoring guidelines and mitigation measures for impact topics retained for analysis. It is intended that any past and ongoing monitoring and mitigation measures including NPS control of site access, maintenance of vegetation, and removal of trash and debris from the site would be continued upon implementation of the preferred alternative and supplemented by the monitoring guidelines and mitigation measures indicated below.

Natural Resources

General:

Develop multi-step and multi-scale (species, communities, ecosystems, and key ecosystem processes) prioritization to efficiently allocate limited resources for climate-related risks. All prioritization relies on best available science but ***must*** also consider legal mandates, stakeholder values, and other non-scientific attributes.

- Adapt strategies and actions aimed at reducing climate-related risks and enable the park to meet its management goals for the Spanish-American War Battery and landscape.
- Integrate natural resource management and climate change vulnerabilities with the program for cultural resource management and climate change vulnerabilities when treating the historic landscape and the Spanish-American War Battery structure.

Soils and Geology

- Minimize soil excavation, erosion, and offsite soil migration during ground disturbance due to clearing and grading for the construction of the vehicular access, parking, pedestrian circulation, and orientation space within a 7,500-square-foot section of the site, adjacent to Fort Caroline Road. Implement BMPs for drainage and sediment erosion control including planted swales and bio-retention areas, as well as use of straw mulch for soil stabilization and silt fencing for temporary sediment control.
- Implement similar BMPs for drainage and sediment erosion control at the temporary staging areas to prevent or reduce non-point source runoff and minimize soil loss. Consider the information available in the Florida Department of Environment Protection Statewide Best Management Practice Efficiencies for Nonpoint Source Management of Surface Waters (July 2020) in developing additional green BMPs for staging areas.

- Minimize the use of heavy vehicles and equipment; use low tire-pressure vehicles; protect the ground from compaction using plywood or other protective material; and avoid accessing the site when the soil is wet to reduce the potential for ruts and compaction.
- Inspect regularly and clear erosion control structures as needed to ensure efficacy. Remove temporary erosion control structures only after staging areas are no longer needed and the associated landscape is fully restored.
- Use biodegradable matting with a large-diameter natural fiber when employing erosion control netting to prevent entrapment of wildlife.

Water Resources

- Adopt a range of engineering and landscape architectural BMPs that will serve to enhance water quality without affecting the integrity of the historic landscape. These BMPs include:
    - Use of porous, pervious, or permeable pavement for the new parking facilities associated with implementation of the project to enhance drainage of paved surfaces. This type of pavement is composed of a permeable or perforated surfacing material, or pavers set with spaces between them, that allow transmission of water to an aggregate or subsoil base beneath. Runoff is temporarily stored in the base for infiltration into subsoils or for slow release into a storm drain system or catchment.
    - Planting of trees around paved areas would reduce the heat island effect caused by solar absorption and reflection.
    - Development of a rain garden, or planted bioretention area, integrated into the parking lot located downhill from the sloping topography of the site, would help to both capture and cleanse stormwater before it infiltrates into the ground.
    - Use of vegetated swales and filter strips that convey, retain, infiltrate, and cleanse overland flow serves to remove sediment, nutrients and other contaminants, increase infiltration, and enhance aesthetics. Vegetated swales would be used along the margins of the proposed paved road and walkway features.
    - Due to the importance of vegetation in biodiversity, aesthetics, habitat, cooling of ambient air, and storm water management, native landscaping would be utilized on site as a BMP. Native landscapes benefit stormwater management through the infiltration and cleansing of run-off. Native species would be used for new plantings on the site associated with the parking area, screen plantings and treatment of the ground plane south of the battery.
- Delineation of the location and design of the drainage features would be accomplished throughout the implementation process for the preferred alternative. Soil survey maps, topographic maps, aerial photographs and field inspection would guide decisions for potential location of drainage features. Drainage features would be designed to allow for a minimum of disturbance of the natural drainage patterns while sufficiently draining surface and subsurface water away from the site and dissipating it in a way that prevents excessive collection of water in unstable areas.

Vegetation

- Minimize soil disturbance whenever possible to reduce the potential for erosion and the introduction or spread of non-native invasive plants.
- Inventory invasive plant stands both on-site and in the adjacent area before initiating any ground-disturbing activity in support of monitoring.
- Establish areas for staging, parking, and cleaning equipment during construction that are not already infested with invasive plant species. Avoid or minimize construction vehicle or equipment access to areas

infested with invasive plants, especially during periods when spread of seed or propagules are likely. Once invasives have been cleared, potential staging areas can be delineated in the most unobtrusive locations possible, away from site perimeters. Off-site staging locations should be considered if feasible.

- Consider the value of retaining a closed tree canopy as a measure to suppress the growth of invasive plants.
- Quarantine soil from infested areas to prevent off-site spread.
- Revegetate disturbed soils in a manner that optimizes native plant establishment.
- Monitor all revegetation efforts regularly and evaluate the results to determine the need for additional intervention in terms of seeding, planting, fertilization, and/or mulching.
- Evaluate existing topsoil in and around any unpaved staging area for non-native invasive plant infestations.
- Establish protocols for NPS inspection of vehicles and equipment prior to entry into the property or active staging areas for evidence of invasive plant material.
- Follow BMPs for tree care and removal to protect environmental resources.
- Avoid clearing woodland in areas with slopes that are steeper than 15 percent, and on soils that are classified as highly erodible. Invasive species removal is the exception and should be undertaken as possible.
- Avoid clearing or thinning vegetation within sensitive ecological areas and plant communities. Delineate wetlands prior to conducting any clearing.
- Provide temporary barriers to protect existing trees and shrubs that are identified to be retained, particularly when planning for construction of the elevated boardwalk and clearing the viewshed from the bluff to the St. Johns River.
- Conduct viewshed clearing in phases to ensure that the minimum amount of vegetation possible is removed to meet interpretive needs.

Cultural Resources

- Comply with the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 Federal Register 44716, revised) when conducting all projects that might impact known or potential archeological resources.
- Minimize any contact with the surface of the battery structure during construction of the boardwalk and observation platforms. Follow guidance afforded from NPS Technical Preservation Services, Technical Brief 14: New Exterior Additions Related to Historic Buildings or Structures.
- Employ silvicultural methods that minimize the impacts and threats to cultural and natural resources and known and potential archeological resources. To improve the health and productivity of the large trees on the site and protect cultural resources, silvicultural mitigation methods would include removal of a portion of the trees in the early stages (ten to fifteen years) so there is less competition for sunlight, water and nutrients. The remaining trees will grow faster, stronger and larger. This diminishes the threat of limb or tree damage to the Spanish-American War Battery structure and to visitor walkways and orientation space. The thinning also improves the growth of the proposed understory such as native grasses and forbs by increasing the amount of sunlight that reaches the floor of the site, thus protecting and stabilizing the soil throughout the site.

Visitor Use and Experience

- Provide educational and interpretive information to the public during the establishment of viewsheds that require clearing to convey the historic associations of the Spanish-American War Battery with military coastal defense and the battery's command of the St. Johns River.
- Interpret any natural resource benefits associated with viewshed clearing, such as habitat enhancement.
- Continue to monitor areas used by visitors for signs of vegetation community disturbance, trampling, erosion, and the development of social trails.
- Meet Leadership in Energy and Environmental Design (LEED) standards when constructing new amenities to demonstrate NPS commitment to protect natural and cultural resources for future generations.

Human Health and Safety

- Monitor incidences of human and wildlife interactions.
- Monitor proposed screen plantings along the boundary of the property and manage growth inside the fence line with proper pruning and associated maintenance.
- Continue the ongoing and required measures already in place that ensure visitor safety when implementing the actions proposed in the preferred alternative. These measures include controlled access to the site area; vegetation management and removal of debris from the site; signage to inform visitors that the site is closed for construction; illustrative signage to inform visitors of new site amenities that will be available; and communications on the park website to inform and warn visitors of potential severe summer storms, hurricanes, flooding, heat and humidity, and the presence of biting insects and reptiles

Chapter 3 – Affected Environment

3.1 Introduction

This chapter presents information about existing conditions of resources that are analyzed in this EA, along with any trends likely to occur with the coming decades if no action is taken. This section specifically discusses the resources that may be potentially impacted as a result of the proposed no action and action alternatives. The resources discussed below were identified and described as impact topics in Chapter 1 of this document. Identification of resources was based on issues raised by agencies or the public during scoping and civic engagement, existing site conditions, federal laws, regulations and executive orders, resource issues, concerns of park staff, and specific resource information for Timucuan Ecological and Historic Preserve and the Spanish-American War Battery site within the context of the preserve.

Trends associated with the conditions of each resource and potential projects planned within the area of the Spanish-American War Battery site are identified at the end of each resource condition description. These projects may affect the current existing condition of any of the resources or may be an additional factor within an ongoing trend in existing conditions that will affect a particular resource in the future.

Based on current information, the only projects in the foreseeable future planned on or near the Spanish-American War Battery site are the widening of Fort Caroline Road and the use of a parcel of property south of the Spanish-American War Battery on Fort Caroline Road as overflow parking space for the battery site and the Theodore Roosevelt area of the preserve and the associated trails.

Natural resources examined in detail at the Spanish-American War Battery include:

- Geology and soils
- Water resources
- Vegetation
- Federal species of concern and their habitat

Cultural resources examined include:

- Archeological resources
- Historic buildings and structures
- Cultural landscape
- Historic viewsheds

Additional issues examined include:

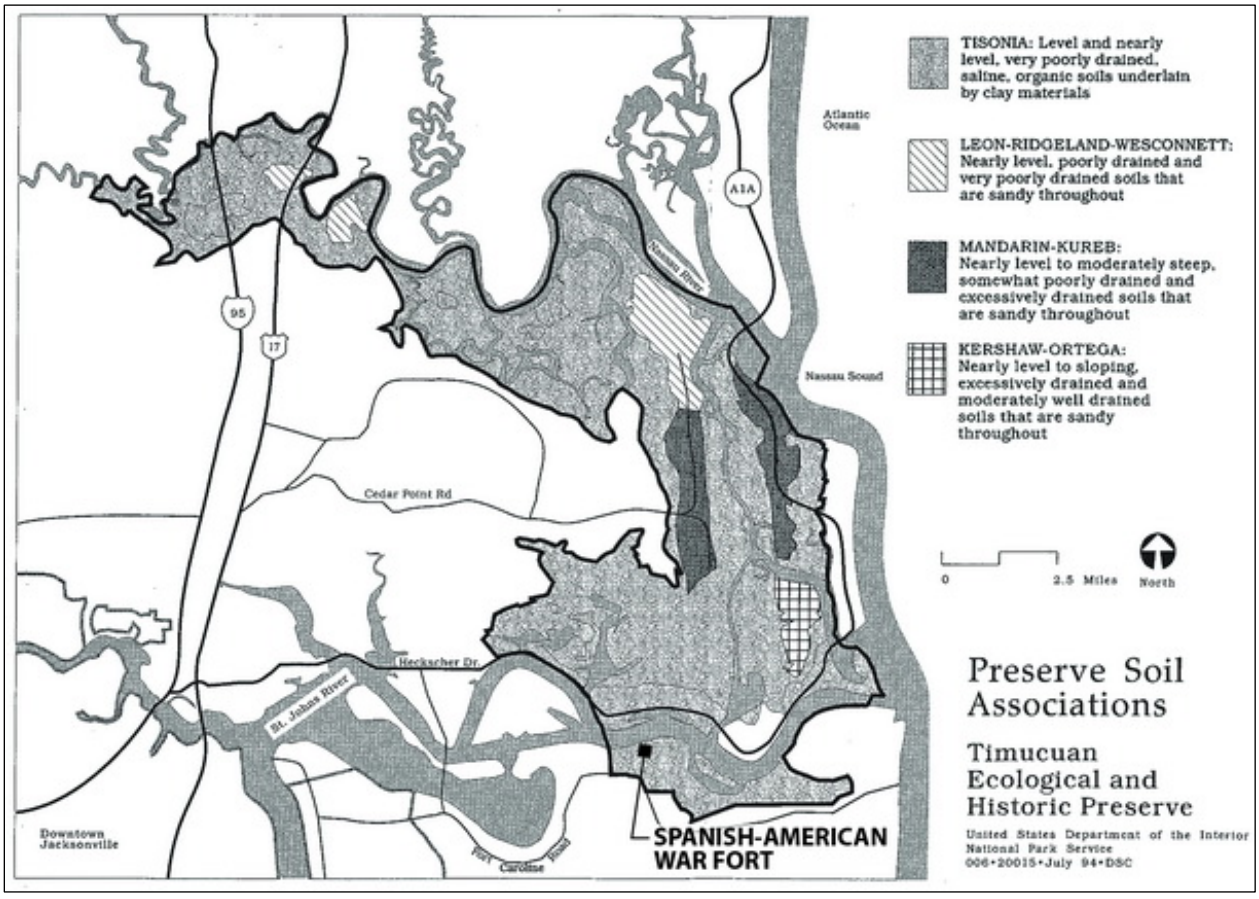
- Visitor use and experience
- Human health and safety

3.2 Natural Resources

Geology and Soils

The soils throughout the preserve comprise very deep, poorly drained soils that formed in sandy marine sediments. The soils found along upland flats, depressions, and tidal areas are poorly drained with slow runoff and permeability. Lower areas, including hammocks, have nearly level, very poorly drained soils that formed in decomposed organic matter underlain by sandy marine sediments. Under normal conditions, the water table is at or above the surface for six to nine months of the year, and soils are moist most of the time due to frequent flood events.

Soils within the region are grouped into five principal associations. Most of the salt marshes are composed of Tisonia mucky peat soil, which is saline or brackish where feeder streams enter, and flooded daily by tides. Soils underlying the Spanish-American War Battery property fall within the Tisonia association. The other four soil associations within the preserve include Leon-Ridgeland-Wesconnett, Mandarin-Kureb, Kershaw-Ortega, and Aquic Quartizipsammets-Fripp.[1]



MAP 3-1. Soil associations within Timucuan Ecological and Historic Preserve. (Source: National Park Service, *General Management Plan*)

1. National Park Service, *General Management Plan, Development Concept Plans* (Denver, Colorado: US Department of the Interior, 1994).

Trends

Poorly drained soils are likely to remain on the site and are subject to erosion due to physical interventions such as tree removal or construction of visitor amenities. The soils are also vulnerable to erosion due to flooding from weather events such as heavy rainfalls, tropical storms, and hurricanes. Soils on the site are also subject to potential effects from any ongoing projects on or near the Spanish-American War Battery site. The potential widening of Fort Caroline Road would affect soils on the site adjacent to the existing road and shoulder. Ground disturbance could potentially create erosion and compaction of site related soils and create an increase in stormwater run-off in the vicinity of the Spanish-American War Battery site.

The combination of sea-level rise and increased storm surge due to climate change could exacerbate shoreline erosion and bluff erosion at the Spanish-American War Battery and associated cultural landscape.

Water Resources

Water Quality

Generally, the preserve's water quality is considered good compared to other Florida surface waters.[2] Tidal flushing and the coastal salt marshes are considered important contributing factors in water quality because upstream areas of the Nassau and St. Johns Rivers are degraded. Water quality monitoring conducted in 2013 identified 70 percent of sampled sites as fair and 30 percent as good. In general, sites with good water quality were located in inlets, sounds, or open water, while fair ratings were found in salt marshes.

Wetlands

Approximately 75 percent, or 35,000 acres, of the land within the boundaries of the preserve are wetlands and open water.[3] Water resources include numerous tidal creeks, portions of the Nassau and St. Johns Rivers, Sisters Creek/Intracoastal Waterway, Fort George River, and freshwater resources like Spanish Pond. Seven types of wetlands have been mapped at Timucuan Ecological and Historic Preserve as part of the National Wetlands Inventory by the USFWS. The marsh at the base of the Spanish-American War Battery bluff is part of a designated wetland. The portion of the property from Fort Caroline Road to the apex of the bluff does not contain designated wetland.

Surface Waters and Floodplains

Timucuan Ecological and Historic Preserve is bounded by the Nassau River to the north, St. Johns River to the south, and the Atlantic Ocean to the east. The project site abuts St. Johns Creek near its confluence with St. Johns River. The preserve forms an extensive estuarine system composed of salt marsh, coastal hammock, and marine and brackish waters. This estuarine system makes up approximately 75 percent of the preserve.

The St. Johns River is the longest river in the state of Florida; its watershed comprises 9,430 square miles. The St. Johns River flows in a northerly direction from southern to northeastern Florida. The river's drainage basin is divided into three regions. Timucuan Ecological and Historic Preserve falls into the lower drainage basin, which encompasses the area in Northeast Florida from Putnam County to the river's mouth in Duval County.

2. S. M. Anderson, C. Katin, and W. R. Wise, *Assessment of Coastal Water Resources and Watershed Conditions at Timucuan Ecological and Historic Preserve.* Technical Report NPS/NRWRD/NRTR-2005/340 (Gainesville: University of Florida, Department of Environmental Engineering Sciences, 2005).
3. Ibid.

The Florida Department of Environmental Protection has designated all waters in the preserve as Outstanding Florida Waters, with stringent water quality criteria. Extensive floodplain areas exist in the preserve because of the slight elevations of land above sea level and the relatively flat topographic relief of the land surface.

St. Johns Creek edges the Spanish-American War Battery property to the north. Like the river, St. Johns Creek is brackish where affected by tidal action. A drainageway arising from the bluff empties into the creek at the northeastern corner of the Spanish-American War Battery property. At the base of St. Johns Bluff, the landform levels out. The lower-lying ground along the margin of St. Johns Creek is characterized by marshland.

Trends

Potential stressors on water quality due to construction activities include erosion, turbidity, and sedimentation. There could be increased turbidity after rain events on areas near St. Johns Creek. Stressors outside the preserve include nonpoint-source pollution from urban and agricultural areas, elevated metal concentrations in the sediments of the St. Johns River, impacts of several superfund sites and landfills, and pollution from malfunctioning septic systems within and adjacent to the preserve.[4]

Based on current information, the only projects in the foreseeable future planned on or near the Spanish-American War Battery site are the widening of Fort Caroline Road and the use of a parcel of property south of the Spanish-American War Battery on Fort Caroline Road as overflow parking space for the battery site and the Theodore Roosevelt area of the preserve and the associated trails. Any construction on or near the Spanish-American War Battery site, including the future widening of Fort Caroline Road, could cause a limited and or temporary downward trend for water quality in the immediate vicinity of the site, but less so in the water quality trends associated with the entire Timucuan Ecological and Historic Preserve.

Water resources within the boundary of the Spanish-American War Battery and within the preserve as a whole are particularly vulnerable to weather events, erosion due to flooding, and the effects of climate change resulting in rapidly rising sea levels. Increased temperatures associated with climate change could produce a drier landscape in the preserve, resulting in decreased availability of surface and groundwater, a trend harmful to wetland and aquatic environments and native plant material.

Vegetation

The landscape associated with the Spanish-American War Battery is characterized by woodland representative of a temperate mixed hardwood and evergreen hammock community. The woodland is layered and contains canopy and understory trees, shrubs, vines, and a grassy herbaceous layer that is maintained through mowing. The species associated with the hammock woodland include live oak *(Quercus virginiana),* Southern magnolia *(Magnolia grandiflora),* and Southern hackberry *(Celtis laevigata)* trees. Saw palmetto *(Serenoa repens)* and oak saplings form the understory and shrub layer. The bluff slope contains sparse coverage of oaks and other hardwoods with an open canopy and exposed understory. The coastal marsh at the bottom of the slope is primarily vegetated by spartina *(Spartina alternaflora)* and juncus *(Juncus effusus)*.

4. W. Wright, M. B. Gregory, and J. Asper, *Assessment of Estuarine Water Quality at Timucuan Ecological and Historic Preserve,* Natural Resource Data Series NPS/SECN/NRDS – 2013/598 (Fort Collins, Colorado: National Park Service, 2013).



FIGURE 3-1. Layered woodland on the site with canopy and understory trees, shrubs, vines, and grass, looking toward the battery from Fort Caroline Road.



FIGURE 3-2. Woodland species include live oak, magnolia, and Southern hackberry, with oak saplings in the understory and shrub layer.

Vines include catbrier *(Smilax rotundifolia)* and grape (*Vitis* sp.). There are several ferns present, likely including species of the maiden fern genus *Thelypteris*, Boston fern genus *Nephrolepis*, and representatives of the shield fern genus *Dryopteris*. There is also Spanish moss *(Tillandsia usneoides)*, an epiphyte, associated with the canopies of many live oak trees. Yucca *(Yucca filamentosa)* are growing in the masonry columns near the southwestern perimeter fence. Additional species often included in the hammock woodland type in northeast Florida include laurel oak *(Quercus hemisphaerica*), swamp cabbage *(Sabal palmetto)*, redbay *(Persea borbonia)*, and hollies (*Ilex* spp.).



FIGURE 3-3. Vines and ferns are abundant throughout the landscape, along the property boundaries, and within the battery area and structure.



FIGURE 3-4. Abundant and varied plant material at a boundary fence with a view into the site and to the battery.

Air potato vine *(Dioscorea bulbifera)* is one of the invasive plant species found growing throughout the Spanish-American War Battery property. Another is tuberous sword fern *(Nephrolepis cordifolia)*. The park currently controls air potato vine and sword fern through mowing. The park also releases air potato leaf beetle *(Liliocercia cheni)* as a control mechanism. Challenges associated with control of these species include the fact that:

> Air potato vine spreads by twining around available foliage of other plants and climbing into the tree canopy, where it upsets the tree's ability to resist wind loads. The invasive tuberous sword fern is similar in character to a native species, also named sword fern *(Polystichum munitum)*, but it has the ability to displace all other low growing plants and form dense monocultures. Sword fern as well as air potato vine are included on Florida's Exotic Pest Plant Council's Category 1 list of invasive species, meaning that they are

found to be altering native plant communities by displacing native species, changing community structure or ecological functions, or hybridizing with natives.[5]



FIGURE 3-5. Air potato vine, an invasive species, has colonized much of the site along the boundaries and covers many of the trees that have fallen in place.



FIGURE 3-6. Native and invasive species growing in abundance at the northeast boundary of the site, adjacent to a private residential property.

Trends

The unabated growth of invasive species within the site will continue into the future if not removed or controlled. The presence of the invasives will increase continue to threaten the health and stability of existing native vegetation associated with the hammock woodland include live oak *(Quercus virginiana)*, Southern magnolia *(Magnolia grandiflora)*. The stability and health of understory trees and bluff slope coverage of oaks and other hardwoods with an open canopy and exposed understory are also threatened by the rapid growth of the invasive species on the site.

Any construction projects and associated ground disturbance and movement of materials into and out of the vicinity and the site of the Spanish-American War Battery could increase the presence of invasives. Based on current information, the only projects in the foreseeable future on or near the Spanish-American War Battery site that would affect vegetation is a future plan for the widening of Fort Caroline Road.

There are potential future impacts on plant communities due to climate change. Accelerated spread of non-native plant species could occur in response to climate change, and some native plant species may be unable to adapt, allowing for further colonization by non-native species.

Federal Species of Concern and Critical Habitat

Section 7 of the Endangered Species Act requires federal agencies to "consult with the US Fish and Wildlife Service to ensure that effects of actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of listed species and request information whether any species which is listed or proposed to be listed may be present in the area of such proposed action." In fulfillment of this requirement, park staff sent a letter of request to the USFWS North Florida Ecological Services Office for information on endangered species or habitat at the Spanish-American War Battery property and immediate vicinity. The agency reported back that there are no federal species of concern or critical habitats found on the project site or within its immediate context (See Appendix B).

5. Florida Exotic Pest Plant Council, "Florida Exotic Pest Plant Council Invasive Plant Lists," accessed July 20, 2021, https://www.fleppc.org/list/list.htm.

3.3 Cultural Resources

The preserve contains at least 200 archeological sites that provide physical evidence of some 6,000 years of human occupation. In addition to the archeological sites, Timucuan Ecological and Historic Preserve encompasses a variety of historic buildings and structures including the Spanish-American War Battery on St. Johns Bluff.

Climate change impacts all aspects of preservation management at the Spanish-American War Battery including cultural resources. The accelerating trend in climate change resulting in more intense storms and flooding could cause weathering and deterioration contributing to future loss of historic structures, potential archeological sites, and physical characteristics of the cultural landscapes.

Archeological Resources

Ten sites specifically related to the preserve's history were identified in the enabling legislation. Only four of these ten sites have extant remains that have been located. They include the antebellum Zephaniah Kingsley Plantation, Yellow Bluff Fort, Spanish-American War Battery, and San Juan del Puerto mission site. The other six sites—San Estaban, San Gabriel, Dos Hermanas, Thomas Creek Battlefield, Fort St. George, and St. Johns Town—have not been located archeologically or otherwise.

There are, however, many other prehistoric and historic cultural resources within the preserve not cited in the legislation that contribute to the understanding of human use and life in the region. The preserve contains sites representing almost every cultural period: Archaic, Orange, Woodland, Mississippian, Protohistoric, Mission Period, First Spanish Period, British Period, Second Spanish Period, and nineteenth-century American to the present. Perhaps the oldest documented ceramic culture habitation site in the state of Florida (dating back 6,000 years) is found on preserve lands.

In August 2011, NPS personnel from the preserve conducted a cleanup of the Spanish-American War Battery, although the property was not owned by the federal government at the time. The owner granted permission to remove overgrown vegetation, litter, and eroded soil from the exterior and interior rooms of the structure. During the cleanup, artifacts were collected from the top of the structure, from the ground surface immediately surrounding the structure, and from soil removed from the floor of the west interior room.[6]

Of the 4,512 grams of artifacts recovered, more than 92 percent were either glass or metal fragments. Also found were bone, clay, and plastic. The report on the cleanup noted that the site has long served as a destination spot for Jacksonville residents to visit, with or without the permission of the owner. The majority of the metal fragments recovered were believed related to the corrosion of the metal channels in the ceiling of the west room. Most of the glass fragments were pieces of soda or alcoholic beverage bottles.[7]

A Phase 1 archeological investigation of the area planned for construction was conducted in 2013 as part of a comprehensive investigation for the La Caroline Project by the University of North Florida Archeology Laboratory I for the state of Florida and the National Park Service. The purpose of the survey was to determine if any artifacts or intact features were located on the property, away from the extant gun emplacement. Shovel testing revealed a low density lithic scatter and a sparse and intermittent distribution of historic artifacts. No intact deposits were encountered in areas of shovel testing that are potentially significant cultural resources worthy of inclusion in the National Register of Historic Places.

6. Barbara P. Prettyman, Preliminary draft report "8DU00124 Spanish American War Battery cleanup project" (National Park Service, August 2011, submitted in 2013). 1.
7. Ibid., 4–7.

Trends

Archeological investigations have been completed within the Spanish-American War Battery site, and any ground disturbing event in the future will be closely monitored for any potential discoveries as yet unknown. Based on current information, the only projects in the foreseeable future with ground disturbing activity is the widening of Fort Caroline Road. Archeological monitoring as required by NPS would occur for the widening of Fort Caroline Road in the vicinity of the Spanish-American War Battery.

Buildings and Structures

Spanish-American War Battery

In March 2019, the office of the Director of Division of Historical Resources and State Historic Preservation Officer for the State of Florida determined that the Spanish-American War Battery (8DU124) was eligible for listing in the *National Register of Historic Places*.

The only built structures currently associated with the Spanish-American War Battery property are those associated with the battery and magazine built between 1898 and 1899 on St. Johns Bluff. Missing are the rail line tracks laid in support of conveying concrete and other construction materials to the bluff and supporting features such as a position finder. Although archival documentation indicates that wood structures were present on site to support construction of the battery, no other permanent buildings or structures were present historically on the property or have been built since.

The battery consists of the magazine to house ammunition, pylons, two gun platforms, the parapet, and the traverse wall. The base concrete used to construct the battery features a large size granite aggregate. On exposed surfaces, the concrete walls are covered with a 3/8-inch-thick cementitious layer with fine aggregate. A concrete topping approximately 1/2-inch thick, with fine aggregate and a smooth finish, is present over most of the slabs and horizontal surfaces.



FIGURE 3-7. Northeast portion of the Spanish-American War Battery.



FIGURE 3-8. Southwest portion of the Spanish-American War Battery.

From July 9 through 11, 2019, a field assessment was conducted as part of the development of the Spanish-American War Battery CLR to document the structure and its existing conditions. Visible conditions were documented with field notes, photographs, and measurements taken of the battery. Non-destructive test methods, including sounding of the concrete for voids and metal detector survey, were used to further evaluate observed conditions. No voids were identified from the sounding of the concrete, and no reinforcement was found during the metal detector survey other than the iron members observed in the magazine. The notable conditions observed during this assessment included cracking and spalling of the

concrete, corrosion of iron elements, and moisture staining and organic growth. (Refer to the CLR for a more detailed description and condition assessment.)



FIGURE 3-9. Concrete wall of the battery exhibits cracking, spalling, and plant growth within the concrete.



FIGURE 3-10. Current condition of concrete walls, steps, and gun emplacement with evidence of cracking, spalling, and moisture staining.



FIGURE 3-11. Gun emplacement concrete structure exhibits cracking, spalling, and moisture staining.



FIGURE 3-12. Field assessment conducted by the project team to document the battery and its existing conditions.

Masonry Columns

Two masonry columns sit just inside the property north of the perimeter fence along Fort Carolina Road. The columns are mortared rubble fieldstone and of marginal construction quality. The column to the east measures 2 feet in height and 3 feet by 3 feet 6 inches in plan. The column to the west measures 2 feet 6 inches in height and is 3 feet 6 inches square in plan. The date of origin of the columns is not currently known, although they likely were built as part of development of the parcel following subdivision in 1945.

Trends

Deterioration in condition of the Spanish-American War Battery would continue without a strategic preservation management plan and implementation of repairs and maintenance. The structure would continue to experience deterioration related to exposure to the environment. Cracking and spalling of the concrete due to corrosion of embedded steel reinforcement would continue and, as the steel is further exposed to moisture at existing as well as new cracks and spalls, deterioration of the concrete would be expected to become more extensive and severe over time. Due to the continued presence of invasive plant

species on the site, the structure would also be subject to further damage from vegetative growth. The structure also continues to be vulnerable to potential limb falls from nearby trees, accidental damage from unauthorized visitors accessing the structure and vandalism.



FIGURE 3-13. Plants are growing out of the west masonry column.



FIGURE 3-14. Potato vine has taken over the east masonry column.

Cultural Landscape

The landform and topography associated with the Spanish-American War Battery landscape and the direct connection between topography, the siting of the battery, and the views toward the St. Johns River are present today and contribute to the historic setting of the property. Although the residential properties to either side of the battery have been developed with some topographic modification, few alterations to site topography appear to have made since 1899.

The Spanish-American War Battery sits near the top of St. Johns Bluff. To the north, beyond the high point, the land drops away toward St. Johns Creek. From the property boundary along Fort Caroline Road to the concrete structure of the Spanish-American War Battery, the topography of the parcel rises steadily yet gently at a slope of approximately 3 percent near the road, and 8 percent on the approach to the battery structure.

Trends

The majority of the landscape is wooded with mature live oak *(Quercus virginiana)* trees casting shade over much of the site. Since circa 2013, the National Park Service has begun to manage the understory through mowing.

Viewsheds

Views were an essential component in the siting of the Spanish-American War Battery. The US Board of Engineers constructed the battery on a high point of St. Johns Bluff to take advantage of the strategic views over St. Johns River, an important waterway for US coastal defense. Although views from the battery are becoming blocked by woody vegetation, the key visual relationship between the structure, the apex of the

bluff, and the ability to see long distances due to the rapidly declining topography to the north remains. There is also a strategic view of the expanse of the cultural landscape to the battery structure from the gated entrance to the site at Fort Caroline Road to the battery. Residences built atop the bluff to either side of the Spanish-American War Battery property are visible from the area around the gun emplacement platform and from the top of the magazine structure.

Trends

Management and maintenance measures are not currently in place to re-establish the historic viewshed from the bluff to the St. Johns River. Due to the steepness of the slopes of the bluff north of the battery, woody growth is difficult to manage; views toward the St. Johns River are becoming increasingly blocked by this growth. Existing vegetation on the bluff would continue to grow, including any invasive species that potentially threaten the health and safety of the native vegetation on the site.



FIGURE 3-15. View from the battery structure to Fort Caroline Road.



FIGURE 3-16. View from Fort Caroline Road toward the battery structure.



FIGURE 3-17. View from the apex of the bluff to St. Johns River.

3.4 Additional Issues

Visitor Use and Experience

The importance of the Spanish-American War Battery as an intact example of an Endicott-era coastal defense battery has long been recognized. In 1934, the property was recorded by the Historic American Buildings Survey (HABS) due to its historic importance. In 1994, the National Park Service indicated acquisition of the property for inclusion in Timucuan Ecological and Historic Preserve as a goal in the park's General Management Plan. This goal was supported by the North Florida Land Trust (NFLT), which began working toward protection of the property during the late twentieth century, with the intention of conveying the tract to the federal government as possible. Following several years of fundraising, the NFLT and the City of Jacksonville secured sufficient funds to purchase the battery parcel in 2016. The NPS accepted the deed for the property from the NFLT in a ceremony on December 14, 2018.

Current visitor and interpretive services are provided at the Timucuan Preserve Visitor Center at the Fort Caroline National Memorial and a visitor contact station at Kingsley Plantation. From Fort Caroline National Memorial, many visitors travel to the Ribault Monument, a five-minute drive to the east along Fort Caroline Road. The site features a walk leading to the monument set high atop St. Johns Bluff. From the monument, visitors can experience expansive views of the preserve and St. Johns River. The Ribault Monument is located in close proximity to the Spanish-American War Battery property. Further to the south is the Theodore Roosevelt Area, where visitors can follow self-guided walks or ride bikes on several trails.

Trends

The NPS administers the battery parcel as part of the preserve and plans to provide access to the public once appropriate improvements and preservation management protocols have been developed. Due to new opportunities for access and interpretation of the Spanish-American War Battery and existing interpretive services in place within its vicinity, there would be a trend toward increased visitation to the site. This upward trend could also increase in the future based upon the plan for widening Fort Caroline Road and additional use of a parcel of property south of the Spanish-American War Battery on Fort Caroline Road as overflow parking space for the battery site and the Theodore Roosevelt area of the preserve and the associated trails.



FIGURE 3-18. NPS staff and CLR/EA project team on a tour of the Ribault Monument.



FIGURE 3-19. NPS staff and CLR/EA project team on a tour of the Spanish-American War Battery site.

Human Health and Safety

Numerous conditions at the Spanish-American War Battery require continual attention by park staff to ensure the safety of visitors now and in the future. Currently, the property is not officially open for visitors. Entrance to the property is through the front gate, which remains locked. A small number of the public manage to find ways to access the property after work hours or during the day when there are no staff present at the site. Access to the property for purposes of research, archeological investigations, maintenance, or planning documentation is granted upon request, with NPS staff present at all times. There is also periodic clean-up of the site with volunteers working alongside park staff. Due to past unauthorized access to the battery, park staff monitor the site and the condition of the battery structure. Safety of unauthorized visitors is a prime concern of the preserve and a management issue that continues to be addressed by park staff.

Trends

Unsupervised access to the structure has the potential to cause vandalism, unintended damage to the battery structure, and/or harm to trespassers. Incidences of littering continue and require ongoing management. Potential for unsupervised access to the battery structure and its associated landscape remain, resulting in continued potential threats to the cultural resources and to the health and safety of unauthorized visitors. Increases to visitation that could occur due to the plans to widen Fort Caroline Road and provide overflow parking south of the Spanish-American War Battery on Fort Caroline Road could increase the amount of unsupervised access and potential threats to health and human safety at the site.

A rise in temperatures associated with climate change could affect human health and safety at Timucuan Ecological and Historic Preserve. A shift of a few degrees can change conditions from a "Caution" to "Extreme Caution" zone, according to the National Oceanic and Atmospheric Administration's Heat Index. In response to these potential changes, new park programs would be developed by NPS staff to educate visitors about the dangers of extreme heat, encourage use of personal non-plastic water containers, and maintain potable fresh water on-site.

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Chapter 4 – Environmental Consequences

4.1 Introduction

This chapter describes impacts that would occur under each alternative carried forward for detailed analysis. The impact analysis assumes that mitigation measures described in Chapter 2 would be implemented.

The preamble to the Council on Environmental Quality (CEQ) regulations implementing the procedural provisions of NEPA states that an agency "may contrast the impacts of the proposed action and alternatives with the current and expected future conditions of the affected environment in the absence of the action, which constitutes consideration of a no-action alternative" (85 *Federal Register* 43304, at 43323). Under the no action alternative (Alternative A), there would be no interventions related to expansion of the visitor experience through implementation of the conceptual treatment plan developed in the CLR and current conditions and trends of the resources, as well as current management and maintenance strategies described in Chapter 3, would continue. To avoid restating the same information, the impact analysis of Alternative A in Chapter 4 provides only a brief discussion with the understanding that the reader may refer to Chapter 3 for current conditions and trends. This constitutes consideration of the impacts of the no action alternative, in accordance with the direction from CEQ.

Impacts under the action alternative (Alternative B) are described in detail. The duration of impacts would vary for different resources and impact topics. While the duration is specified as applicable, the following general terminology was also used.

- **Short-term impacts during project implementation:** Implementation includes temporary staging areas, site clearing, grading and preparation and subsequent construction of infrastructure and features allowing visitors to access the property, circulate through the site, and gain an understanding of the historical events and associations through the provision of interpretive information. Depending on the impact topic, impact may be intermittent (generally lasting days or weeks) or continuous during the implementation period. This period also includes the months following completion of construction for stabilization and condition assessment of newly installed vegetation.
- **Long-term impacts following construction:** Beneficial impacts of the above action may take some years to fully develop as changes within and to the landscape are characterized by continuous change, growth, and susceptibility to environmental challenges.

Direct and Indirect Impacts: Direct impacts are caused by an action and occur at the same time and place as the action. Indirect impacts are caused by the action and occur later or further away but are still reasonably foreseeable.

4.2 Climate Change and Environmental Issues

The Timucuan Ecological and Historic Preserve is a 46,000-acre unit of the National Park System located along the Florida coast northeast of the city of Jacksonville and in proximity to the Atlantic Ocean. Most of the preserve is composed of inland waterways and wetlands associated with an extensive estuarine system of salt marsh, coastal hammock, and marine and brackish waters. Northeast Florida is directly in the path of

potentially dangerous storm surge due to tropical storms and hurricanes. Storms have affected this area throughout its history, and most recently Tropical Storm Elsa in July 2021, Hurricane Eta in 2020, Hurricane Irma in 2017, Hurricane Matthew in 2016, and the devasting Hurricane Dora in 1964. The area faces the threat of hurricanes or tropical storms every year.

The entire preserve is vulnerable to current and future threats associated with climate change. Predicted results and models developed for the Timucuan Preserve agree that one result of climate change is the increase in intense storm events causing greater water inputs in shorter periods of time, affecting flood frequency and duration. Based on some of the models, the NPS has considered how preserve resources may be impacted by the predicted change of temperature and precipitation in the future. The models address the vegetation changes and the complex and uncertain interactions among climate change, non-native biotic stressors, and plants anticipated to occur based on current information available for anticipated climate change. Plant community changes can also be anticipated using the models.[8]

Sea-level rise is another result of climate change that is already impacting the preserve, and it is anticipated to play an increasing role in ecosystem process adaptation. In the vicinity of the preserve, sea level has risen more than 8 inches over the past eighty years.[9]

Within the Spanish-American War Battery property itself, it is anticipated that increases in temperature may result in drought conditions and a lowered water table. These conditions will stress the hammock woodland community and lead to a decline in the health of the trees and a prevalence of invasive species and additional challenges associated with their control.

Efforts conducted for Timucuan Ecological and Historic Preserve will benefit from coordination with other planning and documentation projects to address effects of climate change under consideration or in the process of being implemented by the National Park Service. Future severe weather events, rising sea levels, and other impacts related to climate change should be anticipated and considered in planning for protection and maintenance of the Spanish-American War Battery and its associated landscape as well as the entire preserve.

4.3 Impact Analysis

Geology and Soils

Alternative A: No Action

Under the no action alternative, the conditions and trends associated with geology and soils on the Spanish-American War Battery property discussed in Chapter 3 would continue. Existing management or maintenance strategies would remain in place including erosion control and deposition of sediment associated with the bluff slopes, limiting visitor access and avoiding construction of new features or facilities that might cause soil conditions or stability to change or accelerate. Current mitigation measures for sensitive natural resources would remain in place and include soils and geology. Management of current erosion trends on the bluff slope would need to continue and become more substantial due to anticipated effects of accelerated climate change and resulting rise in sea level on the stability of the soils, otherwise there would be a continuing adverse impact on the underlying geology and soils going into the future.

8. National Park Service, *State of the Park Report for Timucuan Ecological and Historic Preserve and Fort Caroline National Memorial,* State of the Park Series No. 39, National Park Service, Washington, DC, 2016, 22–24.
9. Ibid.

Alternative B: Action Alternative - Implementation of Concept Treatment Plan

Impact Analysis

Potential short-term impacts on soils within the concept design plan proposed in Alternative B would be associated with the earthwork and grading to clear the site and for construction of the circulation infrastructure. Ground disturbance for the construction of the vehicular access, parking, pedestrian circulation and orientation space would be within a 7,500-square-foot section of the site, adjacent to Fort Caroline Road. Soils would be disturbed within a localized area of the battery site and are susceptible to short-term impacts due to compaction, erosion and migration, and contamination during staging and construction. Long-term impacts would be avoided through construction methods and materials detailed in the construction drawings and specifications for the implementation of the alternative and the implementation of mitigation measures during construction as described in Chapter 2. Cut and fill amounts would be balanced to the extent possible to minimize the need to import or export soils during construction and avoid short and long-term impacts.

The elevated boardwalk would be designed to limit the impact of the structure on the historic topography of the site and any ground disturbance that might impact soils and archeological resources. A foundation system for sensitive soils, difficult terrain, or where a high water table prevents access or pouring of footings would be implemented as part of the concept plan. Installation of pile footings is fast, provides uplift resistance to a structure influenced by flood waters, and prevents boardwalk undulation. Benefits of this type of foundation include no soil excavation, installation in limited access areas, and transfer of loads to competent bearing strata below weak soils.

The migration of soils from the bluff slope due to clearing of vegetation to open the viewshed to the St. Johns River would be monitored by a qualified soil scientist. Monitoring would start immediately during the clearing of woody vegetation and before re-stabilization of the bluff with native shrub and fibrous root grass species planted to control erosion. This would prevent adverse impacts associated with migration of soils from the slope and bluff into the marsh and St. Johns Creek. Clearing and revegetation would be monitored by a qualified ecologist, archeologist, and the park resource manager. Clearing plant materials to open up the viewshed would consider the appropriate extent of clearing and pruning as well as a strategy for plant removal that considers the existing limited access to the bluff. It would balance the need for vegetation to maintain the structural stability of the elevated bluff and include a proposed schedule for occasional and regular routine maintenance.

Conclusion

The potential for short-term adverse impacts to surface soils exists due to ground disturbance for the construction of the vehicular access, parking, pedestrian circulation and orientation space within a 7,500-square-foot section of the site, adjacent to Fort Caroline Road. Impacts would be localized and short term due to the minimal area of disturbance and balanced cut and fill conditions. Short-term adverse impacts would be avoided with implementation of mitigation measures such as BMPs for drainage and sediment erosion control. BMPs would include planted swales and bio-retention areas and use of straw mulch for soil stabilization and silt fencing for temporary sediment control. Similar BMPs for drainage and sediment erosion control at the temporary staging areas would be implemented to prevent or reduce non-point source runoff and minimize soil loss.

The impact to soils under this alternative combined with future operations, management strategies, mitigation measures, and the potential for expansion of Fort Caroline Road would be would short-term. Additional mitigation measures within the vicinity of the Spanish-American War Battery would be implemented within the context of any future changes to Fort Caroline Road. Adverse impacts to soils are not expected.

Water Resources

Alternative A: No Action

Under the no action alternative, the conditions and trends associated with water resources on the Spanish-American War Battery property discussed in Chapter 3 would continue. Protection of marsh and estuarine wetlands and waterways at the base of the bluff associated with the Spanish-American War Battery site would continue with the current management and maintenance strategies in place for water resources throughout Timucuan Ecological and Historic Preserve.

Monitoring of existing drainage on the site from the apex of the bluff to Fort Caroline Road would continue as part of existing operations, management, and maintenance of the battery site. Under this alternative it is imperative to consider the sensitivity of water resources to changing conditions and exposure to climate-related changes. Water resources within the boundary of the Spanish-American War Battery and within the preserve as a whole are particularly vulnerable to weather events, erosion due to flooding, and the effects of climate change resulting in rapidly rising sea levels. Increased temperatures associated with climate change could produce a drier landscape in the preserve, resulting in decreased availability of surface and groundwater, a trend harmful to wetland and aquatic environments.

Under the no action alternative, with current ongoing management and operations combined with limited strategies in response to future climate change and sea-level rise, there would be continuing vulnerability of the Spanish-American War Battery site to increased temperatures resulting in decreased availability of surface and groundwater. This would directly impact the vegetation and soils within the site, threatening the health and stability of plant materials and soils. This condition would also be conducive to the spread of invasive species or introduction of new invasive species tolerant of drought conditions, a direct and long-term adverse impact on the site.

Alternative B: Implementation of Concept Treatment Plan

Impact Analysis

Specific actions resulting from the implementation of this alternative include introduction of land uses that would contribute to the condition of water resources. Ground disturbance for the construction of the vehicular access, parking, pedestrian circulation and orientation space would be within a 7,500-square-foot section of the site adjacent to Fort Caroline Road. Mitigation measures associated with BMPs for stormwater runoff would be implemented within the concept plan and include use of porous pavements, filter strips, and naturalized detention structures such as rain gardens. A rain garden or planted bioretention area, integrated into the parling lot, which is located downhill from the sloping topography of the site, would help to both capture and cleanse stormwater before it infiltrates into the ground. There would be no disturbance on or near wetlands, estuarine marsh, or the waterways, including the St. Johns Creek, St. Johns River, and the drainageway arising from the bluff and emptying into the creek at the northeastern corner of the property. Impacts of ground disturbance due to construction would consist of removal of vegetation, earthwork for site preparation, and rough and fine grading. This process however temporary, leaves the site vulnerable during rain events to stormwater overflow conditions causing flooding, migration of soil, drainage backup, and erosion. The impact would direct and short-term. Implementation of mitigation measures as documented in Chapter 2 as soon as possible is essential in this phase of the project to prevent long-term adverse impacts and additional costs for clean-up and potential replacement of washed-out soils.

Conclusion

Alternative B would have a short-term impact on water resources due to the ground disturbance associated with the implementation of the infrastructure within a minimalized section of the site landscape. There would

be short-term impacts to surface water drainage due to project staging and construction and associated temporary soil compaction. Mitigation measures including BMPs associated with stormwater runoff would be implemented to avoid long-term impacts. Additional mitigation measures within the vicinity of the Spanish-American War Battery would be implemented within the context of any future changes to Fort Caroline Road. Adverse impacts to soils are not expected.

Vegetation

Alternative A: No Action

Under the no action alternative, the conditions and trends associated with vegetation on the Spanish-American War Battery property discussed in Chapter 3 would continue. Existing management and maintenance strategies would remain in place including monitoring of vegetative growth within the battery structure. Without changes to vegetative management strategies, the current condition of the battery structure would deteriorate due to uncontrolled vegetative growth within the concrete resulting with resulting impacts to the materials and structure. In addition, the uncontrolled growth of the invasive air potato vine *(Dioscorea bulbifera)* and tuberous sword fern *(Nephrolepis cordifolia)* would continue, impacting native vegetation on the site as well as plant material within the boundaries of the neighboring residential dwellings. Within this alternative and the current ongoing vegetation management and operations, any future migration of invasive species from the surrounding context landscape would continue and resulting in long-term adverse impacts on native vegetation.

Alternative B: Implementation of Concept Treatment Plan

Impact Analysis

Specific actions resulting from the implementation of this alternative and associated with vegetation include selected tree removal and clearing of understory plantings and invasive species for construction of an access drive, vehicular parking, pedestrian walkways, and a raised boardwalk. As shown in Map 2-1 there is currently extensive tree cover on the site. The tree inventory was based on a survey conducted in March 2021. Trees indicated are those that are greater than 10 inches or more diameter at breast height. Smaller trees, shrubs, and other undergrowth were not surveyed. As indicated on Map 2-2, there are fourteen trees that would potentially be removed in order to accommodate the infrastructure of the concept design plan. Trees would be evaluated as to general health and stability. Decisions for selected removal would be based on management issues, general health of each tree to be removed, visitor access and preservation of historic viewsheds. In order to minimize adverse impacts due to tree removal, a removal plan would be developed by the park in association with a certified arborist. Tree and stump removal techniques would be used to minimize ground disturbance and protect surrounding vegetation. Alignments of pedestrian walks and the elevated boardwalk would be verified in the field before construction to ensure minimal removal of trees and protection of trees adjacent to new construction. Construction methods and materials for boardwalks within heavily vegetated areas would be detailed within construction drawings and specifications. Use of pile supports for the elevated boardwalk would have minimal impact on surrounding vegetation.

Limbing-up of selected trees would occur in order to maintain the view to the battery from the orientation space adjacent to the parking area. Screen plantings of native trees and shrubs would be added to further screen views between the battery and neighboring properties. These plantings would enhance the feeling and character of the historic property and protect the privacy of adjacent property owners. Native evergreen shrub species commonly used for screening include Marlberry *(Ardisia escallonioides)*, an excellent understory for live oaks; Southern wax myrtle *(Myrica cerifera)*; and Dahoon holly *(Ilex cassine)*. Small native evergreen trees could be used in combination with shrubs. Appropriate species include Little Gem Magnolia *(Magnolia grandiflora* 'Little Gem'*)* and Yaupon holly *(Ilex vomitoria)*.

Selected clearing of the vegetation at the apex of the bluff slope would not proceed without evaluation of the bluff stability in order to determine if the reestablishment of the historic viewshed would cause long-term adverse impacts. The vegetation management plan implemented within this alternative would address procedures for removing woody vegetation within the viewshed. The plan would identify the appropriate equipment to be used on the site, as well as a schedule for maintenance procedures and monitoring activities to avoid potential short-term adverse impacts to bluff vegetation.

There are direct and beneficial impacts to vegetation due to management and maintenance of the canopy of existing hammock trees and the introduction of a groundcover layer of native grasses augmenting or replacing the existing turf grass. Native forbs or wildflowers and ornamental bunchgrasses would potentially be included as part of the meadow planting within the open space southwest of the battery. The grasses and forbs, in combination with shrub plantings ranging in height from 18 to 36 inches, would create long-term and beneficial visual impacts as they grow in and around the boardwalk and would stabilize the landscape with minimal maintenance requirements.

Treatment would include continued protection and maintenance of the native vegetation associated with the bluff and the marshland at the northeastern end of the property.

Conclusion

Alternative B would have a short-term impact on vegetation due to installation of tree protection barriers; removal of selected trees for construction of the parking, walkways, and boardwalk; and re-grading to return restore site elevations and introduction of the new native grass and forb ground cover. Implementation of mitigation measures (see Chapter 2) and a vegetation management plan implemented as part of Alternative B would minimize the short-term impacts and restore the landscape once construction is complete.

Under Alternative B, impacts on vegetation would primarily be beneficial and long-term. Implementation of recommendations within the concept plan for comprehensive vegetation management including preservation of native species, removal and control program for invasive species, and silviculture mitigation methods would protect both natural and cultural resources and guide vegetation management well into the future. Protection and ongoing vegetation management on the site is imperative in order to preserve the character of the historic site defined by the large live oaks with handing moss and the spatial organization between open space and closed shady areas, and the vista created to the battery structure created by the vegetation frame that encloses the interior of the space. Existing vegetation and additional new plantings are essential for screening views to and from neighboring properties. The impact of Alternative B when combined with future operations and management strategies, mitigation measures detailed in Chapter 2, and expanded interpretation of the battery and its associated landscape would be long-term and beneficial to vegetation. Adverse impacts on vegetation are not expected.

Federal Species of Concern and their Habitat

Alternative A: No Action

Under the no action alternative, the conditions and trends associated with federal species of concern on the Spanish-American War Battery property discussed in Chapter 3 would continue. Under this alternative, there are no continuing or direct impacts to federal species of concern and their habitat because the North Florida Field Office of the USFWS determined there were no federal species of concern or critical habitat associated with the Spanish-American War Battery site.

Alternative B: Implementation of Concept Treatment Plan

Impact Analysis

On June 30, 2021, Annie Dziergowski of the project review and consultation section of the USFWS/North Florida Ecological Services Office concurred with the park's determination that no federally listed species are located at this site. The findings fulfill compliance with the Endangered Species Act of 1973, as amended (16 U.S.C. et seq.). Ms. Dziergowski concluded that the USFWS does not have any additional information for listed species at the proposed site. Actions proposed in the concept design plan would not have any adverse impact on federal species of concern and their habitat within the landscape of the Spanish-American War Battery.

Conclusion

Specific actions resulting from the implementation of the action alternative would have no direct impacts on federal species of concern or their habitats as none were determined to be located at the Spanish-American War Battery and its associated cultural landscape. NPS staff would continue to monitor the site during construction and after construction and consult with USFWS to ensure the status of critical habitat and species of concern within the project site in the future.

Archeological Resources

Alternative A: No Action

Under the no action alternative, the conditions and trends associated with archeological resources on the Spanish-American War Battery property discussed in Chapter 3 would continue. Current management and maintenance policies associated with the no action alternative would not impact existing or potential archeological sites. There would be no ground disturbance due to planning interventions associated with this alternative and no potential disturbances by visitors as the gates will remained locked and no visitor access provided except under special circumstances with NPS staff. There would be no adverse impacts to archeological sites under this alternative.

Alternative B: Implementation of Concept Treatment Plan

Impact Analysis

A Phase 1 archeological investigation of the area planned for construction was conducted in 2013 as part of a comprehensive investigation for the La Caroline Project by the University of North Florida Archeology Laboratory I for the state of Florida and the National Park Service. The purpose of the survey was to determine if any artifacts or intact features were located on the property, away from the extant gun emplacement. Shovel testing revealed a low-density lithic scatter and a sparse and intermittent distribution of historic artifacts. No intact deposits were encountered in areas of shovel testing that are potentially significant cultural resources worthy of inclusion in the National Register of Historic Places.

If previously unknown archeological resources were discovered during earth moving, grading, or installation of piles to support the proposed boardwalk, the NPS would suspend operations at the site and immediately contact the appropriate NPS archeologist or cultural resource specialist, who would arrange for a determination of eligibility in consultation with the Florida Department of State, Division of Historical Resources and State Historic Preservation Officer, and, if necessary, develop a recovery plan.

Conclusion

Implementation of the proposed actions in Alternative B would have no adverse impacts to archeological resources within the landscape associated with Spanish-American War Battery due to previous investigation

of the area planned for construction and preservation management of the integrity of archeological resources including treatment protocols in the event of discovery of any previously unknown resources. Adverse impacts on archeological resources are not expected.

Historic Buildings and Structures

Alternative A: No Action

Under the no action alternative, the conditions and trends associated with historic buildings and structures on the Spanish-American War Battery property discussed in Chapter 3 would continue. A strategic preservation management plan would not be developed or implemented for the battery. The structure would continue to experience deterioration related to exposure to the environment. Cracking and spalling of the concrete due to corrosion of embedded steel reinforcement would continue and, as the steel is further exposed to moisture at existing as well as new cracks and spalls, deterioration of the concrete would be expected to become more extensive and severe over time. The battery would also be subject to further deterioration and damage from vegetation growing on and within the structure and would remain vulnerable to potential damage from falling limbs or trees. The structure would remain susceptible to accidental damage from unauthorized visitors climbing on the structure and from vandalism and graffiti. Under this alternative, current trends in the deteriorating condition of the structure, combined with uncontrolled spread of invasive plant species throughout the landscape, would have a continuing adverse impact on the battery structure.

Alternative B: Implementation of Concept Treatment Plan

Impact Analysis

Potential adverse impacts associated with the concept design plan proposed in Alternative B would be associated with construction methods or materials used in and around the battery structure for the elevated boardwalk and viewing platforms at the base of the structure and on top of the bluff. Design development for the alternative infrastructure would minimize any contact with the surface of the battery during construction of circulation features. Design drawings and specifications would adhere to construction techniques presented in NPS Technical Preservation Services, Technical Brief 14: *New Exterior Additions Related to Historic Buildings or Structures*. Methods would also be required to meet Leadership in Energy and Environmental Design (LEED) standards when constructing new amenities to demonstrate NPS commitment to protect natural and cultural resources for future generations. Within this context adverse impacts to the structure would be avoided.

The actions in the concept treatment plan would include opportunities for visitors to view the structure without directly accessing it. The pedestrian boardwalk and the observation platform provide open and expansive views of the battery without the potential impact of direct foot traffic on the structure. The alignment of the circulation infrastructure would assist in long-term preservation of the structure and avoid adverse impacts due to human contact. This action would have a direct beneficial impact on the battery structure.

Implementation of mitigation measures associated with vegetation management would also be necessary to avoid adverse impacts to the battery structure and assist in the long-term preservation of the structure. These measures include removal and eradication of vegetation growing on or within the structure, management of nearby trees to prevent damage from falling limbs, and removal of invasive species with continued management and maintenance. Development of specific planning documents including a Historic Structure Report with treatment recommendations, as well as a stabilization and repair plan and preservation protocols based on best management practices, would ensure future maintenance and repair of the battery in accordance with the Secretary of the Interior's Standards for Preservation.

Conclusion

Implementation of the above actions within the concept treatment plan and associated mitigation measures would have direct and beneficial impacts to the battery structure because within the implementation process for this alternative, a preservation protocol guide for the battery as described in the CLR would address appropriate treatment based on best practices for repair and maintenance of concrete and metal materials associated with the structure. Treatment would include cleaning of the concrete; repair of cracks and spalls in the concrete; repair of corroded iron and steel elements; repair of the deteriorated cementitious parge coating; and repair of deteriorated paving materials. Repairs to historic features would be performed only by those with proven experience in the preservation of historic materials. There would be appropriate care of the battery based on condition issues of concern and development of maintenance tasks such as inspection, monitoring of cracks, cleaning of concrete, and coating of exposed steel as well as vegetation management tasks. Appropriate maintenance cycles to reduce the need for large-scale repair projects in the future would be determined. The battery would be maintained free of vegetation. All vegetation growing and within cracks and crevices associated with the structure would be removed based on preservation protocols and long-range vegetation management goals for the site. Instances of vandalism, including graffiti, would be addressed as outlined in the preservation protocol guide implementation of treatment recommendations associated with the preservation management of historic structures and implementation of mitigation measures for cultural resources under the alternative would ensure long-term beneficial impacts to the Spanish-American War Battery structure. Impacts associated with Alternative B when combined with future operations, management strategies, and expanded interpretation of the battery and its associated landscape would be long-term and beneficial to the battery structure. Adverse impacts on historic buildings and structures are not expected.

Cultural Landscape

Alternative A: No Action

Under the no action alternative, the conditions and trends associated with the cultural landscape of the Spanish-American War Battery property discussed in Chapter 3 would continue. The conditions and trends of the landform and topography associated with the Spanish-American War Battery landscape and the direct connection between topography, the siting of the battery, and the views toward the St. Johns River would not be impacted. Few alterations to site topography have been made since 1899, and there would be no topographic alterations to the site associated with this alternative. Current vegetation management and maintenance would continue with periodic mowing of the grass and partial removal of extensive invasive plants. The character of the wooded landscape including the mature live oaks *(Quercus virginiana)* with Spanish moss draping from their limbs would be retained but only if invasive species are managed and or removed from the site. The views from the bluff would continue to be heavily blocked by unmanaged vegetation growth on the apex of the bluff and within the viewshed to the St. Johns River. The no action alternative would not fulfill the priority goals of the NPS to preserve and interpret the cultural landscape and when combined with current and ongoing vegetation management would have a long-term adverse impact on the cultural landscape associated with the Spanish-American War Battery.

Alternative B: Implementation of Concept Treatment Plan

Impact Analysis

Specific actions resulting from the implementation of Alternative B would retain and enhance the landscape elements and features of the cultural landscape. The historically important view from the top of the bluff to the St. Johns River would be established through clearing of prescribed vegetation on the bluff slope. This clearing would have a direct and beneficial impact on the cultural landscape due to removal of selected limbs, understory and invasive species and thereby restoring the historic cultural landscape that contains the viewshed. Potential adverse impacts to the landform topography would be minimized due to the limited area

of construction and a developed grading plan to restore original elevations. The proposed curvilinear alignment of the elevated boardwalk would preserve large canopy trees and thus the overall character of the cultural landscape. The open landscape allowing views to the battery from the new walkways and nodes would be preserved and enhanced with low meadow plantings. The setting of the battery structure would be preserved and enhanced by keeping the accessible boardwalk within the trees and out of the viewshed to the battery and visitor opportunities for expanded interpretation through integration with the cultural landscape would be afforded. These actions within Alternative B would have direct and long-term beneficial impacts on the cultural landscape due to preservation of large canopy trees, the open landscape setting for the battery structure, and protection and restoration of native plant communities including the meadow plantings of native grasses and forbs.

Conclusion

With implementation of the proposed actions in Alternative B, preservation and enhancement of the integrity of the cultural landscape and the integration of the landscape within the overall visitor experience would have a direct and long-term beneficial impact on the resource. Impacts associated with Alternative B when combined with future operations, management strategies, and expanded interpretation of the battery and its associated landscape would be long-term and beneficial to the cultural landscape. Adverse impacts on the cultural landscape are not expected.

Historic Viewshed

Alternative A: No Action

Under the no action alternative, the conditions and trends associated with the historic viewshed on the Spanish-American War Battery property discussed in Chapter 3 would continue. Continued management and maintenance measures associated with this alternative would not include removal of vegetation within the viewshed on the apex of the bluff to the St. Johns River and would not allow visitor access to the site, including the bluff. The strategic importance of the viewshed as an essential component in the siting of the Spanish-American War Battery would not be interpreted on site, and it would constitute a lost opportunity to enhance visitor understanding of how the battery was built as part of a larger system of artillery emplacements that took advantage of views of the river to protect against enemy attack. This alternative would have a continuing adverse impact on the historic viewshed into the future, as the bluff vegetation is allowed to grow under current park vegetation management strategies and completely block all visibility from the bluff to the St. Johns River.

Alternative B: Implementation of Concept Treatment Plan

Impact Analysis

Specific actions resulting from the implementation of this alternative and associated with the historic viewshed include clearing non-historic woodland from the viewshed atop the bluff to the north of the battery structure and maintaining the area in lower growing native species, or regularly cutting woody growth that impacts the view. The NPS would identify an appropriate approach for conducting clearing efforts and any recommended thinning and vista establishment. Use of native shrub and fibrous rooted grass species would be planted to stabilize the bluff and control erosion. Other mitigation measures outlined in Chapter 2 of this document pertaining to removal of vegetation, soil stabilization, and control of invasive species would be utilized under this alternative.

Conclusion

Overall, this alternative would have direct and beneficial impacts on the historic viewshed and reverse the trend of continued growth of vegetation further blocking the view. Disturbances due to clearing operations

and subsequent maintenance and management would be minimalized due to mitigation measures. Future maintenance operations associated with other actions on the site, combined with any actions associated with the private property on either side of the battery site, would have no impact on the historic viewshed. Adverse impacts on the historic viewshed are not expected.

Visitor Use and Experience

Alternative A: No Action

Under the no action alternative, the conditions and trends associated with visitor use and experience of the Spanish-American War Battery property discussed in Chapter 3 would continue. Current park operations, management and maintenance of the property would continue. Visitor access would continue to be prohibited, and the entrance gate would remain locked unless park staff were conducting maintenance activities or providing special tours. Interpretation of the Spanish-American War Battery as well as visitor services would occur at the Timucuan Ecological and Historic Preserve Visitor Center at Fort Caroline National Memorial and at the Ribault Monument, a five-minute drive to the east of the battery site along Fort Caroline Road. Current access to the battery site and structure for researchers or special guests would continue with park staff management team tours. The no action alternative would not fulfill the priority goals of the NPS to accommodate visitors to the property and would facilitate a long-term and adverse impact any future visitor use and experience of the Spanish-American War Battery.

Alternative B: Action Alternative – Implementation of Concept Treatment Plan

Impact Analysis

Specific actions resulting from the implementation of this alternative and associated with potential impacts on visitor use and experience would include vehicular access and parking, accessible pedestrian circulation, accessible orientation space edged by interpretive panels and benches affording views to the battery structure, an accessible elevated boardwalk, and a platform at the southwestern edge of the battery providing views of the structure and wayside exhibits. A second walk from the base of the structure would lead to the top of the bluff. Due to the steep nature of the slope, the second walk would include several stairs and would not meet accessibility standards. The walk would end in a platform serving as an overlook from the top of the bluff to the expansive view of the St. Johns River.

The actions proposed in this alternative would provide access to the cultural landscape and the historic battery structure and expand and integrate interpretation within the cultural landscape by telling the story of the Spanish-American War Battery. Visitor amenities include benches, shaded nodes, orientation spaces, and interpretive signage.

Mitigation measures would be implemented to reduce impacts of construction activities on neighboring residential properties and park visitors who might go to the site. These measures may include, but are not limited to phasing construction, temporary closures, noise abatement, visual screening, and informational signage at the site relating the purpose and need for construction and future visitor access and amenities within the Spanish-American War Battery and its associated cultural landscape.

Conclusion

The battery is considered and identified as a high priority for preservation in the Timucuan Ecological and Historic Preserve's 1994 General Management Plan. The property was assimilated into the larger preserve due to the efforts of the North Florida Land Trust and the City of Jacksonville, which raised the money to acquire the Spanish-American War Battery site. The property was then donated and transferred to the National Park Service. The NPS priority for the new acquisition is the development of plans to accommodate visitor access

to the historic battery structure and its associated landscape, and to interpret the entire site to facilitate an understanding of events associated with the history of the Spanish-American War Battery and its relationship to more than 300 years of military presence in the Jacksonville area.

Under Alternative B, impacts on visitor use and experience would primarily be beneficial and long term because of provisions for public access to the site and interpretation of the history of the structure and landscape within the Timucuan Ecological and Historic Preserve. Visitors and school groups would be presented with the stories and themes essential to understanding the significance of the structure and site and the significance of the ecological systems and features of the unique landscape. Proposed parking in the shade of large oak trees, and ABAAS-compliant circulation including an elevated boardwalk winding through the existing vegetation, provide full accessibility for all visitors. Additional amenities such as benches shaded by large trees, orientation and informational signage, viewsheds to the battery structure and interpretive waysides provide visitors with choices for experiencing the site and remaining comfortable throughout their visit. Adverse impacts on visitor use and experience are not expected.

Human Health and Safety

Alternative A: No Action

Under the no action alternative, the conditions and trends associated with human health and safety on the Spanish-American War Battery property discussed in Chapter 3 would continue. Unsupervised access to the structure has the potential to cause vandalism, unintended damage to the battery structure, and/or harm to trespassers. Incidences of littering would escalate and require ongoing management issues for the park staff. Existing management and maintenance strategies such as occasional mowing would remain in place, and the gate would continue to be locked at all times unless park staff are on-site. The park currently limits site visits to special requested tours, research, or archeology. Under this alternative, there would be a continuing long-term adverse impact to health and safety to humans, due to unsupervised access to the Spanish-American War Battery and site.

Alternative B: Action Alternative – Implementation of Concept Treatment Plan

Impact Analysis

Once improvements and controlled visitor access as well as preservation management protocols have been developed, the safety of visitors is more easily monitored and ensured. Ongoing future maintenance of planned visitor access, parking, sidewalks, interpretive nodes, and vegetation would be the central part of the comprehensive work required to ensure the health and safety of the public. Staff would remain vigilant about visitor safety issues such as the potential for severe summer weather, hurricanes and severe storms, flooding, heat and humidity, and the presence of biting insects and reptiles. Ensuring the safety of visitors and staff is a major priority of Timucuan Ecological and Historic Preserve now and in the future, and would take priority over other activities.

Conclusion

Under Alternative B, impacts on human health and safety would primarily be beneficial and long term due to controlled visitor access minimizing risk of injury due to unauthorized visitors and vegetation management that would include removal of unhealthy trees and dead limbs, preventing accidental injury to the public while on the boardwalk, the bluff, or in the parking area. Vegetation management within the preferred alternative would also help control insect infestation or nesting, offering further long-term protection of site visitors. New infrastructure and associated visitor amenities would offer the public opportunities for rest, shade, and choices for the extent of engagement with the site based on individual mobility challenges. Parking is provided in close proximity to the trail for easy access to visitor vehicles in case of emergency. Information

signage would be provided to remind visitors of safety protocols while on site and ways to contact NPS staff or emergency responders. Management and maintenance of facilities throughout the extent of the specified actions would ensure the well-being of park staff, visitors, and neighbors for many years into the future. Adverse impacts on human health and safety are not expected.

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Chapter 5 – Consultation and Coordination

5.1 Introduction

National Park Service Director's Order 12 requires the NPS to make "diligent" efforts to involve the interested and affected public in the National Environmental Policy Act process. This chapter describes the civic engagement and agency consultation and coordination with the US Fish and Wildlife Service North Florida Ecological Services Office and the Florida State Historic Preservation Office Division of Historical Resources. Also included in this chapter is a description of the civic engagement virtual meeting, stakeholder participants and opportunities for public comment.

Public input received during scoping and civic engagement was important in the development of the alternatives. The review process helped the planning team understand the public's values and preferences regarding controlled visitor access, proximity to residential dwellings, site parking, recreational use, Architectural Barriers Act Accessibility Standard-compliant walkways, boardwalk trail alignment and surfacing, expanded interpretation, and connections of the Spanish-American War Battery to existing trails, the Timucuan Ecological and Historic Preserve Visitor Center at Fort Caroline National Memorial, and the Theodore Roosevelt Area, all located within the preserve and in close proximity to the battery site.

5.2 Planning

To officially initiate the Cultural Landscape Report and Environmental Assessment project, a kick-off meeting was held on July 9, 2019, at the Timucuan Ecological and Historic Preserve Visitor Center at Fort Caroline National Memorial. Project team members met (either on site or by phone) to initiate work on the project. This internal scoping meeting included the following participants:

NPS Interior Region 2

- David Hasty, Cultural Landscape Program, Contracting Officer's Representative
- Barbara Judy, Branch Chief, Cultural Resources Planning and Stewardship
- Jami Hammond, Regional Environmental Coordinator

NPS Timucuan Ecological and Historic Preserve

- Chris Hughes, Superintendent
- Steven Kidd, Chief of Science and Resource Management
- Morgan Baird, Cultural Resources Manager
- Joshua Salestrom, Cultural Resources
- Lewis Prettyman, Chief of Operations

Consultant Team

- Mark Steinback, Project Lead, Panamerican
- Christine Longiaru, Architectural Historian, Panamerican

- Jane Jacobs, Historical Landscape Architect
- Liz Sargent, Historical Landscape Architect, LSHLA
- Jennifer Trompetter, Landscape Architect, LSHLA
- Christina Osborn, Historic Preservation Specialist, LSHLA
- Deborah Slaton, Conservator/Historian, WJE
- Sean Barron, Intern Preservation Engineer, WJE

The meeting focused on an overview of the park and property; review of the CLR purpose, process, primary scope elements and objectives; coordination and relationship between the CLR and EA; park issues and concerns to be addressed in the project; the project study area; review of research sources and materials; anticipated format, goals, and scope for a civic engagement meeting; overview and goals of the EA, the pre-NEPA process; and other issues related to the EA.

5.3 Civic Engagement

In support of the process of developing planning documents to guide future use of the property, the NPS invited stakeholders to attend a civic engagement meeting to learn more about the CLR project and be given the opportunity to provide comments and ask questions about the NPS process of developing planning decisions for the Spanish-American War Battery and its associated landscape. Given the circumstances at the time surrounding the coronavirus pandemic, the Friends of Timucuan Ecological and Historic Preserve hosted the civic engagement meeting, held on November 12, 2020, virtually. The Friends group sent invitations to stakeholders, friends, and the public on October 20, 2020, that contained a link to the online meeting. Key project stakeholders invited to participate in the meeting included the Florida SHPO Director of Division of Historical Resources, City of Jacksonville Parks and Recreation department, USFWS North Florida Ecological Services Office, North Florida Land Trust, US Army Corps of Engineers, Jaxport, and forty-seven residents of the neighborhood surrounding the Spanish-American War Battery property. Participants were invited to comment in writing during the meeting and/or through the NPS Planning, Environment, and Public Comment (PEPC) system. The approximately one-hour meeting was recorded and made available for viewing during the entire thirty-day comment period to allow interested parties who could not attend the live event to access and understand the process laid out during the presentation.

The meeting centered on a presentation by the NPS and CLR team that included a summary of the history of the property, its current conditions and suite of landscape features, summary of the National Register of Historic Places significance of the property, and the draft conceptual plan being prepared to address NPS goals for the property pertaining to resource management and providing visitor access and interpretation. Because accommodating visitors to the Spanish-American War Battery might occur in a variety of ways and using a range of approaches with the potential to impact the property in different ways, the CLR team initially considered several options that were reviewed by park and regional NPS personnel. The options were refined through discussions that occurred during several conference calls held by the team with the NPS. The concept plan presented during the civic engagement meeting was the refined option considered to best meet all of the goals provided to the team by the NPS. Comments provided by the public during the civic engagement meeting were generally positive and supportive of the concept. No controversial comments were received, and stakeholders showed support. Comments and questions were documented in the Public Review Analysis and taken into consideration as the CLR was further refined. The resulting concept plan is Alternative B in the EA.

5.4 Agency Consultation

Section 7 of the Endangered Species Act

Section 7 of the Endangered Species Act requires federal agencies to ensure that the actions they authorize, fund, or carry out do not jeopardize the continued existence of listed species or destroy or adversely modify critical habitat. NPS is coordinating with the USFWS North Florida Field Office as documented in the letter sent to the Project Review and Consultation Section on April 14, 2021, to begin consultation to determine if the area contains habitat suitable for threatened or endangered species. Preliminary research and investigation by park staff indicated there were no endangered species on the site or habitat suitable for endangered species. A letter of concurrence with this determination was sent to the park on June 30, 2021, that stated: " Your findings fulfill compliance with the Endangered Species Act of 1973, as amended (16 U.S.C. et seq.). The Service does not have any additional information for listed species at the proposed site." (See Appendix B.)

Section 106 of the National Historic Preservation Act

Compliance with Section 106 of the National Historic Preservation Act (NHPA) is being carried out in coordination with the Florida SHPO, Division of Historical Resources. On May 12, 2021, the Director of Historical Resources and State Historic Preservation Officer sent a letter of concurrence to the Superintendent of Timucuan Ecological and Historic Preserve after review of the project in accordance with Section 106 and 110 of the *National Historic Preservation Act of 1966,* as amended, and its implementing regulations in *36 CFR Part 800: Protection of Historic Properties.* The letter stated: "This office concurs with the approach to the project and with the National Park Service's determination that the proposed infrastructure outlined in the CLR would have no adverse effect to the National Register-eligible Spanish-American War Battery historic property." (See Appendix B.)

5.5 Preparers and Consultants

NPS: Timucuan Ecological and Historic Preserve

- Chris Hughes, Superintendent
- Steven Kidd, Chief of Science and Resource Management
- Morgan Baird, Cultural Resources Manager
- Joshua Salestrom, Cultural Resources
- Lewis Prettyman, Chief of Operations

NPS: Interior Region 2

- David Hasty, Cultural Landscape Program, COR
- Jami Hammond, Regional Environmental Coordinator

Consultants

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- Jennifer Trompetter, Landscape Architect, LSHLA
- Deborah Slaton, WJE, Conservator/Historian



FIGURE 5-1. NPS park and regional staff and consultants conducting field investigations at the Spanish-American War Battery structure.



FIGURE 5-2. Consultant and park staff discuss vegetation management and maintenance during field investigations of the battery structure and associated cultural landscape.

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Appendix A

Alternative Options Considered but Dismissed from Further Analysis

Alternative Options Considered but Dismissed from Further Analysis

Three additional alternative options were developed for the CLR and considered for further analysis. Each alternative is described below and followed by illustrative drawings of the design concept.

Concept Option 1

As part of Option 1, a single head-in parking space that meets ABAAS accessibility standards would be located along Fort Caroline Road, along with three spaces aligned parallel with the road. A pair of ABAAS-accessible walks would lead into the property through gates in the perimeter boundary fence. These could be locked when the park is closed. The walks would lead to a paved landing and shelter located just inside the perimeter boundary fence. From the shelter visitors would be able to view the battery from afar through a central area where the trees would be limbed up or removed to establish a clear site line. The shelter would offer protection for visitors during inclement weather and would also feature wayside panels providing interpretive information about the battery available to all visitors. The interpretive panels would explain the history of the battery, the context of Endicott coastal defense structures, the Spanish American War, and the relationship between the prospect of St. Johns River afforded by St. Johns Bluff and military defense strategies both during the Spanish American War and during earlier eras. A mown path would wind its way from the shelter to the base of the battery, where a barrier would be placed to discourage visitors from accessing the structure and a wayside exhibit would expand on interpretation of the structure.

This concept option was dismissed from further analysis because it would not fully address the fundamental purpose and need established for the project. Accessibility that meets ABAAS compliance standards would not be provided to the battery or the cultural landscape and there would be no access to the bluff and associated historic viewshed interpretation. In addition, this option would leave the battery structure vulnerable to unauthorized visitor access, exposing it to further damage.

Concept Option 2

Concept Option 2 would accommodate parking along Fort Caroline Road in the form of three head-in spaces near the southwest corner of the property. One of the spaces would be an ABAAS-accessible space. An accessible walk would lead to a shelter and paved landing just inside the perimeter fence. A shelter would protect visitors during inclement weather and feature interpretive panels to provide the same information described above. The central portion of the property would be cleared for views through limbing up and removing trees. The ground plane would be managed as a native grass and groundcover plant community maintained through mowing. Visitors would be free to walk on the mown turf. To facilitate traversing the slope, stairs would be added, feathered into the hillside, where the land becomes steeper. Stairs would also lead to a raised grass landing established using fill located in front of the battery. This would allow for better views of the structure. A barrier would be added along the edge of the grass landing to discourage visitors from accessing the battery, and a wayside exhibit would expand on interpretation of the structure. Full accessibility would be limited to the parking area, entrance walk, and shelter.

This concept option was dismissed from further analysis because it would fully address the fundamental purpose and need established for the project. Accessibility that meets ABAAS compliance standards would not be provided to the battery or the cultural landscape and there would be no access to the bluff and associated historic viewshed interpretation. In addition, this option would include multiple steps that may be visually unobtrusive but would effectively act as further barriers to the cultural landscape for visitors with mobility challenges. Also, within this alternative there would be less visitor amenities due to limited shelter space, limited pedestrian circulation, and limited interpretation integrated within the cultural landscape.

Concept Option 3

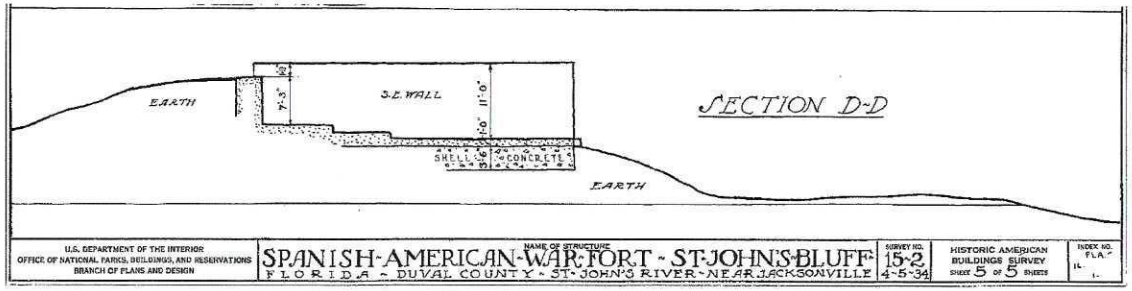
Concept Option 3 provides a total of eight angled parking spaces, including a single accessible space, accessed from a one-way road leading into the property from (and exiting at) Fort Caroline Road. Gates would be installed at the entrance and exit lanes at Fort Caroline Road to close the property when the park is not open to visitors. A shelter would be sited near the parking area and the southwest corner of the property and would contain interpretive panels. From the shelter, visitors would follow an accessible loop trail that would be located along the eastern and western perimeters of the property, just inside of proposed screen plantings along the property boundary. The accessible loop trail would lead to a raised built landing in front to the south of the battery that would allow for viewing of the structure. The landing would be edged by a handrail that would double as a barrier intended to discourage visitors from accessing the battery structure. A wayside exhibit would be provided at the landing to interpret the history of the structure.

This concept option was dismissed from further analysis because it would not fulfill fully address the fundamental purpose and need established for the project. Accessibility that meets ABAAS compliance standards would be provided to the battery and the cultural landscape but there would be no access to the bluff and associated historic viewshed interpretation. In addition, this option would be a major intervention into the cultural landscape with potential for significant impact to the cultural landscape and a visual impact for adjoining properties. Also, visitors would have limited space for orientation, interpretation, rest and shelter from weather events.

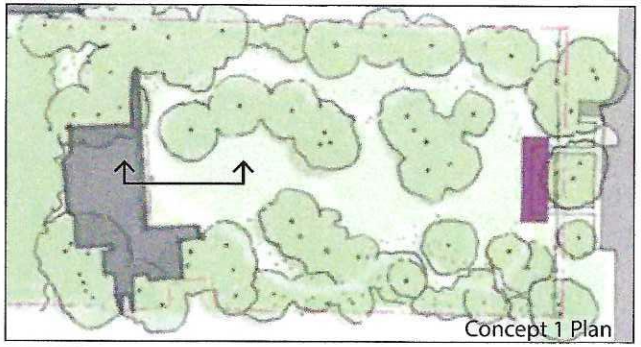


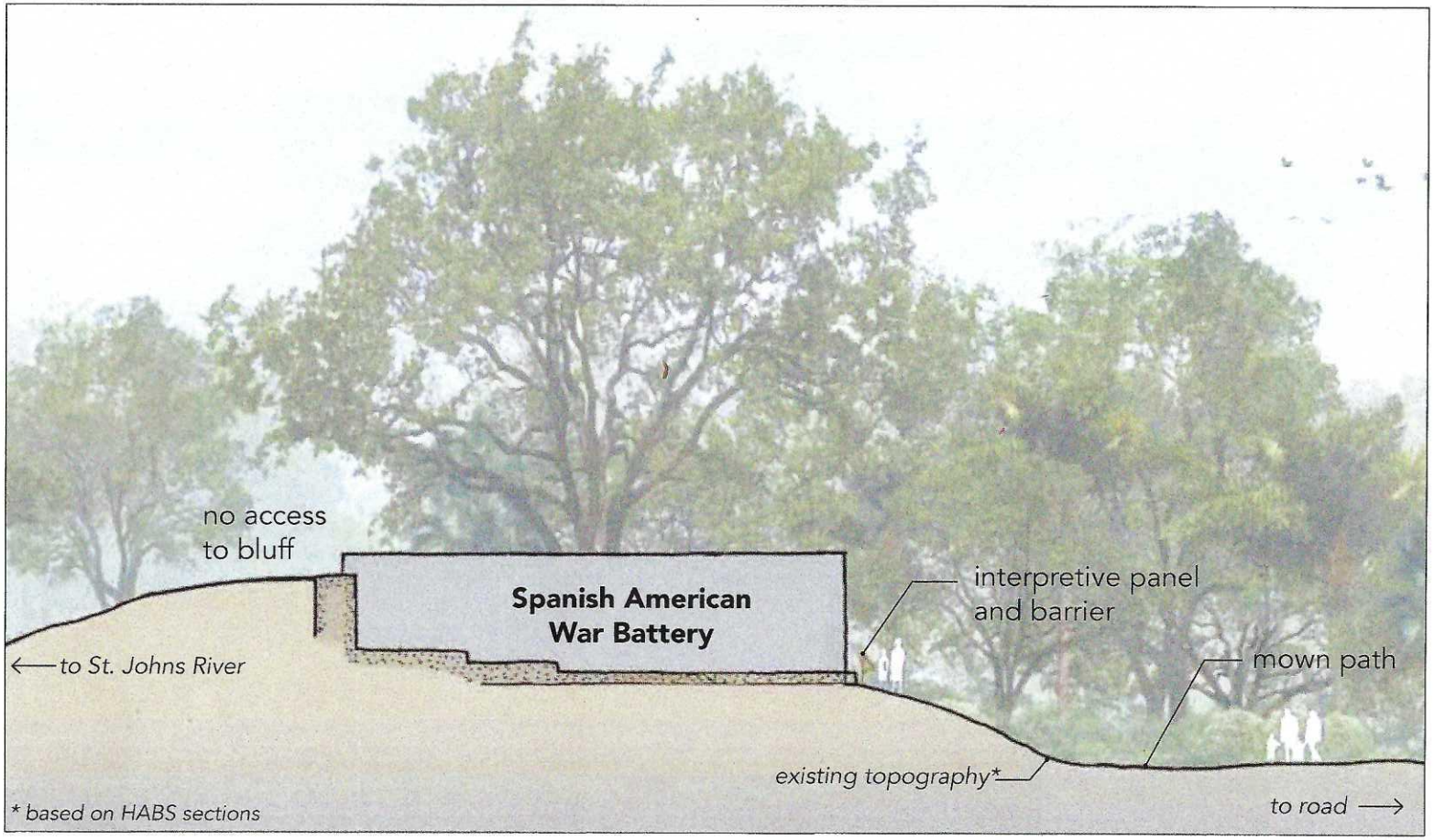
Plan - Treatment Concept 1

28 July 2020
LSHLA



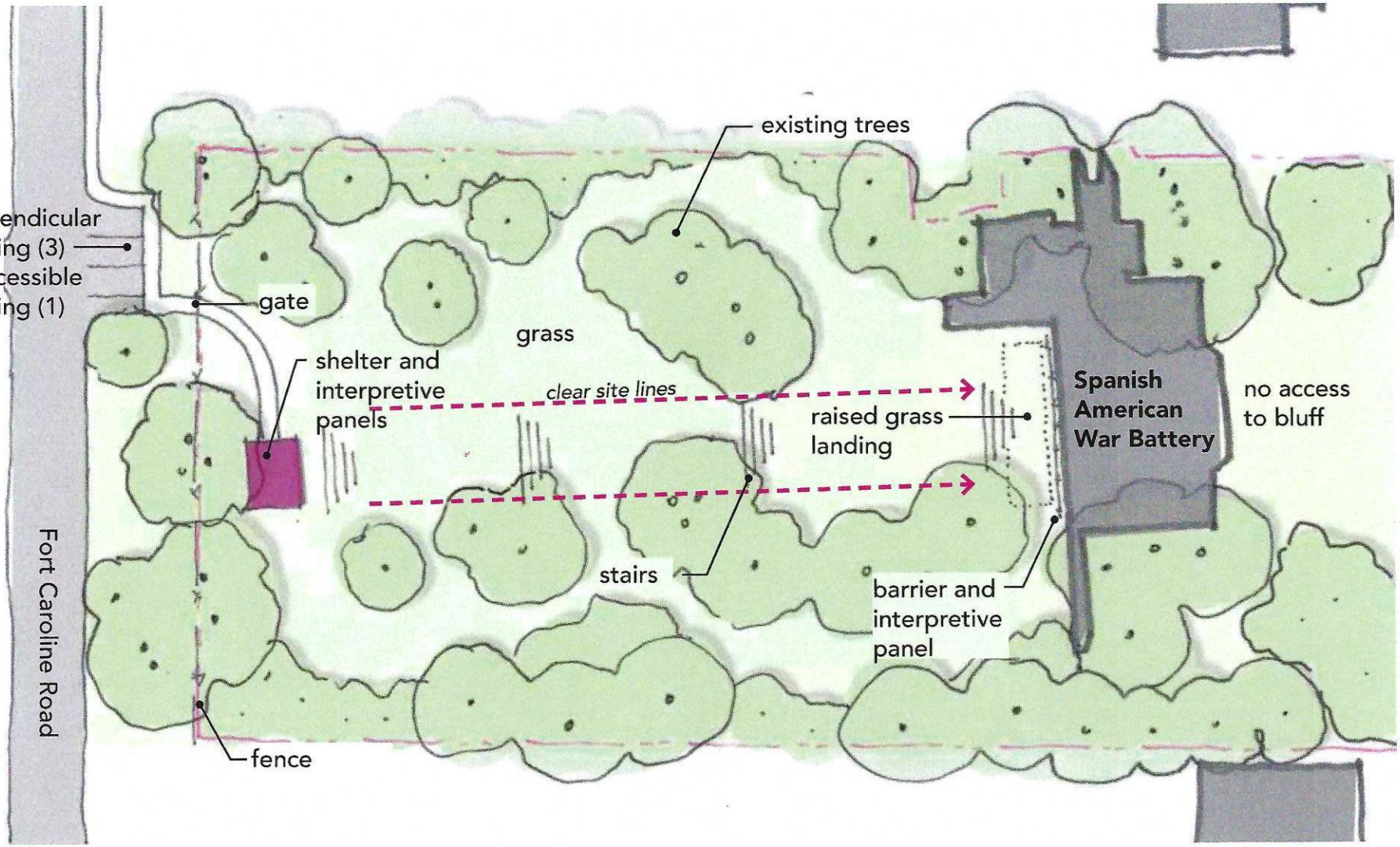
Existing Section (source: HABS survey)





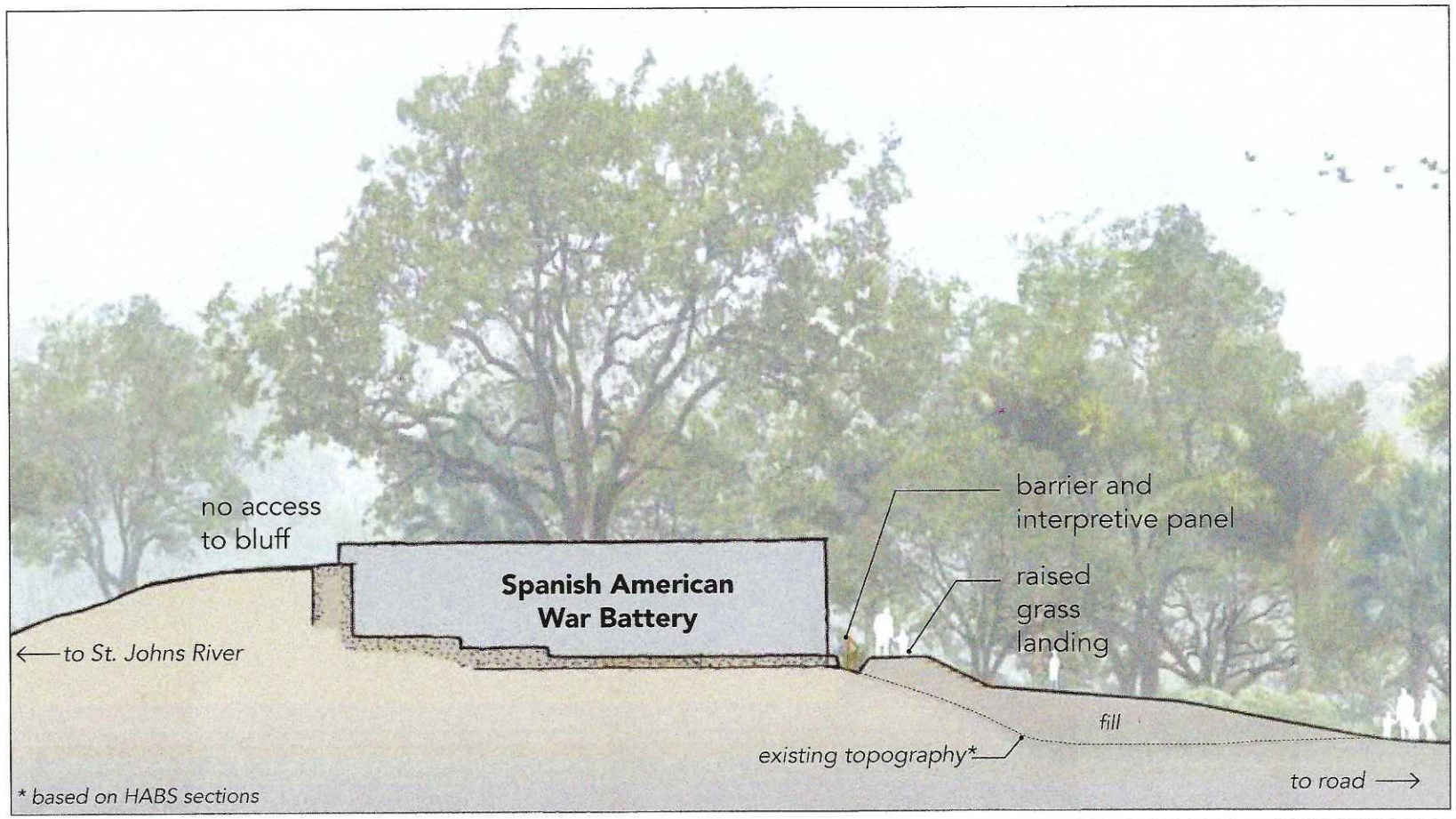
Section - Treatment Concept 1

28 July 2020
LSHLA



Plan - Treatment Concept 2

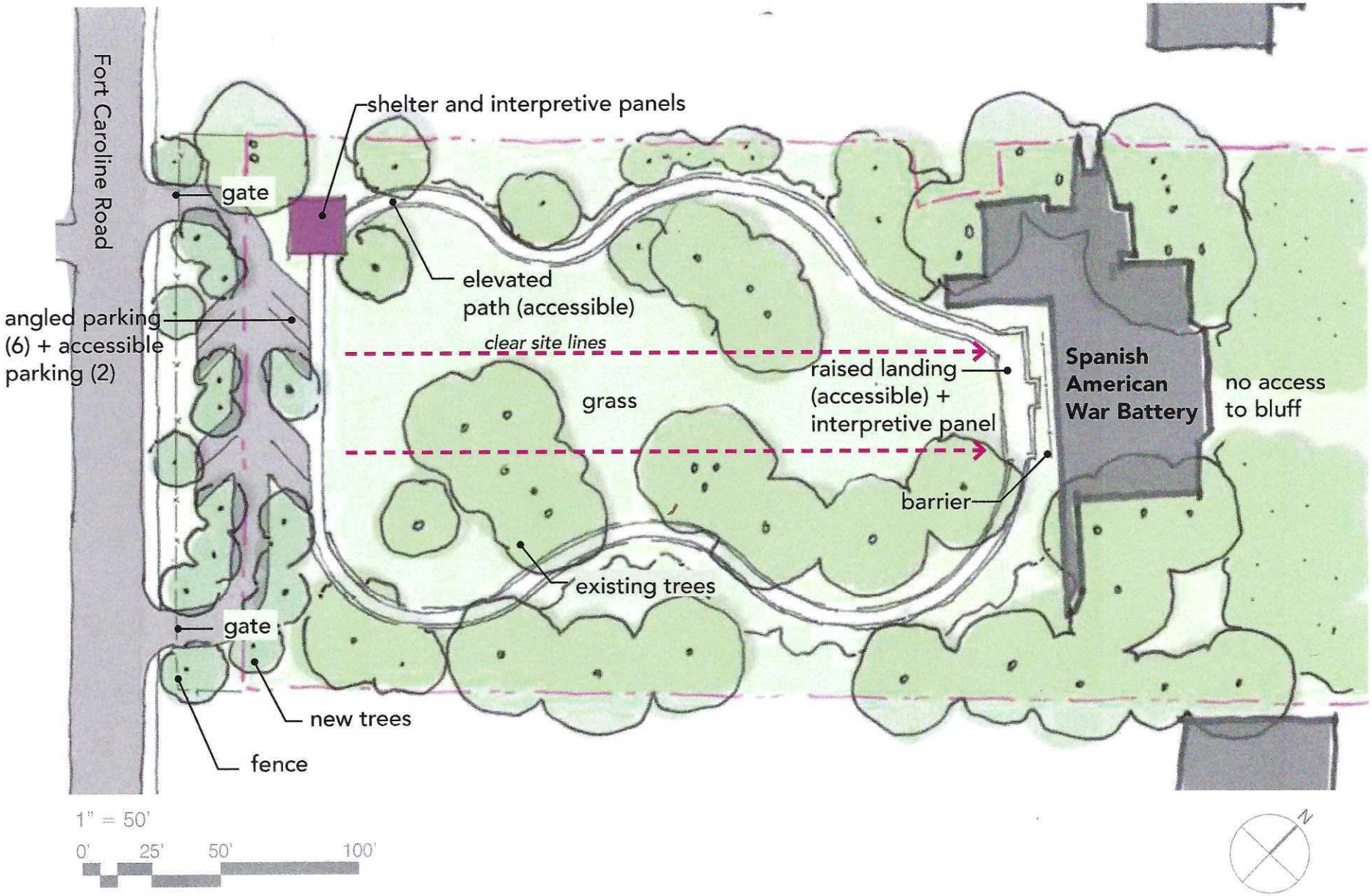
28 July 2020
LSHLA



Section - Treatment Concept 2

Spanish American War Battery
Cultural Landscape Report

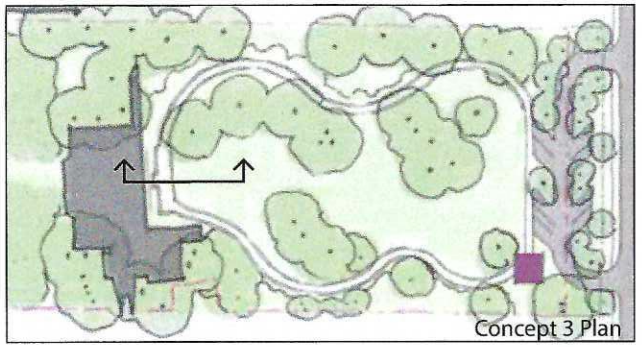
28 July 2020
LSHLA

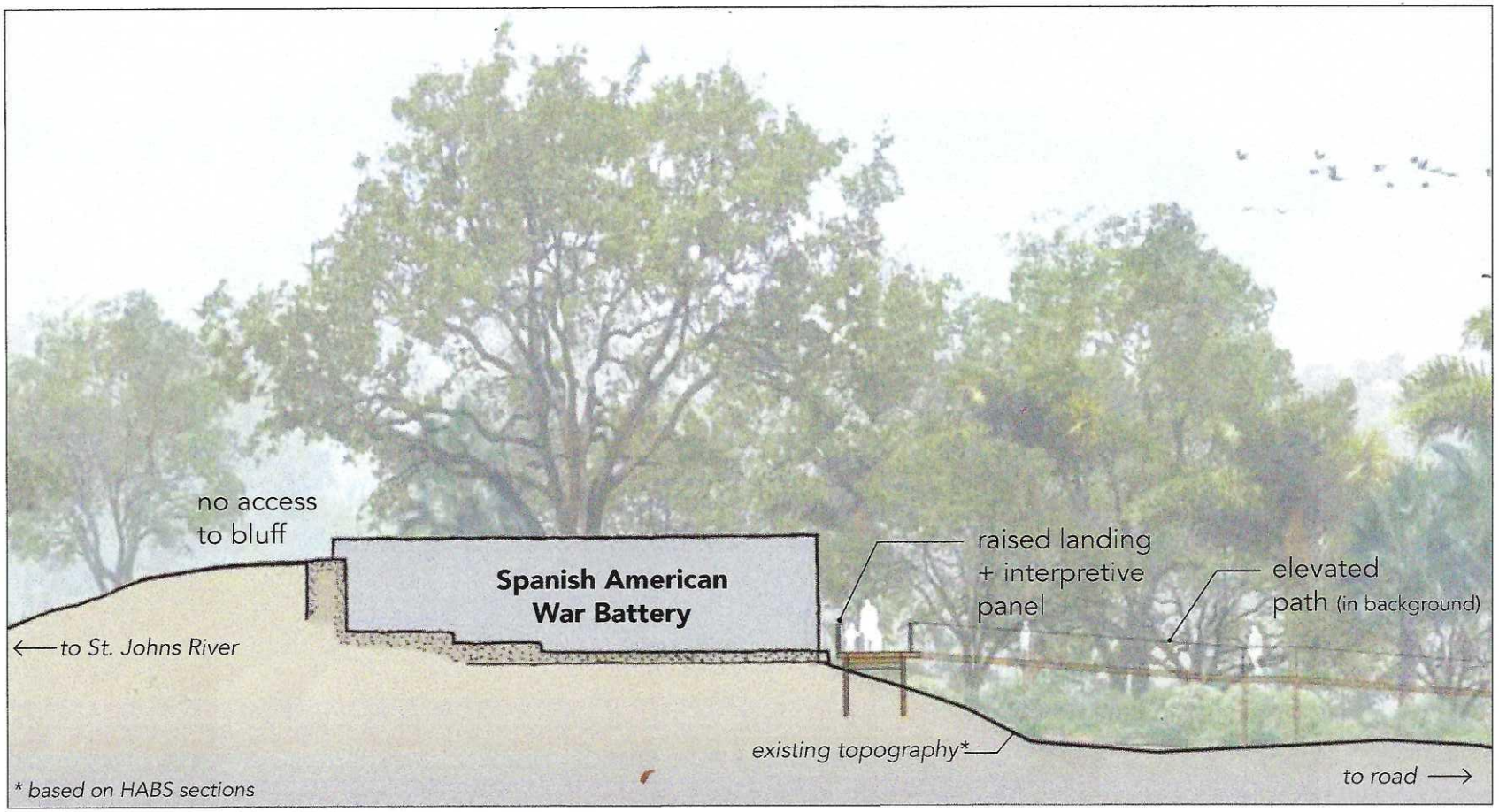


Plan - Treatment Concept 3

28 July 2020
LSHLA

Spanish American War Battery
Cultural Landscape Report





Section - Treatment Concept 3

Spanish American War Battery
Cultural Landscape Report

28 July 2020
LSHLA

Appendix B

Agency Consultation and Public Outreach for Civic Engagement

FLORIDA DEPARTMENT of STATE

RON DESANTIS
Governor

LAUREL M. LEE
Secretary of State

David C. Hasty
Senior Historical Landscape Architect
National Park Service
1924 Building, 100 Alabama St, SW (6S65)
Atlanta, GA 30303-8701

February 24, 2021

RE: DHR Project File No.: 2021-810
Cultural Landscape Report (95% Draft – December 2020) - Spanish American War Battery
Timucuan Ecological and Historic Preserve, Duval County

Dear Mr. Hasty:

The Florida State Historic Preservation Officer reviewed the referenced project in accordance with Section 106 and 110 of the *National Historic Preservation Act of 1966*, as amended, and its implementing regulations in *36 CFR Part 800: Protection of Historic Properties.*

In March 2019, our office determined that the Spanish American War Battery (8DU124) was eligible for listing in the *National Register of Historic Places*. Based upon the park's need to meet current and projected future interpretive, functional, and management goals, rehabilitation was chosen as the most appropriate overarching treatment approach for the Spanish-American War Battery cultural landscape. This office concurs with this approach and we find the referenced report to be complete and sufficient. We look forward to working with the park on the rehabilitation of the Spanish American War Battery.

This office would like to compliment the National Park Service on the thoroughness of the report. If you have any questions, please contact Scott Edwards, Historic Preservationist, by electronic mail *scott.edwards@dos.myflorida.com*, or at 850.245.6333 or 800.847.7278.

Sincerely,

Jason Aldridge
For

Timothy A. Parsons, Ph.D.
Director, Division of Historical Resources
and State Historic Preservation Officer

FLORIDA DEPARTMENT of STATE

RON DESANTIS
Governor

LAUREL M. LEE
Secretary of State

Mr. Steven Kidd
National Park Service
Timucuan Ecological and Historic Preserve
13165 Mt. Pleasant Rd.
Jacksonville, FL 32225

May 12, 2021

RE: DHR Project File No.: 2021-810, Received by DHR: April 13, 2021
Project: *Spanish American War Battery*
Timucuan Ecological and Historic Preserve, Duval County

Dear Mr. Kidd:

The Florida State Historic Preservation Officer reviewed the referenced project in accordance with Section 106 and 110 of the *National Historic Preservation Act of 1966*, as amended, and its implementing regulations in *36 CFR Part 800: Protection of Historic Properties.*

In March 2019, our office determined that the Spanish American War Battery (8DU124) was eligible for listing in the *National Register of Historic Places*. Based upon the park's need to meet current and projected future interpretive, functional, and management goals, rehabilitation was chosen as the most appropriate overarching treatment approach for the Spanish-American War Battery cultural landscape. This office concurs with this approach and with the National Park Service's determination that the proposed infrastructure outlined in the CLR would have no adverse effects to the NRHP-eligible Spanish American War Battery historic property.

If you have any questions, please contact Jennifer Tobias, Historic Sites Specialist, by email at *Jennifer.Tobias@dos.myflorida.com*.

Sincerely,

Jason Aldridge
For
Timothy A Parsons, Ph.D.
Director, Division of Historical Resources
& State Historic Preservation Officer

United States Department of the Interior
National Park Service
Timucuan Ecological and Historic Preserve
Fort Caroline National Memorial
13165 Mt. Pleasant Road
Jacksonville, Florida 32225

IN REPLY REFER TO:

April 12, 2021

Dr. Tim Parsons
State Historic Preservation Office
Division of Historical Resources
R. A. Gray Building
500 S. Bronough Street, Room 423
Tallahassee, FL 32399-0250

Dear Dr. Parsons:

In compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108) Timucuan Ecological and Historic Preserve, a unit of the National Park Service (NPS) is writing to you concerning the proposed development of visitor use infrastructure at the Spanish American War Battery (DU00124). We are preparing a Cultural Landscape Report (CLR) (https://irma.nps.gov/DataStore/Reference/Profile/2284631) to guide the development of this site and completed civic engagement in November 2020. The park provided materials to review on our public-facing website (https://parkplanning.nps.gov/span-am) and held a virtual public meeting on Microsoft Teams November 12, 2020. An Environmental Assessment will be completed to meet requirements for the National Environmental Policy Act (NEPA) in the coming months. The proposed undertaking will preserve historic features and provide public access through vehicle and pedestrian circulation, parking accommodations, and interpretive wayfinding and orientation.

In March 2019 your office concurred with our determination that the Spanish American War Battery is eligible for listing in the National Register of Historic Places at the local level under Criterion A for its significance fortifying Jacksonville during the Spanish American War and under Criterion C as a locally significant example of the Endicott period coastal defenses. The area has been archeologically tested at 10M and 20M intervals and a 2013 survey (enclosed) did not locate any intact archeological deposits related to the construction or very brief occupation of the battery. Although no contributing archeological resources have been identified, the NPS plans to carry out remote-sensing surveys (GPR, resistivity, and conductivity) prior to any ground-disturbing activities related to construction. We will share the results of any survey work completed by the NPS Southeast Archeological Center with your office.

The accessible boardwalk and viewing platform proposed in the CLR will not be anchored or attached to the battery and will provide visitors with access and views without climbing on or otherwise threatening to damage the concrete masonry structure. Funding is requested for a Historic Structure Report (HSR) to guide future preservation efforts and all work proposed in the CLR and upcoming HSR will follow the *Secretary of Interior's Standards for the Treatment of Historic Properties*. The design of the proposed boardwalk and viewing platform emphasize a low visual impact on the site to

minimize interruptions to the historic views and are placed to the edge of the primary vista from the proposed parking lot at the base of the War Battery.
The effects to the historic property with the additional signage, small-scale features, and vegetation proposed in the CLR will not diminish the integrity of the resource. Your review (DHR Project File No.: 2021-810) of the draft CLR document on February 24, 2021 was helpful to the development of thoughtful preservation planning.

The NPS determines that the proposed infrastructure outlined in the CLR would have ***no adverse effect*** on the National Register-eligible Spanish American War Battery historic property. Please provide your concurrence, objection, or request for additional information to us at your earliest convenience. If we have not received this response within 30 days, as provided by 36 CFR 800.5(b) and (c), then we will consider our responsibilities under Section 106 of the National Historic Preservation Act, as amended, and 36 CFR Part 800 to be completed. We look forward to consulting with you on details of this project as funding is obtained and plans and specifications are developed. Thank you for your continued support in our preservation of cultural resources.

Sincerely,

Chris Hughes
Superintendent

Enclosures:
Ashley, Tunnen, and Rolland archeology report excerpt (pages 117-119)

Department of the Interior Regions 2 and 4
7915 Baymeadows Way, Suite 200
Jacksonville, FL 32256-7517
TEL: 904.731.3336
FAX: 904.731.3045
www.fws.gov/northflorida

NOTE: This email correspondence and any attachments to and from this sender is subject to the Freedom of Information Act (FOIA) and may be disclosed to third parties.

From: Kidd, Steven <Steven_Kidd@nps.gov>
Sent: Wednesday, April 14, 2021 1:05 PM
To: Jacksonville Regulatory, FW4 <jaxregs@fws.gov>
Subject: Initiating informal consultation

We are in the process of writing a Cultural Landscape Report for the Spanish American War Battery at Timucuan Ecological and Historic Preserve. A digital version of the CLR is available here at our IRMA website. The battery was recently acquired by NPS and the park desires a CLR for the property that goes into depth about the Battery's history, significance, and integrity, and provides treatment options for its management and preservation. The CLR is at a 95% draft and will be part of an Environmental Assessment that we are preparing to undertake.

Prior to beginning the formal NEPA process, we would like to begin consultation with your office to determine if the area contains habitat suitable for threatened or endangered species. Our preliminary research indicates that there is none. The property is located between 13157 and 13217 Fort Caroline Road, Jacksonville, FL 32225. There is no street address for the property.

Please let me know if you have any questions.

Thank you very much,

Steve

R. Steven Kidd
Chief of Science and Resource Management
Timucuan Ecological and Historic Preserve
Fort Caroline National Memorial
Jacksonville, FL 32225
904-805-7510 Office (Direct)
904-801-9761 Cell

janejacobshla@gmail.com

From: Kidd, Steven <Steven_Kidd@nps.gov>
Sent: Wednesday, June 30, 2021 11:39 AM
To: janejacobshla; Slaton, Deborah; Hammond, Jami
Subject: Fw: Initiating informal consultation

USFWS concurrence on ESA for Span-Am fort.

From: Dziergowski, Annie <annie_dziergowski@fws.gov> on behalf of Jacksonville Regulatory, FW4 <jaxregs@fws.gov>
Sent: Wednesday, June 30, 2021 10:22 AM
To: Kidd, Steven <Steven_Kidd@nps.gov>
Subject: Re: Initiating informal consultation

Steve,

Sorry for the delay. We concur with your determination that no federally listed species are located at this stie. Your findings fulfill compliance with the Endangered Species Act of 1973, as amended (16 U.S.C. et seq.). The Service does not have any additional information for listed species at the proposed site. Please let us know if you have any further questions.

Thanks,
Annie

****

Project Review and Consultation Section
USFWS/North Florida Ecological Services Office
Department of the Interior Regions 2 and 4
7915 Baymeadows Way, Suite 200
Jacksonville, FL 32256-7517
TEL: 904.731.3336
FAX: 904.731.3045
www.fws.gov/northflorida

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****

Project Review and Consultation Section
USFWS/North Florida Ecological Services Office

IN REPLY REFER TO:

United States Department of the Interior

National Park Service
Timucuan Ecological and Historic Preserve
Fort Caroline National Memorial
13165 Mt. Pleasant Road
Jacksonville, Florida 32225

October 20, 2020,

Timucuan Ecological and Historic Preserve, a unit of the National Park Service (NPS), invites you to participate in a civic engagement meeting to help determine the best way to provide access to, and education about, the recently acquired Spanish-American War Battery on Fort Caroline Road. The Spanish-American War Battery was constructed in April 1898 to protect the mouth of the St. Johns River against the Spanish fleet during tensions between the United States and Spain that resulted in the Spanish-American War of 1898.

The fort, which consists of two concrete gun emplacements and a munitions magazine, was built to emplace two 8-inch breach loading rifles on a strategic river bluff in order to protect Jacksonville, Florida, from naval attack. Timucuan Ecological and Historic Preserve wishes to provide educational and recreational opportunities for locals and visitors. The National Park Service is developing a treatment plan that provides a conceptual design for parking, trails, signage, and other site amenities intended to support park goals of stewardship and carefully considered public access.

The preserve would like your participation in determining the best way to provide access and interpretation at the site while preserving the historic character of the battery. A virtual meeting will be held on November 12, 2020 at 6:00 PM. This meeting will provide an opportunity to learn more about this process and to share your input. A link is posted at https://parkplanning.nps.gov/span-am.

There are several development concerns that the preserve would like to get your input on including parking, accessibility considerations for pedestrian circulation through the site, views of the fort and river below, and interpretative information opportunities.

Please plan to attend so we can hear your thoughts to provide the best visitor experience possible.

For more information, visit https://parkplanning.nps.gov/span-am, Facebook at TimucuanPreserveNPS or call 904-805-7510.

Chris Hughes, Superintendent
Timucuan Ecological and Historic Preserve

National Park Service
U.S. Department of the Interior

Spanish-American War Battery
Timucuan Ecological and Historic Preserve
12713 Fort Caroline Road
Jacksonville, Florida 32225
www.nps.gov/timu

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