



Dayton Aviation Heritage National Historical Park General Management Plan Amendment

May 2022



National Park Service
U.S. Department of the Interior

Dayton Aviation Heritage National Historical Park
Region 3



GENERAL MANAGEMENT PLAN AMENDMENT

April 2022

Recommended:

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INTRODUCTION

In compliance with the National Environmental Policy Act (NEPA), the National Park Service (NPS) prepared a categorical exclusion to examine potential impacts associated with the general management plan (GMP) amendment. The new amendment further defines values, desired conditions, and strategies for making management decisions regarding resources and providing for visitors. Elements of the 1997 general management plan and 2005 general management plan amendment have provided the park and partners with management direction in the past, but portions of that guidance no longer apply, as park conditions have changed.

PUBLIC INVOLVEMENT

The NPS public involvement process began with an invitation to stakeholders to participate in an alternatives development workshop in June 2020. The GMP amendment and the appropriate environmental compliance (categorical exclusion B.1: Changes or amendments to an approved plan when such changes would cause no or only minimal environmental impacts) were distributed, and a 30-day public review and comment period occurred from February 28 through March 31, 2022. Also, a virtual open house was held on March 17, 2022, for partner groups and on March 18, 2022, for the public. The purpose of the public review period was to seek public input in the discretionary decision-making process. The National Park Service received six correspondences from individuals. Overall, commenters expressed support for the amendment as written. In addition, commenters suggested opportunities to raise awareness of the importance of Dayton Aviation Heritage National Historical Park. This feedback includes working with partners to explore new and creative interpretation options and considering more sites to include as part of the park. No significant adjustments to the GMP amendment resulted due to the partner and civic engagement.

CONCLUSION

Based on the description of the proposed action, the stipulations associated with the proposed action and the environmental impact information, the National Park Service has determined that the proposed action does not constitute a major federal action that will significantly affect the quality of the human environment or significantly affect human health and safety. The proposed action will not violate any federal, state, tribal, or local laws protecting the environment. No extraordinary circumstances or conditions apply from section 3–5 of the NPS DO-12 NEPA Handbook, and the action is fully described in within the amendment document. The proposed action is categorically excluded from further documentation under NEPA in accordance with 43 CFR §1508.4. This categorical exclusion is appropriate in this context because there are no extraordinary circumstances potentially having significant effects on the environment. The proposed action has been reviewed, and none of the extraordinary circumstances described in 43 CFR §1508.4 apply.

The proposed action for the general management plan amendment at Dayton Aviation Heritage National Historical Park will be implemented as soon as practicable, as funding is available.

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SUMMARY

Dayton Aviation Heritage National Historical Park is a collection of six sites within the National Park Service (NPS) boundary and two additional sites that are interpreted with partners in the greater Dayton, Ohio, area. The park was first protected as a unit of the national park system in 1992. The park's purpose is to interpret the lives and creations of Wilbur and Orville Wright and Paul Laurence Dunbar and preserve sites in the Dayton region associated with them and the early development of aviation. Together with its partners, the National Park Service preserves, enhances, and interprets the historic structures, districts, and artifacts associated with the Wright brothers and the early development of aviation, as well as the life and works of the writer Paul Laurence Dunbar. Out of a total 111 acres within the park's legislative boundary, 110 are not owned by the National Park Service. The park thrives through active partnerships and mutual collaboration that have enhanced the National Park Service's ability to protect resources and serve the public.

An initial general management plan (GMP) for the park was finalized in 1997, and a subsequent GMP amendment was completed in 2005. In 2009, legislation (Public Law 111-11, March 30, 2009) added two new areas to the park's legislated boundary—Hawthorn Hill and the Wright Company Factory: "Within the boundaries of the park the Secretary shall, subject to the availability of appropriated funds, acquire Hawthorn Hill, the Wright Company factory..." (USC 16 Section 410ww[b] 2009). The National Park Service is currently in the process of acquiring a portion of the latter. The National Park Service prepared this updated GMP amendment to provide management guidance for these new areas.

The new amendment also takes a fresh look at the management direction for other areas of the park. Changes in the priorities of the legislated partners and the operational capacity of park staff necessitate this comprehensive planning. The GMP amendment will further define values, desired conditions, and strategies for making management decisions regarding resources and providing for visitors. Elements of the 1997 general management plan and 2005 GMP amendment have provided the park and partners with management direction in the past, but portions of that guidance no longer apply, as park conditions have changed.

In addition, the National Park Service currently leases a maintenance facility to house equipment and staff across three different park units. This facility lacks the proper utilities and safety requirements to be a functional NPS maintenance facility, and its location and limitations restrict the park's ability to provide adequate and efficient maintenance support.

To address the issues described above, this GMP amendment will:

- meet the general management planning requirements for the new areas of the park (Hawthorn Hill and Wright Company Factory);
- account for changes in partner priorities and staff operational capacity;
- update zoning and desired conditions for the park's historic buildings and cultural landscapes to guide management strategies and approaches; and
- address the need for an adequate maintenance facility.

Public Comment: The National Park Service welcomes comments on the general management plan amendment. Comments can be made online at <https://parkplanning.nps.gov/DAAV>. Comments can also be mailed or hand-delivered as directed in the following section. All comments must be transmitted online, postmarked, or hand-delivered no later than 30 days after the plan is released for public comment. This deadline will be posted at <http://parkplanning.nps.gov/DAAV>. Before including your address, telephone number, e-mail address, or other personal identifying information in your comment, be aware that your entire comment—including your personal identifying information—may be made publicly available. All submissions from organizations, businesses, and individuals identifying themselves as representatives or officials of organizations or businesses will be made available for public inspection in their entirety.

Following the conclusion of the comment period, the NPS planning team will evaluate all input received and incorporate any required changes into the document. The document will then be prepared, along with a categorical exclusion, for signature by Dayton Aviation Heritage National Historical Park Superintendent Kendell Thompson.

Chapter 1

Introduction



CHAPTER 1: INTRODUCTION

Overview

This document is structured in chapters. Chapter 1 provides the purpose of this plan and background information and outlines the scope of the planning effort. Chapter 2 includes the vision that will guide future management by describing management zones, site-specific proposed actions, boundary considerations, and visitor use management efforts. Chapter 3 discusses the consultation and coordination conducted during the planning process, and Chapter 4 describes the planning team. Appendix A evaluates visitor use management efforts, while appendix B describes other relevant background.

Purpose and Need

Purpose of the Plan: This general management plan amendment, collectively with the 1997 general management plan (GMP) and the 2005 GMP amendment, sets the management vision for Dayton Aviation Heritage National Historical Park for the next 20 years or longer. The purposes of this general management plan amendment are as follows:

- to meet the general management planning requirements set forth in the 1978 National Parks and Recreation Act (16 USC 1a-7), which directs that general management plans “shall be prepared and revised in a timely manner” for new areas of the park, which include Hawthorn Hill and Wright Company Factory and which were added via legislative amendment in 2009;
- to define partnerships with local, federal, state, and nonprofit organizations to further the park’s purpose;
- to clearly define visitor use opportunities to provide for learning and enjoyment and define activities, locations, and levels of use necessary for a satisfying and safe visitor experience that are compatible with park resources and values and that do not impair them;
- to provide a framework for NPS managers to use when making operational and management decisions;
- to confirm or update desired conditions for the park’s historic buildings and cultural landscapes by describing strategies and approaches to achieve and maintain those conditions;
- to evaluate potential adjustments to the park’s legislative boundary;
- to address identified planning issues such as the need for adequate maintenance facilities (see the Proposed Management Action section below); and
- to ensure that this plan has been developed in consultation with the public and interested stakeholders and adopted by NPS leadership after an adequate analysis of the benefits, impacts, and economic costs of alternative courses of action.

Legislation establishing the National Park Service as an agency and a range of laws and policies governing the national park system provide the fundamental direction for the administration of Dayton Aviation Heritage National Historical Park. This GMP amendment is intended to build on these laws as well as the park's enabling legislation to provide a vision for the park's future. This GMP amendment aims to realize this vision through various proposed management actions for park management.

Actions directed by this GMP amendment would be accomplished over time. Budget restrictions, requirements for additional data or regulatory compliance, and competing priorities may change or delay implementation of many actions. Major or exceptionally costly actions could be implemented in phases as identified in the proposed action. Some actions could be implemented 10 or more years into the future.

This GMP amendment does not describe how particular programs or projects should be implemented. Those decisions would be addressed in future, more detailed implementation planning and associated compliance, which would be consistent with the approved collective general management plan and amendments.

Need for the Plan: As stated above, the park's 1997 general management plan and 2005 GMP amendment have provided the park and partners with management direction in the past, but portions of that guidance no longer apply as park conditions have changed. In 2009, legislation (Public Law 111-11, March 30, 2009) added two new areas to the park's legislated boundary—Hawthorn Hill and Wright Company Factory. Guidance is needed for these new areas. Most notably, the National Park Service is in the process of acquiring a portion of the Wright Company Factory within the expanded park legislative boundary (USC 16 Section 410ww[b] 2009). Direction for the role of the newly acquired resource is needed.

Additionally, changes in the priorities of legislated partners and conditions at the park necessitate comprehensive planning to further define values and strategies for making management decisions regarding resources and providing for visitors.

General Management Plan Context

Elements Addressed by General Management Plan

The 1997 General Management Plan Interpretive Plan (amended in 2005) provides guidelines and strategies for the management and use of the park. The plan provides direction for resource protection, land use, visitor use and interpretation, visitor use/developments, and park operations. The general management plan outlines the steps that the National Park Service and its legislated partners should take in developing facilities and enhancing the visitor experience at the park. The plan describes the collaborative approach of the partnership, the visitor experience, neighborhood outreach, transportation and circulation, and general costs for implementing the plan. The 2005 GMP amendment focused on visitor experience, facility use, and partnerships with the region and community within and near the Wright Cycle Company complex. The plan also addressed connections, both travel and interpretive, between the Huffman Prairie Flying Field Interpretive Center at the Wright Memorial and nearby Huffman Prairie Flying Field. Please see table 3 for a comparison of this proposed amendment to the 1997 general management plan and 2005 amendment.

The Wright Company Factory Boundary Assessment and Environmental Assessment (2006)

addressed the boundary assessment of The Wright Company Factory site in response to the requirements of Public Law 108-447, which directed the secretary of the interior to study “alternatives for incorporating The Wright Company Factory as a unit of Dayton Aviation Heritage National Historical Park.” The evaluation assessed whether the area is nationally significant and whether it meets feasibility criteria for addition to Dayton Aviation Heritage National Historical Park. In accordance with this legislative direction, the National Park Service provided a range of management alternatives for the long-term preservation of the site. The National Park Service, through the secretary of the interior, forwarded the study and any recommendations to Congress. This document determined that “the addition of the Wright Company Factory site would only be a feasible addition to the boundary of Dayton Aviation Heritage National Historical Park if a financially viable partner steps forward to shoulder the costs of site development” (NPS 2006). This GMP amendment considers the addition of the Wright Company Factory within the park boundary.

The Long-Range Interpretive Plan (2018) is intended to define and articulate the overall vision and long-term interpretive goals of the park. The process through which the plan is developed defines realistic strategies and actions that work toward achievement of the interpretive goals. The long-range interpretive plan features two phases. One, the foundation phase, articulates significance and themes and identifies target audiences and their needs. The resulting foundation for planning addresses those elements of the plan and includes a review of the existing interpretive program. The second phase of the plan process recommends interpretive services, media, and partnerships for the site, looking ahead to the next 5 to 10 years. The recommendations section includes an action plan that outlines priorities and suggests a timeline for implementation. The long-range interpretive plan is intended to identify ways to enhance and strengthen both the Wrights’ and Dunbar’s stories and modern legacy, as well as the role they each played within the larger context of human history. The recommendations and action plan were integrated into this GMP amendment, where appropriate.

BACKGROUND

Brief Description of the Park

Dayton Aviation Heritage National Historical Park (the park) comprises six sites within the NPS boundary and two additional sites that are interpreted with partners in the greater Dayton, Ohio, area. The park also maintains a leased maintenance facility. The park boundary encompasses a total of 111 acres, the vast majority of which is managed by park partners. Established in 1992, the park preserves and interprets resources related to inventors Wilbur and Orville Wright, writer Paul Laurence Dunbar, and sites in Dayton associated with the early development of aviation.

Dayton Aviation Heritage National Historical Park includes five national historic landmarks and several properties that contribute to listings in the National Register of Historic Places. These national historic landmarks include the Wright Cycle Company and Wright and Wright Printing, Huffman Prairie Flying Field, the 1905 Wright Flyer III, Hawthorn Hill, and the Paul Laurence Dunbar House. Together, these sites tell the stories of the lives and legacies of Wilbur Wright, Orville Wright, and Paul Laurence Dunbar.

The Wright Cycle Company building and Hoover Block are located at South Williams and West Third Street. Between 1892 and 1897, the Wright Cycle Company was moved to four different locations on the west side of Dayton, and a fifth location existed for a short time in downtown Dayton east of the Miami River. The fourth location of the bicycle shop, operated by the Wrights, is

the only building remaining as testament to their bicycle business. The site was designated a national historic landmark in 1990 (listed as Wright Cycle Company and Wright and Wright Printing). Wilbur and Orville Wright operated Wright & Wright Job Printers on the second floor of the Hoover Block from 1890 to 1895. The Hoover Block was added to the National Register of Historic Places as part of the West Third Street Historic District in 1988. The building now houses the Wright-Dunbar Interpretive Center. The Wright-Dunbar Interpretive Center is colocated with the Aviation Trail, Inc. Visitor Center and Museum, which is one of the park's legislative partners.

Not far from the Wright Cycle Company and the Wright-Dunbar Interpretive Center is the Paul Laurence Dunbar House State Memorial (also referred to as the Paul Laurence Dunbar House Historic Site or Paul Laurence Dunbar House). Paul Laurence Dunbar, a poet, novelist, and playwright, lived in the house in west Dayton with his mother, Matilda Dunbar, from 1904 until his death in 1906. After Matilda Dunbar's 1934 death, the State of Ohio acquired the property and opened it for public visitation as the first state-owned African American history site in the nation. It was designated a national historic landmark in 1962. The Paul Laurence Dunbar House Historic Site is owned by the State of Ohio and managed by the Ohio History Connection and the National Park Service. The Ohio History Connection is one of the park's legislative partners.

Located within the Wright-Patterson Air Force Base, Huffman Prairie Flying Field is where the Wright brothers proved the airplane was a practical invention in 1904 and 1905. The 84-acre Huffman Prairie Flying Field was designated a national historic landmark in 1990. The flying field is on an active military installation, and as such, is subject to unannounced closure. The Huffman Prairie Flying Field Interpretive Center supports activities at the Flying Field but is located at the nearby Wright Memorial. The visitor center was constructed in 2002 using state funds in a partnership between the US Air Force (USAF), State of Ohio, and the National Park Service. The National Park Service developed center exhibits and staffs the center, but Wright-Patterson Air Force Base manages all services. Unlike the Huffman Prairie Flying Field, the center is not located within the park's legislated boundary.

At Carillon Historical Park, the 1905 Wright Flyer III is the centerpiece of the Wright Brothers National Museum. The world's first practical airplane, the Wright Flyer III was built by the Wright brothers in 1905 and flown at Huffman Prairie Flying Field. The 1905 Wright Flyer III was designated a national historic landmark in 1990 and a historic mechanical engineering landmark in 2003. Carillon Historical Park and the 1905 Wright Flyer III are owned and managed by Dayton History, a park legislative partner.

Hawthorn Hill, located on Harman Avenue south of Dayton in Oakwood. In 1914, Orville, his sister Katharine, and their father Milton Wright moved into this large Georgian revival-style mansion in Oakwood. Orville lived at Hawthorn Hill until his death in 1948. Hawthorn Hill was designated a national historic landmark in 1991. Hawthorn Hill is owned and managed by Dayton History. The National Park Service assists Dayton History by hosting special interpretive events, offering occasional tours of the grounds, and providing technical assistance.

The Wright Company Factory in west Dayton opened in 1910 as the first factory in the United States designed specifically for building airplanes—a testament to the brothers' attempt to commercialize their invention. Students at the Wright School of Aviation also came here to learn flight controls on a simulator. The factory, currently owned by the City of Dayton, was added to the park's legislative boundary in 2009 and is not yet open to the public. The Wright Company Factory was listed in the National Register of Historic Places in 2019. The National Park Service is in the process of acquiring

buildings 1 and 2 and a portion of the site, as authorized under the Land and National Historic Site Bills: HR 4199 (June 5, 2008).

Park Purpose. The National Park Service and its legislatively mandated partners at Dayton Aviation Heritage National Historical Park interpret the lives and creations of Wilbur and Orville Wright and Paul Laurence Dunbar and preserve sites in the Dayton region associated with them and the early development of aviation.

Park Significance. The following significance statements were identified in the park's 2017 foundation document. (Please note that the sequence of the statements does not reflect the level of significance.)

1. Dayton Aviation Heritage National Historical Park contains the only existing original buildings at their original locations—the fourth location of the Wright Cycle Company, the print shop, and the Wright Company Factory—associated with the Wright brothers' business careers that led to the invention of the first airplane.
2. Dayton Aviation Heritage National Historical Park contains the last home of internationally renowned poet Paul Laurence Dunbar, a residence that represents the level of success he attained from his writing career, which took place in an era of increasing racial segregation. The home is considered one of the first publicly administered sites to commemorate an African American.
3. Huffman Prairie Flying Field is where the world's first practical, piloted, heavier-than-air, power-driven, and controlled airplanes were tested and proven and is considered the world's first working airfield.
4. The Wright Brothers National Museum in Carillon Historical Park contains the world's first practical airplane, the 1905 Wright Flyer III.
5. Hawthorn Hill, the home of Orville, Milton, and Katharine Wright, represented the success the Wright family attained through the invention of the airplane and was a retreat where Orville lived out his days as he enjoyed success and served a ceremonial role in the aviation community.
6. The Dayton region contains numerous historically significant sites directly related to the Wright brothers or Paul Laurence Dunbar or that contributed to the development of early aviation.

Special Mandates. Congress established Dayton Aviation Heritage National Historical Park in 1992 (Public Law 102-419) as a public-private partnership with multiple management partners. The partners include the National Park Service, the Ohio History Connection, Wright-Patterson Air Force Base, the US Air Force, and Carillon Historical Park (Dayton History).

The 2000 legislation that expanded park boundaries at two of the units added Aviation Trail, Inc., to the list of management partners for the park.

Sections 105 and 107 specifically address interactions among the US Department of the Interior, National Park Service; US Department of Defense; and US Air Force. Applicable text includes the following:

- **“Section 105(e) Interpretation of Huffman Prairie Flying Field.** The secretary [of the interior] may provide interpretation of Huffman Prairie Flying Field on Wright Brothers Hill, Wright-Patterson Air Force Base, Ohio.
- **Section 107.** The decisions concerning the execution of this act as it applies to properties under control of the secretary of defense shall be made by such secretary, in consultation with the secretary of [the] interior.”

The subsequent 2009 legislation (Public Law 111-11) again expanded park boundaries and added another management partner, Wright Brothers Family Foundation, and provided authority to collect fees at Hawthorn Hill. Applicable text includes the following:

- **“Section 7117(c) Cooperative Agreements.** The Secretary is authorized to enter into a cooperative agreement with a partner or partners, including the Wright Brothers Family Foundation, to operate and provide programming for Hawthorn Hill and charge reasonable fees not withstanding any other provision of law, which may be used to defray the costs of park operation and programming.

Section 7117(b) allows for the Secretary to provide grant assistance to the parks’ partners, including the Aviation Trail, Inc., the Ohio Historical Society, and Dayton History, for projects not requiring Federal involvement other than providing financial assistance, subject to the availability of appropriations in advance identifying the specific partner grantee and the specific project. Projects funded through these grants shall be limited to construction and development on non-Federal property within the boundaries of the park. Any project funded by such a grant shall support the purposes of the park, shall be consistent with the park’s general management plan, and shall enhance public use and enjoyment of the park.”

Fundamental Resources and Values. The following fundamental resources and values have been identified for the park:

Sites of Wilbur and Orville Wright’s Invention and Industry. The park preserves, or works with partners to preserve and interpret, several sites where the Wright brothers developed their businesses and perfected sustained crewed flight. These sites include the Wright Cycle Company and Hoover Block containing Wright & Wright Job Printers, Huffman Prairie Flying Field, and the Wright Company Factory. Dayton Aviation Heritage National Historical Park preserves and protects, or works through partners to preserve and protect, the superlative, authentic sites where visitors can experience a sense of inspiration, innovation, and resilience.

- **Wright Brothers Artifacts.** These resources include the 1905 Wright Flyer III, a national historic landmark, and collections related to the Wright brothers, including some of their printing equipment and artifacts connected with development of the airplane and their later attempts to commercialize their invention through the establishment of the Wright Company.

- **Paul Laurence Dunbar House Historic Site and Collections.** These resources include the Paul Laurence Dunbar House—Paul Dunbar’s residence from 1904 to 1906 and his mother Matilda Dunbar’s residence until 1934—and collections installed in the house and its adjacent museum.
- **Hawthorn Hill.** This resource includes the 1914–1948 mansion of Orville Wright, which was also home to Milton Wright and Katharine Wright for shorter times and to several hired servants, complete with some of its original furnishings.
- **Partnerships.** The park was established in 1992 as a multiunit partnership park that has multiple legislatively mandated partners, as well as numerous external partnerships with other governmental agencies and private organizations and groups. The park’s authorizing legislation specifically directs that the park will be managed as a partnership and provides the park with expanded authority for entering into cooperative agreements with park partners. In addition, the park has grant authority for funding assistance for construction and development projects in the units of the park. Currently, the park units are run by six partners and include management engagement by the Aviation Heritage Foundation: National Aviation Heritage Alliance, Aviation Trail, Inc., Dayton History (Carillon Historical Park), Ohio History Connection, Wright-Patterson Air Force Base, and the Wright Brothers Family Foundation. The partner relationships with owners of properties within and outside park boundaries are significant considerations for NPS managers in fulfilling the park’s legislated mandates and providing opportunities for visitors to understand and connect with the significance of the resources.

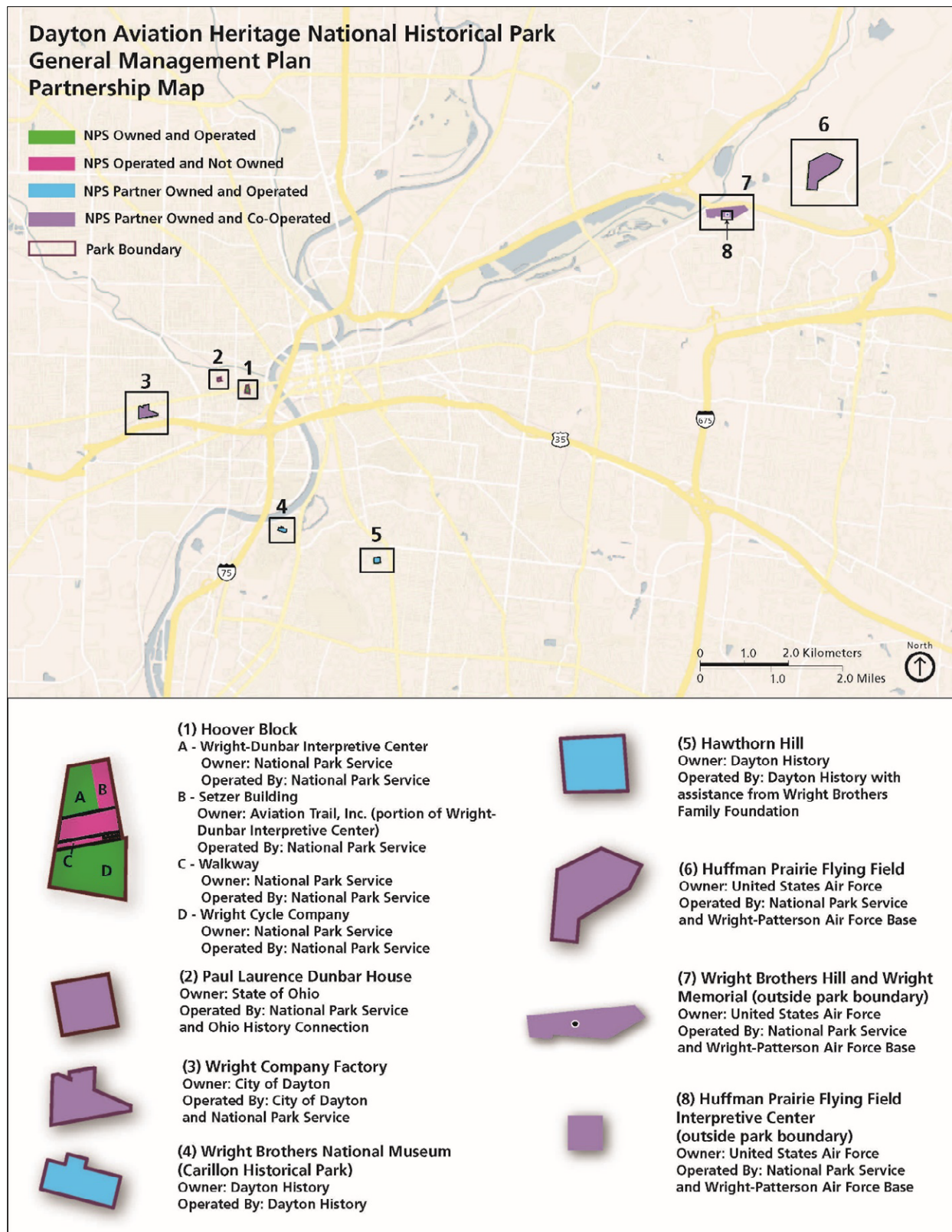


FIGURE 1. MAP OF DAYTON AVIATION HERITAGE NATIONAL HISTORICAL PARK

Partnerships

Dayton Aviation is considered a partnership park with a mix of partners and consists of six sites within the NPS boundary and two additional sites that are interpreted with partners. The locations of these sites are shown in figure 1. Partnership parks are often in urban or suburban population centers, where the park coexists with many other public and private land uses. In such areas, the National Park Service has stated that “managing through agreements and partnerships is a matter of both practical necessity and philosophy.” With their diverse ownership and management arrangements, some of these parks have served as sites for innovative management techniques within the National Park Service (CRI 2016).

Legislated Partners. The park has multiple legislated partners and several stakeholder organizations that coordinate to tell the story of Dayton Aviation Heritage National Historical Park. See table 1 for a list of legislated park partners.

Table 1. Legislated Park Partners

Name	Description
Aviation Heritage Foundation: National Aviation Heritage Alliance	Title V of Division J of the Consolidated Appropriations Act of 2005 (Public Law 108-447) established the National Aviation Heritage Area in December 2004. The act designated the Aviation Heritage Foundation, Inc. as the management entity. The Aviation Heritage Foundation is also known as the National Aviation Heritage Alliance and the National Aviation Heritage Area. The heritage area incorporates eight counties in the greater Dayton area. The legislation sets out a broad range of purposes, including preservation, promotion, heritage tourism, education, and cultural programs, and encourages “a broad range of economic opportunities.” The legislation speaks to preserving, enhancing, and interpreting cultural, historical, natural, recreational, and scenic resources of the area.
Aviation Trail, Inc.	Aviation Trail, Inc. is a membership organization with a volunteer board of directors. The organization commemorates important aviation history sites in Miami Valley. Aviation Trail, Inc. operates the Parachute Museum (Wright-Dunbar Interpretive Center) and owns the Setzer building that houses part of the primary NPS visitor center (Wright-Dunbar Interpretive Center) and three parking lots used by NPS visitors and staff.
Dayton History (Carillon Historical Park)	Dayton History’s main campus is a 65-acre open history museum known as Carillon Historical Park. The organization shares the unique histories of Dayton, Ohio, and owns several sites, including the Wright Brothers National Museum and the Hawthorn Hill mansion, within the park boundary.
Ohio History Connection	The Ohio History Connection, formerly the Ohio Historical Society, is a statewide history organization with the mission to spark discovery of Ohio’s stories. The nonprofit organization was chartered in 1885 and carries out services for Ohio and its citizens that are focused on preserving and sharing the state’s history. The organization houses the state historic preservation office, the official state archives, and local history office and manages more than 50 sites and museums across Ohio, including the Paul Laurence Dunbar House, which is owned by the State of Ohio.
Wright-Patterson Air Force Base	The Wright-Patterson Air Force Base is the landowner for the Huffman Prairie Flying Field within the park boundary. In addition, they own both the Wright Memorial and Huffman Prairie Flying Field Interpretive Center, which fall outside the park boundary.
Wright Brothers Family Foundation	The Wright Brothers Family Foundation became a legislated partner in 2009 through Public Law 111-11. The organization was originally established at the Dayton Foundation by Wilkinson Wright, one of the Wright brothers’

Name	Description
	grandnephews. The organization supports the preservation of aviation history related to Orville and Wilbur Wright by funding research and publication of aviation history, scholarships for studies in the fields of aviation and aeronautics, educational programming, the restoration and display of aviation artifacts, and landmarks and memorials related to the Wright brothers' story. The organization also licenses the Wright brothers' names and uses the income to support education efforts and the operation of the historic family mansion (Hawthorn Hill). The family is also fundraising to expand an endowment for Hawthorn Hill.

Park Locations Considered in this Plan

This section provides background information on existing conditions for the locations considered in this plan. The identifying numbers and letters in the following discussion correlate with those depicted in figure 1 and are used subsequently throughout the document.

For clarification, this document includes the following terms that reference a combination of individual sites:

- The **Wright Cycle Company complex** consists of the Wright Cycle Company building, the Wright-Dunbar Interpretive Center, and the modern Aviation Trail Visitor Center and Museum.
- The **Hoover Block** is the NPS-owned half of the Wright-Dunbar Interpretive Center.

Site 1A: National Park Service Portion of the Wright-Dunbar Interpretive Center—NPS-Owned and Operated

The National Park Service owns the half of the Wright-Dunbar interpretive building referred to as the Hoover Block, which is listed on the National Register of Historic Places as a contributing property. Located within the NPS boundary at the southeast corner of West Third Street and South Williams Street approximately 10 blocks from the center of Dayton, the Hoover Block is a three-story, red brick, commercial structure with a full basement. Built in 1890, the original design of the building consisted of stores on the ground floor, office suites on the second floor, and an open meeting room on the third floor.

The Hoover Block's significance stems from the fact that the Wright brothers operated their printing business there from 1890 to 1895. This is where the brothers edited and published newspapers for a principally west-side audience. The Dayton Tattler, a short-lived weekly publication edited by Paul Laurence Dunbar and printed by Wright and Wright, Job Printers, that promoted African American interests, was also printed at this location. The Hoover Block is listed in the 1989 National Register of Historic Places Nomination Form as a contributing structure in the West Third Street Historic District. The building itself is not currently under nomination as a national historic landmark. The façade of the building is an important cultural resource element and is currently in good condition. In the interpretive center, the National Park Service interprets the stories of the Wright brothers and Paul Laurence Dunbar and their connection to the site.

The third floor of the Hoover Block is currently used for staff offices that accommodate the interpretation and resources management staff. In addition, the third floor also houses the park's research library, which is open to public research by appointment.

The visitor center has issues with the heating, ventilation, and air conditioning (HVAC) systems; faulty wiring; and other systems. These problems are compounded by the fact that the structure is owned and managed with Aviation Trail, Inc., and the two halves of the building(s) are on a single utility system, which services the entire structure. Hoover Block does not have an elevator or restroom facility, as they are in the conjoined Setzer Building. The exhibits within the interpretive center are currently showing wear and need new, accessible, more interactive exhibits.

Group access to the interpretive center currently takes place along South Williams Street, providing a direct route to the primary entrance through the Setzer Building, which is owned by Aviation Trail, Inc. An alternative group access and bus loading/unloading location exists along Third Street at a front entrance through the NPS-owned portion of the facility, the Hoover Block. This alternative entrance is not accessible but does include a pull-off that can accommodate the length of an oversized vehicle. However, the pulloff is available for public parking and does not have a reserved space for oversized vehicles. The entrance space within the interpretive center is not currently set up to serve as a primary welcome and orientation space for visitors. Due to these varying points of access across two separately owned properties, it is important that other management decisions allow for the flexibility and space for any potential future changes to circulation and access.

The original agreement between Aviation Trail, Inc. and the National Park Service expired in 2021, and a bridge agreement will expire in 2025; the terms of a new agreement are unknown. Proposed developments at the facility would vary depending on the direction of a future agreement between Aviation Trail, Inc. and the National Park Service.

Site 1B: Setzer Building (Aviation Trail, Inc., Portion of Wright-Dunbar Interpretive Center) and Parachute Museum—NPS-Operated and Not Owned

The Setzer Building, originally built in 1906, is the other half of the Wright-Dunbar Interpretive Center and is owned by Aviation Trail, Inc. and operated by the National Park Service. The Setzer Building is a modern building with a historic façade. An agreement between the National Park Service and Aviation Trail, Inc. defines building use, as there is a single utility system for the shared building. The Parachute Museum is located on the second floor of the Wright-Dunbar Interpretive Center. The façade of the building dates to the 1920s, is the key cultural resource element, and is currently in good condition.

Staffing and funding are needed to support the operations of non-NPS-owned sites within the park boundary to ensure they remain accessible to the public. The public entrance and other visitor services are in the Setzer Building. The current agreement between Aviation Trail, Inc. and the National Park Service expires in 2025, and the terms of a new agreement are unknown.

The Setzer Building and Parachute Museum currently have issues with the HVAC systems; faulty wiring; plumbing; inefficient visitor flow, and other support systems, which are compounded by the building's split ownership.

Site 1C: Walkway between Interpretive Center and Wright Cycle Company (Wright-Dunbar Interpretive Plaza)—NPS-Owned and Operated

Between the Wright-Dunbar Interpretive Center and the Wright Cycle Company lies the interpretive plaza, which includes a paved area. The National Park Service owns most of the paved area; however, a small portion is owned by Aviation Trail, Inc. The plaza lies within the NPS boundary and is maintained by the National Park Service.

Site 1D: Wright Cycle Company—NPS-Owned and Operated

The building was designated a national historic landmark in 1990, and it was in this shop that the Wrights' passive interest in flying turned to active research and development. The Wright Cycle Company building is in good condition. The Wright Cycle Company building is located at South Williams and West Third Streets next to the Wright-Dunbar Interpretive Center. This fourth location of the bicycle shop operated by the Wrights is the only building remaining as testament to their bicycle business. The second floor and rooms in the rear are currently used as office space for administrative and maintenance staff and are not open to the public. Because it is in a separate location from the visitor center, this office space is inefficient for staff, separated from maintenance equipment, and does not meet safety accessibility requirements.



FIGURE 2. FAÇADE OF THE WRIGHT CYCLE COMPANY

Site 2: Paul Laurence Dunbar House Historic Site—NPS Partner-Owned and Co-Operated

The Paul Laurence Dunbar House is one of five buildings that comprise the Paul Laurence Dunbar Historic Site. The site, which is in fair to good condition, was designated as a national historic landmark in 1962. The Paul Laurence Dunbar House is six blocks northwest of the Wright Cycle Company complex, within the current park boundary but owned by the State of Ohio. The house is managed jointly by the Ohio History Connection and the National Park Service. The National Park Service provides the interpretation staff and technical assistance for cultural resources preservation. Projects are funded by the Ohio History Connection, and the NPS staff is responsible for minimal maintenance and curatorial cleaning at the site. Partner-managed sales were previously removed due to security concerns. A management agreement between the National Park Service and the Ohio History Connection will be established in 2022. The terms of a new agreement are unknown.



FIGURE 3. PAUL LAURENCE DUNBAR HOUSE HISTORIC SITE

Site 3: Wright Company Factory—NPS Partner-Owned and Co-Operated

The Wright Company Factory in west Dayton opened in 1910 as the first factory in the United States designed specifically for building airplanes—a testament to the Wright brothers’ attempt to commercialize their invention. Students at the Wright School of Aviation also came here to learn plane controls on a simulator. The factory is the oldest surviving purpose-built aviation structure in the world. The factory buildings encompass more than 100 years of industrial manufacturing history.

The Wright Company transitioned and expanded into the Dayton-Wright Company in 1916. General Motors purchased the former Wright Company Factory in 1919. By 1922, General Motors was shifting away from the airplane business, and the Inland Manufacturing Division was created to begin making automotive parts. These operations included production of wood-veneered steering wheels; hard rubber steering wheels; rubber components and molding; woodworking; plastic components; and parts for home appliances, railroad equipment, and farm supplies. Inland Manufacturing Division, a subsidiary of General Motors, produced M-1 carbines, tank tracks, and other parts for the US military, as well as plastics, rubber, and metals for the company’s products for general use.

The “factory site” is a conglomeration of structures and includes the Wright Company Factory, which was modified over the years, and its additions. The factory site sits on 3.5 acres of land, which is located within a larger 20-acre plot of land now owned by the City of Dayton. The 20 acres of land was within the former location of the larger (56 acres) Inland/Delco/Delphi Factory, which has since been razed. Six buildings (1, 2, 3, 4, 5, and 17) make up the factory site: two are original to the Wright Company (1910–1911), two were added by the Dayton Wright Airplane Company, one was built by General Motors, and one was added by Inland Manufacturing. Except for building 17, these remaining structures have been determined to be significant and were listed in the National Register of Historic Places in 2019.

On March 30, 2009, Public Law 111-11 was signed, modifying the legislative boundary of the park to include the 20 acres of land surrounding the Wright Company Factory. A financially viable partner has been identified under the auspice of the City of Dayton.

The City of Dayton recently purchased the 20 acres of land, with the expectation of selling a portion of the site to the National Park Service. Authorized under the Land and National Historic Site bills HR 4199 (June 5, 2008) and the Land and Water Conservation Fund, funding for property acquisition was a part of the fiscal year (FY) 2018 NPS budget (Public Law 115-141, March 23, 2018), and the park hopes to develop an agreement with a City of Dayton agent and the National Aviation Heritage Alliance to rehabilitate and manage a portion of the factory site. The National Park Service is in the process of acquiring buildings 1, 2, and 17. A historic structures report and condition assessment is underway to identify issues and guide the park and partners in developing the site. The report will include treatment recommendations that will determine appropriate and compatible development guidance.

The city is working to redevelop other portions of the larger 20-acre site, and the Dayton Metro Library has completed a new branch library adjacent to the NPS boundary. Coordination with the city in future site planning is needed. The City of Dayton is proposing an open-air event space west of the historic buildings 1 and 2 that may be designed to promote park themes, especially the work of Paul Laurence Dunbar.

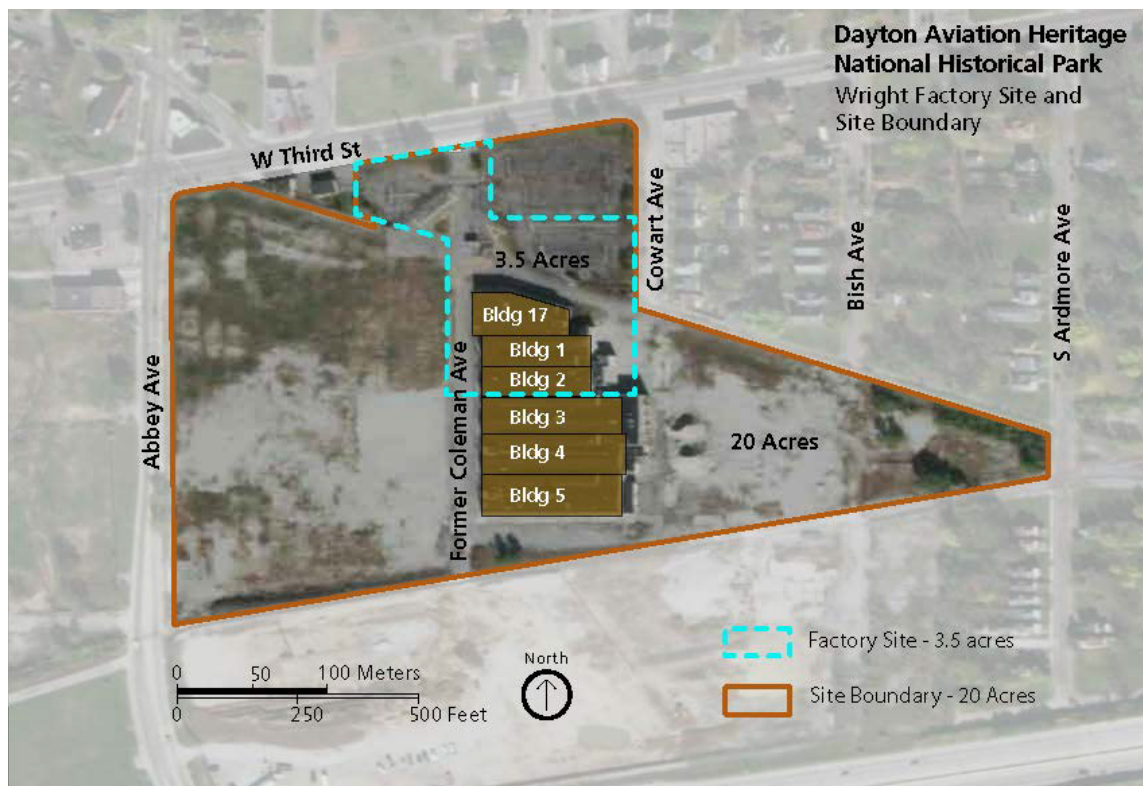


FIGURE 4. WRIGHT COMPANY FACTORY SITE AND SITE BOUNDARY



FIGURE 5. WRIGHT COMPANY FACTORY, 1910

Site 4: Wright Brothers National Museum (Carillon Historical Park)—NPS Partner-Owned and Operated

The Wright Brothers National Museum building is located within Carillon Park, a private park owned by Dayton History. Carillon Historical Park is a 65-acre open-air history museum that includes the Wright Brothers National Museum, which is within the park boundary. The site is the main campus of Dayton History, which operates the museum. The museum site includes a visitor center, museum shop, and multiple historic buildings, many of which were relocated to the park.

The museum houses the original 1905 Wright Flyer III airplane, which was established as a national historic landmark in 1990 and a historic mechanical engineering landmark in 2003. The world's first practical airplane, the Wright brothers built the Wright Flyer III in 1905 and flew it at Huffman Prairie Flying Field. The plane is considered a fundamental resource and value. The plane is currently preserved in good condition. Orville Wright contributed to the design of the gallery housing the Wright Flyer III. The building was subsequently expanded to house a significant collection of Wright brothers artifacts, including a reproduction of the Wright Cycle Company's fifth location.

The museum site charges an admission fee for visitors, which is discounted for NPS annual park pass holders. Carillon Park is open seven days a week. Interpretation at the museum is shared by Dayton History staff and volunteers; NPS personnel assist on an occasional basis. The National Park Service contributes technical advice, and funding for visitor services when budgets allow.

Site 5: Hawthorn Hill—NPS Partner-Owned and Operated

In 1914, Orville Wright, Katharine Wright (Orville's sister), and Milton Wright (Orville and Katharine's father) moved into this large Georgian revival-style mansion in the City of Oakwood. The mansion is situated on the southern portion of a 4-acre landscaped parcel, and the house and

grounds are collectively known as Hawthorn Hill. Orville lived here until his death in 1948. The site was designated a national historic landmark in 1991.

On March 30, 2009, Public Law 111-11 modified the park boundary to include Hawthorn Hill, which is owned and operated by Dayton History with assistance from the Wright Brothers Family Foundation. Hawthorn Hill is open for interpretive tours on Wednesdays and Saturdays. Dayton History staff provide interpretive tours and overall house and landscape maintenance. The National Park Service provides occasional interpretation at Hawthorn Hill, such as special events. The National Park Service also provides technical assistance through cultural resources staffing and resource management, including a historic furnishings report. The National Park Service is seeking funding for future cultural resource baseline documentation (a historic structure report and cultural landscape report).



FIGURE 6. HAWTHORN HILL

Site 6: Huffman Prairie Flying Field—NPS Partner-Owned and Co-Operated

The site, located within Wright-Patterson Air Force Base about 8 miles northeast of the Wright Cycle Company complex, is primarily within the park legislative boundary and was established as a national historic landmark in 1990. The Huffman Prairie Flying Field is owned, maintained, and operated by the Wright-Patterson Air Force Base. The NPS entrance sign, parking area, new comfort station, and storage facility are located outside of the park boundary. National Park Service personnel provide minimal staffing for special events, including tours of the field. The National Park Service has expanded interpretation of the site.

Public access between Huffman Prairie Field and the interpretive center at the Wright Memorial occurs through Wright-Patterson Air Force Base Gate 16A along Communications Boulevard, Hebble Creek Road, and Marl Road. While the field itself is within the park boundary, it is not owned by the National Park Service and the access route to it falls outside of the park boundary. The site is located adjacent to a high-security portion of Wright-Patterson Air Force Base, and access to the site can be challenging. Wayfinding is difficult and US Air Force security can seem intimidating to some. The current access is subject to unannounced closure by the US Air Force and involves a winding, 2.6-mile series of roads that pass through a golf course and an active recreational firing range, which contributes to the intimidating approach to the site.

The larger site is within the Miami Conservancy District retention basin, which is used for flood control of the Mad River. Any new development must be in consultation with the Miami Conservancy District and must be mitigated by a zero net gain in volume of the basin's retention capacity.

Although the following sites are not owned or independently operated by the National Park Service, they contribute to the interpretation of the park and its purpose, and the National Park Service provides occasional, direct operational support. The park currently cooperates with these entities via individual memorandums of agreement/understanding regarding their preservation and compliance with secretary of the interior's standards and technical assistance policies. The National Park Service provides up to three staff members who work between sites 6, 7, and 8 and provide programs and interpretation for visitors.

Site 7: Wright Brothers Hill and Wright Memorial—NPS Partner-Owned and Co-Operated

The Wright Memorial overlooks the Huffman Prairie Flying Field and is located on the Wright-Patterson Air Force Base next to the Huffman Prairie Flying Field Interpretive Center and outside of the park boundary. The Wright Memorial consists of a memorial obelisk, plaza, and overlook in a designed landscape. The Wright Memorial Cultural Landscape is listed on the National Register of Historic Places for two properties:

- Wright Brothers Hill – Memorial, the 27-acre landscape designed by the Olmsted Brothers landscape architecture firm and built by Civilian Conservation Corps volunteers in the 1930s (listed in 2016).
- Wright Brothers Memorial Mound Group for Native American burial mounds (listed in 1974). The site is in fair condition and future restoration work is scheduled to occur. The National Park Service provides up to three staff members who work between sites 6, 7, and 8 and provide programs and interpretation for visitors.

Like the Huffman Prairie Flying Field Interpretive Center, funding availability from the Wright-Patterson Air Force Base has historically led to concerns regarding the costs and need to maintain the memorial.

Site 8: Huffman Prairie Flying Field Interpretive Center—NPS Partner-Owned and Co-Operated

The Huffman Prairie Flying Field Interpretive Center is not within park boundaries. The US Air Force owns the property, which does not require base access to visit. The park's legislation states that the National Park Service "may provide interpretation of Huffman Prairie Flying Field on Wright Brothers Hill, Wright-Patterson Air Force Base, Ohio." The Wright-Patterson Air Force Base owns the facility and typically funds maintenance needs. The National Park Service submits "work requests" to Wright-Patterson Air Force Base and provides occasional funding and project management for capital improvements. The limited funding availability and the costs and needs of this facility are concerns.

The National Park Service operates the interpretive center, which provides interpretation, waysides/exhibits, and displays artifacts owned by and on loan to the park. The National Park Service provides up to three staff members who work between sites 6, 7, and 8. Exhibits focus on the Wright brothers' development of the world's first practical airplane at Huffman Prairie in 1904 and 1905, the Wright Company's flying school starting in 1910, and the accomplishments of

Wright-Patterson Air Force Base. Although the building's artifacts are in good condition and historically significant, the building is only in fair condition and not considered historically significant. The National Park Service maintains its collections.

Leased Maintenance Facility (NPS Partner-Owned and Leased)

Park maintenance operations are currently based out of a leased property on South Williams Street known as 277, which is owned by the City of Dayton. The building is approximately 5,000 square feet and does not provide adequate space for maintenance needs nor a bathroom for current staff.

Summary of Other Sites Included in Boundary Evaluation

Other sites in and around the locations listed above were considered in the boundary analysis, including the Wright-Dunbar Interpretive Center parking lot and access to the Huffman Prairie Flying Field along Marl Road. These are discussed further in chapter 2.

SCOPE OF THE GENERAL MANAGEMENT PLAN AMENDMENT

Key Issues and Opportunities Addressed in this Plan

Wright Company Factory Acquisition. In 2006, a boundary assessment concluded that a boundary expansion to include the Wright Company Factory would only be feasible if a financially viable willing partner stepped forward to shoulder the costs of site development. On March 30, 2009, Public Law 111-11 modified the boundary of the park to include the Wright Company Factory site (site 3 in figure 1). Land and Water Conservation Fund funding for property acquisition at \$450,000 was a part of the FY 2018 NPS budget as shown in the House Amendment to the Senate Amendment on Public Law 115-141 dated March 23, 2018. The factory is now part of the park's legislative boundary, and the National Park Service is in the process of acquiring a portion of the factory from the City of Dayton. The city has identified an overall development partner for the site, but there is a continuing need for the National Park Service and partners to identify additional development partners, potential uses, and other sources of funding for the Wright Company Factory. This plan addresses this issue through potential future management actions.

Visitor Services and Use Levels. On March 30, 2009, Public Law 111-11 modified the park boundary to include Hawthorn Hill (the home of Orville Wright, his father, and his sister) and the Wright Company Factory. These boundary adjustments necessitate determining how to best provide visitor services, visitor access, and additional visitor experiences. The City of Dayton currently owns the Wright Company Factory site within park boundaries. The National Park Service is in the process of acquiring buildings 1, 2, and 17. Visitor services and other park operations could potentially be added at the site. Dayton History will continue to own and manage the Hawthorn Hill site (site 5 in figure 1); however, the park administration needs to clarify its direction with partners regarding how these sites fit into the operations and interpretation of the park. Clarifying strategies for visitor use management is also needed, including identifying visitor capacity at the park as required by the 1978 National Parks and Recreation Act (16 USC 1a-7(b)). This plan addresses visitor services through proposed and future management actions, updated zoning, and visitor capacities.

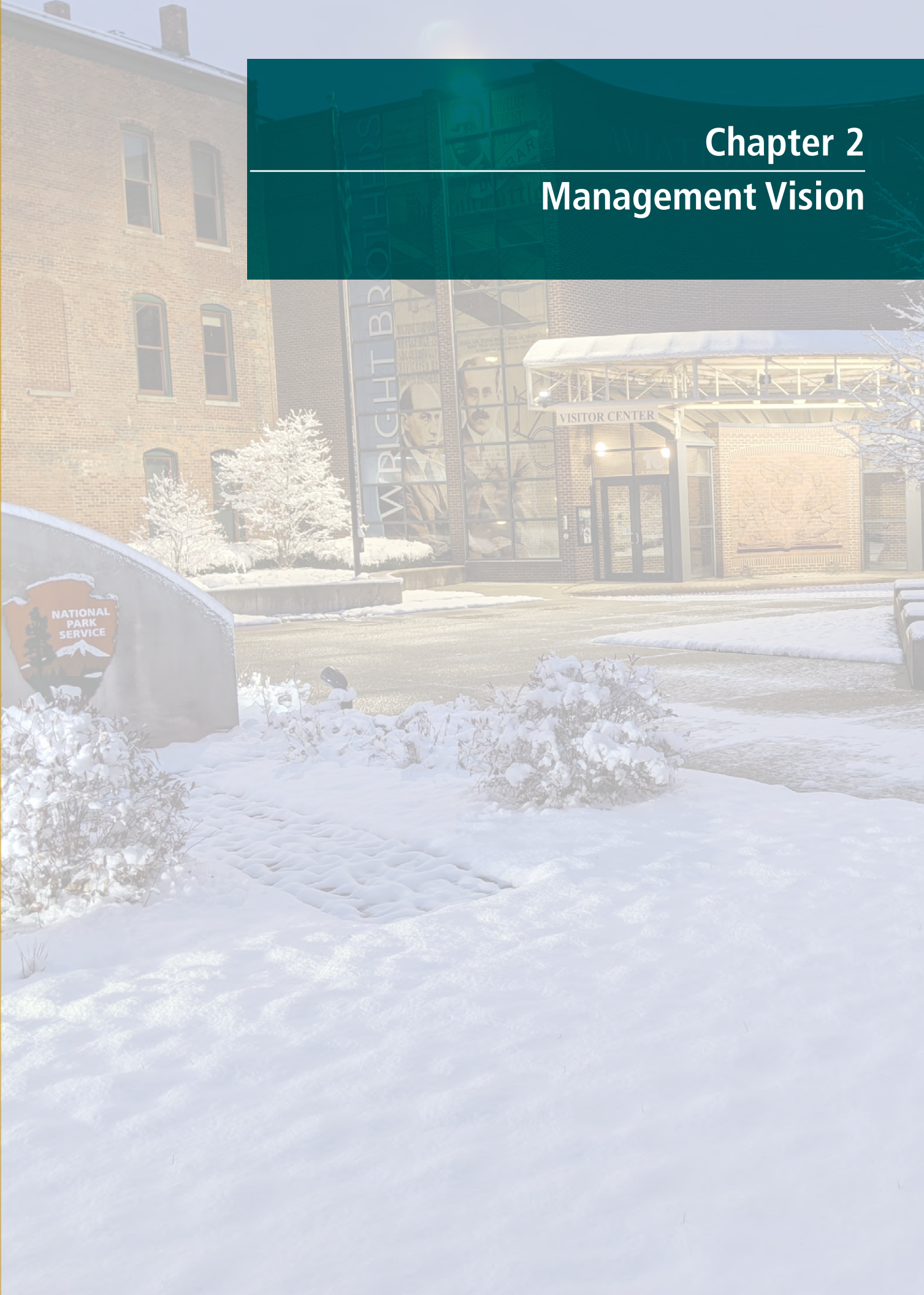
Park Maintenance Operations. Park maintenance operations are currently based out of a leased property on South Williams Street known as 277, which is owned by the City of Dayton. The facility lacks the proper utilities and safety requirements to be a functional NPS maintenance facility.

Because the building is not federally owned, investing in the current maintenance facility continuously presents challenges. The 277 structure is currently inadequate for operations, and the potential addition of new responsibilities to the park (i.e., the Wright Company Factory and other potential boundary adjustments) will only heighten this need. Currently, maintenance staff offices and equipment are housed in separate locations, and no central location exists for maintenance staff who work throughout the park unit and nearby NPS units. A maintenance facility that allows for year-round use and a more centralized location are needed to provide safe and efficient operations support for the park and nearby NPS units. This plan addresses this issue by proposing the potential for a new centrally located maintenance facility at the Wright Company Factory.

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Chapter 2

Management Vision



CHAPTER 2: MANAGEMENT VISION

INTRODUCTION

The National Parks and Recreation Act of 1978 (Public Law 95-625) requires the preparation and timely revision of general management plans for each unit of the national park system. Congress has also specifically directed the National Park Service in 54 USC 100502 to consider as part of the planning process the following elements: “General management plans for each unit shall include, but not be limited to:

- measures for the preservation of the area’s resources;
- indications of types and general intensities of development (including visitor circulation and transportation patterns, systems and modes) associated with public enjoyment and use of the area, including general locations, timing of implementation, and anticipated costs;
- identification of an implementation commitment for visitor carrying capacities for all areas of the unit; and
- indications of potential modifications to the external boundaries of the unit, and the reasons therefore.”

The current general management plan (GMP) for the park was finalized in 1997 and a subsequent GMP amendment was completed in 2005. Conditions at the park have changed in the intervening years, requiring a new look at the management direction for the park (see “Need for the Plan” below). Some elements of the 1997 general management plan and 2005 GMP amendment still provide direction for managing the park—those elements will be identified and confirmed in this chapter and set the management vision for Dayton Aviation Heritage National Historical Park for the next 20 years or longer.

PARKWIDE MANAGEMENT CONCEPT/VISION

The Dayton Aviation Heritage National Historical Park is a partnership park located in and around Dayton, Fairborn, and Oakwood, Ohio. The park contains six sites that fall within the NPS boundary and two additional sites that are interpreted with partners. The park also maintains a leased maintenance facility. The park manages four of its sites indirectly through cooperative agreements and not through fee-simple ownership. Additional sites within the park’s legislated boundary are significant to the park’s purpose; however, they are not owned or maintained by the park. The park supports operations of these sites by providing interpretation support and other technical assistance.

Visitors to Dayton Aviation Heritage National Historical Park will see how the invention of the airplane influenced the course of human history; how aviation, science, and engineering evolved; and how new technologies derived from it continue to shape lives. The park will relate the story of acclaimed author/poet Paul Laurence Dunbar, a high school classmate of Orville’s and acquaintance of both Wright brothers. As part of the Dayton experience, the park will educate the public about the lives and work of these uncommon men whose lofty goals were achieved through intelligent effort and persistence.

The park will be a focal point for information on the Wright brothers, who made the world's first free, controlled, and sustained flight in a power-driven, heavier-than-air machine. The park will also be a catalyst, attracting other aviation-related entities to the area in a way that increases visitors' opportunities to learn about the early aviation story, ranging from the first flight through airplane production during World War I. Additionally, the park will be the primary authentic space to educate the public on the continuing relevancy of Paul Laurence Dunbar's works. Despite the physical distance between resources, visitors will experience the park and its stories as a unified interpretive framework. Local and regional communities will feel a sense of stewardship for the significant sites and objects associated with the lives of the Wright brothers and Paul Laurence Dunbar.

The park continues to cooperate and collaborate with legislated partners and other entities for management, interpretation, transportation, research, stewardship, and facility development for sites in and outside the park boundaries. Visitors have the opportunity to experience different sites in a variety of ways. Interpretation stimulates visitors' interest in learning more about the primary stories, as well as about the history and natural resources of Dayton and the surrounding area.

The park continues to be an integral part of the community. Although changes may occur in the neighborhood surrounding the Wright-Dunbar Interpretive Center and other sites, visual qualities continue to contribute to the historical context of the park. The residents in the neighborhood surrounding the Wright-Dunbar Interpretive Center find that the park brings improvements that help the community to achieve its goals.

This chapter describes how this GMP amendment incorporates and applies this management vision through zoning, proposed management actions that are connected to resource preservation, and discussion of boundary modifications. Further, a summary of the visitor use management elements, including visitor capacity, is described in more detail in appendix A.

PARTNERSHIPS

Partnerships allow park managers to accomplish the park's mission and build a community of stewardship. Park managers will maintain and foster relationships with its legislated partners and pursue the opportunity for additional partnerships, if warranted. Agreements will be maintained and/or updated as necessary and the park will continue to seek partner input on planning elements moving forward.

MANAGEMENT ZONES AND DESIRED CONDITIONS

This section defines the management zones and desired conditions that would be applied to Dayton Aviation Heritage National Historical Park. Desired conditions are statements of aspiration that describe resource conditions, visitor experiences and opportunities, and facilities and services that the National Park Service strives to achieve and maintain in a particular area. Desired conditions describe what conditions, outcomes, and opportunities are to be achieved and maintained in the future, not necessarily what exists today. As the National Park Service strives to provide a diverse range of visitor experiences and opportunities, the park is divided into management zones, each with its own set of desired conditions.

Though each management zone has its own set of desired conditions that comprise a spectrum of resource, visitor opportunity, and facility conditions, they are all consistent with the purpose and significance of Dayton Aviation Heritage National Historical Park. The identification of management zones is required by the NPS management policies guiding park planning (*Management Policies 2006*) and is a key element of meeting the GMP requirements, as defined in the National Parks and Recreation Act of 1978 (54 USC 100502).

The GMP amendment for Dayton Aviation Heritage National Historical Park (NPS 2005) identified two management zones: a Visitor Services/Interpretation Zone and a Historic Landscape Zone. These zones included desired condition descriptions and were applied to many of the areas in the park, though some areas were not addressed if not owned or operated by the National Park Service. The Wright Company Factory and Hawthorn Hill were not included in that plan because they were not part of the park at the time.

Included in this plan is a shift from the two-zone framework in the 2005 GMP amendment to a four-zone framework. The four management zones are: a Visitor Engagement Zone, an Authentic Zone, a Historic Landscape Zone, and an Administrative Zone. The zoning framework was expanded because the two zones were not comprehensive enough to cover the whole park, including new areas that were added since the previous GMP amendment was completed. In order to define a vision for the entire park, more zones were needed. The Authentic Zone was added to cover spaces like the Wright Cycle Company and Paul Laurence Dunbar House Historic Site, where the focus is on preserving historic resources with integrity and conveying a historic feel. The Administrative Zone was added to cover areas that focused on NPS operations and maintenance activities. Desired conditions for each zone are described below, and proposed zoning for each park location is included in the “Proposed Management Action” section as well as the “Changes to Zoning” section. Slight amendments have been made to the desired conditions for the Visitor Engagement Zone and the Historic Landscapes Zone to improve clarity and readability. A slight addition was made to the Historic Landscapes Zone (shown in *italics*) to distinguish it from the Authentic Zone and provide clarity for management.

Visitor Engagement Zone

Areas in the Visitor Engagement Zone are focused on the interpretation of park resources and the provision of visitor services to facilitate an engaging visitor experience.

Resource Conditions. This area is intensively managed to protect cultural resources, provide public safety, and provide an engaging learning environment. This area is relatively well developed and has a moderate tolerance for resource impacts where necessary for essential visitor and operational needs. As much as possible, the historic landscape is preserved on the exterior of existing buildings. The exterior of new construction is designed to be appropriate for the historic landscape. The condition of the resources is maintained to the highest degree possible, consistent with the purpose of this area.

Visitor Experiences and Opportunities. Visitors receive park information and orientation in this zone area gain an effective understanding of the significance of the park units and the history of the Wright brothers, the works of Paul Laurence Dunbar, and the birth and development of aviation. A high level of opportunity exists for self-guided exploration and staff-led education and interpretation programs in buildings and outdoors. Space is provided for some recreational activities, such as walking and picnicking. Special events take place in this area.

This area provides a facility-dependent experience that includes exhibits and films. The area is directed at visitor orientation, education, resource interpretation, and providing services. This area contains the most interactive experiences available in the park.

In the Visitor Engagement Zone, there is a moderate-to-high degree of visitor interaction with NPS staff and a high probability of encountering other visitors. The sights and sounds of other visitors and vehicles are present. The Visitor Engagement Zone is easily accessible for visitors with impaired mobility.

Facilities and Services. This area contains facilities and services that orient visitors to the site and provide interpretation. Convenient, safe access is provided. This area is near a transportation network.

Visitor facilities may include orientation exhibits, visitor centers, classrooms, auditoriums, indoor and outdoor seating and tables, parking, restrooms, signage, roads, paved and gravel pathways, bridges, and other structures. Additional facilities for park administration and operations include offices, general office supply and equipment storage areas, mechanical equipment and utilities, and maintenance areas.

All development emphasizes operational efficiency, environmentally sustainable practices, and human safety. Development provides full accessibility and is designed to complement park resources. Where possible, the park adaptively reuses historic structures.

Authentic Zone

Areas in the Authentic Zone are focused on preserving historic resources and the provision of visitor opportunities to experience and interact with those authentic historic resources.

Resource Conditions. This area is moderately managed and conveys a historic feel. The area includes development with a moderate degree of historic integrity. There is a low-to-moderate tolerance for impacts on the historic resources in this area because this is an area where the influence of historic events is conveyed in tangible ways. Historically accurate reproductions and replicas are present to facilitate authentic experiences. Interpretive programming is offered to create both a contemplative feel and opportunities to experience historic resources.

Visitor Experiences and Opportunities. This area has a feeling of contemplation that is often experienced in a moderately social setting. Visitors can reflect on the history and significance of events that occurred in the space, alone or alongside others. Formal or informal visitor activities are offered, with some regular interpretive programming. The likelihood of interactions with park staff and other visitors is moderate and periodically fluctuates to provide a diversity of experiences. This area is facility-dependent and is directed at contemplation and learning in a low-impact indoor setting. Special events do not take place in this area.

Facilities and Services. This area includes permanent facilities. Interpretive exhibits that provide perspective on the historic significance of the site are present, and guided experiences are often facilitated. Visitor facilities may include orientation exhibits, historic homes, restrooms, signage, and other structures. Facilities for park administration and operations are not present.

All development emphasizes historic integrity, interpretive experiences, and human safety. Development provides as much accessibility as possible and is designed to complement park resources.

Historic Landscape Zone

Areas in the Historic Landscape Zone are focused on preserving outdoor historic landscapes and the provision of contemplative visitor experiences.

Resource Conditions. This area is moderately managed and conveys a commemorative feel, containing limited development targeted for specific purposes. Because this is an area where the influence of historic events is conveyed, there is a low tolerance for impacts on the resources. Development that does exist may include reproductions that help convey historic events. Other impacts are permitted only where necessary for essential visitor and operational needs. Limited interpretive programming is offered to facilitate a contemplative feel.

Visitor Experiences and Opportunities. This area offers a feeling of solitude and contemplation, and visitors can reflect on the history and significance of events that occurred in the area. Except for aircraft overflights, there is limited noise from adjacent land uses. Formal or informal visitor activities may be offered, although there is little regular programming. Other people may be present in the area but the likelihood of interactions with park staff and other visitors is moderate to low.

This area is not facility-dependent and is directed at contemplation and low-impact outdoor recreation. Space may be provided for picnicking and the area is maintained in a parklike or pastoral setting, possibly with seating areas.

Facilities and Services. This area has no permanent facilities. Trails are accessible to all visitors, but many may be unpaved, and their width may limit group use. Interpretive and directional signs are provided on some formal trails. Trails are self-guided and may lead to vistas where visitors can gain a perspective on the historic significance of the area. Recreational areas are maintained for picnicking, walking, and other undirected outdoor activities.

Administrative Zone

Areas in the Administrative Zone are focused on NPS operations and maintenance activities.

Resource Conditions. This area is intensively managed to protect cultural resources, provide safety, and facilitate a productive work environment for NPS staff and partners. This area is well developed and there is a moderate tolerance for impacts on the resources where necessary for essential operational needs. As much as possible, the historic landscape is preserved on the exterior of existing buildings. The exterior of new construction is designed to be appropriate for the historic landscape if present. The condition of the resources is maintained to the highest degree possible, consistent with the purpose of this area.

Visitor Experiences and Opportunities. Areas in the Administrative Zone are generally closed to the public; therefore, visitor experiences and opportunities are not present. Special events may occur here.

Facilities and Services. This area contains facilities that are conducive to NPS operations and maintenance. Convenient, safe access is provided to NPS staff and partners. This area is near a transportation network.

Facilities may include offices, garages, workshops, conference rooms, meeting rooms, equipment and office storage space, archives, parking, restrooms, signage, roads, mechanical equipment, utilities, employee housing, and other structures.

All development emphasizes operational efficiency, environmentally sustainable practices, and human safety. Development provides full accessibility and is designed to complement park resources. Where possible, historic structures adaptively reused.

Changes to Zoning

Changes to zoning from the previous GMP efforts are described in table 2. Updated zoning is also shown in the following maps (figures 7 and 8). These maps show the noncontiguous sites that were considered during this GMP amendment planning process, including sites that were considered but dismissed. The maps indicate which sites are within the NPS boundary and which sites have public access. Four insets provide a closer view of the Hoover Block, the Wright Memorial, the Paul Laurence Dunbar House, and the Wright Company Factory; the NPS boundaries at these sites; and the buildings that do or do not have public access. In order to define a vision for the entire park, all areas of the park are zoned in this management plan, regardless of ownership or lead operator status. While park managers would strive to work with park partners to achieve this vision, the ownership and decision-making responsibility for the sites not under NPS ownership would not change. In these cases, the laws, regulations, policies, and decisions of the partner prevail, while the management zoning serves as guidance. Park managers would work with park partners to provide a cohesive look and feel to sites throughout the park and increase a visitor's sense of being in a national park.

Table 2. Changes to Zoning

Site	2005 GMP Amendment	Current Proposal
NPS Portion of Wright-Dunbar Interpretive Center (Site 1A)	Visitor Services/Interpretation	Authentic and Visitor Engagement
Setzer Building (ATI Portion of Wright-Dunbar Interpretive Center) and Parachute Museum (Site 1B)	Visitor Services/Interpretation	Visitor Engagement
Walkway between Interpretive Center and Wright Cycle Company (Interpretive Plaza) (Site 1C)	Visitor Services/Interpretation	Visitor Engagement
Wright Cycle Company (Site 1D)	Visitor Services/Interpretation	Authentic
Wright-Dunbar Interpretive Center Parking Lot (East of Site 1D)	Visitor Services/Interpretation	Visitor Engagement
Paul Laurence Dunbar House Historic Site (Site 2)	N/A	Authentic and Visitor Engagement
Wright Company Factory (Site 3)	N/A	Historic Landscape, Visitor Engagement, and Administrative
Wright Brothers National Museum (Site 4)	N/A	Visitor Engagement
Hawthorn Hill (Site 5)	N/A	Authentic
Huffman Prairie Flying Field (Site 6)	Visitor Services/Interpretation and Historic Landscapes	Historic Landscape and Visitor Engagement
Wright Memorial (Site 7)	Visitor Services/Interpretation and Historic Landscapes	Historic Landscape and Visitor Engagement
Huffman Prairie Flying Field Interpretive Center (8)	Visitor Services/Interpretation and Historic Landscapes	Visitor Engagement

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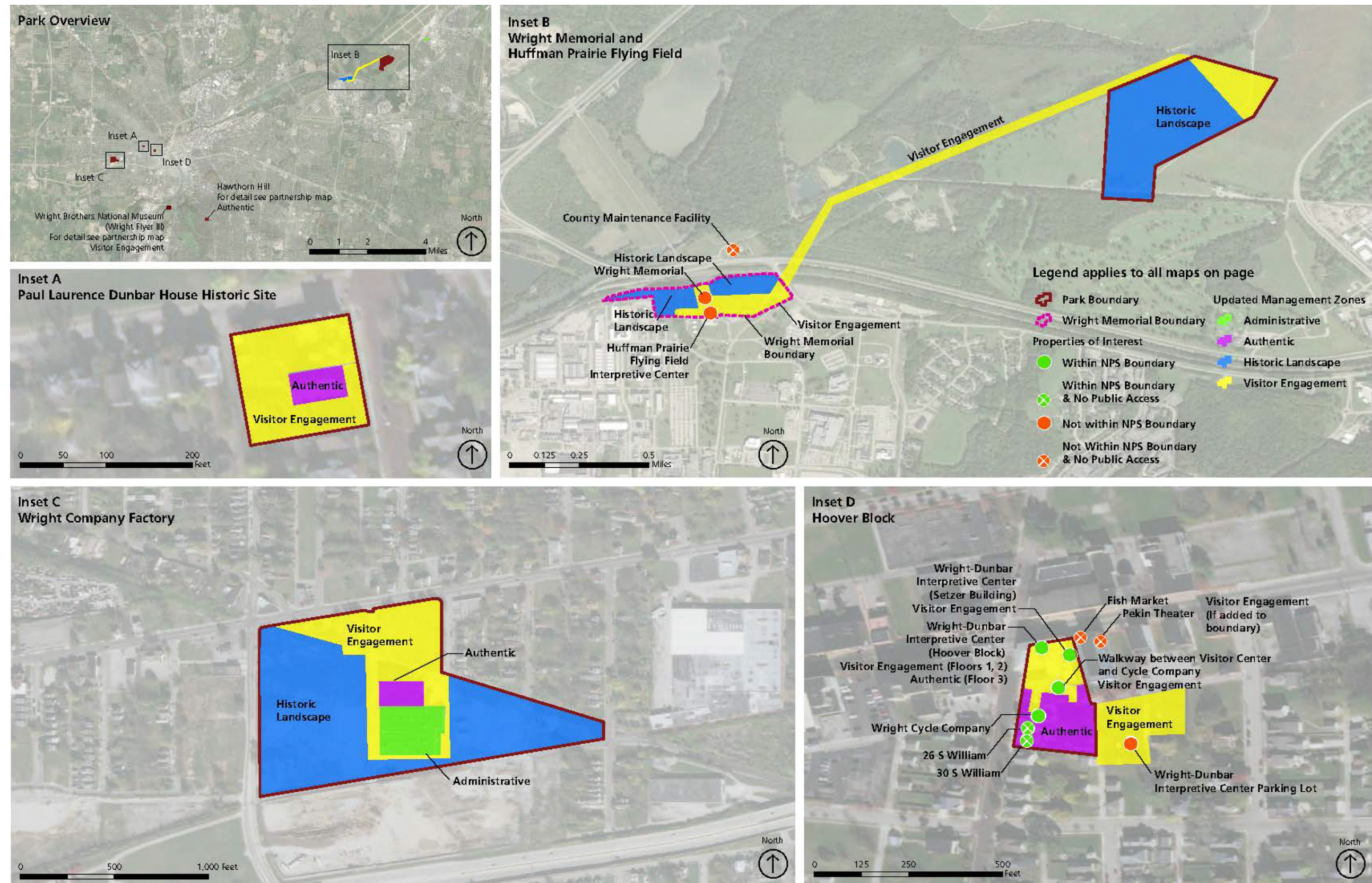


FIGURE 7. ZONING INSET MAPS

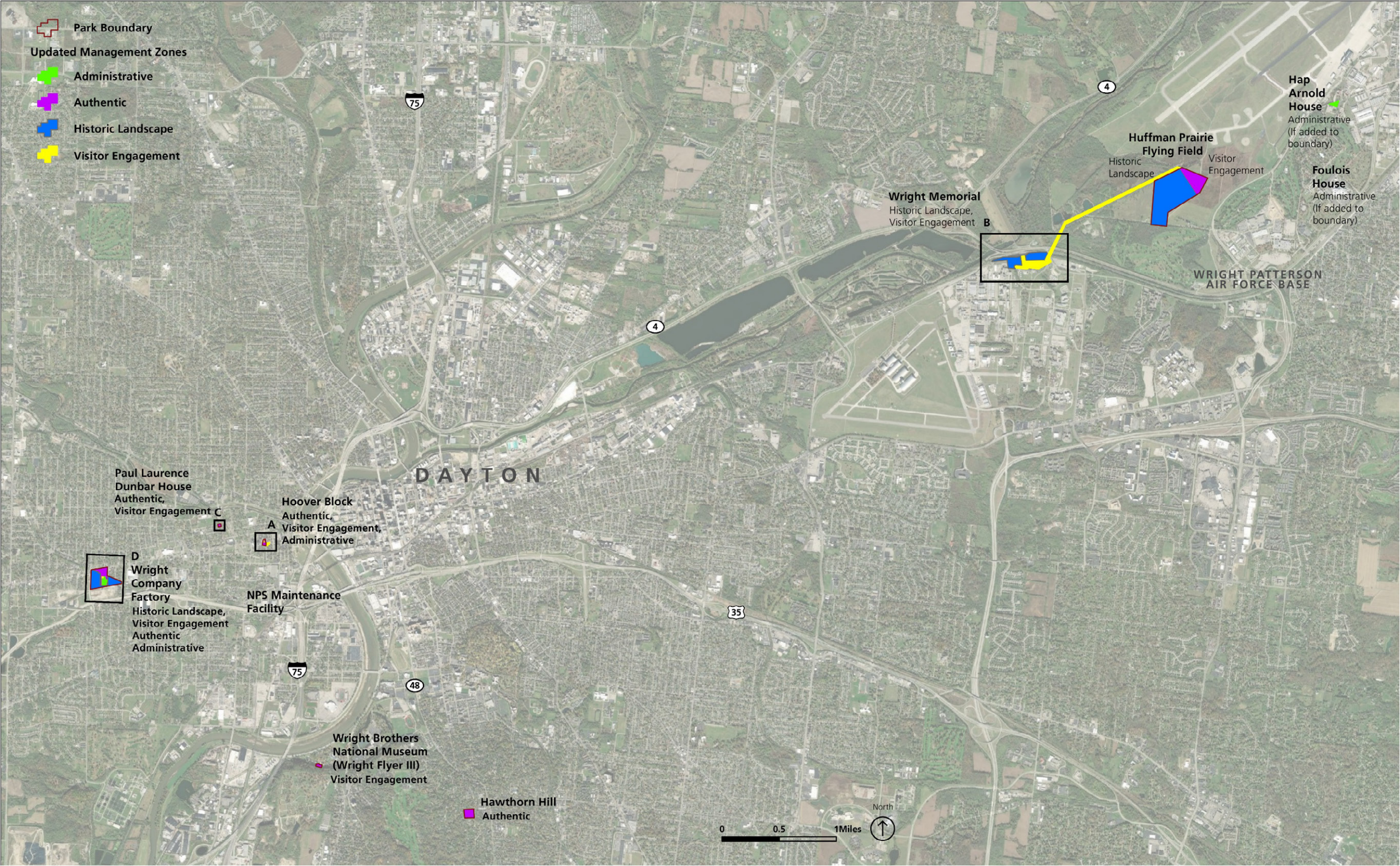


FIGURE 8. UPDATED MANAGEMENT ZONES

PROPOSED MANAGEMENT ACTION

In the following narrative, proposed management actions are those actions that the park would pursue upon signing this document. Potential future management actions are those the park would pursue but would likely require additional compliance, partnership engagement, and other steps. Please see table 3 for a comparison between the proposed actions in this GMP amendment and those actions within the 1997 general management plan and 2005 amendment. All the future management actions identified in “Appendix A: Visitor Use Monitoring and Visitor Capacity” would be considered potential future management actions and could require additional compliance and partnership engagement in the future.

Site 1A: National Park Service Portion of the Wright-Dunbar Interpretive Center—NPS-Owned and Operated

Proposed Zone—Visitor Engagement and Authentic. Collectively, the proposed and future actions achieve these zone descriptions by preserving historic resources and partnering to provide additional opportunities for self-guided and staff-led experiences.

Proposed Management Action—Routine maintenance would continue.

Potential Future Management Action—Renovating the third floor to accommodate additional interpretation would be considered, and this action would be subject to future buildout of the Wright Company Factory. In addition, relocation of the research library to the Wright Company Factory would be considered pending the results of the Historic Structures Report and Condition Assessment.

Pending the status of partnership agreements, the National Park Service would consider renovating the building to provide improved access to the NPS-owned portion of the building and gain control of administrative spaces utilized for communications equipment. If a new agreement were not put in place or if Aviation Trail, Inc. dissolved, the park would explore additional redesign and management options.

Site 1B: Setzer Building (Aviation Trail, Inc. Portion of Wright-Dunbar Interpretive Center) and Parachute Museum—NPS-Operated and Not Owned

Proposed Zone—Visitor Engagement

Proposed Management Action—National Park Service-directed routine maintenance and preservation treatments would continue. Proposed developments at the facility would vary, depending on the direction of a future agreement between Aviation Trail, Inc. and the National Park Service following the 2025 expiration. If a new agreement is not established or the conditions of a new agreement change, the park would explore other management options, including the possibility of gaining fee ownership of the Setzer Building.

Site 1C: Walkway between Interpretive Center and Wright Cycle Company (Interpretive Plaza)—NPS-Owned and Operated

Proposed Zone—Visitor Engagement

Proposed Management Action—Routine maintenance would continue.

Site 1D: Wright Cycle Company—NPS-Owned and Operated

Proposed Zone—Authentic. Proposed and future actions work towards a historic feel with additional interpretive opportunities.

Proposed Management Action—Routine maintenance would continue.

Potential Future Management Action—No immediate change from current management is planned for the first floor. In the future, the National Park Service would consider world heritage nomination of the site.

Efficient use of the building space and visitor experience would be improved by automating the visitor flow to the Wright Cycle Company from the Wright-Dunbar Interpretive Center. In addition, the National Park Service would continue to maintain the interpretive plaza between the interpretive center and the Wright Cycle Company.

The potential for providing public access to the second floor for interpretation and/or partner and community use would be considered.

Relocating the maintenance staff away from the Wright Cycle Company building to a more efficient, safe, and centrally located facility at Wright Company Factory (site 3) would improve maintenance operations throughout the park.

Site 2: Paul Laurence Dunbar House Historic Site—Partner-Owned and Co-Operated

Proposed Zone—Visitor Engagement and Authentic Zone. Proposed and future actions would protect resources and opportunities to connect with the works of Paul Laurence Dunbar.

Proposed Management Action—The National Park Service would continue to support and encourage considerations regarding access, fire suppression, and security at the site.

Potential Future Management Action—The park will explore alternative management options for the Paul Laurence Dunbar House Historic Site, including the possibility of a direct agreement with the Ohio History Connection.

Cooperative sales should be considered for redevelopment, possibly as a self-service system using online sales.

Site 3: Wright Company Factory—Partner-Owned and Co-Operated

Proposed Zone—Historic Landscape, Visitor Engagement, and Administrative. Proposed and potential management actions would preserve outdoor historic landscapes while supporting NPS operations and maintenance activities. Further, once rehabilitated, this site would offer opportunities for an engaging visitor experience.

Proposed Management Action—No immediate change from current management is planned for the Wright Company Factory beyond applying management zoning and pursuing funding and partnership opportunities for potential future management actions.

Potential Future Management Action—The footprint of all extant historic factory buildings is over 100,000 square feet. The National Park Service proposes to control through fee ownership approximately 25,000 square feet (buildings 1 and 2). Sufficient space exists to accommodate partner activities that further the themes of the park. In addition, some portions may be suitable for lease to compatible organizations. Following a historic structures report and condition assessment, necessary mitigation and/or necessary restoration would inform the consideration of appropriate uses for the site.

The National Park Service would no longer lease the maintenance facility and would relocate operations to the Wright Company Factory. The park proposes repurposing a portion of the buildings into an interpretive area for visitors, establishing a location for maintenance facilities, and identifying a common operations area for staff from all the separate sites in the park. A new maintenance facility would primarily support Dayton Aviation Heritage National Historical Park, and the size of the space will allow it to function as a multipark maintenance facility to support specific project work and longer-term storage for William Howard Taft National Historic Site and Charles Young Buffalo Soldiers National Monument. As partnerships and funding sources move forward, the park would initiate a more detailed plan to guide reuse of the factory buildings and the nature of partnerships to be located at the site and encourage this appropriate development of the non-NPS controlled sections. The project-specific plan would recommend tangible partnership/leasing opportunities in coordination with NPS needs. This project will include leveraging opportunities and a clear business rationale for future public/private investments at Wright Company Factory.

Rehabilitating buildings 1 and 2 to their 1910–1911 exterior and interior appearance would offer a unique opportunity to discuss the techniques, practices, and legal challenges to include the development of the aviation industry. Buildings 1 and 2 together contain approximately 25,000 square feet of space. Once rehabilitated, building 1 would be used for visitor services. The park’s interpretive focus would be on how the Wright Company Factory played a major role in the birth of the American aviation industry through the early development of the age of flight. Possible exhibits include replica Wright Company aircraft, machinery, development of an aviation industry workforce, and interpretation of the social and economic impacts of the United States’ first purpose-built airplane factory. Building 1 is connected to building 2 with an integrated infill structure. A historic structure report is underway to determine the appropriate treatment for the infill to include potential demolition. The park could consider acquiring Wright artifacts or replicas.

Once rehabilitated, building 2 could be used for a STEAM (science, technology, engineering, arts, and mathematics) classroom and innovation performance facilities and as a consolidated administration/maintenance facility. Operations staff from each separate location in the park would

be relocated to this new common operations area. Building 2 is connected to building 3 with an integrated infill structure. Little remains of the eastern half of the southern façade of building 2. A historic structure report is underway to determine the appropriate and feasible treatment for the infill to include potential demolition and reconstruction of the southern façade. A location for a research library would also be considered in either building 1 or 2.

Building 17 is not one of the original buildings in the Wright Company and does not convey the same level of significance. Because it is physically attached to building 1, the National Park Service would acquire these buildings collectively and it would be carefully removed as part of the rehabilitation of building 1 to its 1910–1911 appearance. The site could be used as a future outdoor education space.

The small electrical building behind building 2 no longer provides electricity to the site but may have in the past. Funding has been allocated for a historic structure report part 1 to identify the significance of the resource and for a part 2 to conduct a condition assessment and identify treatment recommendations.

Historic collections would not be stored at the Wright Company Factory. Storage space for historic collections associated with the park is available at the storage facility at nearby Hopewell Culture National Historical Park.

The National Park Service will not acquire buildings 3, 4, and 5, but they could be considered for partner opportunities. The buildings have been zoned by the City of Dayton for light manufacturing, with no heavy industrial or residential uses allowed.

Under current park management and operations, there would be adequate staff to provide management and administration for the site. Additional staff (approximately 0.7 full-time employees) would be needed for building and site maintenance, with an annualized total cost of facility ownership of approximately \$165,000 per year.

In the future, the site would be considered for a world heritage site nomination.

Site 4: Wright Brothers National Museum (Carillon Historical Park)—Partner-Owned and Operated

Proposed Zone—Visitor Engagement. Proposed management actions at this site would support a high level of opportunity for self-guided exploration and interpretation programs both in buildings and outdoors.

Proposed Management Action—Preservation of the 1905 Wright Flyer III would continue to be managed by Dayton History at Carillon Historical Park.

The park would also enhance the NPS operational presence.

The park, in coordination with Dayton History, would explore a practical voucher system for targeted audiences or alternative entrance that would promote a no-fee entrance to the national park section.

Site 5: Hawthorn Hill—Partner-Owned and Operated

Proposed Zone—Authentic. Proposed and future management actions offer visitors opportunities to interact with authentic historic resources in a low-impact indoor setting.

Proposed Management Action—No immediate change from current management is planned for Hawthorn Hill beyond applying management zoning and exploring partnership opportunities for additional interpretation.

Potential Future Management Action—Considering the boundary adjustment, there is a need to determine how to best provide visitor services, visitor access, and additional visitor experiences. Dayton History would continue to own, manage, and provide visitor services at the Hawthorn Hill site; however, the park needs to clarify its direction with partners about how these sites fit into the operations and interpretation of the park.

A historic structures report, condition assessment, and cultural landscape report are needed to guide treatment recommendations before use of the site can be determined. In the future, the park could consider offering limited tours for visitors, increased exterior interpretation, and allow some events at the site in coordination with Dayton History.

The National Park Service has not and would not obtain fee title on Hawthorn Hill.

In the future, the site would be considered for a world heritage site nomination.

Site 6: Huffman Prairie Flying Field—Partner-Owned and Operated

Proposed Zone—Historic Landscape and Visitor Engagement. Proposed and future management actions at this site provide visitor opportunities in a preserved outdoor historic landscape. Contemplative experiences are supported with little interpretive programming offered.

Proposed Management Action—The US Air Force is expected to continue funding maintenance and preservation of the landscape at the Huffman Prairie Flying Field.

Improvements to the Simms Station interpretation would be considered through limited reconstruction of the interpretive exhibit to the 1905 period. Opportunities to provide interpretation at the Ohio 444/Marl Road/Hebble Creek Bridge interface through partnership agreement would be pursued.

Potential Future Management Action—If implemented, phase 3 of an ongoing project would restore the field to its historic setting, primarily through the removal or reduction of Pylon Road, and return the road to its historic alignment.

The National Park Service would consider ways to make interpretation at the site more automated, including the potential for self-guided tours.

In the future, the site would be considered for a world heritage site nomination.

The 2005 GMP amendment proposed a new, 500-foot-long road to extend Kauffman Avenue to the north. This project would involve committing about 0.6 acre of land to paved surfaces and right-of-way. The road would cross land owned by the Miami Conservancy District and connect with the existing Marl Road corridor. This proposal would allow motorists to turn right (northeast) onto

Marl Road and enter Wright-Patterson Air Force Base through Gate 18C. The existing gate was designed to accommodate bicycles but had not been opened when the amendment was written. The plan proposed that Gate 18C would be upgraded to a standard vehicular gate. (Gate 16A, which currently provides access to the flying field, may or may not be closed. However, the national park signs would be removed from Gate 16A and along the route from that gate to the flying field. This action effectively would make Gate 18C the only access for the public to the flying field area.) From Gate 18C, visitors would travel about 1.3 miles on Marl Road to the parking lot. Other elements proposed in the 2005 amendment that would support this access route, including bridge updates, have been completed in recent years. This proposed access point remains a proposed action under this amendment and the park will seek funding options to support the proposal. Additional compliance would be necessary (see chapter 3). As part of this proposal, the park would consider opportunities to tie in the Greene County wellness trail (bike trail) program upgrade that connects to the Huffman Prairie Flying Field and connect with the Five Rivers Metroparks trail system.

Site 7: Wright Brothers Hill and Wright Memorial—Partner-Owned and Co-Operated

Proposed Zone—Historic Landscape and Visitor Engagement. The Wright Memorial was previously zoned as Visitor Services/Interpretation and Historic Landscapes in the 2005 GMP amendment. Managed similarly to the Huffman Prairie Flying Field, potential future management actions at this site would provide contemplative experiences for visitors in an outdoor historic landscape.

Proposed Management Action—No changes are proposed at this site under this GMP amendment. The US Air Force is expected to continue to fund maintenance and preservation of the memorial.

Potential Future Management Action—The US Air Force has proposed restoring the Olmsted design of the overlook associated with the memorial depending on funding availability. If restoration moves forward, the National Park Service would partner with the US Air Force and the State Historic Preservation Office on the necessary compliance for the restoration plans.

Site 8: Huffman Prairie Flying Field Interpretive Center—Partner-Owned and Co-Operated

Proposed Zone—Visitor Engagement. Proposed and future management actions at this site offer additional interpretive opportunities and engaging experiences for visitors.

Proposed Management Action—No preservation or treatments are proposed for the interpretive center. The US Air Force is expected to continue to fund maintenance and preservation of the interpretive center.

Additional interpretation at the site would be focused on telling individual stories of early fliers as a comparative to the Wrights' school, the place it held in teaching early aviators, and its students.

Potential Future Management Action—In addition, the development of automated exhibits would be considered to relieve staffing requirements at this location.

Boundary Evaluation Criteria Process Description

A statutory requirement for general management planning is to consider “potential modifications to the external boundaries of the park—if any—and the reasons for the proposed changes.” Through the management planning process, several sites were identified as potential additions to the park’s boundary.

This boundary adjustment analysis examines the cultural, historic, and natural significances of those properties to determine if they are appropriate for addition to the boundary of Dayton Aviation Heritage National Historical Park. The analysis also examines the potential for those properties to address management issues or resource protection needs.

The study evaluates the properties under consideration according to criteria set forth originally in the 1991 Study of Alternatives, Dayton’s Aviation Heritage, which laid out NPS boundary criteria (NPS 1991) and clarified in section 3.5 of *NPS Management Policies 2006*. For a property to be included in a boundary expansion, the property must meet at least one of the following three criteria:

1. Protect significant resources and values or enhance opportunities for public enjoyment related to park purposes.
2. Address operational and management issues, such as the need for access or the need for boundaries to correspond to logical boundary delineations, such as topographic features or roads.
3. Otherwise protect park resources that are critical to fulfilling the park purposes.

In addition to meeting one of the three criteria above, potential additions must also meet both of the following criteria from section 3.5 of *NPS Management Policies 2006*:

1. The added lands will be feasible to administer, considering size, configuration, and ownership costs; the views and impacts on local communities and surrounding jurisdictions; and other factors such as the presence of structures, hazardous substances, or exotic species.
2. Other alternatives for management and resource protection are not adequate.

No major boundary adjustment can be accomplished without authorization by the US Congress. The implementation of actions related to boundary adjustments depend on future funding and NPS priorities. Actions after additions to the boundary could include fee acquisition, easements, or agreements with property owners. The approval of a boundary adjustment does not guarantee that funding and staffing needed to implement the proposed actions will be forthcoming. Full implementation could be many years in the future.

The management planning process considered whether modifications to the park’s external boundaries were needed to help the park meet its purpose, maintain its significance, preserve its fundamental and other important resources, ensure high-quality visitor experiences, and/or address operational and management issues. At this time, current park boundaries are adequate to protect resources and perform park operations and none of the properties considered for addition to the park boundary meet the criteria for inclusion. A summary of the properties considered, and analysis of each site, appears below the boundary adjustment decision tree pictured. For any property that met the criteria for analysis, the planning team moved to the next column of criteria questions to determine whether a boundary adjustment was warranted. These discussions took place initially

over a series of workshop calls in February 2020 and were revisited throughout the planning process. Discussions continually referred to the decision tree shown in figure 9.

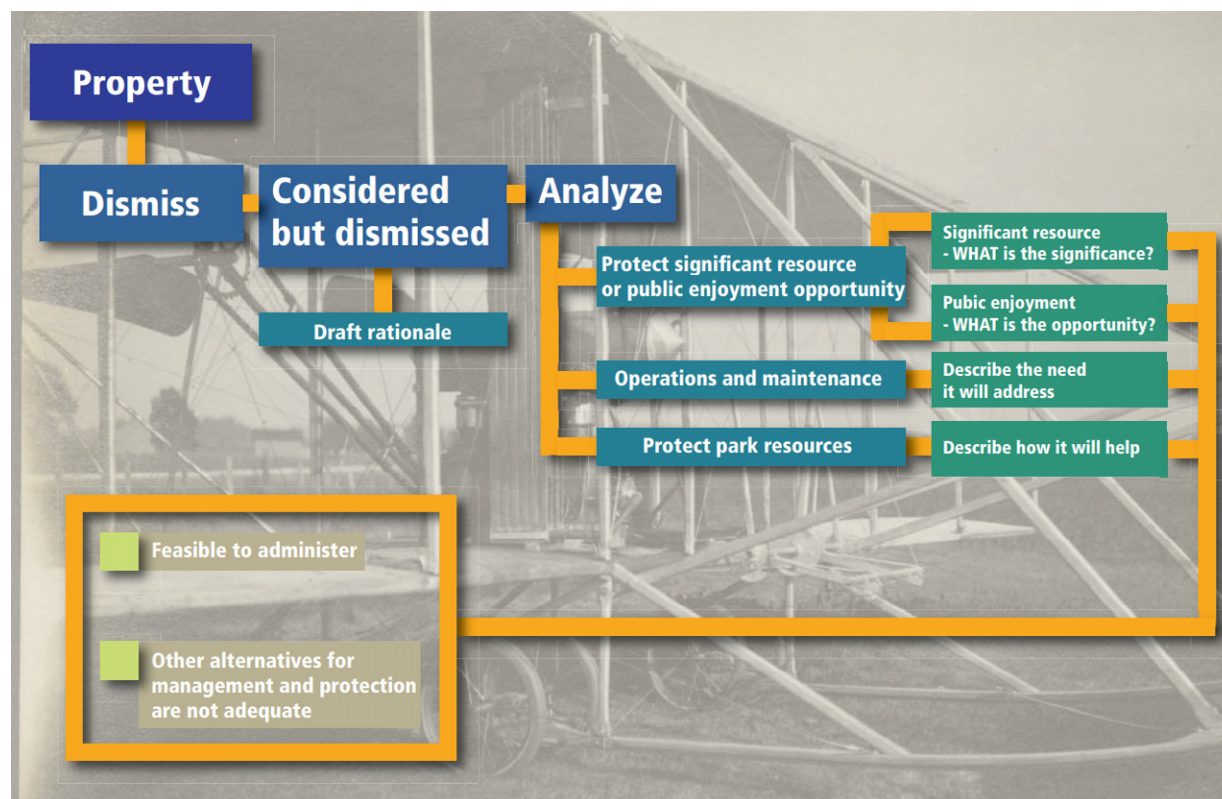


FIGURE 9. FLOW CHART OF THE BOUNDARY ADJUSTMENT PROCESS

Sites Evaluated for Adjustment

Recently, discussions have occurred with existing partners, particularly Wright-Patterson Air Force Base, about potential adjustments to expand the park boundary. The following sites were considered and analyzed using the process description above. Each of these sites was dismissed during the analysis because they did not meet an element of the criteria, which is further detailed in each site-specific description below.

Interpretive Center Parking Lot/Right-of-Way Access. This potential adjustment would include the parking lot and its connected access to the Wright-Dunbar Interpretive Center.

Current Status—This site is owned by Aviation Trail, Inc., and NPS acquisition is pending.

Consideration/Analysis—Currently the National Park Service currently administers the lot. This site is not significant to the park; it would not create a public enjoyment opportunity and would not protect any park resources. Acquisition would allow for administrative access and parking at the site and make it possible for NPS funds to be spent on maintenance of the parking lot.

Outcome—Acquisition of this parking lot is being pursued outside the scope of this GMP amendment under a minor boundary adjustment authority and therefore was not considered within this plan.

Huffman Prairie Flying Field Interpretive Center. The site is an interpretive center with a 46-spot parking area and built in 2002. The center is located on the grounds of Wright-Patterson Air Force Base adjacent to the Wright Memorial.

Current Status—This site is not within NPS boundary. It is operated by the National Park Service and maintained by the US Air Force.

Consideration/Analysis—The interpretive center has no park significance and has no documented support for retaining the structure. The National Park Service currently operates the interpretive center. However, the interpretive services provided are mobile and could alternatively be provided at the Wright Memorial or elsewhere on the Flying Field if the center were demolished. Inclusion within the NPS boundary would not support operations or protect park resources.

Outcome—An adjustment to the boundary to include this site was considered but dismissed. The US Air Force offers an adequate management alternative.

Access to Huffman Prairie Flying Field Along Marl Road. This potential adjustment would include Marl Road between Ohio Highway 444 and the Huffman Prairie Flying Field.

Current Status—This site is owned by US Air Force and the Miami Conservancy District and is located within Wright-Patterson Air Force Base, outside the park boundary.

Consideration/Analysis—The National Park Service discussed the potential for adding Marl Road to the park boundary. It was determined that adding the road to the park boundary was not necessary at this time, because the National Park Service and the US Air Force have a partnership agreement that can be used to address current visitor access needs in this area. If future needs cannot be met without an NPS boundary in this location, this site may be revisited.

Outcome—An adjustment to the boundary to include this site was considered but dismissed. It was recommended to work with the park's legislated partner (Wright-Patterson Air Force Base) to improve the access to the Huffman Prairie Flying Field as well as Miami Conservancy District, Five Rivers Metroparks, the City of Fairborn, Greene County, and the Ohio Department of Transportation.

Wright Memorial. This site is a 27-acre memorial and park designed by the Olmsted Brothers landscape architecture firm and built by Civilian Conservation Corps volunteers. The memorial was dedicated in August 1940 and is listed on the National Register of Historic Places.

Current Status—The site is not within the NPS boundary and is owned and operated by the US Air Force.

Consideration/Analysis—The memorial has park significance due to its commemoration of the aviation achievements of the Wright brothers. The memorial site provides a minimal vantage point for visitors to observe Huffman Prairie Flying Field, and the memorial itself is historically significant. As stated in the 2005 GMP amendment, while the memorial may be feasible for the National Park Service to administer, the Wright-Patterson Air Force Base currently provides adequate management and must protect the resource due to its significance.

Outcome—An adjustment to the boundary to include this site was considered but dismissed. Wright-Patterson Air Force Base offers an adequate management alternative.

Hap Arnold House Facility. Built in 1841, this structure is the oldest house on the Wright-Patterson Air Force Base. US Air Force General Henry “Hap” Arnold, a noted aviation pioneer trained to fly at the Wright School at Huffman Prairie Flying Field, lived in the house from 1929 to 1931. Officially designated as building 8, the house is located at the corner of Pearson Road and Wright Avenue.

Current Status—This site is not within the NPS boundary and is owned and operated by the US Air Force. The first floor is used for special events, and the second floor is unoccupied.

Consideration/Analysis—Due to the short period of occupation by “Hap” Arnold, more information would be required to show support for a determination of significance to the park. The site is not needed to provide visitor opportunities, operational support, or protect park resources.

Outcome—The site was considered but dismissed. The US Air Force offers an adequate management alternative.

Foulois House. Constructed in 1874, this house is eligible for listing in the National Register of Historic Places as a contributing element of the Fairfield Air Depot Historic District. Its significance is due to its association with the development of the depot between 1928 and the end of World War II. Brigadier General Benjamin D. Foulois, who was trained to fly by Orville Wright on the first Army Signal Corps airplane, a Wright “B” Flyer, lived in the house from July 1929 to July 1930. Foulois was a significant figure in early aviation and the development of the US Air Force.

Current Status—This site is not within the NPS boundary and is owned and operated by the Wright-Patterson Air Force Base as base housing for key and essential personnel. The structure has been modified periodically.

Consideration/Analysis—The site is currently operated by the US Air Force as housing and is protected as a contributing element to the Fairfield Air Depot Historic District. The house was one of a few places where the first flight experiments by the Wright brothers could be routinely witnessed. Like the “Hap” Arnold House, the site would require more information to show support for a determination of significance to the park. The site is not needed to provide visitor opportunities, operational support, or protect park resources.

Outcome—An adjustment to the boundary to include this site was considered but dismissed. The US Air Force offers an adequate management alternative.

Pekin Theater. Also known as the Enterprise Block, this building was constructed in 1890 and is part of the West Third Street Historic District listed on the National Register of Historic Places. While part of a historic district, the building does not tie directly to park significance.

Current Status—This building is not within the NPS boundary and is owned by Aviation Trail, Inc.

Consideration/Analysis—While part of a historic district, the building does not tie directly to park significance. The park would also be challenged to provide adequate staffing to operate a separate facility for interpretation and education. The Wright Company Factory could be used for this purpose.

Outcome—An adjustment to the boundary to include this site was considered but dismissed. This building would not be feasible for the National Park Service to operate and maintain over time, and other locations could provide this function.

Fish Market. This building is part of the West Third Street Historic District listed on the National Register of Historic Places. While part of a historic district, the building does not tie directly to park significance.

Current Status—This building is not within the NPS boundary and is owned by Aviation Trail, Inc.

Consideration/Analysis—As with the Pekin Theater building, the Fish Market could offer the park an improved space for interpretation and education. While part of a historic district, the building does not tie directly to park significance. The building is quite small, and the park would be challenged to provide adequate staffing to operate a separate facility for interpretation and education. The Wright Company Factory could be used for this purpose and has undergone a boundary adjustment.

Outcome—An adjustment to the boundary to include this site was considered but dismissed. This building would not be feasible for the National Park Service to operate and maintain over time, and other locations could provide this function.

Miami Conservancy District and Five Rivers Metro Parks Maintenance Facilities. These facilities include the Five Rivers Metro Park’s contemporary metal maintenance garage near Huffman Prairie Flying Field (at the intersection of 444 and Marl Road) and a smaller maintenance facility used by the Miami Conservancy District. The land is owned and operated by the Miami Conservancy District.

Current Status—These facilities are not within the NPS boundary.

Consideration/Analysis—These facilities would provide the entrance experience for Huffman Prairie Flying Field and would be a more suitable location to interpret Huffman Prairie Flying Field. The buildings also have the potential to support park maintenance operations. However, the facilities are owned by the Miami Conservancy District and are important operational facilities for both entities. An alternative would need to be developed. Transfer of ownership is not currently feasible.

Outcome—An adjustment to the boundary to include this site was considered but dismissed. Non-inclusion in the park boundary does not preclude development of Gate 18C as an entrance to Huffman Prairie Flying Field. The park will continue to work with its legislatively mandated partners and others in the vicinity.

VISITOR USE MANAGEMENT

Visitor use management and other related efforts within the National Park Service enable the agency and its partners to provide a welcoming and inclusive environment for all—regardless of physical ability, financial means, or cultural tradition. Visitor use management also ensures that the agency protects nationally significant resources while responding effectively to changing visitor use patterns in every national park unit. Visitor use management is the proactive and adaptive process of planning for and managing characteristics of visitor use and its physical and social setting, using a variety of strategies and tools, to sustain desired resource conditions and visitor experiences. Visitor use management helps to maximize opportunities and benefits for visitors while achieving and maintaining desired conditions for resources and visitor experiences in a particular area.

A statutory requirement for general management planning is to identify “visitor carrying capacities and implementation commitments for all areas of the park.” To fulfill this requirement, this plan

incorporates guidance from the Visitor Use Management Framework (IVUMC 2016b) to (1) articulate a vision for managing visitor use within the park through desired conditions and zoning, (2) identify visitor capacities for different areas of the park, and (3) develop long-term strategies for monitoring and adaptively managing visitor use within the park through indicators and thresholds.

Under the NPS planning framework, not all required elements for general management planning are always found in a single general management plan. In fact, many park general management plans begin to address the requirement to identify visitor capacities by assessing baseline conditions and defining desired conditions and zoning but go no further (see “Visitor Capacity on Federally Managed Lands and Waters: A Position Paper to Guide Policy,” IVUMC, June 2016, Edition One (IVUMC 2016a). However, the 2005 GMP amendment, which this plan further amends, includes “carrying capacities, with associated indicators and standards, (that) would be used to ensure a high degree of resource preservation and a consistently high-quality visitor experience” (NPS 2005). The 2005 plan included capacities and indicators for facilities throughout the Wright Cycle Company complex and the Huffman Prairie Flying Field, associated interpretive center, and the Wright Memorial.

Given the progress already made and the importance placed on visitor use management in the previous GMP amendment, this plan includes implementation-level visitor capacities as well as indicators and thresholds. These implementation commitments build upon the desired conditions and zoning described in the “Park Management Concept/Vision” section to fully address the GMP legal requirement. The visitor capacities, indicators, and thresholds update, clarify, and improve the commitments included in the 2005 GMP amendment to align with current best practices and expand them to include areas not covered in the 2005 plan.

Indicators and Thresholds

Monitoring in this plan is accomplished through establishment of “indicators” and “thresholds.” Indicators are specific resource or experiential attributes that can be measured to track changes in conditions so that progress toward achieving and maintaining desired conditions can be assessed. Thresholds are the minimum acceptable conditions associated with each indicator. Together, indicators and thresholds provide park managers with monitoring protocols to ensure desired conditions for resources and visitor experiences are achieved and maintained over time.

The planning team considered many potential indicators for visitor use-related impacts but ultimately identified four that are the most important to monitor the implementation and effectiveness of the plan’s management strategies. The indicator topics include:

- Visitor Satisfaction with Quality of the Park Experience
- Historic Fabric and Structural Integrity at Key Historic Sites
- Visitor Ability to Readily Access Key Park Sites
- Visitor Impacts at Huffman Prairie Flying Field

For a complete discussion of the rationale for the indicators and related thresholds, monitoring strategy, and associated management strategies, see appendix A.

Visitor Capacity

Visitor capacity is defined as the maximum amount and types of visitor use that an area can accommodate while sustaining desired resource conditions and visitor experiences consistent with the purpose for which the area was established. Visitor capacity is a tool that can support managers in achieving and maintaining desired conditions. By establishing visitor capacities and implementing them with appropriate management strategies, the National Park Service can help ensure that resources are protected and that visitors have the opportunity for a range of high-quality experiences.

Visitor capacities are identified for:

- Wright Company Factory
- Wright Cycle Company
- Wright-Dunbar Interpretive Center
- Wright-Dunbar Interpretive Plaza
- Huffman Prairie Flying Field
- Huffman Prairie Flying Field Interpretive Center
- Wright Memorial
- Paul Laurence Dunbar House Historic Site
- Wright Brothers National Museum (Carillon Historical Park)
- Hawthorn Hill

Visitor capacities are not identified for other locations discussed in this plan. Pekin Theater, Fish Market, Hap Arnold House, Foulis House, and the Miami Conservancy District and Five Rivers Metro Parks Maintenance Facilities do not have visitor capacities, as they are currently outside the park boundary and are not expected to be within the boundary in the immediate future. Should these properties be added to the boundary and acquired in the future, visitor capacities would be identified for them at that time.

For a complete visitor capacity analysis, including a description of the analysis areas, a review of existing direction and knowledge, identification of limiting attributes and visitor capacity levels, and associated management strategies, see appendix A.

Adaptive Visitor Use Management

Visitor use management is an iterative process in which management decisions are continuously informed and improved through monitoring to determine the most effective way to manage visitor use. Assessing the outcome of management actions is necessary to ensure management actions are having their intended effects and desired conditions are maintained.

As monitoring of conditions continues, managers may decide to modify or add indicators and/or thresholds if better ways are found to measure important changes in resource and experiential conditions. Likewise, visitor capacities may need to be adjusted over time in response to improved understanding of the relationship between visitor use and impacts to desired conditions. The rationales to adapt any indicators, thresholds, visitor capacities, or their associated management strategies would be documented appropriately, undergo any necessary additional compliance reviews, and be made available to the public.

This comparison of the 1997 GMP interpretive plan, the 2005 GMP amendment, and this 2022 GMP amendment includes the actions carried forward from previous planning. Together, these documents provide a complete vision for all park lands that have been recently acquired. No change is noted in the current proposal to indicate that the direction and actions identified in previous planning are still relevant and being pursued. The row headings in this table correlate to the previous general management plans. While proposed actions in the previous section were not separated by function (e.g., administration/operations, interpretation/education) in the narrative above, they have been listed in the correlating functions to provide an opportunity to review the park’s previous planning.

Table 3. Comparison of the 1997 GMP Interpretive Plan, the 2005 GMP Amendment, and Proposed 2022 Amendment

Site and Function	1997 GMP	2005 GMP Amendment	Current Proposal
Site 1A: NPS Portion of the Wright-Dunbar Interpretive Center			
Management Zone	NA	NA	Visitor Engagement and Authentic
Access	<ul style="list-style-type: none">The main entrance to the Wright-Dunbar Interpretive Center is from the interpretive plaza on the southwest side of the building.To accommodate pedestrian traffic on West Third Street, there also is an entryway on this important Dayton thoroughfare.Public access into the Wright-Dunbar Interpretive Center would continue to occur from two entrances (the interpretive plaza and West Third Street).	<ul style="list-style-type: none">Deliveries would be made to the offsite maintenance and storage facility without interfering with the visitor experience.Public access into the Wright-Dunbar Interpretive Center would continue to occur from two entrances (the interpretive plaza and West Third Street).Additional emphasis would be given to educational outreach and community involvement.Visitor amenities would be enhanced through community partnerships.	<p>Proposed Action: No change.</p> <p>Potential Future Action:</p> <ul style="list-style-type: none">The National Park Service, in partnership with Aviation Trail, Inc. (ATI), would consider renovating the building to provide improved access to the NPS-owned portion of the building and gain control of administrative spaces utilized for communications equipment.
Interpretation	<ul style="list-style-type: none">This site would continue to provide orientation and information for Dayton Aviation Heritage National Historical Park.This building serves as the primary anchor for the park and is the only facility that communicates the story of all four park units.The Wright-Dunbar Interpretive Center would continue to serve as a primary destination for the park and Aviation Trail, Inc.The 71-seat theater in the Wright-Dunbar Interpretive Center could be used for selected purposes.Interpretive programs would continue to consist primarily of the exhibits and activities within the Wright-Dunbar Interpretive Center and Aviation Trail Visitor Center and Museum.	No change.	<p>Proposed Action: No change.</p> <p>Potential Future Action:</p> <ul style="list-style-type: none">The National Park Service, in partnership with Aviation Trail, Inc., would consider renovating the third floor to accommodate additional interpretation.The National Park Service, in partnership with Aviation Trail, Inc., would consider relocation of the research library to the Wright Company Factory, pending the results of the historic structures report and condition assessment.
Storage	<ul style="list-style-type: none">Storage would continue to be provided in miscellaneous space in the basements of the Wright-Dunbar Interpretive Center.	No change.	<p>Proposed Action: No change.</p>
Administration	<ul style="list-style-type: none">The third floor of the Wright-Dunbar Interpretive Center would continue to be used for park operation offices, including interpretive and maintenance staff.Continue to house the Maintenance Division support office in the basement and Education and Resources Management offices on the third floor. Deliveries would continue to be made to the park headquarters or the Wright-Dunbar Interpretive Center.	No change.	<p>Proposed Action: No change.</p>
Partnerships	NA	No change.	<ul style="list-style-type: none">Building co-owned and managed with Aviation Trail, Inc.Agreement expires 2021/2025.

Site and Function	1997 GMP	2005 GMP Amendment	Current Proposal
Site 1B: Setzer Building (ATI Portion of Wright-Dunbar Interpretive Center) and Parachute Museum			
Management Zone	NA	No change.	Visitor Engagement
Administration	<ul style="list-style-type: none">Aviation Trail, Inc. would continue to own the Aviation Trail Visitor Center and Museum.	No change.	Proposed Action: No change.
Maintenance and Storage	<ul style="list-style-type: none">Storage would continue to be provided in miscellaneous space in the basements of Aviation Trail Visitor Center and Museum.	No change.	Proposed Action: No change.
Interpretation/ Visitor Experience	<ul style="list-style-type: none">Interpretive programs would continue to consist primarily of the exhibits and activities within the Wright-Dunbar Interpretive Center and Aviation Trail Visitor Center and Museum.	No change.	Proposed Action: No change.
Partnerships	NA	NA	<ul style="list-style-type: none">Pending the direction of a future agreement between Aviation Trail, Inc. and the National Park Service following the 2025 expiration, consider gaining fee ownership or exploring other management agreements for the Setzer Building.
Site 1C: Walkway between Interpretive Center and Wright Cycle Company (Interpretive Plaza)			
Management Zone	NA	NA	Visitor Engagement
Site 1D: The Wright Cycle Company			
Management Zone	NA	<ul style="list-style-type: none">The entire Wright Cycle Company complex would be within the Visitor Services/Interpretation zone.	Authentic Zone
Administration	<ul style="list-style-type: none">NPS management, in partnership with Aviation Trail, Inc., would continue within the park boundaries.Park headquarters would continue to be located at 30 South Williams Street.The house at 26 South Williams Street would remain vacant without any stabilization or rehabilitation.	<ul style="list-style-type: none">The plan remains the same as 1997 GMP, except administrative and operations space for other legislated park partners would be provided within the current boundaries of the Wright Cycle Company complex.The house at 26 South Williams Street would be rehabilitated for administrative and/or partner use.	Proposed Action: No change. Potential Future Action: <ul style="list-style-type: none">The National Park Service would consider the potential for providing public access to the second floor for interpretation and/or partner and community use.
Maintenance and Storage	<ul style="list-style-type: none">There would be no dedicated maintenance/storage facility within the Wright Cycle Company complex. Maintenance would continue to occur from an offsite location.Storage would continue to be provided in miscellaneous space in the basements of the Wright Cycle Company building, Wright-Dunbar Interpretive Center, and Aviation Trail Visitor Center and Museum.Deliveries would continue to be made to the park headquarters or the Wright-Dunbar Interpretive Center.	<ul style="list-style-type: none">The National Park Service would enter into an agreement with a partner organization for use of a storage and maintenance facility located near the Wright Cycle Company complex to meet both NPS and partner requirements.This facility might be built by a partner to NPS specifications.Deliveries would be made to the offsite maintenance and storage facility without interfering with the visitor experience.	Proposed Action: No change. Potential Future Action: <ul style="list-style-type: none">The National Park Service would relocate maintenance staff to Wright Company Factory from the current leased maintenance facility.
Interpretation	<ul style="list-style-type: none">Interpretive programs would continue to consist primarily of the exhibits and activities within the Wright-Dunbar Interpretive Center and Aviation Trail Visitor Center and Museum.Interpretation would continue to focus on major park themes and significance.The extensive use of interactive displays and exhibits would continue.Backyard areas would remain undeveloped and would not be used for interpretation.	<ul style="list-style-type: none">Programming would be expanded into the community with an emphasis on educational outreach.Outreach would focus on regional, local, and neighborhood interpretive themes related to aviation, Dunbar and his literary contributions, and the amicable personal and professional relationships between Dunbar and the Wright brothers.Public access into the Wright-Dunbar Interpretive Center would continue to occur from two entrances, on the interpretive plaza and West Third Street.	Proposed Action: No change. Potential Future Action: <ul style="list-style-type: none">The National Park Service would consider providing public access to the second floor for interpretation. (Note: This action would require physical alterations to provide access and informed by the historic structures report and condition assessment.)

Site and Function	1997 GMP	2005 GMP Amendment	Current Proposal
		<ul style="list-style-type: none">Historically compatible outbuildings would be reconstructed behind the cycle shop building. Interpretation would show how houses of that era required nearby support structures.	
Visitor Experience	<ul style="list-style-type: none">The Wright-Dunbar Interpretive Center and Aviation Trail Visitor Center and Museum would continue to serve as a primary destination for the park and Aviation Trail visitors.The primary visitor experience would continue to be indoors.Outdoor open space would remain undeveloped.The National Park Service would continue to address issues affecting the quality of the visitor experience without the use of carrying capacity indicators and standards.	<ul style="list-style-type: none">Additional emphasis would be given to educational outreach and community involvement.Visitor amenities would be enhanced through community partnerships.Outdoor activities, including those focused on the community, would use the NPS plaza and backyards, plus nearby lots owned by the City of Dayton or Wright Dunbar, Inc.The National Park Service would implement carrying capacity indicators and standards, followed by management actions and ongoing monitoring. This would ensure the continued quality of the visitor experience, such as being able to hear and see exhibits and interpretive talks when the Wright Cycle Company building is crowded and would protect the condition of this historic building. Indicators of visitor experience at the Wright-Dunbar Interpretive Center would address crowding in the entire facility and in individual areas, such as the theater.	<p>Proposed Action: No change.</p> <p>Potential Future Action:</p> <ul style="list-style-type: none">The National Park Service would improve efficient use of the building and improve the visitor experience by automating the visitor flow to the Wright Cycle Company from the Wright-Dunbar Interpretive Center.
Orientation	<ul style="list-style-type: none">Information and orientation services would continue to be provided, including information on other park units, Aviation Trail, Inc., and the National Museum of the US Air Force.	<ul style="list-style-type: none">Information, orientation, and wayfinding would be expanded to enhance visitor access to all park units, Aviation Trail, Inc., the National Museum of the US Air Force, and other local and regional attractions. However, enhanced information and orientation would include identification of programs, activities, and events sponsored by partners.	<p>Proposed Action: No change.</p>
Education and Outreach	<ul style="list-style-type: none">The National Park Service and Aviation Trail, Inc. would continue to share the limited classroom space available at the Wright Cycle Company complex.The current approach of educational and outreach programming, with one education specialist on staff, would continue.Education and outreach would continue to focus on schoolchildren and their teachers.	<ul style="list-style-type: none">Up to an additional 20,000 square feet of classroom, presentation, and exhibit space would be available to the National Park Service and partner organizations through an NPS agreement with Wright Dunbar, Inc. to use all or part of the Pekin Theater, which is located outside park boundaries.Park staff would be expanded to include four new employees who provide education and outreach services.Additional education and outreach staff would be provided by partners.Outreach partnerships would be used to develop a broad educational constituency.Programs for schoolchildren and teachers would be substantially expanded.Added emphasis would be given to community outreach and would include training others to lead education and outreach activities for groups throughout the region.	<p>Proposed Action: No change.</p>
Community Facilities	<ul style="list-style-type: none">There would be no dedicated community facilities. The National Park Service’s limited facilities would continue to be made available to community requests via the special use permit process.	<ul style="list-style-type: none">The National Park Service’s facilities would continue to be made available to community requests via the special use permit process.Through partnerships, the National Park Service could make facilities in the Pekin Theater and outdoor open space available for expanded community purposes.	<p>Proposed Action: No change.</p> <p>Potential Future Action:</p> <ul style="list-style-type: none">The National Park Service would consider providing public access to the second floor for interpretation and/or partner and community use. (Note: This action would require physical alterations to provide access/).
Boundaries	<ul style="list-style-type: none">The existing boundary would be maintained.	<ul style="list-style-type: none">The existing boundary would be maintained.	<ul style="list-style-type: none">The existing boundary would be maintained.
Site 2: Paul Laurence Dunbar House Historic Site			
Management Prescription/ Zone	NA	NA	Visitor Engagement and Authentic Zone

Site and Function	1997 GMP	2005 GMP Amendment	Current Proposal
Administration/ Operations	NA	NA	<p>Proposed Action:</p> <ul style="list-style-type: none">• The National Park Service would continue to support and encourage access, fire suppression, and security at the site from the Ohio History Connection. <p>Potential Future Action:</p> <ul style="list-style-type: none">• The National Park Service, in partnership with the Ohio History Connection and Dayton History, would consider redevelopment of cooperative sales online systems.• Explore alternative management options, including the possibility of a direct agreement with the Ohio History Connection.
Site 3: Wright Company Factory			
Management Zone	NA	NA	Historic Landscape, Visitor Engagement, and Administrative Zones
Administration/ Operations	NA	NA	<p>Proposed Action:</p> <ul style="list-style-type: none">• The National Park Service is proposing no immediate change from current management for the Wright Company Factory beyond applying management zoning and pursuing funding and partnership opportunities for potential future management actions. <p>Potential Future Action:</p> <ul style="list-style-type: none">• The National Park Service would:<ul style="list-style-type: none">◦ Analyze appropriate uses for the site following a cultural landscape inventory/report and condition assessment/historic structure report and as partnerships and funding source move forward.◦ Identify a common operations area for staff from all the separate sites in the park.◦ Establish a location for maintenance facilities to serve as additional capacity for two additional nearby NPS units.• Once rehabilitated, building 2 could be used as a consolidated administration/maintenance facility. Operations staff from each separate location in the park would be relocated to this new common operations area.• A location for a research library would also be considered in either building 1 or 2.• Restore and reuse the small electrical building behind building 2 following a historic structures report and condition assessment.• Consider designating the site as a First Amendment location.• Historic collections would not be stored at the Wright Company Factory. Storage space for historic collections associated with the park would be available at the storage facility at nearby Hopewell Culture National Historic Park.• The National Park Service, in partnership with the City of Dayton, would propose nomination as a world heritage site.• The National Park Service would partner with the City of Dayton to identify partner opportunities for buildings 3, 4, and 5.
Interpretation/ Education	NA	NA	<p>Potential Future Action:</p> <ul style="list-style-type: none">• The National Park Service would develop for building 1 and work with partners for future implementation of these actions:<ul style="list-style-type: none">◦ The focus of interpretation in building 1 would be on how the Wright Company Factory played a major role in the birth of the American aviation industry through the early development of the age of flight.◦ Restore the purpose-built surroundings to their period of significance to offer an opportunity to discuss the women involved in early aviation at the factory and the interconnected flight school.◦ Accommodate the display of replica aircraft.◦ The focus of interpretation in building 2 to STEAM education and innovation themes.

Site and Function	1997 GMP	2005 GMP Amendment	Current Proposal
			<ul style="list-style-type: none"> ○ The National Park Service would remove building 17, which is a noncontributing element to the historic site, to be utilized as a future outdoor education space. • The National Park Service would remove the northwest parking lot and convert into a landscaped area with potential for a period of significance agricultural demonstration. • Repurpose the space into an interpretive area for visitors. • Rehabilitate buildings 1 and 2 to their 1910–1911 exteriors and interiors, and interpret the techniques and practices to include the development of the aviation industry.
Site 4: Wright Brothers National Museum (Carillon Historical Park)			
Management Zone	NA	NA	Visitor Engagement
Operations	NA	NA	Proposed Action: <ul style="list-style-type: none"> • Dayton History at Carillon Historical Park would continue to manage preservation of the 1905 Wright Flyer III. • The National Park Service would enhance operational presence. • The National Park Service and Dayton History would explore a practical voucher system for targeted audiences.
Site 5: Hawthorn Hill			
Management Zone	NA	NA	Authentic
Operations	NA	NA	Proposed Action: <ul style="list-style-type: none"> • No immediate change from current management is planned for Hawthorn Hill beyond applying management zoning and exploring partnership opportunities for additional interpretation. Potential Future Action: <ul style="list-style-type: none"> • The National Park Service and Dayton History would offer limited tours for visitors and some events at the site, pending the recommendations of a historic structures report, condition assessment, and cultural landscape report. • The National Park Service will provide technical assistance for resource preservation efforts.
Site 6: Huffman Prairie Flying Field			
Management Zone	NA	<ul style="list-style-type: none"> • The Visitor Services/Interpretation Zone would be applied to the northeast part of the flying field from just west of corner marker 6 on the north to just west of corner marker I on the south. The parking area and the portion of the Marl Road corridor within the Visitor Services/ Interpretation Zone would extend from Gate 18C to corner marker 6. • The Historic Landscape Zone would be applied to the remainder of the flying field. 	Historic Landscape and Visitor Engagement
Administrative/ Operational	<ul style="list-style-type: none"> • Storage for the replica Wright “B” Flyer would remain offsite within building 145 on the Wright-Patterson Air Force Base active flight line. 	<ul style="list-style-type: none"> • A dedicated storage facility for the replica Wright “B” Flyer might be built close to Huffman Prairie Flying Field. 	Proposed Action: <ul style="list-style-type: none"> • No immediate change from current management besides additional opportunities to improve interpretation at Simms Station and the Ohio 444/Marl Road/Hebble Creek Bridge. Potential Future Action: <ul style="list-style-type: none"> • The National Park Service and US Air Force (USAF) would consider the site for a world heritage site nomination. • If implemented, phase 3 of an ongoing project by US Air Force would restore the field to its historic setting. The National Park Service, in partnership with the US Air Force, would consider ways to make interpretation at the site more automated, including the potential for self-guided tours.

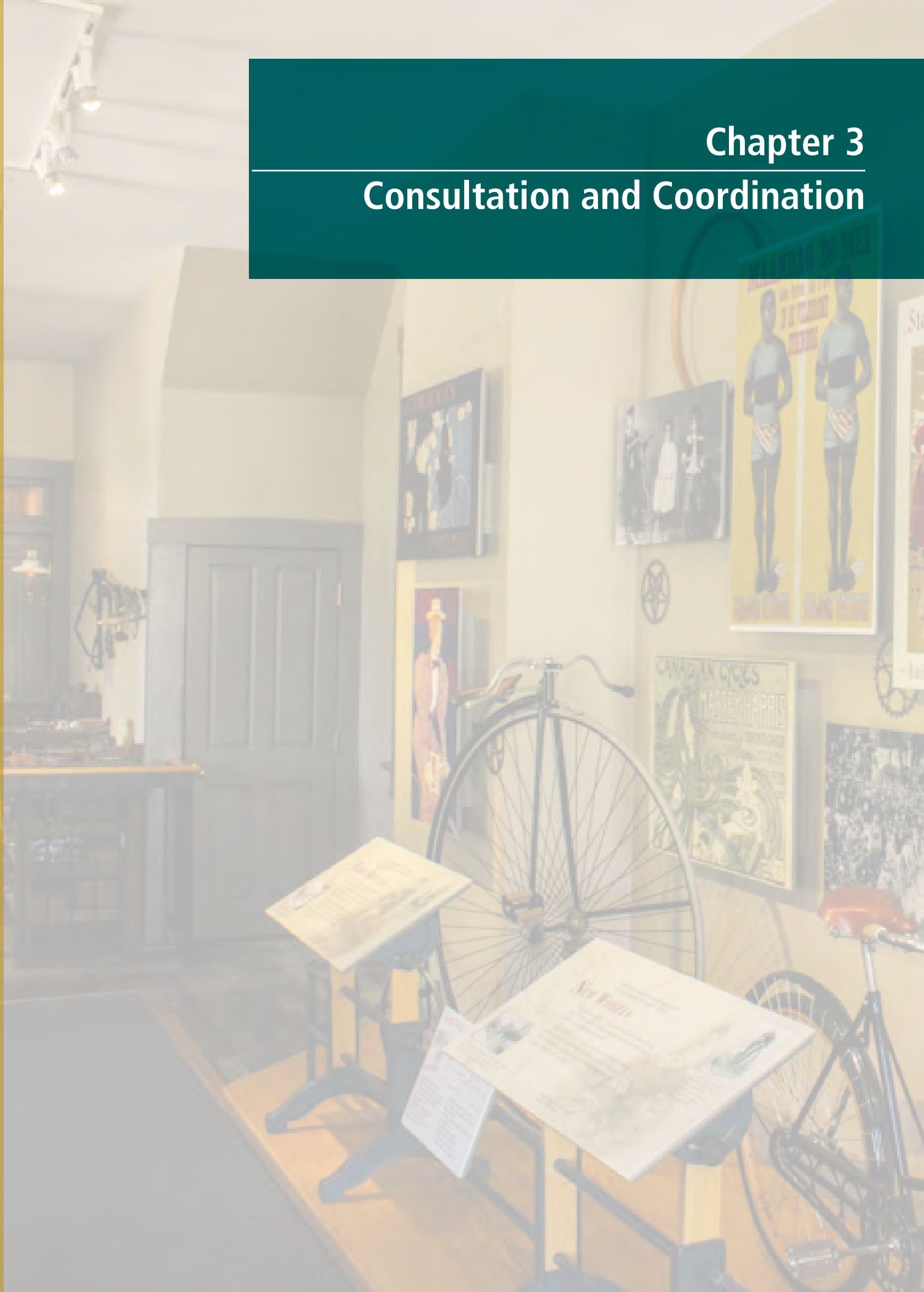
Site and Function	1997 GMP	2005 GMP Amendment	Current Proposal
Route	<ul style="list-style-type: none">Transit between units would continue to be via Ohio Highway 444. The highway would be crossed at the existing, unsignalized grade crossing at Gate 16A.	<ul style="list-style-type: none">Transit between Huffman Prairie Flying Field and the Wright Memorial would be via a new road that would extend Kauffman Avenue to north of Ohio Highway 444, cross Miami Conservancy District lands, and connect with the Marl Road corridor near Gate I8C.Ohio Highway 444 would be crossed via an upgraded, at-grade intersection at Kauffman Avenue.	<p>Potential Future Action:</p> <ul style="list-style-type: none">The National Park Service would no longer pursue the 1997 GMP recommendation but continue to pursue the 2005 GMP amendment recommendation.Other elements proposed in the 2005 amendment that would support this access route, including bridge updates, have been completed in recent years. The remaining actions to support this 2005 GMP amendment recommendation would occur outside the USAF boundary. The proposed access point remains a proposed action under this amendment, and the National Park Service will seek funding options to support the proposal.An agreement with Miami Conservancy District and Five Rivers Metro Parks would be required, as they own the parcel adjacent to Gate 18C and operate maintenance facilities at that location.
Mode	<ul style="list-style-type: none">Most visitors would continue to use private vehicles to travel between the interpretive center and the flying field.During high-use periods, a rubber-tired shuttle operated by a partner (such as the Greater Dayton Regional Transit Authority) could be available to move visitors between the two sites.This alternative would not have the ability to accommodate a steel-railed heritage trolley between the flying field and interpretive center.	No change.	No change.
Access Gate	<ul style="list-style-type: none">Visitors to Huffman Prairie Flying Field would continue to enter the Wright-Patterson Air Force Base via existing Gate 16A.	<ul style="list-style-type: none">Visitors to the flying field would enter the base via existing Gate I8C. This gate would be modified to accommodate its new function.	<p>Potential Future Action:</p> <ul style="list-style-type: none">The National Park Service would no longer pursue the 1997 GMP recommendation but continue to pursue the 2005 GMP amendment recommendation.
Sequencing	<ul style="list-style-type: none">Visitors could continue to visit Huffman Prairie Flying Field and the interpretive center in whatever order they chose.	No change.	No change.
Interpretation	<ul style="list-style-type: none">The route between the Wright Memorial and Huffman Prairie Flying Field would not include any interpretation.	<ul style="list-style-type: none">Interpretive wayside exhibits might be added along the historic Marl Road corridor.	<p>Potential Future Action:</p> <ul style="list-style-type: none">The National Park Service would no longer pursue the 1997 GMP recommendation but continue to pursue the 2005 GMP amendment recommendation.
Site 7: Wright Brothers Hill and Wright Memorial			
Management Zone	NA	<ul style="list-style-type: none">The Visitor Services/Interpretation Zone would be applied to the road corridors, parking areas, formal monument, interpretive center area, north overlook, and overlook walkway. The Visitor Services/Interpretation Zone would be less extensive because all access would be via the existing road.The Historic Landscape Zone would be applied to the rolling, lawn-like area on the east side of the memorial grounds and the tree-shaded area on the west side of the grounds that includes the picnic tables and prehistoric burial mounds.	Historic Landscape and Visitor Engagement
Visitor Experience	<ul style="list-style-type: none">The site would continue to provide an informal experience within a landscape designed by the Olmsted Brothers firm.Visitors would have little or no outdoor contact with NPS personnel.The National Park Service would continue to address issues affecting the quality of the visitor experience without the use of carrying capacity indicators and standards.	<ul style="list-style-type: none">The National Park Service would provide a range of outdoor interpretive programs and activities on weekends and holidays. but schools and other community partners would provide an increased frequency and variety of outdoor activities.Visitors would have a moderate-to-high level of contact with NPS personnel. School and community groups may have a higher level of contact with trip leaders or volunteers trained by the National Park Service or other partners.The National Park Service would implement carrying capacity indicators and standards, followed by management actions and ongoing monitoring. This would ensure the continued quality of the visitor	<p>Proposed Action: No change.</p> <p>Potential Future Management Action:</p> <ul style="list-style-type: none">If the US Air Force moves forward with the restoration of the Olmsted Overlook, the National Park Service would partner with the US Air Force and the State Historic Preservation Office on the necessary compliance for the restoration plans.

Site and Function	1997 GMP	2005 GMP Amendment	Current Proposal
		experience related to availability of parking, development of social trails on the Wright Memorial grounds, the size of tour groups in the interpretive center, and crowding within the auditorium.	
Interpretation	<ul style="list-style-type: none"> NPS interpretation would continue to occur primarily within the interpretive center. Outdoor interpretation would continue to be limited to the existing plaques on the memorial and wayside exhibits on the grounds. 	<ul style="list-style-type: none"> NPS interpretation would be expanded to include outdoor features such as the memorial, Native American mounds, Olmsted Brothers landscape, and overlook. New wayside exhibits around the Wright Memorial would provide increased interpretation and would also include regional and school groups. 	Proposed Action: No change.
Visitor Facilities	<ul style="list-style-type: none"> Parking would continue to be provided in the existing 46-vehicle lot west of the Huffman Prairie Flying Field Interpretive Center. Water and restrooms would continue to be available in the interpretive center. 	<ul style="list-style-type: none"> Based on carrying capacity evaluation, parking at the Wright Memorial could be expanded to accommodate up to 100 vehicles. Visual screening of the steam lines could be provided, but they would not be modified, and the fence would not be moved. Water and restrooms would continue to be available in the interpretive center. 	Proposed Action: No change.
Site 8: Huffman Prairie Flying Field Interpretive Center			
Management Zone	NA	<ul style="list-style-type: none"> The Visitor Services/Interpretation Zone would be applied to the northeast part of the flying field from just west of corner marker 6 on the north to just west of corner marker I on the south. The parking area and the Marl Road corridor from Gate I 8C to corner marker 6 would be within this zone. 	Visitor Engagement
Visitor Experience	<ul style="list-style-type: none"> The site would continue to provide a contemplative, low-intensity experience. The National Park Service would continue to provide self-guiding interpretive programming, wayside exhibits, and occasional ranger-led tours and talks. Structures would not be near the flying field. Visitors would continue to have a low level of contact with NPS personnel, except during planned events or programs. No interpretation would be available for the Marl Road corridor (the route the Wright brothers took on the interurban rail line from Dayton). The National Park Service would continue to address issues affecting the quality of the visitor experience without the use of carrying capacity indicators and standards. 	<ul style="list-style-type: none"> The site would provide an active experience of moderate-to-high intensity during summer weekends and holidays or when large community or school groups were present. The experience would be contemplative and low intensity at other times. The National Park Service would provide a higher frequency of NPS-managed demonstrations, interpretive programs, and special events during higher-use periods. Schools and other regional partners would provide an increased frequency and variety of activities. A kiosk would expand the use of interpretive media and serve as a staging area for school and community groups. Visitors would have a moderate-to-high level of contact with NPS personnel, especially during weekends and holidays when local, regional, and national visitation is high. Visitors would have a moderate-to-high level of contact with NPS personnel during weekends and holidays. School and community groups may have a higher level of contact with trip leaders or volunteers trained by the National Park Service or other partners. The historic significance of the Marl Road corridor would be interpreted through the development of such facilities as wayside exhibits. The National Park Service would implement carrying capacity indicators and standards, followed by management actions and ongoing monitoring. This would ensure the continued quality of the visitor experience related to crowding at the exhibit area, development of social trails across the flying field, and occupancy limits for maintaining a suitable experience at the flying field. 	Proposed Action: <ul style="list-style-type: none"> The National Park Service, in partnership with the US Air Force, would develop additional interpretation focused on telling individual stories of early fliers as a comparative to the Wright Company's school, students, and the place it held in teaching early aviators. Future Proposed Action: <ul style="list-style-type: none"> The National Park Service would consider developing automated exhibits to relieve staffing requirements at this location.

Site and Function	1997 GMP	2005 GMP Amendment	Current Proposal
Visitor Facilities	<ul style="list-style-type: none">Facilities within the flying field would continue to include the walking trail, wayside exhibits, and reconstructed hangar and catapult.Facilities on adjoining Wright-Patterson Air Force Base lands would continue to include a replica of the Simms Station trolley platform, interpretive wayside exhibits, a 25-car parking lot, and a pedestrian bridge.A portable toilet is on-site from April through October.	<ul style="list-style-type: none">Facilities would be added to interpret the historic significance of the Marl Road corridor. However, based on carrying capacity evaluation, parking may be expanded to accommodate up to 35 additional vehicles. A kiosk would be constructed to expand the use of interpretive media and additional portable toilets would provide sanitation services throughout the year.	Proposed Action: No change.

Chapter 3

Consultation and Coordination



CHAPTER 3: CONSULTATION AND COORDINATION

PUBLIC INVOLVEMENT

The public involvement process began with an invitation to stakeholders to participate in an alternatives development workshop in June 2020. After distribution of this GMP amendment and the appropriate environmental compliance (categorical exclusion *B.1: Changes or amendments to an approved plan when such changes would cause no or only minimal environmental impacts*), a 30-day public review will take place. In addition, stakeholder input will be requested during stakeholder meetings in spring 2022.

LIST OF STAKEHOLDERS

The park coordinated with the following stakeholders during the development of this GMP amendment:

- Ohio History Connection
- Dayton History
- Wright-Patterson Air Force Base
- Aviation Heritage Foundation
- City of Dayton
- Woodland Cemetery
- Miami Conservancy District
- Five Rivers Metroparks
- Aviation Trail, Inc.
- Council of Governments
- Sinclair Community College

CONSULTATION AND COORDINATION

National Historic Preservation Act Compliance

Agencies that have direct or indirect jurisdiction over historic properties are required by section 106 of the National Historic Preservation Act of 1966, as amended (16 USC 270 et seq.) to consider the effect of any undertaking on properties eligible for listing in the National Register of Historic Places. Ongoing and future consultation with partners, the state, the Wright-Patterson Air Force Base, and other concerned parties would occur as necessary, in accordance with section 106 of the National Historic Preservation Act, regarding implementation actions being carried out.

In letters dated November 9, 2015, the National Park Service notified the Ohio State Historic Preservation Office of the initiation of the GMP amendment planning process for the Dayton Aviation National Historic Park. The National Park Service noted that, in accordance with the

Advisory Council on Historic Preservation's regulations, the planning effort would be considered "nondestructive project planning activities . . . [that] do not restrict the subsequent consideration of alternatives" (36 CFR 800.1(c)) and that the National Park Service would seek formal section 106 consultation following completion of the plan and as specific project proposals stemming from the plan reach more detailed design development stages.

In discussion with park staff and members of the study team in the summer of 2021, the Ohio State Historic Preservation Office anticipated a finding of "no potential to cause effects" for the historic properties included in this study for this GMP amendment. The park will send an informational copy of the GMP amendment to the Ohio State Historic Preservation Office for official designation following public comment. Should a future finding of "no potential to effects" be determined, this finding would not require formal consultation under section 106 of the National Historic Preservation Act, although the park has engaged with the Ohio State Historic Preservation Office to inform them of the GMP amendment undertaking.

National Environmental Policy Act Compliance

Compliance for this document under the National Environmental Policy Act (NEPA) is satisfied by categorical exclusion (CE) *B.1: Changes or amendments to an approved plan when such changes would cause no or only minimal environmental impacts*. The Planning, Environment, and Public Comment Project number for this categorical exclusion is 68693.

FUTURE COMPLIANCE

Should this plan be approved, it does not guarantee that funding and staffing needed to implement the plan would be forthcoming. Implementation of the approved plan would depend on future funding and could also be affected by factors such as changes in NPS staffing and visitor use patterns and partners' staffing and financial abilities. Full implementation could be years in the future. Appropriate compliance will continue as the GMP amendment is implemented and planning and design for individual elements are underway.

Future potential impacts on the park's cultural resources will be addressed under the provisions for assessing effects outlined in 36 CFR Part 800 and regulations issued by the Advisory Council on Historic Preservation implementing section 106 of the National Historic Preservation Act of 1966, as amended (NHPA; 54 USC 306108). Under the "Criteria of Effect" (36 CFR Part 800.9(a), federal undertakings are considered to have an effect when they alter the character, integrity, use of cultural resources, or the qualities that qualify a property for listing in the National Register of Historic Places. Compliance with these laws and associated policies will be accomplished through specific project consultation with the Ohio State Historic Preservation Officer, Tribal Historic Preservation Officers, and other consulting parties.

Pending further development of the proposed actions, additional compliance for natural resources could be required under the Clean Water Act, the Endangered Species Act, and/or applicable director's orders. Compliance with these regulations would occur as necessary.

For the GMP amendment to be adaptive to changing conditions, the National Park Service would regularly review the status of threatened and endangered species and revise conservation measures as needed. Any plans or actions that include changes to the types, levels, or locations of visitor use that may cause (or contribute to cumulative) impacts to threatened and endangered species would be subject to consultation with the US Fish and Wildlife Service. Future implementation projects resulting in site specific plans, such as transportation infrastructure, will include conservation measures for threatened and endangered species, following appropriate review and consultation with the US Fish and Wildlife Service.

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GLOSSARY

NPS-Owned and Operated: The National Park Service both owns and manages the operation of the facility/site.

NPS-Operated and Not Owned: The National Park Service manages the operation of the site but does not own the facility/site.

NPS Partner-Owned and Operated: A National Park Service partner owns the facility/site and also manages the operation of the facility/site.

NPS Partner-Owned and Co-Operated: A National Park Service partner owns the facility/site, and the National Park Service and their partner jointly manage operation of the facility/site.

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Appendices



APPENDIX A: VISITOR USE MONITORING AND VISITOR CAPACITY

INDICATORS AND THRESHOLDS

Monitoring to ensure desired conditions for resources and visitor experiences are tracked, achieved, and maintained over time is essential for the success of the Dayton Aviation Heritage National Historical Park General Management Plan. The monitoring strategy for this plan was developed based on the principles described in the Interagency Visitor Use Management Council's (IVUMC) *Visitor Use Management Framework* and *Monitoring Guidebook*. These documents and associated background material are available on the IVUMC website at: <http://visitorusemanagement.nps.gov/>.

Monitoring in this plan is accomplished through the establishment of “indicators” and “thresholds.” Indicators are specific resource or experiential attributes that can be measured to track changes in conditions so that progress toward achieving and maintaining desired conditions can be assessed. Thresholds are the minimum acceptable conditions associated with each indicator. Each indicator may have one or more thresholds associated. Together, indicators and thresholds provide park managers with monitoring protocols to ensure desired conditions for resources and visitor experiences are achieved and maintained over time.

The planning team considered many potential indicators for visitor use-related impacts but ultimately identified four that are the most important to monitor the effectiveness and implementation of the plan's management strategies. The four indicator topics the planning team identified include:

- Visitor Satisfaction with Quality of the Park Experience
- Historic Fabric and Structural Integrity at Key Historic Sites
- Visitor Ability to Readily Access Key Park Sites
- Visitor Impacts at Huffman Prairie Flying Field

These indicators and the associated thresholds are considered part of the action alternative. The planning team also identified management strategies associated with each indicator. Several of these strategies are currently in use and may be increased in response to changing conditions. Other strategies would be implemented upon completion of the plan to ensure conditions do not approach thresholds. Some adaptive management strategies would be implemented if and when monitoring indicates that conditions are changing and thresholds are being approached or exceeded. Details of potential management strategies would be developed at the time they are needed to ensure that the most effective approach is implemented. The impacts of these future management strategies would be analyzed in future compliance as needed (see chapter 3).

The iterative practice of monitoring, implementing management strategies, and then continuing to monitor the effectiveness of management actions allows park managers to maximize benefits for visitors while achieving and maintaining desired conditions for resources and visitor experiences in a dynamic setting.

These indicators replace the indicators included in the 2005 GMP amendment, which included:

- The number of visitors who are dissatisfied with the condition of facilities or exhibits.
- The percentage of visitors reacting favorably to conditions in the exhibit room. These indicators would be obtained and measured through the onsite interpreters' observations and measurement of visitor perception and the reaction to conditions through the use of a visitor survey.
- The maximum waiting time or number of visitors turned away for an interpretive tour.
- The presence of social trails or bare patches of soil on the grounds at the Wright Memorial.
- The percentage of visitors who cannot find a parking space near the facilities.
- The percentage of visitors reacting unfavorably to crowded conditions in the northeast corner of Huffman Prairie Flying Field.
- The presence of social trails on the flying field.

Visitor Satisfaction with Quality of the Park Experience

<p>Indicator:</p> <p>Proportion of park visitors who respond favorably to customer satisfaction survey questions about an atmosphere of inspiration, commemoration, and solemnity at Huffman Prairie Flying Field and Wright Cycle Company; the quality of interpretive exhibits at the visitor center; the ability to access tours of the Wright Cycle Company; and the ability to visit different sites in a day.</p>
<p>Threshold:</p> <p>No more than a 10% decrease in the percentage of visitors who respond favorably to an individual question about the atmosphere, exhibits, or access when compared to baseline conditions.</p>
<p>Rationale for Indicator and Threshold:</p> <p>One of the most important concerns park managers have related to visitor experience at Dayton Aviation is whether park visitors are able to experience an atmosphere of inspiration, commemoration, and solemnity at Huffman Prairie Flying Field and Wright Cycle Company. The Wright Cycle Company is an important space because it is the place where the Wright brothers decided to “do the impossible” and make the “leap to flight.” Similarly, the flying field is the location where many of these early attempts and success took place. Preserving an atmosphere of “hallowed ground” and intimacy in these two locations can inspire others to wonder about and do the impossible. The atmosphere of inspiration, commemoration, and solemnity is fragile and may be impacted by a number of factors, including crowding, anthropogenic sounds, other visitor activities.</p> <p>Another concern is the quality of visitors' experience in the visitor center exhibit spaces, which is also highly important to the visitors and a regular topic in their comments. The concern is that too many people are sometimes present to comfortably fit into available space and still be able to interact with the exhibits. The lack of space may make visitors feel hurried and unable to connect with park stories and resources. This indicator would ensure that the features and facilities most important to a quality visitor experience would be consciously monitored and repairs and maintenance would be kept current and focused on issues that matter most.</p>

A third concern is the ability to access tours of the Wright Cycle Company, which is considered a jewel of the park. Visitors who are unable to visit the site due to full tours, language barriers, and lack of available times are missing out on a key resource and experience. At times, visitors who wish to visit the Wright Cycle Company building can only do so by joining a ranger-led interpretive tour when staffing or visitation is low. Currently, about three-quarters of park visitors go to the cycle shop. The ability to access the Wright Cycle Company serves as a proxy for visitors' ability to experience other exhibits in the park, such as a comparison of period bicycles with modern ones. If visitor use levels, patterns, and/or orientation are causing visitors to miss out on one key experience, they may be missing out on others as well.

A fourth concern is the travel time between key park sites. Currently, traffic issues in the Dayton area are limited, but park managers are concerned this could change over the next 20 to 30 years. The travel time between the sites is a concern because it affects visitors' ability to visit multiple park sites within their allotted visitation window, which typically ranges from a couple of hours to a half or full day. If travel time between sites increases substantially, visitors may be less likely to experience areas throughout the park. If this occurs, visitors may not have a complete Dayton Aviation experience or understanding of the park's story.

Development of a customer (visitor) satisfaction survey customized to gauge how well the park is meeting visitor expectations in terms of these three important concerns will ensure that this indicator is easy for park staff to monitor, provides reliable results, and is sensitive to change.

Monitoring:

Monitoring would occur via a customer (visitor) satisfaction survey. National Park Service staff would distribute a short (five minutes or less), voluntary "customer satisfaction survey." The survey would be distributed randomly to visitors a few days per quarter to ensure that data collection is consistent and representative. The chief of interpretation would oversee the data collection effort and compile results. Results would be compared with the baseline threshold (established by first year of monitoring) on an annual basis. The customer (visitor) satisfaction survey would be subject to approval by the Office of Management and Budget.

Management Strategies:

If monitoring determines that the threshold is being approached or exceeded, one or more of the following future management actions may be implemented:

- Examine possible causes for why the atmosphere of inspiration, commemoration, and solemnity at Huffman Prairie Flying Field and Wright Cycle Company Example may be declining. Examples could include surveys of anthropogenic sounds.
- Increase spacing between exhibits.
- Continue to organize the Wright Cycle Company tours on a time schedule.
- Develop a system that would guarantee entrance at a later time for visitors who are turned away from Wright Cycle Company tours.
- Develop a reservation system for Wright Cycle Company tours.
- Develop trip planning itineraries for visitors who only have a couple hours, a half a day, or a whole day. These itineraries would facilitate efficient visits and would be distributed via the park interpretive centers and website.

- Study autonomous modes of transportation with built-in interpretive content.
- Develop a Marl Road entrance to Huffman Prairie Flying Field to offer shorter drive times and other flying field and interpretive center options.
- Improve wayfinding near park sites to decrease travel time between sites.
- Work with local government and partners to reestablish the interurban rail line (the method the Wright brothers used to travel). This line would facilitate efficient and historically authentic travel between the park sites and may improve travel time.

Historic Fabric and Structural Integrity at Key Historic Sites

Indicator:

A change in the three Facility Condition Index Parametric Assessment Criteria most closely related to visitor use at the Paul Laurence Dunbar House Historic Site and Wright Cycle Company.

Thresholds:

No more than a two-point decrease in the total score of the “Interior Finishes,” “Windows and Doors,” or “Structures” Parametric Assessment Criteria from baseline conditions. No more than a one-point decrease in any of these three criteria from baseline conditions.

Rationale for Indicator and Threshold:

Disturbance from visitor use to the historic Dunbar House and Wright Cycle Company can occur intentionally (e.g., vandalism, graffiti, or theft) and unintentionally (e.g., handling and breaking, wear and tear on flooring, stairs, bannisters, and other historic fabric). The physical condition of these sites is directly impacted by levels of visitor use, and neither of the two sites was built to withstand extensive visitation or their role as museums, as they do today. Historic sites like these are nonrenewable, and therefore cannot recover from visitor-caused disturbance or damage. The interiors of these structures are much more impacted by visitor use than by other natural forms of disturbance. The historic fabric may wear down quickly if its condition is not monitored and visitor use managed.

Pursuant to a recent update in the way National Park Service facilities are assessed, the Facility Condition Index uses several parametric assessment criteria to monitor the condition of buildings like the Wright Cycle Company and Dunbar House. These criteria are generally scored on a scale of 1 to 9, where 9 represents excellent condition and 1 represents very poor condition. While several of these scores are likely to be affected primarily by non-visitor-related factors such as weathering and age, three of the criteria—“Interior Finishes,” “Windows and Doors,” and “Structures”—are closely tied to visitor use and will be affected by factors such as vandalism (windows and doors), theft and breaking (interior finishes), and wear and tear on flooring, stairs, bannisters, and other historic fabric (structure). Using these parametric assessment criteria is a reliable, accurate, and cost-effective way to monitor visitor-caused degradation of these structures. Ongoing training to ensure consistency of scoring across the agency contributes to this reliability.

Since monitoring and condition scoring already occur regularly with the support of regional facility management staff, park managers can use the index to consistently track the status of the buildings and distinguish between the effects of time and the environment and visitor-caused impacts. This consistent monitoring allows park managers to assess whether conditions are worsening and what type of management action is needed.

Visitor use will always cause some impact, and it is unrealistic to assume that no impact will occur. However, at both the Dunbar House Historic Site and Wright Cycle Company, there is little to no tolerance for impact. For this reason, the threshold for impact has been established as no more than a two-point decrease in the total score of the Interior Finishes, Windows and Doors, or Structures parametric assessment criteria from baseline conditions and no more than a one-point decrease in any of these three criteria from baseline conditions. The baseline condition is established when two facilities are first evaluated using the parametric assessment criteria, which has already occurred at Wright Cycle Company and will soon occur at Paul Laurence Dunbar House Historic Site.

Monitoring:

The parametric assessment criteria that make up the Facility Condition Index are typically monitored once every one to two years. Park staff will compare the results of this routine monitoring with the baseline condition established when the facilities are first evaluated to determine the change in scoring for the three criteria of interest. If this monitoring reveals that conditions are trending in an adverse direction due to visitor use, management strategies as described below would be used.

Management Strategies:

If monitoring determines that the threshold is being approached or exceeded at the Paul Laurence Dunbar House Historic Site or Wright Cycle Company, park managers could use one or more of the following future management actions:

- Provide visitors improved and more detailed information regarding the sensitivity of the historic buildings and the need to protect them upon beginning a tour or entering the buildings.
- Install additional physical barriers such as posts and rope to deter visitor use in sensitive portions of the structure.
- Improve signage to encourage visitors to respect the historic resources.
- Install security cameras (already in use at Wright Cycle Company) to monitor and deter intentional visitor damage such as theft.
- Consider reducing the number of visitors allowed at one time in the Paul Laurence Dunbar House Historic Site and Wright Cycle Company so that rangers, volunteers, and partner staff can better observe visitor activities and limit the wear and tear on historic resources that can occur during crowded conditions.
- Improve floor supports if engineering studies reveal that more floor support is needed to accommodate visitor use of these buildings.
- Continue to maintain modern walkways on top of the historic flooring and stairs to accommodate current and desired levels of use that are higher than what the flooring was originally designed for. Doing so serves as a visual or physical barrier to focus visitor use and deter visitor use in sensitive areas.

Visitor Ability to Readily Access Key Park Sites

Indicator: Average number of available spaces during the peak visitation hours at Huffman Prairie Flying Field Interpretive Center and Wright-Dunbar Interpretive Center.
Threshold: At least 5 parking spaces available at Wright-Dunbar Interpretive Center, 95% of the time during peak visitation hours from 10:00 a.m. to 4:00 p.m. At least 6 parking spaces available at Huffman Prairie Flying Field Interpretive Center, 95% of the time during peak visitation hours from 10:00 a.m. to 4:00 p.m.
Rationale for Indicator and Threshold: This indicator measures the amount of available parking at two of the primary visitor destinations in the park, and therefore is directly related to visitors' ability to readily access key park sites. The indicator is focused on the times of the day when visitors are most likely to be visiting these sites. Currently, parking availability is believed to be adequate, but park managers are concerned this could change in the future due to increased visitation. The Wright-Dunbar Interpretive Center parking area has 39 parking spaces, while the Huffman Prairie Flying Field Interpretive Center has 42 spaces. The thresholds allow for 85% of the existing spaces to be used, which is a standard expectation for efficiency of a parking lot. Parking availability is a concern because it affects visitors' ability to visit park sites during their allotted visitation window, which typically ranges from a couple of hours to a half or full day. If visitors are unable to find parking conveniently, they may be less likely to experience key park areas or the quality of their experience may suffer.
Monitoring: Monitoring parking space availability would occur via automation using smart parking lot technology. An automated parking lot monitoring system would be installed at the key parking lots to record how many parking spots are still available at the peak time each day. The counts would be analyzed annually to determine if parking lots were below the thresholds on 95% of the days.

Management Strategies:

If monitoring determines that the threshold is being approached or exceeded, one or more of the following future management actions may be implemented:

- Work with local government and partners to reestablish the interurban rail line (the method the Wright brothers used to travel between the two sites). This line would facilitate efficient and historically authentic travel between the park sites and remove the need to park at each individual site.
- Consider implementing a shuttle system to transport visitors from other parking areas to the Wright-Dunbar Interpretive Center and/or Huffman Prairie Flying Field Interpretive Center areas.
- Consider expansion of the existing parking lots consistent with this general management plan amendment.

Visitor Impacts at Huffman Prairie Flying Field

Indicator:

Annual incidences of unauthorized alternative uses that conflict with park resources and values in the Visitor Engagement Zone portion of the Huffman Prairie Flying Field.

Threshold:

No more than five incidences of unauthorized alternative uses per year that conflict with park resources and values.

Rationale for Indicator and Threshold:

The Visitor Engagement Zone of the Huffman Prairie Flying Field includes the area around the replica catapult and hangar. Unauthorized alternative uses of this area include leaving or storing items, using the replica structures as a staging area, parking out of bounds, damaging the grounds and infrastructure with vehicle use, and removing signage from the area.

These visitor-caused impacts to the grounds degrade the overall quality of the visitor experience in the area and therefore should be kept to a minimum. Visitors are often confused when wayfinding signs are removed. The overall appearance of the area suffers from inconsistent signage, the introduction of invasive thistle, roadside impacts from parking, and damage to the structures.

The threshold is relatively low due to the park's limited operational capacity to respond to and repair damage to the infrastructure in the area.

Monitoring: Park staff regularly visit the area to clean the non-flush restroom. When this regular maintenance occurs, staff would conduct a patrol of the visitor engagement zone grounds and record incidences of unauthorized alternative uses. They would record sources of these disturbances and use this information to adjust management strategies defined below.

Management Strategies:

If monitoring determines that the threshold is being approached or exceeded, park managers would use one or more of the following future management actions:

- Discontinue motor vehicle traffic beyond the parking lot on Pylon Road. This would also make the pedestrian access to the replica facilities safer.
- Designate trails, trailheads, and pedestrian connections in the area to improve wayfinding and pedestrian safety.
- Educate visitors who repeatedly use the area in unauthorized ways about acceptable activities in the area.
- Improve wayfinding signage in the area and make it consistent with National Park Service and US Air Force standards.
- Repair damage from unauthorized alternative uses as soon as possible.

VISITOR CAPACITY

Overview

This section includes the visitor capacity identification for the Dayton Aviation Heritage National Historical Park General Management Plan, prepared in accordance with the Interagency Visitor Use Management Council's "Visitor Use Management Framework." More information about the framework can be found at <https://visitorusemanagement.nps.gov/>.

Visitor capacity is defined as "the maximum amounts and types of visitor use that an area can accommodate while achieving and maintaining the desired resource conditions and visitor experiences that are consistent with the purposes for which the area was established." The planning team followed the framework's process for identifying visitor capacity, including the following guidelines: (1) determine the analysis area, (2) review existing direction and knowledge, (3) identify the limiting attribute, and (4) identify visitor capacity.

The concept of the sliding scale of analysis is also a key part of the framework and guides the investment of time and resources related to identifying visitor capacity. The analysis includes four primary components: Issue Uncertainty, Impact Risk, Stakeholder Involvement, and Level of Controversy. Dayton Aviation Heritage National Historical Park has a low degree of issue uncertainty; little impact risk due to the relatively low visitation and minor changes proposed under the management strategies; medium stakeholder involvement given the complex array of partnerships; and a low level of controversy. Therefore, the level of analysis is commensurate with the lower end of the sliding scale.

The Analysis Areas

By establishing visitor capacities for areas of a park unit and implementing them with appropriate management strategies, the National Park Service can help ensure that resources are protected and that visitors have the opportunity for a range of high-quality experiences. Rather than identify a visitor capacity for the park as a whole, the park is divided into analysis areas that can be meaningfully evaluated and managed. Visitor capacities are identified for:

- Site 1A: National Park Service Portion of the Wright-Dunbar Interpretive Center
- Site 1B: Setzer Building

- Site 1C: Wright-Dunbar Interpretive Center (Interpretive Plaza)
- Site 1D: Wright Cycle Company
- Site 2: Paul Laurence Dunbar House Historic Site
- Site 3: Wright Company Factory
- Site 4: Wright Brothers National Museum (Carillon Historical Park)
- Site 5: Hawthorn Hill
- Site 6: Huffman Prairie Flying Field
- Site 7: Wright Brothers Hill and Wright Memorial
- Site 8: Huffman Prairie Flying Field Interpretive Center

Should other areas be added to the park boundary in the future, visitor capacities would be identified for them at that time.

Review of Existing Direction and Knowledge

During this step, the planning team reviewed desired conditions, indicators and thresholds, key management issues affecting achievement of desired conditions, and information about current visitor use levels. Desired conditions for the management zones can be found in the “Management Zones and Desired Conditions” section, and the applicable zoning can be found in table 2 (chapter 2). Indicators and thresholds can be found above within this appendix. The team used parkwide visitation data and site-specific visitation data collected by NPS staff as data sources. Counts at visitor centers, parking availability, partner counts, and other data were also reviewed.

The Dayton Aviation Heritage National Historical Park is particularly complex in the management and ownership of various buildings and outdoor areas, the partnerships associated with each of the sites, and visitor access. This complex system of ownership and management is important to understand, as the various owners’ and managers’ open hours and occasional access restrictions can impact visitor use. The National Park Service works with these partners to achieve desired conditions for resources and visitor experiences. The complex system of ownership and management is shown in figure A-1.

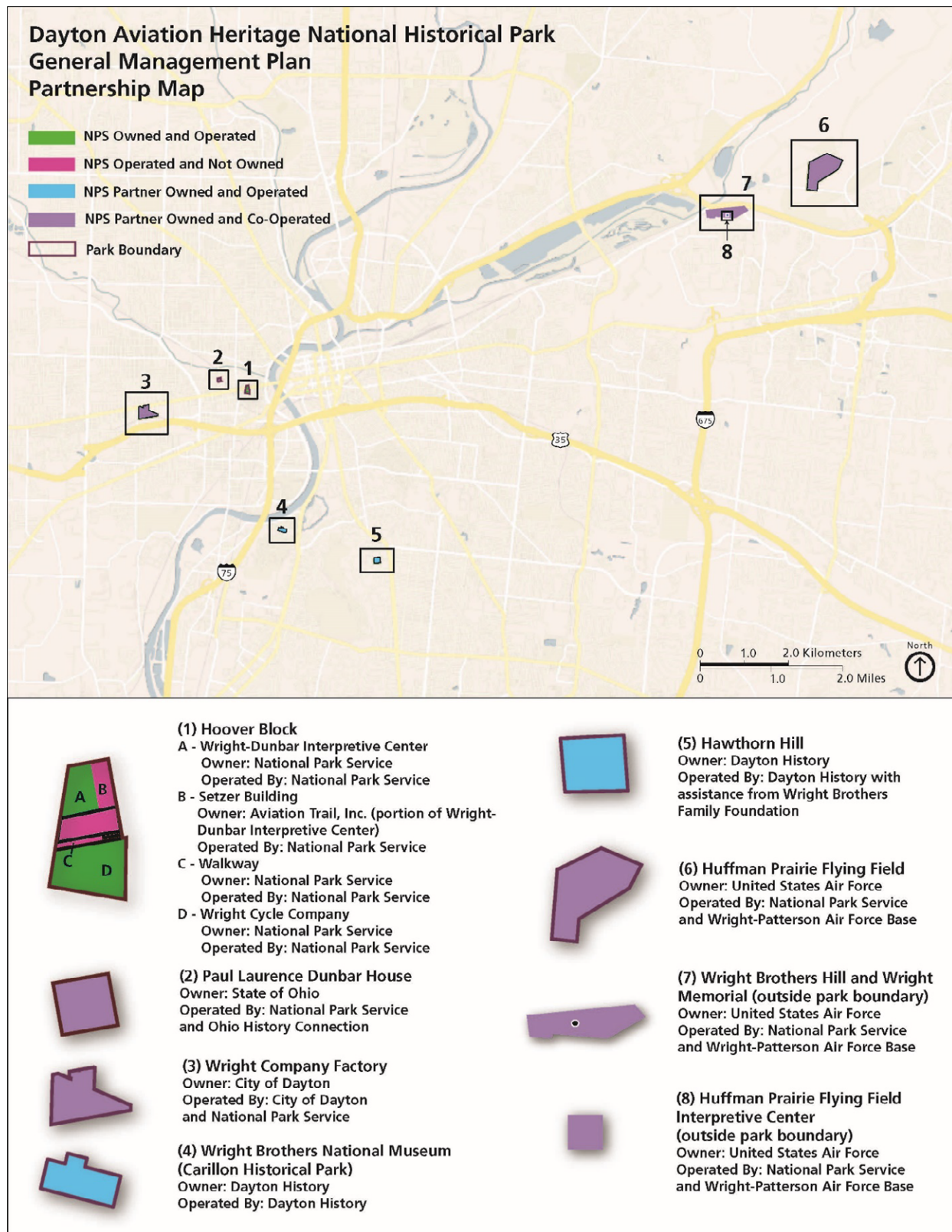


FIGURE A-1. MAP OF DAYTON AVIATION HERITAGE NATIONAL HISTORICAL PARK

Complicated ownership and differing management can affect visitor use, as visitation can vary depending on the site owners' or managers' open hours and occasional access restrictions. Most of the site locations tend to get the highest visitation during the summer travel months, with a spike in May when many school groups visit the park (figure A-2).

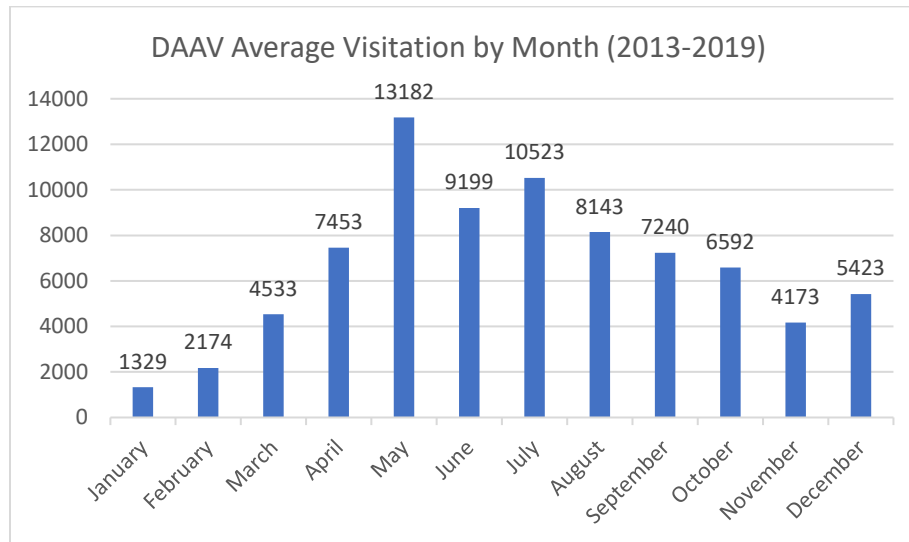


FIGURE A-2. AVERAGE VISITATION TO DAYTON AVIATION HERITAGE NATIONAL HISTORICAL PARK FROM 2013 TO 2019

Annual visitation has steadily increased since the park's establishment in the early 1990s. While 40,000–50,000 visitors were typical over the first decade of the park's operation, the park had a significant surge in 2003 as visitors flocked to the park in celebration of the centennial anniversary of the Wright brothers' first flight in 1903. While visitation returned to around 50,000 the following year, it continued its steady climb over the next decade until the National Park Service centennial celebration in 2016, when annual visitation returned to the 100,000-visit level. Since that time, annual visitation has hovered around 100,000 (figure A-3).

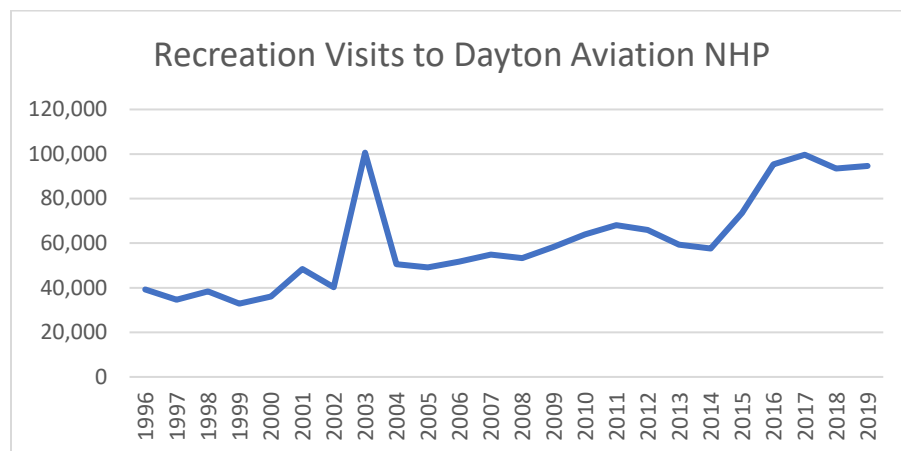


FIGURE A-3. ANNUAL RECREATIONAL VISITS TO DAYTON AVIATION HERITAGE NATIONAL HISTORICAL PARK

With this recent growth in visitation, the National Park Service is interested in continuing to connect more people to this remarkable chapter of the human story and receiving more visitation. The National Park Service has a strong interest in marketing this universal moment better and possibly pursuing a World Heritage Site designation to bring in more visitors and raise awareness. The

National Park Service is also interested in working closer with partners to raise awareness of the park unit and what it has to offer. Most areas of the park could accommodate more visitation.

Identify the Limiting Attribute

This step requires identifying the limiting attributes that most constrain the analysis area's ability to accommodate visitor use. The limiting or constraining attributes may vary across the analysis areas and are described under each. This step is important, given that an analysis area could experience a variety of challenges regarding visitor use and the limiting attributes connect the ultimate visitor capacity identification back to the desired conditions for the area.

Identify Visitor Capacity

Visitor capacity contains two parts. First is the identification of the visitor capacity (maximum amounts and types of use) and second is the identification of management strategies and/or actions that could be taken to implement visitor capacity to ensure the amount of visitor use is managed to achieve and maintain desired conditions.

To identify the appropriate amounts and types of use for each of the analysis areas, the previous steps were reviewed to understand current conditions and how they compare to desired conditions for the area. Based on this understanding, the planning team determined whether visitation levels should be allowed to increase, be maintained at the current level, or decrease to achieve desired conditions. If current conditions are in keeping with desired conditions, the visitor capacity allows for an increase in visitation from current levels. However, if current conditions are not consistent with desired conditions, the visitor capacity is identified below the current use level. When current conditions align with desired conditions but are close to violating them, the visitor capacity is identified at or about the current use level. Generally, capacities are identified well above current use levels, reflective of the ample room for growth in visitation at Dayton Aviation.

Implementation of the visitor capacities identified would include continuation of current management and implementation of management actions described in chapter 2.

Analysis Areas

Site 1A: NPS Portion of the Wright-Dunbar Interpretive Center

The National Park Service owns half of the Wright-Dunbar Interpretive Center building. This building was originally built in 1890. Most of the building was rebuilt between 1998 and 2003, after much of the Setzer Building collapsed; however, the 1920s-era facade was maintained in the reconstruction. The first two floors of the NPS portion have exhibits and are open to visitors, while the third floor holds NPS administrative offices and is not open to visitors. The park research library is also on the third floor and is open to the public by appointment, although use has traditionally been very low. The visitor center hosts the front desk, a park film, the restored print shop, a film on Dunbar, exhibits about where Dunbar and the Wright brothers lived, and a conference room that is available to the community.

The NPS portion of the Wright-Dunbar Interpretive Center is proposed to be zoned as Authentic and Visitor Engagement Zones. Areas in the Authentic Zone are focused on preserving indoor historic resources, and visitor opportunities focus on experiencing and interacting with those authentic historic resources. The National Park Service administrative offices currently housed on the third floor are proposed to be moved elsewhere, potentially opening up the third floor for

additional visitor exhibits. The interpretive center has relatively low numbers of visitors overall, although summers are busier, usually in the afternoon.

The Wright-Dunbar Interpretive Center is the main visitor center for the Dayton Aviation Heritage National Historical Park and acts as the “front door” to the rest of the park sites. While the park unit has other visitor centers, the National Park Service would like to orient visitors to the park at the interpretive center. However, this objective is not currently reflected in the design of the building. Ideally, this location would be where visitors start their visit and get direction on how to visit the various sites the park offers.

Visitors often congregate in the bookstore, and groups congregate in the theater. Many groups visit the interpretive center, including school groups, reunion groups, bus tours, and military reunions with a connection to aviation, and all these large visitor groups must go through the attached Setzer Building to access the interpretive center/NPS side of the building. The static exhibits do not provide much interaction or STEAM experience, and the bookstore/gift shop run by Eastern National should also be redeveloped, as this bookstore is not currently enhancing the visitor experience.

A limiting attribute for this building is currently a lack of parking, particularly designated parking. This problem is magnified for recreational vehicles and buses and their turning radius. Another limiting attribute is the capacity of the theater, which has 72 seats, although one solution may be moving the theater into the ballroom upstairs. The fire code for the building is 168 people at one time, although the site rarely receives half that number on a given day.

The National Park Service is interested in greatly increasing visitation numbers for this building, as even doubling the current attendance would be easily accommodated without causing issues in areas where visitors congregate or from a fire code perspective. Therefore, visitor capacity is identified at 350 people per day.

Site 1B: Setzer Building

The Setzer Building, part of the Wright-Dunbar Interpretive Center, is owned by Aviation Trail, Inc. and houses the Parachute Museum. The Setzer Building is proposed to be zoned for Visitor Engagement.

On the second floor of the Setzer Building, where the Parachute Museum is located, there may be slight congestion at the initial turn when visitors are coming out of the elevator to go the museum or the second-floor conference room. Visitors are often confused and go to locked offices before finding the exhibits. The first floor of the Setzer Building is the highest area of congestion, particularly during tour group visits. The glider is also located in the first-floor lobby, and the L-shaped area and theater location contribute to congestion here.

Crowding typically does not occur in the exhibits or conference room, which is used by community groups through a permitting process managed by the National Park Service, and large groups are accommodated in the conference room if the space is needed as a theater. The third floor of the Setzer Building has a staff break room and staff restrooms, and there is no visitor use. The park research library is also on the third floor and is open to the public by appointment, although use has traditionally been very low.

The Parachute Museum consists of one room and is around 900 square feet. The Parachute Museum is open seven days a week and is busiest around 11:00 a.m., becomes quieter during lunchtime, and increases in use steadily throughout the day until closing. The number of people within the

Parachute Museum at one time is a minor concern, as well as the areas where they congregate. Just outside of the Parachute Museum is a cutout of a parachutist for a photo opportunity where people gather to take photos. Some crowd control may be needed here since this is currently a self-guided area. Also, visitors using the stairs to access the conference room could encounter congestion as they pass by the entrance to the Parachute Museum and a large group is trying to access the museum. The entrance to the museum is narrowed by exhibits, and visitor flow to this museum is also not ideal with the conference room location.

The limiting attribute at the Setzer Building is the visitor experience of the exhibits, glider, and the Parachute Museum. With many people there, it is challenging to access the glider or even the bathrooms. This space is not ideal for accessibility, as the glider cannot be accessed, and it is challenging to see artifacts and exhibits.

Due to crowding in some areas of the Setzer building, notably in the Parachute Museum, the visitor capacity for the Setzer building is identified slightly above current use levels, at 100 people per day.

Site 1C: Wright-Dunbar Interpretive Center Plaza (Interpretive Plaza)

Between the Wright-Dunbar Interpretive Center and the Wright Cycle Company lies the interpretive plaza. The plaza is proposed to be zoned as Visitor Engagement, which would be focused on interpretation of park resources and the provision of visitor services to facilitate an engaging visitor experience.

The interpretive plaza is a gathering space. The plaza has been used for naturalization ceremonies, which have been a challenge since the space is not designed for these types of events. The National Park Service is interested in hosting more of these special events to fulfill its goal of additional community engagement. The National Park Service is also interested in adding trees and shade to improve use for interpretive programs.

The limiting attribute of the interpretive plaza is the feeling of being crowded when a large group gathers in the area. The paved area of the interpretive plaza is approximately 4,500 square feet. Per the *Highway Capacity Manual*, a high level of service is achieved when 13 square feet per person is provided, and other park plans have assumed 10–15 square feet per person as a reasonable requirement. Presuming that each person would likely take up to 13 square feet to use this space comfortably, the interpretive plaza would be able to accommodate around 350 people without being exceptionally crowded.

Site 1D: Wright Cycle Company

The Wright Cycle Company is located next to the Wright-Dunbar Interpretive Center and is NPS-owned and operated. This Wright Cycle Company building is the only remaining building from the Wright brothers' bicycle business, and this site was designated a national historic landmark in 1990. The Wright Cycle Company is one of Dayton Aviation Heritage National Historical Park's principal attractions. In this shop, the Wrights' passive interest in flying turned to active research and development.

The Wright Cycle Company is proposed to be zoned as Authentic. Areas in the Authentic Zone are focused on preserving indoor historic resources where visitors can experience and interact with those authentic historic resources. The Wright Cycle Company building is a place where visitors can be inspired to do the seemingly impossible and gain a deep sense of the Wright Brothers' risk-taking and innovation. Visitors can contemplate and reflect on the history and significance of events that

occurred in this space and, ideally, get a sense of reverence from this building for the profound world changes that stemmed from this site.

The Wright Cycle Company is fairly busy. Most people who come to the nearby Wright-Dunbar Interpretive Center also want to see the Wright Cycle Company. Currently, visitors meet the ranger at the top of the hour, and tours have no group size limitation. For a bus group, half of the bus group can go through the building at a time. After-hours vandalism is a concern, particularly related to parkour and skating, which damages the modern reproduction porch.

The primary limiting attributes are that the site has authentic historic fabric that can be impacted by too many visitors, which is further compounded by the limited space of one main room. Ensuring that the historic fabric and furniture are not damaged by visitors is a key limiting factor in this Authentic Zone building. The “Historic Fabric and Structural Integrity at Key Historic Sites” indicator is particularly relevant to the Wright Cycle Company, as it identifies a threshold for the physical condition of the house as related to visitor use.

The visitor capacity is identified at 25 visitors at one time for ranger-led tours, which is the same number of people who can fill half a bus. Based on the experiences of rangers leading these tours, this is about the maximum number of people who can be in the space at one time while having the sort of contemplative experience described by the desired conditions. This number is also about the maximum number of people who can be in the site without affecting the historic integrity of the fabric, furniture, and building.

Site 2: Paul Laurence Dunbar House Historic Site

The Paul Laurence Dunbar House is one of three buildings that make up the Paul Laurence Dunbar Historic Site and is owned by the State of Ohio and managed jointly by the Ohio History Connection and the National Park Service. The house is proposed to be in the Authentic Zone. Areas in the Authentic Zone are focused on “preserving indoor historic resources and the provision of visitor opportunities to experience and interact with those authentic historic resources.” This zone has a low-to-moderate tolerance for impacts on the historic resources and should offer a feeling of contemplation that is often experienced in a moderately social setting. The likelihood of interactions with park staff and other visitors is moderate and periodically fluctuates to provide a diversity of experiences in a low-impact indoor setting. Historic integrity and interpretive experiences are key.

While the site has historically not been busy, visitation numbers have almost doubled in the three years since the National Park Service began managing the property. Overall, visitation has increased from 660 visitors in 2009 to 3,500 visitors in 2019 (the busiest year is nearly 4,500 people). The site tends to be busiest in June and July, especially around Dunbar’s birthday on June 27, when popular special events celebrating Dunbar are frequently held. Park managers anticipate hosting more of these special events in the future. The site receives many visitations from structured groups, as well as a fair number of people interested in African American history.

Despite recent increases in visitation, park managers continue to be concerned about relatively low visitation to the site. In fact, a cooperating association bookstore was previously located here, but it was discontinued due to low sales and security concerns. One of the biggest challenges with the site is that it does not feel inviting, as visitors have to be “buzzed” into the building. Recognizing this, the National Park Service has made some effort to make it more inviting. Accessibility in the house is not ideal, as the first floor is barely wheelchair accessible, the second floor is not accessible, and the house has no space for an elevator. The “Historic Fabric and Structural Integrity at Key Historic

Sites” indicator is particularly relevant to Paul Laurence Dunbar House Historic Site, as it identifies a threshold for the physical condition of the house as it relates to visitor use. Disturbance from visitor use to the historic house can occur intentionally (e.g., vandalism, graffiti, or theft) and unintentionally (e.g., handling and breaking, wear and tear on flooring, stairs, bannisters, and other historic fabric).

The most limiting attribute constraining visitor use at the Paul Laurence Dunbar House Historic Site is the ability to preserve the historic resources and integrity of the house, where there is a low-to-moderate tolerance for impacts. This attribute is closely related to preserving a feeling of contemplation in a moderately social setting. The house is a small, mid-1880s home with small rooms, a narrow staircase, and hallways. The artifacts in the house have high integrity and are easy to steal, causing concern about too many visitors in the home at one time. Visitors’ ability to “contemplate and reflect on the history and significance of events that occurred in the space, sometimes alone and sometimes with others,” also indicates that the number of visitors in the home at one time should be relatively low, while allowing that the number of people in the building at one time will naturally fluctuate to some degree.

The visitor capacity of the Paul Laurence Dunbar House is identified at 25 people at one time. Park staff has learned through experience that when a full motorcoach group arrives to tour the home, it is best to split the group in half. These motorcoaches typically carry about 50 people. Park employees have noted that they can observe about 25 people at a time to determine if their actions might impair the building’s historic fabric. This number is also near the upper limit of how many people can be in the home while still allowing for an opportunity to contemplate and reflect on the significance of the space.

Site 3: Wright Company Factory

The Wright Company Factory, built in 1910–1911, was the first factory in the United States designed specifically for building airplanes. The National Park Service is currently in the process of acquiring Buildings 1, 2, and 17 from the City of Dayton. Buildings 1 and 2 are authentic spaces with clear historic structure value (Building 17 will be demolished, as it is not an original building in the Wright Company but is physically attached to Building 1).

National Park Service holdings within the Wright Company Factory are proposed to be zoned for Historic Landscape, Visitor Engagement, and Administrative. Areas in the Historic Landscape Zone are focused on preserving outdoor historic landscapes and the provision of contemplative visitor experiences, while the Visitor Engagement Zone areas are focused on interpretation of park resources and the provision of visitor services to facilitate an engaging visitor experience. The outdoor area of the factory, less than an acre, is zoned Historic Landscape. From this area, visitors will be able to get a sense of what the factory and still-standing historic buildings looked like from Third Street in the 1910s. Additionally, the Administrative zoning allows for NPS operations and maintenance activities to be housed at this factory site in the future.

Buildings 1 and 2, which the National Park Service is acquiring, have a total of 30,000 square feet, and the large space could lead to many opportunities. The National Park Service has been considering three main proposals for these two buildings: (1) rehabilitate the inside of the buildings to a historic view based on existing old photographs, and use Building 1 as a museum where visitors could have an interactive experience on the shop floor through hands-on exhibits; (2) create a dynamic STEAM learning location at Building 2, potentially partnering with Air Camp or Sinclair Community College; and (3) consolidate administrative and maintenance functions in Building 2.

Currently, this area has no legal public use due to the potential for contaminants and hazardous materials. However, without ground disturbance, the site appears to be safe. Concerns including security, routine vandalism, and wire stealing are expected to be alleviated once the National Park Service acquires the site.

The site's exterior and interior limiting attributes differ. The small outside area zoned for Historic Landscape will need to provide contemplative visitor experiences evoked by the 1910s viewscape, while the buildings with Visitor Engagement zoning would focus on engaging visitor experiences and interpretive messaging. The potential uses of the buildings—with Building 1 likely serving as a museum space and building 2 serving as a dynamic STEAM learning environment geared toward children, indicate that different densities would likely be appropriate.

A preliminary visitor capacity of 275 people at one time is identified for both buildings 1 and 2, with approximately 225 people allocated to building 1 and another 50 people allocated to building 2. These capacities would likely need to be adjusted once Buildings 1 and 2 have been rehabilitated. This visitor capacity is a result of NPS staff estimates of combining the two largest visitor capacities for the two buildings and of the desired visitor experience. Distributing 275 people across these two buildings and the outside area will likely create positive visitor experiences and not cause negative visitor experience impacts. As newly acquired and soon-to-be renovated sites, visitor experience documented through surveys will need to be closely monitored to determine if this visitor capacity is reasonable or needs to be revisited.

Site 4: Wright Brothers National Museum (Carillon Historical Park)

Note: This visitor capacity analysis was completed in partnership with Dayton History management.

The Wright Brothers National Museum complex is located within Carillon Historical Park, a private park owned and operated by Dayton History. The museum houses the original 1905 Wright Flyer III airplane, which became a national historic landmark in 1990. The Wright Brothers National Museum is proposed to be in the Visitor Engagement Zone, where the focus is on interpretation of park resources and the provision of visitor services to facilitate an engaging visitor experience.

The Wright Brothers National Museum is the most-visited unit of the park. In 2019, 71,000 people came through the museum. May (with school groups) and December (including a special Christmas event in the evenings) are the busiest months. Combined, these two months account for over a third of museum visitation. The museum is typically busy in morning hours during the week, with several large campus-wide events on weekends. Many special interest groups visit in summer and fall, including military reunions and general tourism motorcoaches. The entire site's infrastructure and exhibits were overhauled in 2018, with the goal to increase program and attendance numbers.

Dayton History's goal of increasing program and attendance numbers can be understood in terms of balancing out the "peaks" and the "valleys." Currently, the site has periods of downtime, when few people visit. This downtime contrasts with periods like May and December when visitation is quite high. To illustrate, a single day's worth of visitation in December may exceed visitation during the entire month of January. Instead of increasing or changing visitation levels at peak times (i.e., December), Dayton History is interested in increasing visitation during the valleys (i.e., January) to be more consistent with levels seen at peak times. An increase from 71,000 annual museum visitors to around 150,000 annual visitors would be welcome and would fit into Dayton History's strategic plan.

The most limiting attribute is the number of people who that can fit through certain bottlenecks in the museum while still being able to move about the museum and experience key exhibits. These

bottlenecks include the replica Wright Cycle Company and Wright Hall. Wright Hall is designed to showcase the airplane so that people can walk around it, but once too many people are in the space, this is no longer possible.

During current peak conditions, visitors are still able to move through the museum, see the Wright Flyer III, and experience other key exhibits. For example, a very busy evening event may include 1,800 people moving through the museum in a four-hour period. Museum staff observes that any more people than that would cause bottlenecks. Given this experience, visitor capacity is identified at 450 people per hour (derived by dividing 1800 by 4). If visitation numbers close to this visitor capacity were sustained across the year, annual visitation would be more than the 150,000 annual visits desired by Dayton History management.

Site 5: Hawthorn Hill

Note: This visitor capacity analysis was completed in partnership with Dayton History management.

Hawthorn Hill is the national historic landmark home that Orville Wright lived in from 1914 to 1948. As Orville's home from age 42 until his death, the site serves as a bookend to the Wright brothers' story. The home is owned and operated by Dayton History and was added to the park boundary by legislation in 2009. Under the proposed management action, Dayton History would continue to own and manage the home.

Generally, Hawthorn Hill is not open to walk-up visitation, and the only access is by official tour led by Dayton History employees. Tours originate at Carillon Historical Park's Visitor Center, where visitors check in before boarding a shuttle that takes them to Hawthorn Hill. These visitors usually have a prepaid reservation, although if space remains, walk-in tickets may be purchased (currently \$14/person). There are generally four tours per week, one each at 10:00 a.m. and 12:30 p.m. on Wednesdays and Saturdays. Occasionally, a third tour is added on Saturdays during the busy season, or tours may be arranged in advance for special groups interested in visiting the site. The tours are limited to 14 people each and are approximately 1.5 hours long.

Exceptions to this general visitation pattern include a half dozen or so special events that occur each year. These special events include small community gatherings, donor recognition events, events hosted by aviation interest groups, and others. These events typically include 20 to 30 people visiting the house, mostly on the home's first floor, but with occasional use of the second floor. During special events, visitors often come to the site by shuttle or van due to the extremely limited onsite parking, although visitors occasionally park on adjacent neighborhood streets.

Dayton History also hosts one annual open house event at Hawthorn Hill each April. During this event, Dayton History personnel are stationed in each room of the house while visitors meander through. Records from these open house events indicate that about 80 people visit the house per hour over a six-hour period, although these visits are shorter than the normal, organized tours.

Overall, an average of just over 2,000 people per year have visited Hawthorn Hill during the period from 2010 through 2019. A large portion (30–40%) of this visitation occurs in April due to the annual open house event. Visitation occurs in all months of the year but is concentrated in the April–September period.

The first limiting attribute that constrains Hawthorn Hill's ability to accommodate visitation is the desire by Dayton History and the City of Oakwood to maintain the integrity of the neighborhood in which Hawthorn Hill is located. The City of Oakwood has a number of "conditions and restrictions"

on Dayton History's use of the site, including that the general public is prohibited from parking at the site; that general public visitors are transported to the site; "that no more than 15 general public visitors may be at the house at any given time;" that tours occur between 10:00 a.m. and 2:00 p.m.; that there should be no more than eight special events per year; and that any information about the site should note that "the property is located within an established residential neighborhood and any visitation should occur through the established public tour schedule." (The annual open house event is conducted under a one-time, special use permit from the City of Oakwood). Aside from effectively establishing the visitor capacity (15 people at one time) during public visitation, the conditions and restrictions are reflective of a general desire by both the City of Oakwood and Dayton History for the site to be a respectful neighbor in a residential setting. Walk-up visitation would lead to concerns about impacts to the surrounding neighborhood.

A second limiting attribute that constrains Hawthorn Hill's ability to accommodate visitation is the need to protect the original historic fabric and furniture of the building while ensuring contemplative visitor experiences. If walk-up visitation were to be allowed on a regular basis, Dayton History would need to have a lot more staff on hand (as they do during the annual open house) to keep tabs on use of the building's restrooms and associated fragile plumbing; prevent theft and accidental damage to the building's many original items; and provide interpretation of the home, which lacks exhibits. Dayton History does not have the staffing to provide this level of supervision and interpretation on a day-to-day basis.

The visitor capacity for Hawthorn Hill is identified at 15 people at one time during public visitation. This capacity is consistent with the City of Oakwood's conditions and restrictions as well as the desired conditions for the Authentic Zone, which describe a low-to-moderate tolerance for impacts on historic resources, as well as a feeling of contemplation that includes visitors having the opportunity to interact with historic resources and fabric.

During special events and the annual open house, the visitor capacity is identified at 35 people at one time if only one floor is to be used and 50 people at one time if both floors are to be used. This capacity is consistent with the City of Oakwood's conditions and restrictions, which require that special arrangements for off-site parking be made for events with greater than 35 attendees, as well as desired conditions for the Authentic Zone, which describe moderately social settings. Dayton History staff has found that people begin to feel too close to one another if more than 40 or 50 people are present in the house at one time.

Site 6: Huffman Prairie Flying Field

The Huffman Prairie Flying Field is located adjacent to a high-security area of the Wright-Patterson Air Force Base, and the site is owned, maintained, and operated by the US Air Force. Concurrently, the flying field is a national historic landmark where the Wright brothers mastered their flying skills and developed the first practical airplane.

The Huffman Prairie Flying Field is proposed to be zoned as Historic Landscape and Visitor Engagement. Areas zoned as Historic Landscape are focused on "preserving outdoor historic landscapes and the provision of contemplative visitor experiences." Areas zoned for Visitor Engagement are focused on "interpretation of park resources and the provision of visitor services to facilitate an engaging visitor experience." Thus, to ensure that the desired conditions of the Historic Landscape zoning are met, the flying field would be moderately managed to convey a commemorative feel with limited development. As an area where the influence of historic events is conveyed, there would be a low tolerance for impacts on the resources, although reproductions that

help convey historic events would be acceptable and limited interpretive programming would be offered in order to create a contemplative feel.

Most visitors to Huffman Prairie Flying Field are individual users, and the site is busier in the morning with driving traffic and as people get outdoors. The grounds are open from dawn to dusk, and considerable exercise use occurs throughout the day. Some visitors walk the trails through the adjacent tallgrass prairie remnant, especially during periods of wildflower blooms. Site walking tours occur mid- to late morning. Visitors often come to the flying field after visiting the US Air Force museum, causing waves of visitation to the prairie site.

Daily visitation is typically between 10 and 100 people. Visitation must be counted manually with a clicker due to the complexity of roadways leading to this area, so underestimating visitation is possible. The National Park Service facilitates tours, ranger-led experiences, and other opportunities to independently visit the site in order to create the contemplative visitor experience. Ultimately, US Air Force controls the access for this site, and they occasionally close the gate for security reasons or hazardous materials flights.

The most limiting attribute at this site is to ensure quality contemplative visitor experiences.

Visitor capacity for the Huffman Prairie Flying Field is identified at 300 visitors per day. Based on staff experience, the current visitation of around 100 people per day appears to be lower than the site can accommodate while keeping the visitor experience contemplative. While the 2005 general management plan indicated 400 visitors as the daily capacity number, having 400 visitors enter through the shared entrance with the US Air Force would likely cause a traffic and safety issue. Monitoring the “Visitor Impacts at Huffman Prairie Flying Field” indicator will track incidents that damage to resources or visitor experiences.

Site 7: Wright Brothers Hill and Wright Memorial

The Wright Memorial overlooks the Huffman Prairie Flying Field and is located on the US Air Force base next to the Huffman Prairie Flying Field Interpretive Center. The Wright Memorial is a cultural landscape and is listed on the National Register of Historic Places for two properties: (1) the Wright Brothers Hill – Memorial, the 27-acre landscape designed by the Olmsted Brothers landscape architecture firm and built by Civilian Conservation Corps volunteers in the 1930s (listed in 2016); and (2) the Wright Brothers Memorial Mound Group for Native American burial mounds (listed in 1974).

The Wright Memorial is proposed to be zoned as Historic Landscape and Visitor Engagement. Areas in the Historic Landscape Zone are focused on preserving outdoor historic landscapes and providing contemplative visitor experiences. Areas in the Visitor Engagement Zone are focused on interpretation of park resources and providing visitor services to facilitate an engaging visitor experience. Designed by the Olmsted Brothers as an open space for commemoration of the Wright brothers, the memorial does not feature a resource tied to the Wright brothers, such as the other resources described in this document. The area is managed as a contemplative space. The US Air Force also has goals and desired conditions for this area, and they will be leading the effort to restore the cultural landscape to the Olmsted design. Aside from replacing deteriorated exhibits, the National Park Service has no plans for major changes at the Wright Memorial.

The hours of the memorial site are longer than the nearby Huffman Flying Field Interpretive Center, and NPS rangers do not currently staff the memorial. On a busy weekend day, 100 to 150 visitors visit the interpretive center, and if the Air Force Museum closes, people often flood into this area. People

also park here to access Wright Brothers Memorial Trail, which is part of the longer North Country Trail, and connect to the Huffman Prairie Flying Field from this location. People also park here to bike, run, or hike, including a “Volksmarchers” group that leads 1.25–2.5-mile (2–4 kilometer) walks starting from this location. In the winter, this hill site is heavily used for local sledding, although it currently has less use than in the past. In inclement weather, the gate may be closed.

Large special events have been hosted at the memorial and the Huffman Flying Field Interpretive Center, attracting around 350 people. These special events require additional parking in the grass, but the grass has been able to recover after these events. Expanding the parking lot behind the interpretive center building to accommodate these large events has been discussed, as maintaining emergency access and directing cars to parking is challenging at these events. Any changes to the parking lot would need to be discussed with the US Air Force.

In the past, trash was an issue, but now grounds workers regularly pick up trash. Minor graffiti on walls or other surfaces occurs occasionally. Some damage has also occurred to tables in the picnic area located near the Native American burial mounds, and visitors have created social trails in the grass. If use increases, more of these impacts would be expected.

The limiting attribute for the Wright Memorial is ensuring that the cultural integrity of the site is not damaged. As this area is layered with multiple historic significances as a cultural landscape and two National Register of Historic Places sites, ensuring that visitors do not impact the integrity of the cultural resources is key. Additional social trails and graffiti would detract from both the cultural landscape and the Olmstead-related national register property. Social trails and graffiti would also affect the contemplative aspect of the visitor experience zoned for Historic Landscapes. The “Visitor Satisfaction with Quality of the Park Experience” indicator would be useful in monitoring the contemplative nature of the experience.

According to NPS staff, the current daily number of visitors at around 150 people per day is much lower than what the site can accommodate while ensuring that the cultural integrity of the site is protected. As indicated during large special events, 350 people at one time would not be sustainable in the long term, as overflow parking on the grass would have a cumulative impact on the grass and the landscape. However, this level of visitation would be consistent with ensuring the integrity of the landscape if it were distributed throughout the day. Therefore, the visitor capacity is identified at 350 people per day.

Site 8: Huffman Prairie Flying Field Interpretive Center

The Huffman Prairie Flying Field Interpretive Center is owned by the US Air Force and operated by the National Park Service to provide interpretation and display waysides and artifacts. The interpretive center is proposed to be zoned for Visitor Engagement. Areas in this zone focus on interpreting park resources and facilitating an engaging visitor experience. In this zone, a moderate-to-high degree of visitor interaction with NPS staff and a high probability of encountering other visitors is expected.

The Huffman Prairie Flying Field Interpretive Center building is in fair condition and is not considered historically significant, although there are historically significant artifacts on exhibit within the building. These artifact collections are maintained by the National Park Service and are in good condition.

While visitors to the building are primarily casual users of the Wright Memorial grounds, other visitors include local, repeat users who bring additional visitors from out of town. Visitors tend to

come at the end of the day, after they have visited other destinations such as the US Air Force Museum.

The limiting attribute for this interpretive center site is the building layout, which is T-shaped and has only one doorway, causing visitor circulation challenges. Visitor use has also caused wear and tear on the building, although the building condition is currently fair and increased use could cause greater impacts. Parking availability may also be a limiting attribute to some degree, especially related to larger vehicles.

While the 2005 GMP amendment identifies visitor and staff capacity at 246 people at one time, this number appears to be based on the physical space of the building prior to the interpretive exhibits being installed. While groups that consider using the site still follow a visitor capacity of 246 people at one time, this capacity is no longer practical since the construction of the interpretive exhibits. The 2005 GMP amendment specifies that any group size should not exceed 90 people.

The interpretive center's visitor capacity is being set at 100 people at one time, including both visitors and staff. The 2005 GMP amendment capacity of 246 people doesn't allow for an engaging visitor experience desired for this zone. With only one doorway, visitors have difficulty moving around the exhibits. The 100-person capacity includes no more than 30 people at one time in the exhibit space and no more than 70 people at one time (with up to 50 people seated) in the auditorium. The group size limit of 90 people from the 2005 GMP amendment would still be employed, as staff has seen that a 90-person group typically needs to be split into 30 people outside, 30 people in the exhibits, and 30 people in the auditorium. These limits make it much more manageable for interpretive staff and provide a better visitor experience.

APPENDIX B: PROPOSED MANAGEMENT ACTION PRELIMINARY COST ESTIMATE

Denver Service Center

National Park Service
U.S. Department of the Interior



WRIGHT COMPANY FACTORY IMPROVEMENTS

Dayton Aviation Heritage National Historical Park

Montgomery County, Ohio

PMIS No: Not Applicable

ASSESSMENT OF PROBABLE COSTS

December 15, 2021

<u>Work Activity</u>		<u>Non-Escalated NET Costs</u>	<u>TOTAL Project Cost</u>	
Wright/Dunbar Interpretive Center	2,076 SF	\$398,851	\$530,472	\$256 SF
Wright Company Factory Building #1	18,000 SF	\$9,273,504	\$12,982,906	\$721 SF
Wright Company Factory Building #2	15,000 SF	\$9,572,324	\$13,401,254	\$893 SF
TOTAL COSTS		\$19,244,680	\$26,914,632	

DIRECT Cost of Construction (Not shown on this Page) - Includes actual labor, materials, equipment, taxes, overhead, & profit of the subcontractor for the proposed work. These costs should be used only to identify the estimated labor, materials, equipment and production rates for crews to construct the proposed project scope of work.

Non-Escalated NET Cost - (This is the cost to be used in PMIS applications as the PMIS forms have their own method for adding Escalation Costs). Includes DIRECT Cost of Construction plus location factor, remoteness factor, federal wage rate factor, historic preservation factor, design contingency, permitting, contracting method of procurement, testing, general conditions, bonds, permits and contractor overhead, profit, & escalation. Escalated NET costs are found on the "Project Markups" of this estimate and not included within this cover page.

TOTAL PROJECT COSTS - Includes Escalated NET costs plus Construction Contingency, NPS Construction management, plus compliance, pre-design, design, and supplemental services.

Gross Square Foot Cost: \$767.32 SF

Total Square Footage: 35,076 SF

Project Start: June 1, 2024

Project Finish: July 27, 2025

Months Weeks Days Midpoint Const

Construction Duration: 14.0 60.2 421.4 3.04 Years

Annual Escalation Rate: 4%

Escalation to Constr Midpoint: 12.66%

Contracting Method Full and Open, 2 Step

Index City: Dayton

City Index: 88.50

City Factor: -11.50

Developed By Denver Service Center
Transportation Division

United States Department of the Interior
National Park Service
Class A Construction Cost Estimate
BASIS OF ESTIMATE

Denver Service Center

National Park Service
U.S. Department of the Interior



PROJECT INFORMATION

Project: Building 1 & 2 Renovation
Park: Dayton Aviation Heritage National Historical Park
Park Alpha: Park Alpha Code
Estimate Date: December 15, 2021
Prepared By: Denver Service Center

BACKGROUND SUPPORTING MATERIAL (Scope of Work):

Renovate interior third floor 2,076 square feet of Wright-Dunbar Interpretive Center to accommodate additional interpretation; Complete renovation of Wright Company Factory interior, exterior, & sitework of buildings #1 and #2. Building #1 has 18,000 square feet and is based on the following build out of 10,000 sf maintenance facility and 8,000 sf storage area. Building #2 has 15,000 square feet and is based on the following build out of Interpretive space 8,000 sf; Classrooms 4,000 sf; Administration 2,000 sf; and Research Library 1,000 sf. Sitework is included for area around buildings #1 & #2 only.

SOURCE OF COST DATA:

Pricing is based on historical systems costs and estimator judgment. RS Means is used only as a general guide, and the WBS reference at each line item indicates the area of the price book used as the general guide. Quantities and scope are based on cost narrative and GMP provided by Planning team with information on different components of the proposed project.

ESTIMATE ASSUMPTIONS:

- Based on existing buildings and site to be unoccupied during construction with year round construction allowed. Cost is only for upgrades to buildings #1 & #2 with no campus wide improvements.
- Sitework costs are divided proportionally between building #1 & #2 estimate

COST EXCLUSIONS:

- No demolition to any existing structures or buildings except the selective limited interior/exterior renovation of buildings #1 & #2.
- No operational and maintenance costs for the facility including all staffing needs (only up-front capital improvement costs are included). Unfixed furnishings, equipment, fixtures are excluded i.e. Furniture, linens, artwork, tools, maintenance vehicles, fuels, etc.
- No cost for any curatorial storage facilities including specialty storage shelving, equipment, DE humidification, refrigeration, air oxygen controls, moisture or vapor protection.

United States Department of the Interior
National Park Service
Class A Construction Cost Estimate
BASIS OF ESTIMATE

Denver Service Center

National Park Service
U.S. Department of the Interior



PROJECT INFORMATION

Project: Building 1 & 2 Renovation
Park: Dayton Aviation Heritage National Historical Park
Park Alpha: Park Alpha Code
Estimate Date: December 15, 2021

- In the Final-Pre-Acquisition Environmental Site Assessment dated July 28, 2020, Hazardous materials are called out but are listed as contained within the soil and encapsulated not presenting a current health issues. Since the range of cost for hazardous material clean-up can be very large costing into the millions, an allowance only is included at this time until further investigation is done which would allow for a more definitive scope of work and costs.
- No campus wide utility improvements or infrastructure to accommodate new building improvements and the additional utility load increases including sanitary treatment, water supply or pressure, electrical power increases, and gas supply,
- No interpretive or display costs for Wright Company Factory Buildings #1. & #2
- Does not include Access Road to Huffman Prairie Flying Field at WPAFB. PMIS 152547. Previous cost done 01/08/13 was \$4,428,616.56 which would need to be escalated to projected project start.
- Pricing based on project being DSC delivered with regional support.
- This estimate is based on the scope of work determined at the conceptual level anticipating normal associated work known as scope creep and includes a 25% design contingency . The estimate does NOT include any additional scope that maybe added during the design process by the Park, Design Team, or other sources. In addition, the estimate does not account for additional costs associated with awarding the contract due to obligation deadlines.

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Renovating the third floor of the right/Dunbar Interpretive Center to accommodate additional interpretation. All major structural, mechanical, and electrical systems are to be reused while only performing a light tenant improvement to the space to accommodate a new interpretive layout.

Building Square Feet

2,076 Wright/Dunbar Interpretive Center

BUILDING		PROJECT			COMMENT
Item	System	Ave \$/SF	Total \$	Ave %	
1	Foundations	\$0.00	\$0	0.0%	
	a. Standard Foundations	\$0.00	\$0	0.0%	
	b. Special Foundations	\$0.00	\$0	0.0%	
	c. Slab on Grade	\$0.00	\$0	0.0%	Not Applicable
2	Basement Construction	\$0.00	\$0	0.0%	
	a. Basement Excavation	\$0.00	\$0	0.0%	
	b. Basement Walls	\$0.00	\$0	0.0%	Not Applicable
3	Superstructure	\$2.00	\$4,152	2.2%	
	a. Floor Construction	\$2.00	\$4,152	2.2%	Miscellaneous reinforcement of existing structure upgrading building to existing structural codes for new interpretive displays.
	b. Roof Construction	\$0.00	\$0	0.0%	
4	Exterior Closure	\$0.00	\$0	0.0%	
	a. Exterior Walls	\$0.00	\$0	0.0%	
	b. Exterior Windows	\$0.00	\$0	0.0%	
	c. Exterior Doors	\$0.00	\$0	0.0%	
	b. Exterior Projections	\$0.00	\$0	0.0%	Not Applicable
5	Roofing	\$0.00	\$0	0.0%	
	a. Roof Coverings	\$0.00	\$0	0.0%	
	b. Roof Openings	\$0.00	\$0	0.0%	
	c. Roof Drainage	\$0.00	\$0	0.0%	Not Applicable
6	Interior Construction	\$17.81	\$36,974	19.7%	
	a. Interior Partitions	\$12.22	\$25,369	13.5%	Partitions consist of light gauge metal frame at most areas except the maintenance area which would be masonry CMU. Doors are hollow metal frame with solid core doors, and grade 1 door hardware.
	b. Interior Doors	\$4.21	\$8,740	4.7%	
	c. Interior Specialties	\$1.38	\$2,865	1.5%	
7	Staircases	\$0.00	\$0	0.0%	
	a. Stair Construction	\$0.00	\$0	0.0%	
	b. Stair Finishes	\$0.00	\$0	0.0%	Not Applicable
8	Interior Finishes	\$18.44	\$38,281	20.4%	
	a. Wall finishes	\$4.83	\$10,027	5.4%	Wall finishes consist of painted drywall; Ceiling finishes are a combination painted drywall and suspended tile, Floor consists of a combination of existing tile and new tile.
	b. Floor finishes	\$8.27	\$17,169	9.2%	
	c. Ceiling finishes	\$5.34	\$11,086	5.9%	or allowance to replace existing flooring with new finishes accommodating the new interpretive layout.

Appendix B: Proposed Management Action Preliminary Cost Estimate

9	Conveying Systems	\$0.00	\$0	0.0%	
	a. Elevator & lifts	\$0.00	\$0	0.0%	
	b. Other conveying systems	\$0.00	\$0	0.0%	Not Applicable
8	Mechanical Systems	\$4.05	\$8,408	4.5%	
	a. Plumbing	\$0.00	\$0	0.0%	
	b. HVAC	\$1.21	\$2,512	1.3%	Relocation of existing HVAC diffusers and returns to accommodate new interpretative displays. Relocation of existing fire sprinkler heads to accommodate new interpretative displays.
	c. Fire Protection	\$2.84	\$5,896	3.1%	
9	Electrical Systems	\$15.91	\$33,029	17.6%	
	a. Service & distribution	\$0.00	\$0	0.0%	
	b. Lighting & branch wiring	\$12.75	\$26,469	14.1%	
	c. Communication & security	\$2.32	\$4,816	2.6%	
	d. Other electrical systems	\$0.84	\$1,744	0.9%	Interpretive display lighting and power requirements relocating from current locations with space.
10	Selective Demolition	\$3.85	\$7,993	4.3%	
	a. Building demolition	\$3.85	\$7,993	4.3%	
	b. Hazardous abatement	\$0.00	\$0	0.0%	Not Applicable
11	Equipment	\$0.00	\$0	0.0%	
	a. Other Equipment	\$0.00	\$0	0.0%	Not Applicable
12	Furnishings	\$3.15	\$6,539	3.5%	
	a. Interpretative displays	\$50.00	\$103,800	55.4%	Allowance only for displays, boards, signage, interpretations, etc.
	b. Fixed Furnishing	\$3.15	\$6,539	3.5%	Cabinets, countertops, window blinds, corner guards, bollards, etc.

TOTAL BUILDING	\$90	\$187,276	100%
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Subtotal Direct Construction Costs	Percent	\$ 187,276	\$90	Comment
Published Location Factor	-11.50%	-\$21,537	-\$10	Based on Dayton, Ohio
Remoteness Factor	0.00%	\$0	\$0	Based on Dayton, Ohio
Federal Wage Rate Factor	0.00%	\$0	\$0	Using the attached Wage Rate Calculator determine if additional costs are needed.
State & Local Taxes	8.00%	\$7,491	\$4	State sales taxes calculated on materials only
Historic Preservation Contingency	0.00%	\$0	\$0	Not required for Interpretation update
Design Contingency	25.00%	\$46,819	\$23	Based on conceptual narrative only
Total Direct Construction Costs		\$ 220,049	\$106	
Testing & Inspections	0.00%	\$0	\$0	Not Applicable
Standard General Conditions	14.00%	\$30,807	\$15	Standard field general conditions for duration of project, based on previous park projects
Government General Conditions	5.00%	\$11,002	\$5	Government requirements including, quality assurance and safety requirements
Subtotal NET Construction Cost		\$ 261,859	\$126	
Overhead	12.00%	\$31,423	\$15	Applicable for type and size of construction per previous park projects
Profit	8.00%	\$20,949	\$10	Applicable for type and size of construction per previous park projects

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Estimated NET Construction Cost		\$	314,230	\$151	
Permits	1.00%	\$3,142		\$2	Local fire requirements, sanitary, water, electrical local utility agency fees
Bonds	2.50%	\$7,856		\$4	Construction bonding for contractor and subcontractors. The smaller the company the higher the rate.
Contracting Method Adjustment	5.00%	\$15,712		\$8	Based on full and open competitive contract method
4% Inflation Escalation (Months)	48	\$57,912		\$28	NPS recommended projected annual inflation rate of 4% and insert number of month till midpoint of construction.
Total NET Cost of Construction		\$	398,851	\$192	SF

Estimated GROSS Cost		\$	71,793	\$35	
Project Management/CMR Fees	8.00%	\$31,908		\$15	NPS management cost for offsite and onsite services.
Construction" Contingency	10.00%	\$39,885		\$19	Contingency for the those unforeseen items that occur during construction
Estimated DESIGN Cost		\$	59,828	\$29	
Compliance	0.00%	\$0		\$0	Not applicable
Pre-Design (Conceptual Phase)	5.00%	\$19,943		\$10	Cost for Design services during the initial conceptual phase of the project
Final Design SD Phase to CD Phase	10.00%	\$39,885		\$19	Cost for actual design of the project with the final deliverable of 100% construction documents.
Supplementary Services	0.00%	\$0		\$0	Not applicable
Total Estimated PROJECT COST			\$530,472	\$256	SF

Appendix B: Proposed Management Action Preliminary Cost Estimate

NPS DSC ASSESSMENT OF PROBABLE COSTS Wright Company Factory Improvements December 15, 2021
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Building #1 consists of complete renovation of existing building interior and exterior with only foundation, structure, exterior closure remaining after initial selective demolition. Building programming to consist of 10,000 sf maintenance facility and 8,000 sf storage area.

Building Square Feet **18,000** Wright Company Factory Building #1

BUILDING		PROJECT			COMMENT
Item	System	Ave \$/SF	Total \$	Ave %	
1	Foundations	\$4.80	\$86,400	2.1%	
	a. Standard Foundations	\$2.85	\$51,300	1.3%	
	b. Special Foundations	\$0.00	\$0	0.0%	Miscellaneous post foundations for structural shoring of existing facility and Miscellaneous slab cut and patching to accommodate new mechanical and electrical distribution
	c. Slab on Grade	\$1.95	\$35,100	0.9%	
2	Basement Construction	\$0.00	\$0	0.0%	
	a. Basement Excavation	\$0.00	\$0	0.0%	Not Applicable
	b. Basement Walls	\$0.00	\$0	0.0%	
3	Superstructure	\$18.31	\$329,580	8.0%	
	a. Floor Construction	\$0.00	\$0	0.0%	Miscellaneous reinforcement of existing structure upgrading building to existing structural codes and new mechanical loads. It is understood there is no 2nd floor or mezzanine in the building.
	b. Roof Construction	\$18.31	\$329,580	8.0%	
4	Exterior Closure	\$26.70	\$480,600	11.7%	
	a. Exterior Walls	\$14.73	\$265,140	6.5%	Patch, repair, tuck point existing exterior masonry, replace windows and doors to operational, sustainable current NPS requirements. Exterior doors include panic hardware with accessible door hardware. Maintenance doors are panel roll up doors with manual operation.
	b. Exterior Windows	\$4.85	\$87,300	2.1%	
	c. Exterior Doors	\$5.12	\$92,160	2.2%	
	b. Exterior Projections	\$2.00	\$36,000	0.9%	
5	Roofing	\$13.47	\$242,460	5.9%	
	a. Roof Coverings	\$11.50	\$207,000	5.0%	Replacement of existing roofing system including new current code insulation requirements as well as drainage system.
	b. Roof Openings	\$0.91	\$16,380	0.4%	
	c. Roof Drainage	\$1.06	\$19,080	0.5%	
6	Interior Construction	\$21.74	\$391,320	9.5%	
	a. Interior Partitions	\$16.15	\$290,700	7.1%	Partitions consist of light gauge metal frame at most areas except the maintenance area which would be masonry CMU. Doors are hollow metal frame with solid core doors, and grade 1 door hardware.
	b. Interior Doors	\$4.21	\$75,780	1.8%	
	c. Interior Specialties	\$1.38	\$24,840	0.6%	
7	Staircases	\$0.00	\$0	0.0%	
	a. Stair Construction	\$0.00	\$0	0.0%	Not Applicable
	b. Stair Finishes	\$0.00	\$0	0.0%	
8	Interior Finishes	\$11.30	\$203,400	5.0%	
	a. Wall finishes	\$4.87	\$87,660	2.1%	Wall finishes consist of painted drywall; Ceiling finishes are a combination painted drywall, and exposed painted structure at maintenance. Floor consists of porcelain tile bathrooms, and sealed concrete at maintenance and storage.
	b. Floor finishes	\$3.22	\$57,960	1.4%	
	c. Ceiling finishes	\$3.21	\$57,780	1.4%	
9	Conveying Systems	\$0.00	\$0	0.0%	

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	a. Elevator & lifts	\$0.00	\$0	0.0%	
	b. Other conveying systems	\$0.00	\$0	0.0%	Not Applicable
8	Mechanical Systems	\$38.51	\$693,180	16.9%	
	a. Plumbing	\$12.87	\$231,660	5.6%	All new mechanical systems to meet large space commercial building needs including gas fired space heaters, restrooms, floor drainage, and fire protection.
	b. HVAC	\$18.21	\$327,780	8.0%	
	c. Fire Protection	\$7.43	\$133,740	3.3%	
9	Electrical Systems	\$21.67	\$390,060	9.5%	
	a. Service & distribution	\$10.62	\$191,160	4.7%	All new electrical systems to current code to meet power distribution, switchgear, panels, lighting, communication, information technology, and security requirements.
	b. Lighting & branch wiring	\$7.89	\$142,020	3.5%	
	c. Communication & security	\$2.32	\$41,760	1.0%	
	d. Other electrical systems	\$0.84	\$15,120	0.4%	
10	Selective Demolition	\$8.00	\$144,000	3.5%	
	a. Building demolition	\$8.00	\$144,000	3.5%	Remove and dispose of selective interior elements to original structure to allow for complete interior renovation.
	b. Hazardous abatement	\$0.00	\$0	0.0%	
11	Equipment	\$4.25	\$76,500	1.9%	
	a. Other Equipment	\$4.25	\$76,500	1.9%	Appliances, shelving, storage, car wash equipment, compressed air, lift capacities etc.
12	Furnishings	\$3.15	\$56,700	1.4%	
	a. Interpretative displays	\$0.15	\$2,700	0.1%	Allowance only for displays, boards, signage, interpretations, etc.
	b. Fixed Furnishing	\$3.15	\$56,700	1.4%	Cabinets, countertops, bathroom fixtures, fire extinguishers, window blinds, corner guards, bollards, etc.

TOTAL BUILDING	\$172	\$3,095,550	75%
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SITEWORK		Project			COMMENT
Item	System	Average	Total \$	%/Site	
1	Site Preparation	\$15.00	\$270,000	6.6%	
	a. Site clearing	\$0.88	\$15,840	0.4%	Immediate area around buildings 1 & 2 to be renovated with existing sitework to be replaced. Cost includes demolition and regrading to account for removed structures in the designated area. Hazardous waste remediation will be very significant cost that can range greatly not be fully determined until a full hazmat report is done. An allowance only is shown for soil remediation.
	b. Site demolition & remove	\$2.22	\$39,960	1.0%	
	c. Site earthwork	\$1.90	\$34,200	0.8%	
	d. Hazardous waste remediation	\$10.00	\$180,000	4.4%	
2	Site Improvements	\$22.38	\$402,840	9.8%	
	a. Roadways & parking	\$11.24	\$202,320	4.9%	Provide new parking, pedestrian paving, site development, landscaping, and irrigation to accommodate new site master plan for newly acquired acreage.
	b. Pedestrian paving	\$2.92	\$52,560	1.3%	
	c. Site development	\$2.39	\$43,020	1.0%	
	d. Landscape and irrigation	\$5.83	\$104,940	2.6%	

Appendix B: Proposed Management Action Preliminary Cost Estimate

3	Site Mechanical Utilities	\$8.47	\$152,460	3.7%	
	a. Water supply & distribution	\$4.12	\$74,160	1.8%	
	b. Sanitary sewer system	\$3.26	\$58,680	1.4%	
	c. Storm sewer system	\$1.09	\$19,620	0.5%	
	d. Heating/cooling distribution	\$0.00	\$0	0.0%	
	e. Fuel & industrial distribution	\$0.00	\$0	0.0%	Replacement and upsizing of existing utilities lines to local utility companies main distribution lines to meet new building programming. In includes domestic water, fire water, sanitary, and storm water.
4	Site Electrical Utilities	\$10.17	\$183,060	4.5%	
	a. Electrical distribution	\$5.15	\$92,700	2.3%	
	b. Site lighting	\$3.12	\$56,160	1.4%	
	c. Tele data distribution	\$1.90	\$34,200	0.8%	Replacement and upsizing of existing electrical primary, secondary, tele data, and transformer to building. Site lighting to be minimal impact to night sky including downlight wall packs and light bollards.
TOTAL SITEWORK		\$56	\$1,008,360	25%	
TOTAL BUILDING & SITE		\$228	\$4,103,910	100%	
Subtotal Direct Construction Costs		Percent	\$ 4,103,910	\$228	Comment
	Published Location Factor	-11.50%	-\$471,950	-\$26	Based on Dayton, Ohio
	Remoteness Factor	0.00%	\$0	\$0	Based on Dayton, Ohio
	Federal Wage Rate Factor	0.00%	\$0	\$0	Using the attached Wage Rate Calculator determine if additional costs are needed.
	State & Local Taxes	8.00%	\$164,156	\$9	State sales taxes calculated on materials only
	Historic Preservation Contingency	5.00%	\$205,196	\$11	Renovation and protection of historical cultural resources during construction
	Design Contingency	25.00%	\$1,025,978	\$57	Based on conceptual narrative only
Total Direct Construction Costs			\$ 5,027,290	\$279	
	Testing & Inspections	1.00%	\$50,273	\$3	Soils, structural, and material testing requirements during the construction phase of the project
	Standard General Conditions	14.00%	\$703,821	\$39	Standard field general conditions for duration of project, based on previous park projects
	Government General Conditions	5.00%	\$251,364	\$14	Government requirements including, quality assurance and safety requirements
Subtotal NET Construction Cost			\$ 6,032,748	\$335	
	Overhead	12.00%	\$723,930	\$40	Applicable for type and size of construction per previous park projects
	Profit	8.00%	\$482,620	\$27	Applicable for type and size of construction per previous park projects
Estimated NET Construction Cost			\$ 7,239,297	\$402	
	Permits	2.00%	\$144,786	\$8	Local fire requirements, sanitary, water, electrical local utility agency fees
	Bonds	2.50%	\$180,982	\$10	Construction bonding for contractor and subcontractors. The smaller the company the higher the rate.
	Contracting Method Adjustment	5.00%	\$361,965	\$20	Based on full and open competitive contract method
4%	Inflation Escalation (Months)	48	\$1,346,474	\$75	NPS recommended projected annual inflation rate of 4% and insert number of month till midpoint of construction.
Total NET Cost of Construction			\$ 9,273,504	\$515 SF	
Estimated GROSS Cost			\$ 1,669,231	\$93	
	Project Management/CMR Fees	8.00%	\$741,880	\$41	NPS management cost for offsite and onsite services.
	Construction" Contingency	10.00%	\$927,350	\$52	Contingency for the those unforeseen items that occur during construction
Estimated DESIGN Cost			\$ 2,040,171	\$113	
	Compliance	5.00%	\$463,675	\$26	Cost to conduct all compliance requirements for the project.
	Pre-Design (Conceptual Phase)	5.00%	\$463,675	\$26	Cost for Design services during the initial conceptual phase of the project
	Final Design SD Phase to CD Phase	10.00%	\$927,350	\$52	Cost for actual design of the project with the final deliverable of 100% construction documents.
Supplementary Services		2.00%	\$185,470	\$10	Cost for geotechnical reports, hazmat reports, surveying, phase 1 reports, etc. not covered within actual design costs.
Total Estimated PROJECT COST			\$12,982,906	\$721 SF	

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Building #2 consists of complete renovation of existing building interior and exterior with only foundation, structure, exterior closure remaining after initial selective demolition. Building programming to consist of Interpretive space 8,000 sf; Classrooms 4,000 sf; Administration 2,000 sf; and Research Library 1,000 sf.

Building Square Feet **15,000** Wright Company Factory Building #2

BUILDING		PROJECT			COMMENT
Item	System	Ave \$/SF	Total \$	Ave %	
1	Foundations	\$4.80	\$72,000	1.7%	
	a. Standard Foundations	\$2.85	\$42,750	1.0%	Miscellaneous post foundations for structural shoring of existing facility and Miscellaneous slab cut and patching to accommodate new mechanical and electrical distribution
	b. Special Foundations	\$0.00	\$0	0.0%	
	c. Slab on Grade	\$1.95	\$29,250	0.7%	
2	Basement Construction	\$0.00	\$0	0.0%	
	a. Basement Excavation	\$0.00	\$0	0.0%	Not Applicable
	b. Basement Walls	\$0.00	\$0	0.0%	
3	Superstructure	\$18.31	\$274,650	6.5%	
	a. Floor Construction	\$0.00	\$0	0.0%	Miscellaneous reinforcement of existing structure upgrading building to existing structural codes and new mechanical loads.
	b. Roof Construction	\$18.31	\$274,650	6.5%	
4	Exterior Closure	\$24.79	\$371,850	8.8%	
	a. Exterior Walls	\$14.73	\$220,950	5.2%	Patch, repair, tuck point existing exterior masonry, replace windows and doors to operational, sustainable current NPS requirements. Exterior doors include panic hardware with accessible door hardware. Maintenance doors are panel roll up doors with manual operation.
	b. Exterior Windows	\$4.85	\$72,750	1.7%	
	c. Exterior Doors	\$3.21	\$48,150	1.1%	
	b. Exterior Projections	\$2.00	\$30,000	0.7%	
5	Roofing	\$13.47	\$202,050	4.8%	
	a. Roof Coverings	\$11.50	\$172,500	4.1%	Replacement of existing roofing system including new current code insulation requirements as well as drainage system.
	b. Roof Openings	\$0.91	\$13,650	0.3%	
	c. Roof Drainage	\$1.06	\$15,900	0.4%	
6	Interior Construction	\$20.81	\$312,150	7.4%	
	a. Interior Partitions	\$14.42	\$216,300	5.1%	Partitions consist of light gauge metal frame and drywall. Doors are hollow metal frame with solid core doors, and grade 1 door hardware. Interior specialties include bathroom partitions and hardware, corner guards, signage, hooks, & bollards.
	b. Interior Doors	\$5.01	\$75,150	1.8%	
	c. Interior Specialties	\$1.38	\$20,700	0.5%	
7	Staircases	\$0.00	\$0	0.0%	
	a. Stair Construction	\$0.00	\$0	0.0%	Not Applicable
	b. Stair Finishes	\$0.00	\$0	0.0%	
8	Interior Finishes	\$27.33	\$409,950	9.7%	
	a. Wall finishes	\$8.24	\$123,600	2.9%	Wall finishes consist of painted drywall. Ceiling finishes are a

Appendix B: Proposed Management Action Preliminary Cost Estimate

	b. Floor finishes	\$10.28	\$154,200	3.6%	combination painted drywall, acoustical tile system, and exposed painted structure at maintenance. Floor consists of carpet, porcelain tile, and sealed concrete at maintenance.
	c. Ceiling finishes	\$8.81	\$132,150	3.1%	
9	Conveying Systems	\$0.00	\$0	0.0%	
	a. Elevator & lifts	\$0.00	\$0	0.0%	Not Applicable
	b. Other conveying systems	\$0.00	\$0	0.0%	
8	Mechanical Systems	\$62.29	\$934,350	22.1%	
	a. Plumbing	\$22.01	\$330,150	7.8%	All new mechanical systems to meet commercial building needs including restrooms, heating, air conditioning, science gases, and fire protection.
	b. HVAC	\$32.85	\$492,750	11.6%	
	c. Fire Protection	\$7.43	\$111,450	2.6%	
9	Electrical Systems	\$30.79	\$461,850	10.9%	
	a. Service & distribution	\$10.62	\$159,300	3.8%	All new electrical systems to current code to meet power distribution, switchgear, panels, lighting, communication, information technology, and security requirements.
	b. Lighting & branch wiring	\$14.24	\$213,600	5.0%	
	c. Communication & security	\$5.09	\$76,350	1.8%	
	d. Other electrical systems	\$0.84	\$12,600	0.3%	
10	Selective Demolition	\$8.00	\$120,000	2.8%	
	a. Building demolition	\$8.00	\$120,000	2.8%	Remove and dispose of selective interior elements to original structure to allow for complete interior renovation.
	b. Hazardous abatement	\$0.00	\$0	0.0%	
11	Equipment	\$1.68	\$25,200	0.6%	
	a. Other Equipment	\$1.68	\$25,200	0.6%	Appliances, shelving, storage, car wash equipment, etc.
12	Furnishings	\$9.12	\$136,800	3.2%	
	a. Interpretative displays	\$10.00	\$150,000	3.5%	Allowance only for displays, boards, signage, interpretations, etc.
	b. Fixed Furnishing	\$9.12	\$136,800	3.2%	Library shelving, Cabinets, countertops, bathroom fixtures, fire extinguishers, window blinds, corner guards, bollards, etc.

TOTAL BUILDING	\$226	\$3,395,850	80%
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SITWORK		Project			COMMENT
Item	System	Average	Total \$	%/Site	
1	Site Preparation	\$15.00	\$225,000	5.3%	
	a. Site clearing	\$0.88	\$13,200	0.3%	Immediate area around buildings 1 & 2 to be renovated with existing sitework to be replaced. Cost includes demolition and regrading to account for removed structures in the designated area. Hazardous waste remediation will be very significant cost that can range greatly not be fully determined until a full hazmat report is done. An allowance only is shown for soil remediation.
	b. Site demolition & remove	\$2.22	\$33,300	0.8%	
	c. Site earthwork	\$1.90	\$28,500	0.7%	
	d. Hazardous waste remediation	\$10.00	\$150,000	3.5%	
2	Site Improvements	\$22.38	\$335,700	7.9%	
	a. Roadways & parking	\$11.24	\$168,600	4.0%	

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	b. Pedestrian paving	\$2.92	\$43,800	1.0%	Provide new parking, pedestrian paving, site development, landscaping, and irrigation to accommodate new site master plan for newly acquired acreage.
	c. Site development	\$2.39	\$35,850	0.8%	
	d. Landscape and irrigation	\$5.83	\$87,450	2.1%	
3	Site Mechanical Utilities	\$8.47	\$127,050	3.0%	
	a. Water supply & distribution	\$4.12	\$61,800	1.5%	Replacement and upsizing of existing utilities lines to local utility companies main distribution lines to meet new building programing. In includes domestic water, fire water, sanitary, and storm water.
	b. Sanitary sewer system	\$3.26	\$48,900	1.2%	
	c. Storm sewer system	\$1.09	\$16,350	0.4%	
	d. Heating/cooling distribution	\$0.00	\$0	0.0%	
	e. Fuel & industrial distribution	\$0.00	\$0	0.0%	
4	Site Electrical Utilities	\$10.17	\$152,550	3.6%	
	a. Electrical distribution	\$5.15	\$77,250	1.8%	Replacement and upsizing of existing electrical primary, secondary, tele data, and transformer to building. Site lighting to be minimal impact to night sky including downlight wall packs and light bollards.
	b. Site lighting	\$3.12	\$46,800	1.1%	
	c. Tele data distribution	\$1.90	\$28,500	0.7%	

TOTAL SITEWORK	\$56	\$840,300	20%
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TOTAL BUILDING & SITE	\$282	\$4,236,150	100%
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Subtotal Direct Construction Costs	Percent	\$ 4,236,150	\$282	Comment
Published Location Factor	-11.50%	-\$487,157	-\$32	Based on Dayton, Ohio
Remoteness Factor	0.00%	\$0	\$0	Based on Dayton, Ohio
Federal Wage Rate Factor	0.00%	\$0	\$0	Using the attached Wage Rate Calculator determine if additional costs are needed.
State & Local Taxes	8.00%	\$169,446	\$11	State sales taxes calculated on materials only
Historic Preservation Contingency	5.00%	\$211,808	\$14	Renovation and protection of historical cultural resources during construction
Design Contingency	25.00%	\$1,059,038	\$71	Based on conceptual narrative only
Total Direct Construction Costs		\$ 5,189,284	\$346	
Testing & Inspections	1.00%	\$51,893	\$3	Soils, structural, and material testing requirements during the construction phase of the project.
Standard General Conditions	14.00%	\$726,500	\$48	Standard field general conditions for duration of project, based on previous park projects
Government General Conditions	5.00%	\$259,464	\$17	Government requirements including, quality assurance and safety requirements
Subtotal NET Construction Cost		\$ 6,227,141	\$415	
Overhead	12.00%	\$747,257	\$50	Applicable for type and size of construction per previous park projects
Profit	8.00%	\$498,171	\$33	Applicable for type and size of construction per previous park projects
Estimated NET Construction Cost		\$ 7,472,569	\$498	
Permits	2.00%	\$149,451	\$10	Local fire requirements, sanitary, water, electrical local utility agency fees
Bonds	2.50%	\$186,814	\$12	Construction bonding for contractor and subcontractors. The smaller the company the higher the rate.
Contracting Method Adjustment	5.00%	\$373,628	\$25	Based on full and open competitive contract method
4% Inflation Escalation (Months)	48	\$1,389,861	\$93	NPS recommended projected annual inflation rate of 4% and insert number of month till midpoint of construction
Total NET Cost of Construction		\$ 9,572,324	\$638 SF	

Estimated GROSS Cost		\$ 1,723,018	\$115	
Project Management/CMR Fees	8.00%	\$765,786	\$51	NPS management cost for offsite and onsite services.

Appendix B: Proposed Management Action Preliminary Cost Estimate

Construction" Contingency	10.00%	\$957,232	\$64	Contingency for the those unforeseen items that occur during construction
Estimated DESIGN Cost		\$ 2,105,911	\$140	
Compliance	5.00%	\$478,616	\$32	Cost to conduct all compliance requirements for the project.
Pre-Design (Conceptual Phase)	5.00%	\$478,616	\$32	Cost for Design services during the initial conceptional phase of the project
Final Design SD Phase to CD Phase	10.00%	\$957,232	\$64	Cost for actual design of the project with the final deliverable of 100% construction documents.
Supplementary Services	2.00%	\$191,446	\$13	Cost for geotechnical reports, hazmat reports, surveying, phase 1 reports, etc. not covered within actual design costs.
Total Estimated PROJECT COST		\$13,401,254	\$893 SF	

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APPENDIX C: CATEGORICAL EXCLUSION



National Park Service
U.S. Department of the Interior

PEPC#: 68693
PMIS#:

CATEGORICAL EXCLUSION

- ☒ Project-Specific
☐ Programmatic

A. Background

Park: Dayton Aviation Heritage National Historical Park

Proposed Action/Project Name: General Management Plan Amendment

Location of Proposed Action: Ohio

- ☒ Entire Park
☐ Park Unit:

Description of Proposed Action: An initial general management plan (GMP) for the park was finalized in 1997, and a subsequent GMP amendment was completed in 2005. In 2009, legislation (Public Law 111-11 March 30, 2009) added two new areas to the park's legislated boundary—Hawthorn Hill and the Wright Company Factory. The National Park Service (NPS) is currently in the process of acquiring a portion of the latter. The National Park Service prepared an updated general management plan amendment to provide management guidance for these new areas.

The new amendment also takes a fresh look at the management direction for other areas of the park. Changes in the priorities of the legislated partners and the operational capacity of park staff necessitate this comprehensive planning. The general management plan amendment further defines values, desired conditions, and strategies for making management decisions regarding resources and providing for visitors. Elements of the 1997 general management plan and 2005 general management plan amendment have provided the park and partners with management direction in the past, but portions of that guidance no longer apply, as park conditions have changed.

To address the issues described above, the GMP amendment:

- meets the general management planning requirements for the new areas of the park, Hawthorn Hill, and Wright Company Factory;
- accounts for changes in partner priorities and staff operational capacity;

- updates zoning and desired conditions for the park's historic buildings and cultural landscapes to guide management strategies and approaches; and
- addresses the need for an adequate maintenance facility.

B. Stipulations

The interdisciplinary team has reviewed the Proposed Action and recommends the following stipulations. Appropriate compliance will continue as the GMP amendment is implemented and planning and design for individual elements are underway.

Park staff and any contractors undertaking future proposed actions will conduct appropriate additional compliance and consider stipulations at that point.

Natural Resources:

Pending further development of the proposed actions, additional compliance for natural resources could be required under the Clean Water Act, Endangered Species Act, and/or applicable director's orders. Compliance with these regulations would occur as necessary.

For the GMP amendment to be adaptive to changing conditions, the National Park Service would regularly review the status of threatened and endangered species and revise conservation measures as needed. Any plans or actions that include changes to the types, levels, or locations of visitor use that may cause (or contribute to cumulative) impacts to Threatened and Endangered Species would be subject to consultation with US Fish and Wildlife Service. Future implementation projects resulting in site specific plans, such as transportation infrastructure, will include conservation measures for threatened and endangered species, following appropriate review and consultation with the US Fish and Wildlife Service.

Cultural Resources:

Future potential impacts on the park's cultural resources will be addressed under the provisions for assessing effects outlined in 36 CFR Part 800, regulations issued by the Advisory Council on Historic Preservation implementing Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA; 54 USC 306108). Under the "Criteria of Effect" (36 CFR Part 800.9(a), federal undertakings are considered to have an effect when they alter the character, integrity, use of cultural resources, or the qualities that qualify a property for listing in the National Register of Historic Places. Compliance with these laws and associated policies will be accomplished through specific project consultation with the Ohio State Historic Preservation Officer, Tribal Historic Preservation Officers, and other consulting parties.

The Visitor Experience:

Pending further development of the proposed actions, stipulations regarding visitor health, safety, and experience will be considered and applied as necessary.

C. Mitigation

The interdisciplinary team has reviewed the Proposed Action and recommends the following mitigations. The proposed actions include general management guidance for areas of the park

and do not include site-specific proposals at this time. Therefore, there are currently no recommended mitigations. Appropriate compliance will continue as the general management plan amendment is implemented and planning and design for individual elements are underway.

Park staff and any contractors undertaking future proposed actions will conduct appropriate additional compliance and consider mitigations at that point.

D. Approved General Management Plan or Other Plan Conformance

GMP/Plan Name: Dayton Aviation Heritage General Management Plan, Interpretive Plan, National Historical Park, Ohio

Date of Completion: 1997 and amended in 2005

In 2009, legislation (Public Law 111-11 Mar. 30, 2009) added two new areas to the park's legislated boundary—Hawthorn Hill and the Wright Company Factory, and the National Park Service is currently in the process of acquiring a portion of the latter. The National Park Service prepared this updated general management plan amendment to provide management guidance for these new areas and also take a fresh look at the management direction for other areas of the park.

E. Compliance with NEPA

The Proposed Action is categorically excluded from further documentation under the National Environmental Policy Act (NEPA) in accordance with 43 CFR §1508.4. This categorical exclusion (CE) is appropriate in this situation because there are no extraordinary circumstances potentially having significant effects on the environment. The proposed action has been reviewed, and none of the extraordinary circumstances described in 43 CFR §1508.4 apply.

CE Citation: B.1 Changes or amendments to an approved plan when such changes would cause no or only minimal environmental impact.

CE Justification:

This project is adequately covered under the above-cited categorical exclusion. Categorical exclusion B.1 was selected for the following justifications:

- The proposed actions include general management guidance for areas of the park and do not include site-specific proposals at this time.
- The following are clarifications and planning content that were added to the plan. The changes will result in no environmental impact. Therefore, they fall under this categorical exclusion as a change to an approved plan that has no environmental impact.
 - The plan proposes potential future management actions that the park would pursue. These actions would require additional compliance and partnership engagement or other actions prior to implementation.
 - The plan defines the management vision with the National Park Service serving as the focal point for information on the Wright Brothers and Paul Laurence

- Dunbar, while continuing collaboration and cooperation with park legislative partners and stakeholders.
- The plan proposes desired future conditions and management zones as aspirational statements for resource conditions, visitor experiences and opportunities, and facilities and services that the National Park Service strives to achieve and maintain in a particular area.
 - The 1997 general management plan interpretive plan (amended in 2007) provides guidelines and strategies for the management and use of the park. The plan provides direction for resource protection, land use, visitor use and interpretation, visitor use/developments, and park operations. The general management plan outlines the steps that the National Park Service and its legislated partners should take in developing facilities and enhancing the visitor experience at the park. The plan describes the collaborative approach of the partnership, the visitor experience, neighborhood outreach, transportation and circulation, and general costs for implementing the plan. The 2007 general management plan amendment/environmental impact statement focused on visitor experience, facility use, and partnerships with the region and community within and near the Wright Cycle Company complex. The plan also addressed connections, both travel and interpretive, between the Huffman Prairie Flying Field Interpretive Center at the Wright Memorial and nearby Huffman Prairie Flying Field.
- The following actions are changes to the approved GMP amendment (NPS 2007). These changes will have minimal environmental impacts, as described in the environmental screening form. Therefore, these actions are appropriately covered under this categorical exclusion, since these changes are to an approved plan and have a minimal environmental impact.
 - Management zoning was updated and/or reaffirmed for existing locations. Management zones describe proposed uses for a particular geographic area to achieve the desired future conditions. This included a shift from a two-zone framework in the GMP amendment (NPS 2007) to a four-zone framework. The additional zones were needed because the two zones were not comprehensive enough to cover the whole park, including new areas that were added since the previous GMP amendment (NPS 2007) was completed. To define a vision for the entire park, more zones were needed. Changes include focusing on preserving historic resources with integrity and conveying a historic feel at Wright Cycle Company and Paul Laurence Dunbar House. In addition, the Administrative Zone was added to cover areas that focused on NPS operations and maintenance activities. Finally, slight additions were made to the Historic Landscapes Zone, and these are shown in italics in the plan to distinguish it from the Authentic Zone and provide clarity for management. These changes are consistent with current zoning; however, applied to new areas and where new zoning was developed, it is consistent with current use.
 - Please see table 3 for a comparison of this proposed amendment to the 1997 general management plan and 2007 amendment. Consistent with recent CEQ §

1501.11, this categorical exclusion tiers from the previous amendment (NPS 2007) completed for the park's general management plan.

Under the current proposed action, no extraordinary circumstances apply (see the "Screening for Extraordinary Circumstances" section below). Therefore, a categorical exclusion is the appropriate means of documentation for this project.

F. Screening for Extraordinary Circumstances

The interdisciplinary team has reviewed the Proposed Action and prepared the following responses in regard to screening for extraordinary circumstances.

Screening for Extraordinary Circumstances: Will this project...		Yes	No
A	Have significant adverse effects on public health or safety?	–	X
	The management strategies and general actions described in the proposed action would have a beneficial impact to public health and safety. Any new visitor use facilities (which would be evaluated in separate NEPA actions) would be designed and constructed to improve public health and safety. Public health and safety would be reevaluated periodically during implementation of the proposed action and actions taken accordingly.		
B	Have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (Executive Order 11990); floodplains (Executive Order 11988); national monuments; migratory birds; and other ecologically significant or critical areas?	–	X
	The proposed action identifies management strategies and general actions for visitors to safely use, experience, and enjoy the park while concurrently protecting natural and cultural resources. The Historic Landscape Zone was established under this amendment and applied to those areas with a focus on preserving outdoor historic landscapes. This zone is applied to areas where the influence of historic events is conveyed and there is a low tolerance for impacts on resources. In addition, the Authentic Zone was established under this amendment and applied to those areas focused on preserving historic resources with the provision of visitor opportunities to experience and interact with those authentic historic resources. Overall, the changes to the GMP zone descriptions will not have any significant impacts on natural or cultural resources.		
C	Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources (NEPA section 102(2)(E))?	–	X
	The plan proposed desired future conditions and management zones as aspirational statements for resource conditions, visitor experiences and opportunities, and facilities and services that the National Park Service strives to achieve and maintain in a particular area. Management zone updates were tiered from the past GMP amendment (2007). The GMP amendment proposed action does not result in highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources. Potential future management actions identified in the amendment would require additional planning and compliance before being implemented.		
D	Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks?	–	X

Screening for Extraordinary Circumstances: Will this project...		Yes	No
	The proposed action would implement management strategies that would not have highly uncertain and potentially significant environmental effects nor involve unique or unknown environmental risks.		
E	Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects?	–	X
	The proposed action would not establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects.		
F	Have a direct relationship to other actions with individually insignificant environmental impacts [that could lead to significant impacts as a result of other foreseeable actions]?	–	X
	The issue regarding cumulative impacts has been eliminated from consideration by the Council on Environmental Quality as part of a new rule that came into effect September 14, 2020; however, reasonably foreseeable actions and trends have been incorporated in this analysis. The interdisciplinary team reviewed the project and incorporated stipulations into the project design to further minimize any potential for off-site impacts that could contribute to adverse impacts from other projects in the area.		
G	Have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places as determined by either the NPS or SHPO?	–	X
	The proposed action does not have the potential to significantly impact properties listed or eligible for listing on the National Register of Historic Places. Site-specific actions taking place in accordance with strategies described in the proposed action would require stand-alone analysis and documentation under NEPA and the National Historic Preservation Act.		
H	Have significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species, or have significant impacts on designated Critical Habitat for these species?	–	X
	The proposed action does not have the potential to significantly impact species listed or proposed to be listed on the List of Endangered or Threatened Species, nor have significant impacts on designated Critical Habitat for those species. Site-specific actions taking place in accordance with strategies described in the proposed action would require stand-alone analysis and documentation under NEPA and the Endangered Species Act.		
I	Violate a Federal law, or a State, local, or tribal law or requirement imposed for the protection of the environment?	–	X
	The proposed action would not violate a federal, state, or local law or requirement imposed for the protection of the environment. Site-specific actions taking place in accordance with strategies described in the proposed action would require stand-alone analysis, documentation and permitting under NEPA and relevant federal, state, and local laws.		
J	Have a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898).	–	X
	The proposed action would not have a disproportionately high and adverse effect on low income or minority populations. While local residents and park visitors include minority and low-income populations, these populations would not be disproportionately affected by activities associated with the implementation of the proposed action.		

Screening for Extraordinary Circumstances: Will this project...		Yes	No
K	Limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites?	–	X
	The proposed action would not limit access to or ceremonial use of Native American sacred sites on federal lands by Native American religious practitioners or adversely affect the physical integrity of such sacred sites		
L	Contribute to the introduction, continued existence, or spread of noxious weeds or non-native species known to occur in the area or could actions promote the introduction, growth, or expansion of the range of such species?	–	X
	The proposed action would not contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area. Best management practices would be followed to avoid the introduction and spread of invasive species during implementation of ongoing maintenance activities discussed in the proposed action.		

All of the above questions must be answered negatively before the Categorical Exclusion may be approved. If any of the above questions warrant a "yes", additional stipulations should be considered, or an Environmental Assessment should be prepared.

G. Approval and Contact Information

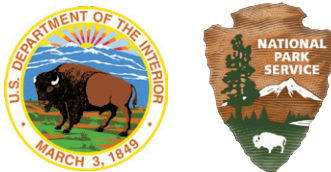
Based on the description of the Proposed Action, the stipulations associated with the Proposed Action and the environmental impact information given to me by my interdisciplinary team, I am categorically excluding this Proposed Action from further NEPA analysis. No extraordinary circumstances or conditions apply from Section 3-5 of the NPS DO-12 NEPA Handbook, and the action is fully described in within this document.

KENDELL THOMPSON Digitally signed by KENDELL
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Date: 2022.09.14 10:36:30 -04'00'

*Kendell Thompson,
Superintendent*

Signature

Date



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



Dayton Aviation Heritage National Historical Park General Management Plan Amendment

May 2022