National Park Service
Cultural Landscapes Inventory

2025



Hopewell Furnace NHS Landscape

Hopewell Furnace National Historic Site

Table of Contents

Introduction

General Information

Concurrence Information

Geographic Information and Location Map

Management Information

National Register Information

Chronology & Physical History

Analysis & Evaluation of Integrity

Uses

Condition

Treatment

Bibliography & Supplemental Information

Introduction

The Cultural Landscape Inventory (CLI)

The Cultural Landscape Inventory (CLI) is a comprehensive inventory of all cultural landscapes in the National Park System. Landscapes that are listed, or eligible for listing, on the National Register of Historic Places, or are otherwise managed as cultural resources and in which the National Park Service has, or plans to acquire, legal interest are included in the inventory. The CLI identifies and documents each landscape's location, size, physical development, landscape characteristics, character-defining features, and condition. Cultural landscapes have approved CLIs when concurrence with the findings is obtained from the park superintendent and all required data fields are entered into the Cultural Resources Information System (CRIS-CL) database. In addition, for landscapes not currently listed on the National Register and/or without adequate documentation, concurrence is required from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or the Keeper of the National Register.

Scope of the CLI

The information contained within the CLI is compiled from primary and secondary sources and through on-site surveys of the landscape. The level of investigation is dependent upon scoping the need for information. The baseline information collected provides a comprehensive look at the historical development and significance of the landscape. Documentation and analysis of the existing landscape identifies character-defining characteristics and features and allows for an evaluation of the landscape's integrity and an assessment of the landscape's condition. The CLI also includes historic maps, drawings, and images; photographs of existing conditions; and a site plan that indicates major features. The CLI documents the existing condition of park landscape resources and identifies impacts, threats, and measures to stabilize condition. This information can be used to develop strategies for improved stewardship. Unlike a Cultural Landscape Report (CLR), the CLI does not provide management recommendations or treatment guidelines for the cultural landscape, but it may identify stabilization measures.

The Cultural Resources Information System (CRIS)

CRIS is the National Park Service's database of cultural resources on its lands, consisting of archeological sites, historic structures, ethnographic resources, and cultural landscapes. Cultural Resources Inventory System (CRIS) replaces three legacy inventory systems: ASMIS (archeology), CLI (cultural landscapes), and LCS (historic structures); and it reinstates the former ERI (ethnographic resources). This Cultural Landscape Inventory document reflects the information in a corresponding CRIS Cultural Landscape record.

Statutory and Regulatory Foundation

The legislative, regulatory, and policy directives for conducting and maintaining the CLI within CRIS are:

- National Historic Preservation Act (NHPA) of 1966 (16 USC 470h-2(a)(1)) Sec. 110
- Executive Order 13287: Preserve America, 2003. Sec. 3 (a and c)
- Secretary of the Interior's Standards and Guidelines for Federal Agency Historic Preservation Programs
- Pursuant to the National Historic Preservation Act, 1998. Std. 2
- Cultural Resource Management Guideline, 1997, Release No. 5, page 22; issued pursuant to Director's Order #28 (DO-28)

The NHPA requires the identification, evaluation, and nomination of historic properties to the National Register of Historic Places and the maintenance and expansion of an inventory of cultural resources. DO-28 requires a cyclic assessment of the current condition of cultural landscapes based on an assessment interval, with a default of six years.

Use

Beyond fulfilling legal and policy requirements, park staff can use the Cultural Landscape Inventory in the following ways:

- To learn about park cultural landscapes (all staff)
- To inform management decisions (park managers)
- To inform project planning and development (park managers, facility managers, project managers, compliance specialists)
- To monitor the condition of the cultural landscape and take measures to protect its significance and integrity (cultural resource managers, facility managers)
- To recognize the stabilization and treatment needs of landscape features and plan work within cultural landscapes to address the needs (facility managers, cultural resource managers)
- To understand the cultural value of natural systems in a cultural landscape (natural resource managers)
- To create programming and educational materials based on site history (interpretation and education specialists)
- To recognize impacts within cultural landscapes and enforce protection measures (visitor and resources protection staff)

General Information

Property Level and CLI Numbers

Inventory Unit Name: Hopewell Furnace NHS Landscape

Resource Classification: Cultural Landscape

CLI Identification Number: 300091

Parent Landscape: 300091

Inventory Status: Complete

Park Information

Park Name: Hopewell Furnace National Historic Site

Alpha Code: HOFU

Park Organization Code: 4430

Park District: HOFU

Region: Northeast

Restricted: Yes

Landscape Description:

The Hopewell Furnace National Historic Site (NHS) occupies the timbered and agrarian hills of the Pennsylvania Piedmont along the border of Union Township, Berks County, and Warwick Township, Chester County. While the park includes less than twenty percent of the property historically associated with Hopewell Furnace during the eighteenth and nineteenth centuries, it encompasses the furnace's core buildings and structures, as well as outlying farm buildings and agricultural fields that were once part of the furnace community.

The 848-acre park includes 140 acres of fields, pastures, and meadows, and 635 acres of woodland. At the center of the park is a hamlet called Hopewell Furnace Village, which is anchored by a furnace complex comprised of multi-story industrial resources and ruins dating to 1771 and later. The Ironmaster's House, a prominent, L-shaped stone and stucco building, and associated outbuildings stand north of the furnace complex and are surrounded by earthen terraces and lawns dotted with mature shade trees. To the southeast of the house are three tenant houses and a boarding house, formerly the homes of furnace workers and their families, and later, park staff. Resources are linked by earthen and gravel-surfaced roads built between 1757 and 1815. Within the village are former raceways that were fed by three streams, and in turn powered the furnace. To the north and west of the village core are the park's visitor center, maintenance buildings, and parking lots dating to the 1950s. An entrance road connects these facilities to PA Route 345 east of the village core.

Forests and agricultural land surrounding the village core contains additional historic resources, including the Thomas Lloyd, Harrison Lloyd, Nathan Care, and John Church farmsteads, each of which include various support buildings and structures accessed by farm lanes and surrounded lawns, trees, and fences. There are also ruins of several other farmsteads. Historic buildings associated with the park's Civilian Conservation Corps (CCC) camp remain, as do stone fireplaces, water fountains, footbridges, and a wood and stone shelter at the Baptism Creek Picnic Area, built in the late 1930s in the woods northeast of the village core. Lastly, the Bethesda Baptist Church and cemetery stand near the far eastern corner of the park. Set within lawns and a few trees, the small ca.1782 stucco and stone church is next to a walled cemetery, where the earliest gravestone dates to 1807.

Hopewell Furnace NHS is surrounded on its north, west, and south sides by French Creek State Park, which is owned

and operated by the Commonwealth of Pennsylvania. The NHS also shares its southern boundary with the Pennsylvania State Game Lands and the Crow's Nest Preserve. Many of these surrounding lands were historically owned by the furnace company.

SIGNIFICANCE SUMMARY

The Hopewell Furnace NHS is significant under National Register of Historic Places Criterion A (events), C (design/construction), and D (archeology) under multiple areas of significance. In the area of Industry the park preserves the late eighteenth and nineteenth century setting of an iron-making village, including the charcoal-fueled furnace and its natural and cultural resources, and illustrates the essential role of industrialization in the growth of the early United States. In the area Military the park is associated with the American Revolution, which stems through the furnace's finished products, as well as the activities of its original owner, Mark Bird. In the area of Conservation the park is associated with important national trends in conservation and management of rural historic landscapes through the various stages in the development of the field of historic preservation. In the area of Social History the park is significant for its ability to provide information about the organization of labor during the furnace's operation in the first eight decades of the nineteenth century. In the area of Architecture the park is the site of the Ironmaster's House, which illustrates changes in aesthetic values and style from the time of its original construction in ca.1773 until the closing of the furnace in 1883. Lastly, the in the area of Archeology (Historic, Non-Aboriginal) the park is significant as a uniquely well-preserved complex of industrial and domestic sites that together constitute a late eighteenth- through nineteenth-century Pennsylvania iron furnace and its rural community, that has yielded, and may likely further yield, information important in history. The park's period of significance is 1771-1966, beginning with construction of the blast furnace and ending with completion of renovation work undertaken through the NPS's Mission 66 development program.

ANALYSIS AND EVALUATION SUMMARY AND CONDITION

The historic integrity of the Hopewell Furnace NHS Landscape is evaluated by comparing landscape characteristics and features present during the period of significance, 1771-1966, with the existing conditions as assessed in 2023. Many landscape characteristics and features from the period of significance remain today. The National Park Service's conservation of the park's historic resources and landscape over the course of 85 years has played a seminal role in the retention of the park's historic rural and industrial setting. This began with preservation, rehabilitation, and restoration projects undertaken by the Civilian Conservation Corps (CCC). The furnace complex, Ironmaster's House, and associated historic resources are extant, preserving the historic spatial relationships. The tenant village and the several outlying farmsteads that contributed to the success of the furnace in the eighteenth and nineteenth centuries also remain, as does the historic Bethesda Baptist Church and its walled cemetery. The historic road system has been returned to its nineteenth-century appearance, and CCC-constructed trails remain popular to visitors. The forested portions of the park (which had expanded between the final furnace blast in 1883 and the inauguration of federal ownership in 1935) have only minimally changed during the past century, representing both the furnace's reliance on natural systems and features and the park's introduction of recreational land uses. Stream-fed raceways still track through the landscape, while earthen terraces remain from extensive gardens. The Mission-66 program brought construction of the visitor center and parking, and staff residences and maintenance buildings to improve visitor interpretation and support park operations.

Since 1966 some landscape characteristics and features at Hopewell Furnace NHS have changed. Several resources have been renovated during the past 50 years, and the Blacksmith Shop was restored following a fire in the 1980s. New constructions have been the tenant house privy and small storage buildings, the latter located away from the park's historic areas. The park recently rehabilitated the CCC-constructed picnic shelter at the Baptism Creek Picnic Area. The terraced gardens are now grass save for a small demonstration plot. Also largely absent are small-scale features associated with the everyday lives of furnace workers and farmers.

Condition:
The overall condition of the Hopewell Furnace NHS Landscape is evaluated as "Fair." The property shows clear evidence of minor disturbances and deterioration by natural and/or human forces, and that some degree of corrective action is needed within 3-5 years to prevent further harm to its cultural and/or natural values. If left without the appropriate corrective action, the cumulative effect of the deterioration on many of the landscape characteristics will cause the property to degrade to a poor condition.

Preservation maintenance and/or use must be combined with corrective action to halt deterioration. The primary

concerns regarding the landscape are the intrusion of woody plants and invasive species into fields and along boundary walls and fences; and flooding and erosion along stream beds, roads, and walls; and damage and deterioration of some historic features at the Baptism Creek Picnic Area.

Landscape Hierarchy Description:

Hopewell Furnace National Historic Site is classified as a landscape in the Cultural Resource Inventory System (CRIS-CL) database.

Landscape Type:

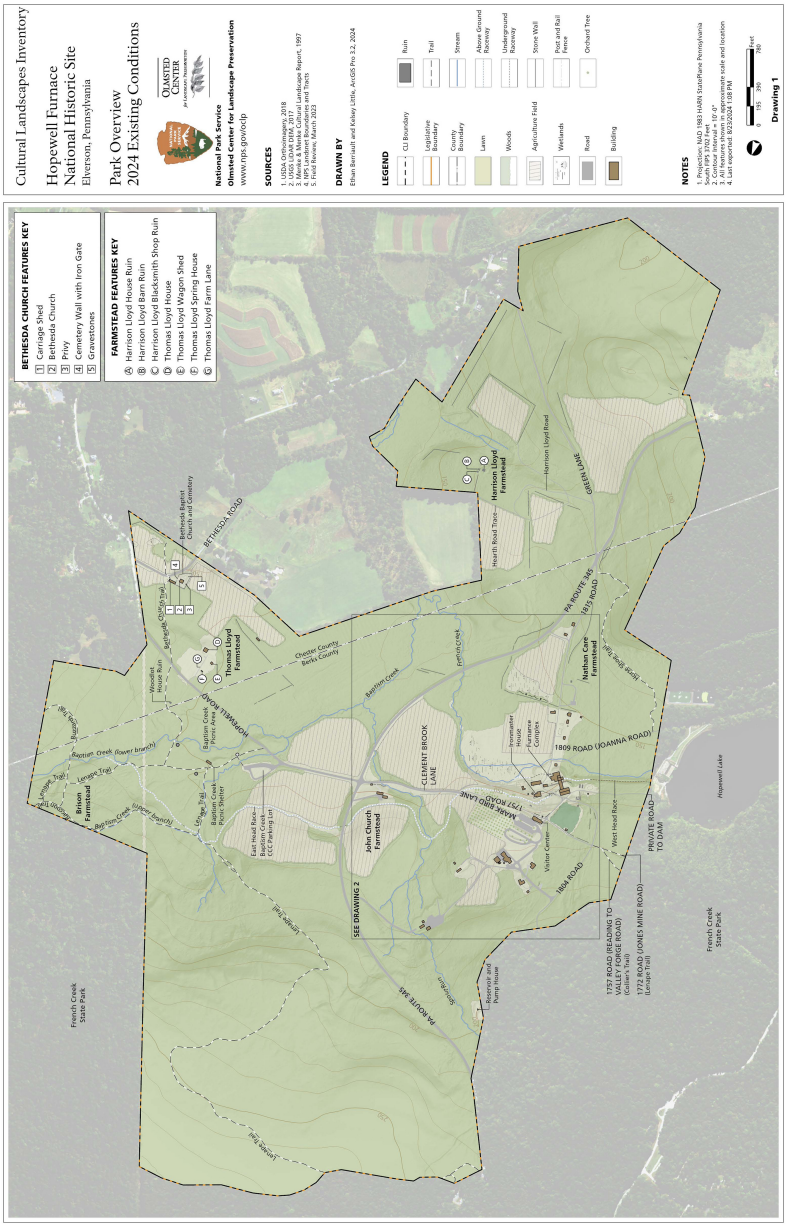
Historic Site

Historic Vernacular Landscape

Other Names:

Other Name:	French Creek Recreation Demonstration Area	**Other Name Type:**	Historic
Other Name:	Hopewell	**Other Name Type:**	Historic
Other Name:	Hopewell Furnace	**Other Name Type:**	Both Current And Historic
Other Name:	Hopewell Furnace National Historic Site	**Other Name Type:**	Current
Other Name:	Hopewell Village	**Other Name Type:**	Historic
Other Name:	Hopewell Village National Historic Site	**Other Name Type:**	Historic

Site Plan



Site map, Drawing 1 of 2.



Site map, Drawing 2 of 2.

Concurrence Information

Concurrence Status:

Park Superintendent Concurrence: Yes

Park Superintendent Date of Concurrence: 04/08/2025

Completion Status Explanatory Narrative:

A draft Cultural Landscape Inventory was completed in 2003 by Cheryl Sams O'Neill with the Olmsted Center for Landscape Preservation, based on the findings of the 1997 Cultural Landscape Report completed by CLR Cultural Resources Group and Menke & Menke Landscape Architects. The CLI was not finalized. In March 2023 Jennifer Hanna, Historical Landscape Architect with the Olmsted Center for Landscape Preservation in Boston, MA, conducted field photographic documentation. A draft was completed in summer 2024. Mapping was completed by Ethan Berriault, GIS Technician and Kelsey Little, GIS Specialist, with the Olmsted Center. The draft CLI was reviewed Jeff Killion, Regional Cultural Landscape Inventory Coordinator, at the Olmsted Center. The cultural resource contact for Hopewell Furnace National Historic Site is Amy Ruhe, Chief, Planning and Resource Management, Valley Forge NHP and Hopewell Furnace NHS, who may be reached at amy_ruhe@nps.gov or 610-783-1036.

Concurrence Graphic Information:

Attachment File Path

CULTURAL LANDSCAPES INVENTORY
CERTIFICATION FORM

Hopewell Furnace NHS Landscape
Hopewell Furnace National Historic Site

Hopewell Furnace National Historic Site certifies the findings of the Cultural Landscape Inventory (CLI) for the Hopewell Furnace NHS Landscape, including the following specific components:

MANAGEMENT CATEGORY: Must Be Preserved and Maintained

CONDITION ASSESSMENT: Fair

Good: indicates the inventory unit shows no clear evidence of major negative disturbance and deterioration by natural and/or human forces. The inventory unit's cultural and natural values are as well preserved as can be expected under the given environmental conditions. No immediate corrective action is required to maintain its current condition.

Fair: indicates the inventory unit shows clear evidence of minor disturbances and deterioration by natural and/or human forces, and some degree of corrective action is needed within 3-5 years to prevent further harm to its cultural and/or natural values. If left to continue without the appropriate corrective action, the cumulative effect of the deterioration of many of the character defining elements will cause the inventory unit to degrade to a poor condition.

Poor: indicates the inventory unit shows clear evidence of major disturbance and rapid deterioration by natural and/or human forces. Immediate corrective action is required to protect and preserve the remaining historical and natural values.

The Cultural Landscape Inventory for the Hopewell Furnace NHS Landscape is hereby approved and accepted.

Digitally signed by ROSALYN FENNELL
Date: 2025.04.08 14:52:50 -04'00'

Superintendent, Hopewell Furnace National Historic Site Date

Park concurrence form, April 8, 2025.

Geographic Information

State and County:

State	County
Pennsylvania	Berks County
Pennsylvania	Chester County

Size (Acres): 848.06

Land Tract Number(s)

Tract 01-101, 322.41 acres (Deed USA, D-2);
Tract 01-102, 206.09 acres (Deed USA, D-1);
Tract 01-203, 1.90 acres (Deed USA, D-1);
Tract 01-104, 317.65 acres (Deed USA, D-2).

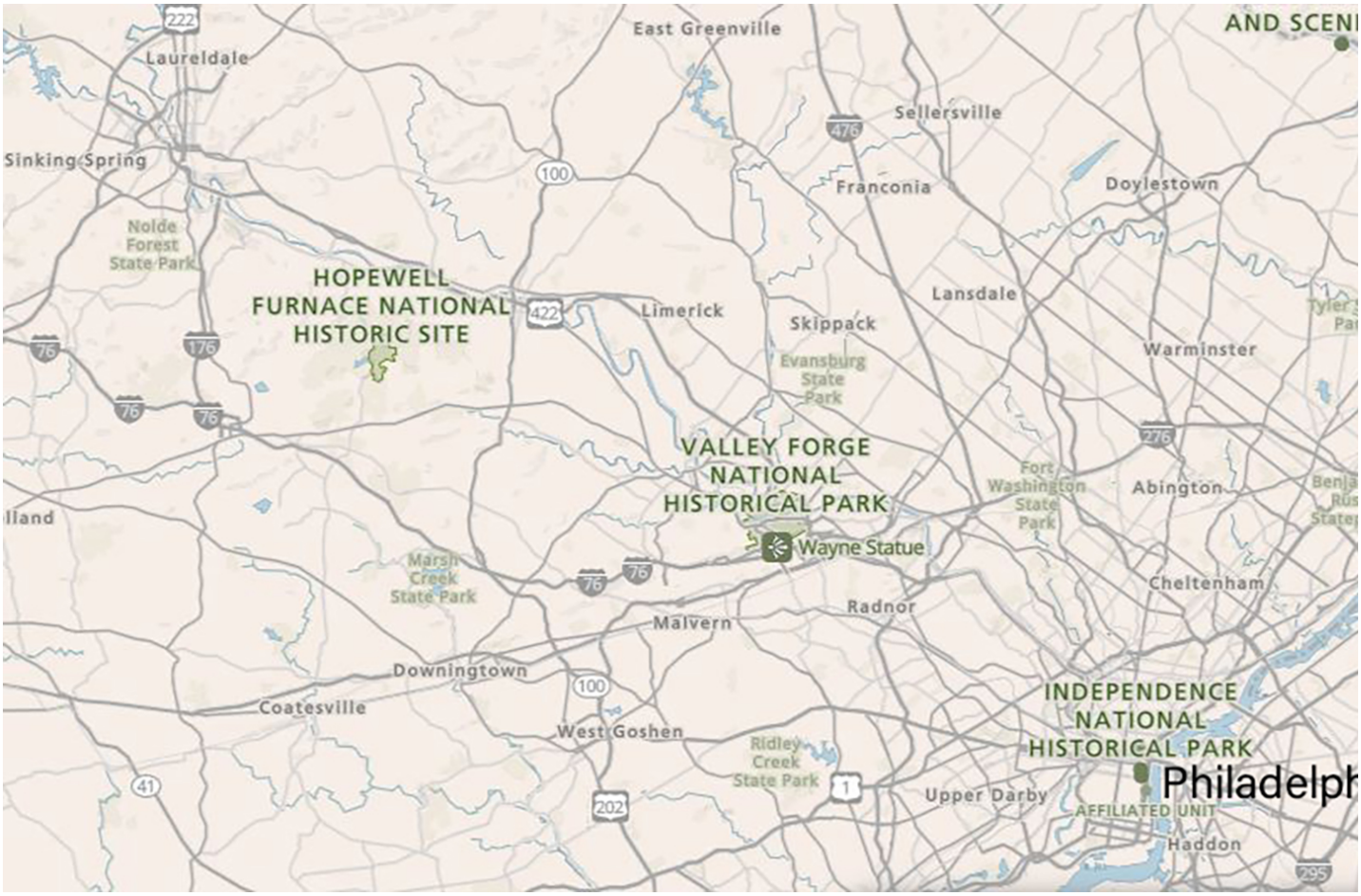
Boundary Description:

Hopewell Furnace National Historic Site landscape boundary begins at the intersection of Shed Road and PA Route 345 north of the Visitor's Center. It then runs parallel to PA Route 345, approximately 1,000 feet before turning SSW to follow Park Road for roughly 2,500 feet. From there the property line heads SSE in an irregular line to the northeast corner of State Game Lands #43. Turning east, the boundary runs approximately 2,000 feet, coming to the intersection of Harrison Lloyd Road and Bethesda Road. From this intersection it turns and runs back NW parallel to Harrison Lloyd Road for 500 feet, before turning NNE and heading towards French Creek roughly 1,350 feet. The boundary parallels French Creek nearly 800 feet before turning WSW for 750 feet to a point near the site of the Harrison Lloyd House Ruins. From there it runs NNW for 650 feet before heading NNE and running approximately 1,750 feet parallel to the Berks/Chester County Line. The property line then turns ESE, running 1,800 feet to encompass the Bethesda Church before heading NNW along Hopewell Road for nearly 1,100 feet. Next the boundary runs roughly NE for 600 feet before turning NNW approximately 1,000 feet to the confluence of the Berks/Chester County Line and the Raccoon Trail. From there it turns WNW for 1,500 feet before turning NNW 2,700 feet to the Mill Creek Trail. Finally, the property line runs parallel to the Mill Creek Trail approximately 3,000 feet to its point of origin at Shed Road and PA Route 345. (PHSO 2002)

Boundary Coordinates

Source	Type of Point	Latitude	Longitude	Narrative
Other	Area	40.21633	-75.775807	Google Earth
Other	Area	40.219682	-75.763955	Google Earth
Other	Area	40.210886	-75.760446	Google Earth
Other	Area	40.210079	-75.755692	Google Earth
Other	Area	40.206506	-75.754854	Google Earth
Other	Area	40.206036	-75.757804	Google Earth
Other	Area	40.20489	-75.757978	Google Earth
Other	Area	40.201991	-75.75595	Google Earth
Other	Area	40.203874	-75.763333	Google Earth
Other	Area	40.200633	-75.768737	Google Earth
Other	Area	40.198011	-75.767852	Google Earth
Other	Area	40.199205	-75.764743	Google Earth
Other	Area	40.197921	-75.763062	Google Earth
Other	Area	40.195552	-75.764123	Google Earth
Other	Area	40.196504	-75.765722	Google Earth
Other	Area	40.191324	-75.766092	Google Earth
Other	Area	40.189459	-75.769898	Google Earth
Other	Area	40.190864	-75.773868	Google Earth
Other	Area	40.194024	-75.773697	Google Earth
Other	Area	40.19552	-75.775278	Google Earth
Other	Area	40.207988	-75.77722	Google Earth
Other	Area	40.210001	-75.774401	Google Earth
Other	Area	40.21361	-75.774666	Google Earth

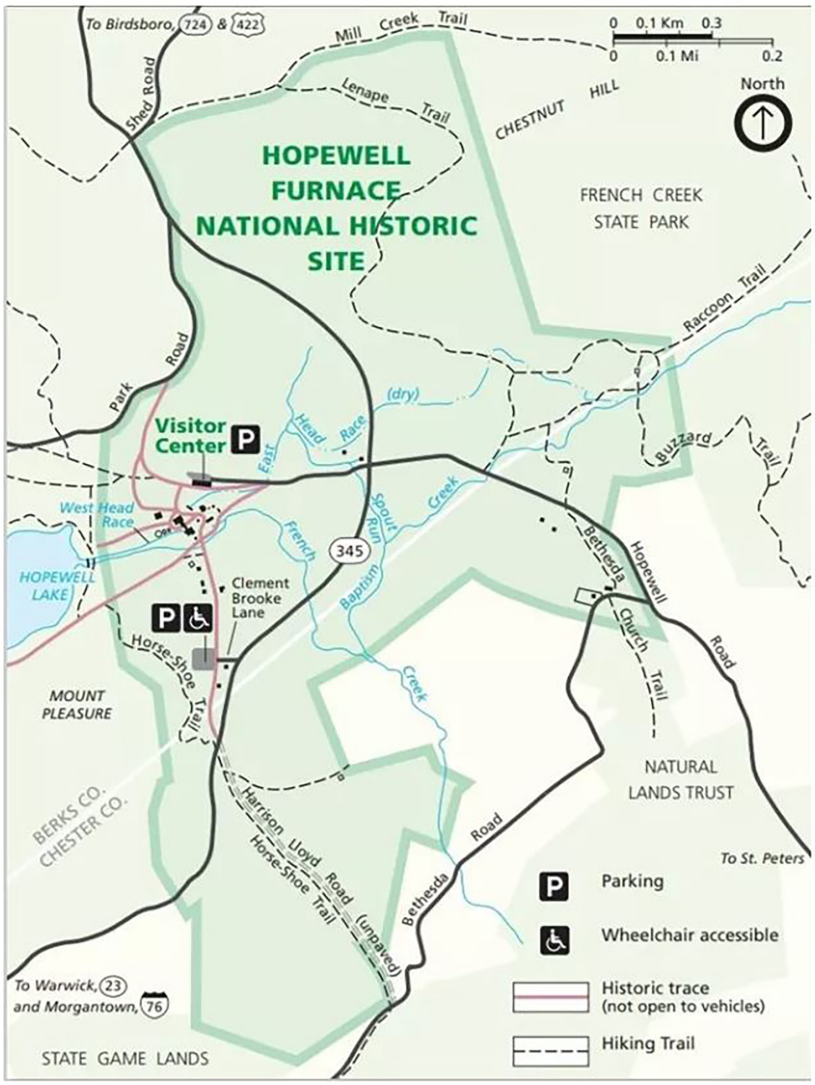
Location Map:



Hopewell Furnace National Historic Site (NHS) is about 40 minutes west from Valley Forge National Historic Site in King Prussia, which is 40 minutes west of Independence National Historical Park in Philadelphia. (National Park Service)



of



Hopewell Furnace NHS is almost entirely surrounded by public land including French Creek State Park, Natural Lands Tr property and State Game Lands. (National Park Service)

rust

Regional Landscape Contexts:

Type of Context: Cultural

Description:

Cultural context is the general human overlay on the physical form of the landscape. Hopewell Furnace NHS is in a heavily forested, hilly rural area straddling the boundary between Chester and Berks counties in southeastern Pennsylvania. The town of Reading (population 95,000) is fifteen miles northwest, Pottstown (24,000) is ten miles northeast, and Exton (5,000) is twenty miles to the southeast. The park is adjacent to the 7,730-acre French Creek State Park. Pennsylvania State Game Lands No. 43 and the privately-owned Crow's Nest Preserve are located to the southeast and extend this rural landscape.

Type of Context: Physiographic

Description:

Physiographic context considers the large-scale physical forms and patterns of the landscape such as hill, plateau, ravine, drumlin, etc. Hopewell Furnace NHS lies in the Gettysburg-Newark Lowland section of the Piedmont physiographic province, characterized by shallow valleys and rolling lowlands underlain primarily by red shales, siltstones, and sandstones. French Creek flows through the park just south of the Furnace Complex and drains into the Schuylkill River. Two other spring-fed creeks, Baptism Creek and Spout Creek, pass through portions of the park. Secondary growth hardwood forests, including oak, birch, black cherry, maple, poplar, sycamore, and walnut, cover almost seventy-five percent, or 635 acres, of the park. Pasture and fields of forage and hay comprise an additional 16.5 percent, or 140 acres. The area's geography, which provided waterpower, iron ore, limestone, and hardwood for charcoal, made it ideal for furnace development, while its proximity to urban centers provided a ready market. Once technology made the furnace obsolete, its rural setting, including its partial enclosure by the 7,730-acre French Creek State Park, facilitated the preservation of its archeological sites and features by the National Park Service. (NR 2024: Sec.7: 22)

Type of Context: Political

Description:

Political context is the overlay imposed on the landscape through general land use, zoning, legal restrictions,
transportation, utilities, population, and political jurisdiction (e.g., state, county, city, borough, or village). All land parcels within Hopewell Furnace NHS are owned in fee simple by the National Park Service and are within the Hopewell Furnace National Historic Site District boundaries. The North Warwick Historic & Archeological District is adjacent to the south of the Hopewell Furnace National Site Historic District and contains both public and private land. Conserved public open space surrounds the site north, east, and west. The primary transportation corridor, US Interstate 76, is ten miles south, connecting the site to Philadelphia approximately 35 miles to the southeast.

Management Information

General Management Information

Management Category: Must be Preserved and Maintained

Management Category Date: 09/14/2021

Management Category Explanatory Narrative:

The Hopewell Furnace National Historic Site meets the “Must Be Preserved and Maintained” management category because preservation of the property is specifically legislated. The property was first preserved as the French Creek Recreational Demonstration Area on August 13, 1935. On November 14, 1936, President Roosevelt signed an Executive Order transferring land contained within French Creek from the Resettlement Administration to the Secretary of the Interior. On August 3, 1938, President Roosevelt passed an Executive Order (3 F.R. 2039) designating Hopewell Village National Historic Site. The Executive Order establishing Hopewell Village National Historic Site cited the significance of the “lands and structures in Hopewell Village, Pennsylvania, including the old furnace, mansion house, blacksmith shop, etc., by reason of their relationship to the colonial history of the United States,” adding that the resources “have been declared by the Advisory Board on National Parks, Historic Sites, Buildings, and Monuments to be a historic site of national significance” as “Hopewell Village National Historic Site.” On September 19, 1985 the site was renamed Hopewell Furnace National Historic Site (F.R. Doc. 85-30306). (FD 2017: 38)

Management Agreements:

Type of Agreement: None

Management Agreement Expiration Date:

Management Agreement Explanatory Narrative:

Legal Interests:

Type of Interest: Fee Simple

Narrative: The property within the Hopewell Furnace National Historic Site is owned in Fee Simple by the NPS.

Located in managed wilderness?: No

Adjacent Lands Information

Do Adjacent Lands Contribute? Yes

Adjacent Lands Narrative:

Adjacent lands are lands outside the cultural landscape boundary, including lands inside or outside the park. The park is adjacent to the 7,730-acre French Creek State Park. Pennsylvania State Game Lands No. 43 and the Crow's Nest Preserve, the latter owned by the nonprofit association Natural Lands, are located to the southeast and extend this rural landscape. Large portions of these properties were historically associated with Hopewell Furnace, either directly owned by the furnace proprietors or used to provide charcoal to fuel the furnace. (NR 2024, Sec.7: 6)

National Register Information

National Register of Historic Places

Documentation Status: Entered Documented

Documentation Narrative Description:

In 1938, Hopewell Village National Historic Site (NHS) was the second property in the nation to be designated an NHS under the provisions of the Historic Sites Act of 1935. The property was administratively listed in the National Register of Historic Places on October 15, 1966, after the passage of the National Historic Preservation Act. The listing did not include any documentation.

On September 17, 1985, documentation for the 848-acre historic district, “Hopewell Furnace,” was accepted by the Keeper of the National Register. This effort coincided with the change of the park’s name to Hopewell Furnace NHS. National-level significance was identified under Criterion A and C in the areas of Architecture, Industry, and Military (American Revolution). The period of significance was listed as 1771 -1883, the time during which the blast furnace was used to smelt iron ore. As stated in the documentation, this site’s historical significance lies in its association with the American Revolution and as well as its long life as an industrial community representative of the hundreds of charcoal ironworks that once flourished in the eastern US. The documentation identified 50 contributing features as “contributing to the character of the district” and 21 features as “nonconforming intrusions detracting from the integrity of the district structures.”

On August 18, 1994, the Pennsylvania State Historic Preservation Office (SHPO) agreed with the NPS on a Determination of Eligibility for the Baptism Creek Picnic Shelter and Concession Building, despite its classification as a noncontributing feature in the 1985 National Register. It was determined to have state and regional significance under Criteria A and C.

On February 24, 1995, the North Warwick Historic and Archeological District was established adjacent to the park. Areas of significance included Archeology (Prehistoric) Archeology (Historic), Architecture, Exploration/Settlement, and Industry. As stated in the documentation, the district is significant for its association with prehistory, settlement, and industrial periods of southeastern Pennsylvania. The district encompasses fifty-five contributing buildings, thirty-nine contributing archaeological sites, thirteen contributing structures, and one contributing object in a mineral-rich, well-forested area. Archaeological remains document prehistoric habitation dating back to 3000 BC. The contributing buildings include log and fieldstone buildings, many of which date to the eighteenth and nineteenth centuries. A portion of the Hopewell Furnace NHS lies within this district, and several structures are included as contributing features in both districts: resources at the Harrison Lloyd Farm and the Bethesda Baptist Church.

On September 12, 2005, as part of a List of Classified Structures (LCS, now HSI) update, the Pennsylvania SHPO concurred with the NPS on evaluations of resources. Contributing features included: 1815 Road Bridge, Bethesda Church Cemetery, Boarding House Pump and Cover, Brison Field Wall and Foundational Ruin, six Charcoal Hearths, East Head Race Retaining Wall, Harrison Lloyd Bank Barn Ruin, Harrison Loyd Barn Ruins, Harrison Lloyd Blacksmith Shop Ruin, Harrison Lloyd Stone Walls, Harrison Lloyd Worm Fence Ruins, Hearth Road Trace, [Ironmaster’s] Garden Fence, [Ironmaster’s] Kitchen Yard Walls, [Ironmaster’s] Yard Wall, Mule Stable Ruin, Nathan Care Boundary Stone Wall, Nathan Care Field Stone Wall, Private Charcoal House Turn Around, Private Road to Dam, Tenant House No.3 Fence, [Thomas] Lloyd Farm Lane, and [Thomas] Lloyd Stone Walls. Three resources were identified as noncontributing due to the absence of historic integrity: French Creek Bridge, Cedar Pasture Fence, and Tenant House #3 Walkway.

On April 13, 2012, as part of a LCS update, the Pennsylvania SHPO concurred with the NPS evaluations of the additional park resources. Contributing features included Baptism Creek CCC Water Fountain, Baptism Creek CCC Foot Bridges, Baptism Creek CCC Fireplaces, Baptism Creek CCC Parking Area,

Baptism Creek CCC Hiking Trails, John Church CCC Retaining Walls and Steps, Spout Run CCC Culvert, Lenape CCC Spring House, Nathan Care CCC Spring House, and Woodlot CCC Spring House. Noncontributing resources included CCC Pump House, CCC Stone Foundation, CCC Oil House, CCC Storage House, John Church Garage, John Church Driveway, and Mark Bird Lane.

In 2011, a National Historic Landmark nomination form was initiated for the park, and although the Pennsylvania SHPO reviewed the first draft, the process of designating Hopewell Furnace as an NHL was never completed.

On October 18, 2024, updated documentation for the 848-acre historic district, “Hopewell Furnace National Historic Site,” was accepted by Pennsylvania SHPO. The update expanded the areas of significance and altered the period of significance to reflect new scholarship. National-level significance was identified under Criterion A, C, and D in the areas of Architecture, Archeology (Historic, Non-Aboriginal), Conservation, Industry, Military, and Social History. The period of significance was listed as 1771-1966, beginning with construction of the blast furnace and ending with completion of the Mission 66 program’s renovation work. Specific significant dates were listed as 1883, the final year of the furnace’s operation, and 1938, the year the park was established. The documentation identified most of the same contributing features as the 1985 documentation, as well as archeological sites and the thirteen additional contributing features. The documentation revaluated seven formerly noncontributing features as contributing. The documentation also reconfirmed several non-contributing features and identified additional non-contributing features. However, the documentation did not include several features previously determined eligible in consultations with the Pennsylvania SHPO (see feature tables in Analysis and Evaluation chapter).

According to research conducted for this CLI and the categories of National Register documentation outlined in the “CLI Professional Procedures Guide,” resources that contribute to the significance of the Hopewell Furnace landscape have been described in the 1985 and 2024 National Register documentation and in consultation with the Pennsylvania SHPO in 1994, 2005, and 2012. The site’s areas and periods of significance are also adequately documented. Therefore, for purposes of the CLI, Hopewell Furnace NHS Landscape is considered “Entered-Documented.”

Eligibility: Eligible -- SHPO Consensus Determination

Concurrence Eligibility Date: 10/18/2024

Concurrence Narrative:

The Pennsylvania SHPO approved the National Register update on October 18, 2024. The Keeper's approval of the update is pending.

Significance Level: National

Contributing: Individual

Classification: District

Statement of Significance for National Register of Historic Places:

Hopewell Furnace National Historic Site is nationally significant under Criterion A in the areas of Industry, Military, Conservation, and Social History; Criterion C in the area of Architecture; and Criterion D in the area of Archeology (Historic, Non-Aboriginal). The park’s period of significance is 1771-1966, beginning with construction of the blast furnace and ending with completion of the NPS’s Mission 66 development program’s work at the park.

CRITERION A

Industry:
The Hopewell Furnace NHS landscape is nationally significant under Criterion A in the area of Industry for its long history as a charcoal-fueled ironworks. The site preserves the late eighteenth and nineteenth century setting of an iron-making village, including the charcoal-fueled furnace and its natural and cultural resources. The village illustrates the essential role of industrialization in the growth of the early United States. (FD 2017: 4)

Hopewell Furnace includes examples of most of the kinds of structures—restored or reconstructed—that were present when the furnace was making iron. Numerous other historic resources associated with the furnace operation, such as farmsteads and charcoal hearths, are also extant outside the boundaries of the historic site on former furnace land. Consequently, the park has national significance as a site representative of industrial technology and processes, important in the economic development of the United States, and as a rare example of the industrial villages that surrounded the often isolated and remote iron furnaces. (NR 1985, Sec.8: 1-5)

Hopewell Furnace is also representative of the hundreds of charcoal ironworks that once flourished in the eastern United States during the eighteenth and nineteenth centuries. The area's natural resources supported this ironmaking industry. Iron ore was mined on furnace land, and limestone was mined from the furnace or neighboring land. Nearby woodlands yielded charcoal, and water was drawn from the streams coursing through the property. The need for large quantities of charcoal, which required up to 7,000 cords of wood to produce, shaped the surrounding property most dramatically. At times, the furnace required up to 8,000 acres of forest to yield the required cordwood, resulting in the furnace community's physical isolation.

Although most of the land associated with the furnace was forested, farming, gardening, and animal husbandry provided food to the furnace employees and the surrounding community. Farmers raised field crops, including oats, corn, wheat, rye, and buckwheat, and grew beets, cabbage, potatoes, spinach, and other vegetables. Peach and apple orchards also grew on the property. In addition, farmers raised cows, sheep, hogs, chickens, and turkeys for food and maintained work animals, including horses, mules, and oxen. The furnace company partners owned the farms, but often, farmers who had reciprocal arrangements with the furnace cultivated the crops. In addition, some of the surrounding neighbors of the furnace held accounts at the furnace store, trading crops and vegetables for blacksmith services and iron products. Merchants sold clothing, fabrics, personal care, and household items at the furnace store. In addition, the ironmaster hired a teacher to educate his children, and children of the furnace employees attended classes on a tuition basis. The furnace, with its historic roads, industrial structures, houses, farming and gardening areas, store, school building, church, and woodlands, illustrates the charcoal iron production process and the infrastructure that was developed to support the industrial process. (NR 1985, Sec.8: 1-5)

Military:
The Hopewell Furnace NHS landscape is nationally significant under Criterion A in the area Military for its association with the American Revolution, which stems through the furnace's finished products, as well as the activities of its original owner, Mark Bird. During the war the furnace manufactured cannon, shot, and shell that was used to equip the Continental forces. In addition to arming the patriots, Bird was involved in a variety of political activities that supported the revolutionary cause. In the years immediately preceding the war, Bird served on the Committee on Observation and the Committee of Correspondence and was chosen to the Provincial Conference of 1775. During the war, he served as a colonel in the Berks County Militia, and "was credited with providing uniforms, tents, and provisions for three hundred men at his own expense." In February 1778 he, as deputy quartermaster general, shipped 1,000 bushels of flour to George Washington and his army wintering at Valley Forge. (NR 1985, Sec.8: np, citing Walker 1966: 27)

Conservation:
The Hopewell Furnace NHS landscape is nationally significant under Criterion A in the area of Conservation for its association with important national trends in conservation and management of rural historic landscapes through the various stages in the development of the field of historic preservation. Three developments or themes underscore the park's significance in Conservation, which are mostly

chronologically intertwined and discussed in detail below: one, the beginnings of conservation efforts by President Franklin D. Roosevelt's federal relief Civilian Conservation Corps (CCC) program; two, the development of management strategies and policies as a National Historic Site as initiated and administered by the NPS; and three, the importance of documentation projects in the park which fostered an early understanding of vernacular architecture. (NR 2024, Sec.8: 58-59)

The federal government purchased the Hopewell Furnace property in 1935 as part of its Recreational Demonstration Area program, which converted underused farmland into recreational destinations. Most of the conservation/recreation work on these various properties was completed by CCC workers in the 1930s, with their presence at Hopewell Furnace from 1934 to 1941. Recreational projects completed by the CCC in the current Hopewell Furnace NHS boundary included hiking/bridle trails, picnic area amenities, small-scale infrastructure such as bridges and water fountains along the trails, and assistance in the construction of the PA Route 345 bypass. Much of this construction made use of the NPS Rustic Style, which paired site design techniques with native materials to ensure new features harmonized with local conditions. CCC workers also completed important projects to stabilize the furnace, clean the water wheel pit, record historic buildings, and complete the initial archeological investigations. (NR 2024, Sec.8: 58-59)

The park helped to establish management strategies and policies with regard to preservation, restoration, interpretation, and visitor experience that have been applied to other parks owned or managed by the NPS. As the second property designated as a National Historic Site under the provisions of the Historic Sites Act of 1935, Hopewell Furnace was the first industrial unit of the NPS. Its management approach changed with the development of federal approaches to historic preservation. In the 1930s NPS staff emphasized living history and events of interest to the public that would give a sense of what life was like in earlier generations. Later, during the NPS's Mission-66 program, non-historic buildings at Hopewell Furnace were removed, existing historic buildings were restored to their historic appearance (such as the Furnace Complex), and historic roads were returned to their earlier appearance as part of an effort to create an "authentic" experience of life of the previous century. After the passage of the National Historic Preservation Act of 1966, federal policy changed to emphasize preserving and maintaining the historic setting of properties, without erasing historic buildings constructed after an established cutoff year. This change in policy has meant that the historic resources and landscape have retained their appearance in the past 50 years with minimal alteration. (NR 2024, Sec.8: 58-59)

The park has contributed to the growing body of expertise regarding vernacular architecture. Although some scholars such as Henry Mercer had started the process of analyzing vernacular architecture in the early twentieth century, it was still a novel field of study when the federal government purchased the park in 1935. The field of vernacular architecture was enhanced by the subsequent documentation of above and below ground resources. The lack of experience in dating vernacular architecture in the 1930s resulted in park staff initially concluding that most of the buildings at the park dated to the 1770s. The dozens of later historic structure reports fine-tuned the dates of the various resources and contributed knowledge about vernacular architecture in the process that has informed documentation projects elsewhere in southeastern Pennsylvania. Multiple historians and firms have deepened the breadth of knowledge about vernacular architecture through projects at the Hopewell Furnace NHS. This information has informed the interpretative program, resulting in greater accuracy, and serving as a model for other NPS resources throughout the country. (NR 2024, Sec.8: 58-59)

Social History:
The Hopewell Furnace NHS landscape is significant under Criterion A in the area of Social History for its ability to provide information about the organization of labor. A large body of records of the operations of Hopewell Furnace survives, mostly for the years 1805 to 1880. The survival of these records provides an excellent account of the operations during the first eight decades of the nineteenth century, a period for which the records of most companies do not survive. Over the years, historians have collected the names of over 2,000 workers or associated people found in these records and entered them into a database called "People with an Occupation" that is available at the Hopewell Furnace administration office. Names in the database may be divided into five categories or groups, which may be understood as an employment hierarchy. The database indicates gender and race when known. (NR 2024, Sec.8: 55)

CRITERION C

Architecture:
The Hopewell Furnace NHS landscape is significant under Criterion C in the area of Architecture for the Ironmaster's House, which illustrates changes in aesthetic values and style from the time of its original construction in ca.1773 until the closing of the furnace in 1883. Examples include the contrast between the Federal mantel in the dining room with the High Victorian-Baroque Revival mantels in the parlor. The windows in the parlor have had their sills lowered as was typical of the latter half of the nineteenth century. Technological evolution is illustrated by the important bathroom addition that illustrates the beginning of modern plumbing; and the installation of larger panes of glass in some of the first floor rooms, as opposed to the presence of smaller and earlier panes in the older sections of the house. (NR 1985, Sec.8: 4-5)

CRITERION D

Archeology (Historic, Non-Aboriginal):
The Hopewell Furnace NHS landscape is significant under Criterion D in the area of Archeology (Historic, Non-Aboriginal) as a uniquely well-preserved complex of industrial and domestic sites together constituting a late eighteenth- through nineteenth-century Pennsylvania iron furnace and its rural community, that has yielded, and may likely further yield, information important in history. The long history of archeological survey at Hopewell Furnace NHS has identified industrial and domestic features, as well as archeological deposits, which have provided and may continue to provide information concerning the development of the industrial landscape through time, the processes of iron manufacture, and the material conditions of life for furnace management, laborers, and adjacent community members. The property has yielded, and may continue to yield, information pertinent to research questions in the Industry area of significance through investigations utilizing Hopewell Furnace's existing collections and records, as well as through future survey and excavation. (NR 2024, Sec.8: 69)

Archeological investigations at Hopewell Furnace NHS began during the late 1930s in conjunction with Civilian Conservation Corps (CCC) projects on the historic property. Archeological work continued into the period of National Park Service (NPS) ownership throughout the remainder of the twentieth century and into the twenty-first century, though methodologies, research goals, and recording detail has varied considerably on a project-by-project basis. Many early and mid-twentieth-century surveys focused on identifying and interpreting industrial features, particularly those associated with the Furnace Complex and its appurtenant structures, with the ultimate goals of reconstruction/restoration and public interpretation rather than addressing historical or archeological research concerns. Consequently, the artifacts retained from some of these investigations tend to be only the display-worthy items. Later surveys typically generated more thorough records and employed more consistent artifact collection strategies following theoretical and methodological developments in the fields of historical and industrial archeology. Despite the shortcomings of some of the previous archeological work at the park relative to modern standards, the dozens of archeological surveys conducted here have resulted in several assemblages and related field records (including documentation of furnace structural features) which have provided and may provide additional insight on important research questions pertaining to the history of Hopewell Furnace. (NR 2024, Sec.8: 69)

National Register Significance Criteria:

A - Associated with events significant to broad patterns of our history

C - Embodies distinctive construction, work of master, or high artistic values

D - Has yielded, or is likely to yield, information important to prehistory or history

National Register Criteria Consideration:

National Register Periods of Significance (with Historic Context Themes):

Time Period: CE 1771 - CE 1966

Historic Context Theme	Subtheme	Facet	Other Facet
Expanding Science and Technology	Technology (Engineering and Invention)	Extraction And Conversion Of Industrial Raw Materials	
Shaping the Political Landscape	The American Revolution	War in the North	
Peopling Places	Development of the Colonies	Physical Development	
Creating Social Institutions and Movements	Ways of Life	Industrial Towns	
Creating Social Institutions and Movements	Social and Humanitarian Movements	Historic Preservation Movement	
Expressing Cultural Values	Architecture	Federal (1780-1820)	
Expressing Cultural Values	Architecture	Period Revivals (1870-1940)	
Developing the American Economy	Extraction or Mining Industries	Other Metals And Minerals	
Expanding Science and Technology	Technology (Engineering and Invention)	Military (Fortifications, Weapons, And War Vehicles)	
Transforming the Environment	Conservation of Natural Resources	The Conservation Movement Matures 1908-1941	
Transforming the Environment	Historic Preservation	The Federal Government Enters The Movement	

Area of Significance:

Area of Significance Category: Archeology

Area of Significance Subcategory: Historic-Non-Aboriginal

Explanatory Narrative:

Area of Significance Category: Architecture

Area of Significance Subcategory:

Explanatory Narrative:

Area of Significance Category: Conservation

Area of Significance Subcategory:

Explanatory Narrative:

Area of Significance Category: Industry

Area of Significance Subcategory:

Explanatory Narrative:

Area of Significance Category: Military

Area of Significance Subcategory:

Explanatory Narrative:

Area of Significance Category: Social History

Area of Significance Subcategory:

Explanatory Narrative:

NRIS Information:

NRIS Name:	Hopewell Furnace National Historic Site
NRIS ID:	66000645
Primary Certification Date:	09/17/1985
NRIS Name:	North Warwick Historic and Archaeological District, 2/24/1995
NRIS ID:	95000135
Primary Certification Date:	02/24/1995
NRIS Name:	Hopewell Furnace National Historic Site, 9/17/1985
NRIS ID:	66000645
Other Name:	Keeper approval date of Update pending

State Register Documentation:

Identification Number:	1938RE00001
Name:	Hopewell Furnace National Historic Site,

National Historic Landmarks:

National Historic Landmark? No

Theme:

Contributing:

NHL ID:

NHL URL:

Date:

Statement of Significance for National Historic Landmark:

World Heritage Site:

World Heritage Site? No

Category:

WHS ID:

WHS URL:

Date:

Is Resource within a designated National Natural Landscape: No

Chronology and Physical History

Chronology:

Year	Event	Major Event Narrative
CE 1757	Established	Road opens from Reading to Coventry Forge.
CE 1770	Established	Hopewell Mine opens ca.1770.
CE 1771	Built	Furnace is erected (date in cast arch)
CE 1772	Built	Road built connecting Jones Mine to Schuylkill River at Monocacy (north of Hopewell Village on “Brushy” Hill).
CE 1772	Built	Ironmaster’s House extant by this date.
CE 1773	Built	Cast House is constructed ca.1773.
CE 1775	Built	Blacksmith Shop is constructed ca.1775.
CE 1782	Built	Bethesda Church is built by Thomas Lloyd
CE 1784	Established	Earliest mention of a “store” in records of Furnace.
CE 1786	Purchased/Sold	Bird offers property at public sale – 4000 acres of land, 5000 cords of wood and 800 loads of ore.
CE 1788	Purchased/Sold	Sheriff’s sale is held in April – 5,163 acres to Cadwallader Morris & James Old (included 250 tree apple orchard).
CE 1791	Purchased/Sold	Morris’ brother Benjamin becomes sole owner of Hopewell Furnace.
CE 1793	Built	James Old buys property for $37,000 and resells to James Wilson.
CE 1796 - 1795	Purchased/Sold	Sheriff’s sale of 4,000 acres to “Old”.
CE 1798	Built	East Head Race is clearly extant by this date (6,100 feet from Baptism Creek).
CE 1800	Purchased/Sold	Sheriff’s sale of Hopewell Furnace to Benjamin Morris.
CE 1800	Purchased/Sold	Morris sells furnace property to Daniel Buckley and brother-in-laws Thomas & Matthew Brooke.
CE 1800	Altered	Buckley & Brooke make extensive alterations to furnace; rebuild hearth walls, reorient water wheel east-west, build new West Head Race; construct new Coal House; as well as a log and timber Charcoal House.
CE 1803	Built	Buckley & Brooke have a log house constructed at an unknown location (possibly a tenant house).
CE 1804	Built	Public road from Birdsboro to Hopewell opens.
CE 1805	Built	Stamping mill is erected.
CE 1806	Built	Stone Tenant House is constructed (possibly the west section of Boarding House).
CE 1806	Built	North end of Spring House is constructed.
CE 1807	Built	Dam bursts three times during the year.
CE 1808 - 1816	Damaged	Furnace out of blast, lawsuits against furnace; at least three houses extant at mines.
CE 1809	Established	Road to Jones Mine opens (used ford near Blacksmith Shop).

Year	Event	Major Event Narrative
CE 1815	Established	Road to Warwick opens (Warwick Mine to Hopewell).
CE 1816	Built	New Cast House is erected ca.1816.
CE 1816	Rehabilitated	$8,000 worth of repairs are made in preparation to restart the furnace after long hiatus.
CE 1816	Established	Water pipe exists from Spring House to Mansion.
CE 1817	Altered	Possible alterations made to the Barn.
CE 1818	Built	Wheelhouse is erected (wheelhouse described as "new").
CE 1820	Land Transfer	Lloyd Tract is willed to Thomas Lloyd – possible house additions.
CE 1823	Built	Bake Oven is built near Ironmaster's House.
CE 1825	Established	Road officially established from Furnace to 1750s Road.
CE 1826	Established	Tenant House with excavated cellar is constructed (Church House?)
CE 1826 - 1827	Built	Furnace makes door frames and other items for New State Penitentiary.
CE 1827	Altered	Cast House is enlarged ca.1827.
CE 1827	Established	Formal organization of Baptist congregation at Bethesda Church.
CE 1828	Built	Smokehouse built ca.1828.
CE 1828	Altered	Major masonry repairs are made to furnace; possible removal of south shed and construction of new shed.
CE 1828	Built	Greenhouse constructed ca.1829 (based on glass purchases).
CE 1829 - 1842	Altered	25-foot addition made to east end of Barn.
CE 1829	Planted	Furnace purchases and plants 160 apples trees.
CE 1830	Built	Likely construction of the Boarding House east addition.
CE 1832	Built	Stone steps are installed in garden.
CE 1832 - 1833	Built	Garden Wall is constructed according to furnace records.
CE 1833	Built	Garden Toolhouse is built ca.1833.
CE 1834	Built	Ice House/Summer House constructed ca.1834 (earliest mention in records).
CE 1834	Planted	Furnace purchases and plants 304 apple trees.
CE 1837	Built	Public school located at furnace ca.1837 – built at company expense.
CE 1838	Built	Greenhouse is constructed (based on presence of full-time gardener).
CE 1841	Built	Gable end steps built on mansion for fire control ca.1841.
CE 1844	Abandoned	Stove casting halted at Furnace.
CE 1845 - 1854	Built	Tenant House No. 3 is built about this time.
CE 1847	Built	South Molding Room is abandoned ca.1847.
CE 1847	Built	Scales are installed at Bridge House.
CE 1849	Built	Brick Kiln House built ca.1849.
CE 1850 - 1860	Built	Carriage Shed frame addition likely constructed to east end of Barn during this time.

Year	Event	Major Event Narrative
CE 1850	Built	Care Log House is extant ca.1850.
CE 1853	Built	Anthracite Furnace is erected.
CE 1856 - 1857	Built	Nathan Care House is built ca.1856.
CE 1856	Built	AME Mount Frisby Church is constructed (3 miles from furnace).
CE 1857	Moved	Anthracite machinery is moved to Monocacy ca.1857.
CE 1859	Established	Hopewell is listed as a Post Office.
CE 1859	Built	Nathan Care Barn is built ca.1859.
CE 1867	Neglected	Archives documents that there is no roof on the north molding room.
CE 1867	Altered	Ironmaster's House porch is extended to 20 feet.
CE 1867	Repaired	Extensive repairs are made to the furnace.
CE 1869	Built	Tenant House No 4 (Boone Store) is built ca.1869.
CE 1870	Built	New school built along Jones Mine Road (approximately one mile west of Hopewell ca.1870.
CE 1870	Built	Frame additions are constructed on the barn ca.1870.
CE 1870	Altered	A bathroom is installed in the mansion, the first-floor windows are lengthened, and the porch is extended.
CE 1875	Established	Boone Store is started in the Tenant House No. 4 ca.1875.
CE 1876	Built	A latrine is extant in the mansion yard, ca.1876.
CE 1878	Altered	A brick kiln is rented as a residence to John Roberts.
CE 1879	Reconstructed	Wheel House is rebuilt with a roof to the Bridge House.
CE 1880	Reconstructed	Charcoal House and north shed are rebuilt ca.1880.
CE 1881	Built	Boiler is installed to provide auxiliary power to furnace ca.1881.
CE 1882	Built	Ore Roaster is installed.
CE 1891	Abandoned	Boone Store is closed.
CE 1893	Damaged	Boone Store burns.
CE 1895	Demolished	Wheelwright Shop torn down ca.1895.
CE 1895	Exploited	Fence posts and rails cut from woodland and sold in railroad car lots ca.1895.
CE 1900	Demolished	Care Log House is demolished to use site as a field ca.1900.
CE 1915	Abandoned	Clingans cease using mansion as a summer house.
CE 1920	Built	Ironmaster's House bridge at east façade is built (formerly steps to summer house).
CE 1922	Graded	Nathan Care, Jr. regrades north side of Barn.
CE 1928	Built	New barn is built incorporating some old stone walls.
CE 1932	Altered	1804 Road is realigned; wall broken and Ore Roaster is infilled.
CE 1935	Purchased/Sold	Federal Government purchases Hopewell property (approximately 6,000 acres).
CE 1935	Established	Two Civilian Conservation Corps (CCC) camps located in area (about 400 men).

Year	Event	Major Event Narrative
CE 1935	Altered	CCC workers raise dam on French Creek 8 feet, increasing lake size from 12 to 62 acres.
CE 1935 - 1939	Restored	Work Progress Administration restoration work begins on site.
CE 1938	Restored	CCC clean out tail race.
CE 1938	Established	Hopewell Village National Historic Site is established.
CE 1939 - 1938	Established	Pennsylvania Route 345 loop road is completed.
CE 1941	Restored	CCC workers complete Furnace restoration.
CE 1941	Expanded	Church House addition constructed.
CE 1946	Land Transfer	Federal government deeds approximately 5,000 acres to the state of Pennsylvania; 848 acres retained as Hopewell Village National Historic Site.
CE 1950	Restored	Blacksmith Shop is restored.
CE 1952	Restored	NPS restores water wheel and blast machinery.
CE 1955	Abandoned	Birsboro-Warwick Road through Hopewell Village closes to the public.
CE 1955 - 1958	Restored	Steps west of the Office-Store are reconstructed and the risers are lowered for the safety of visitors.
CE 1957	Reconstructed	Bridge House is reconstructed.
CE 1958	Rehabilitated	Considerable work is completed on the interior of the Ironmaster's House.
CE 1958 - 1959	Built	Visitor Center, Upper Parking Lot, Maintenance Building and Residences built.
CE 1959	Stabilized	Tenant Barn stabilized and re-roofed.
CE 1960	Planted	Parking Lot orchard is planted.
CE 1961	Stabilized	Ore Roaster Ruins are stabilized.
CE 1961	Restored	Store is restored.
CE 1961	Restored	Barn is restored.
CE 1961	Moved	Charcoal hearth is moved from beyond the Blacksmith Shop to its current location near the Charcoal House for visitor convenience.
CE 1962	Excavated	Cleaning shed is discovered through archeology.
CE 1963 - 1964	Stabilized	Anthracite Furnace, ca.1853, is stabilized.
CE 1963	Built	French Creek Bridge is rebuilt by mason Russell Bowen.
CE 1963 - 1964	Stabilized	Ruins of the Charcoal Kilns stabilized.
CE 1965	Reconstructed	Cast House is reconstructed.
CE 1965	Demolished	Harrison Lloyd House is razed on January 14.
CE 1965	Restored	Bethesda Cemetery Wall is restored.
CE 1965	Restored	Spring House is restored.
CE 1965	Reconstructed	Charcoal House is reconstructed.
CE 1965	Graded	Grade is lowered east and north of Blacksmith Shop.
CE 1965	Restored	Archaeology uncovers a stone bridge that crossed the original course of French Creek and the bridge is restored in 1965.

Year	Event	Major Event Narrative
CE 1970	Rehabilitated	During the 1970s, Bethesda Baptist Church and surrounding wall is rehabilitated.
CE 1970 - 1979	Removed	During the 1970s, the park placed telephone and electrical cables in the village underground and removed utility poles
CE 1972	Damaged	East Head Race damaged by Hurricane Agnes.
CE 1973	Altered	Cedar Pasture is cleared of all but cedars.
CE 1974 - 1975	Rehabilitated	Bethesda Baptist Church interior is rehabilitated .
CE 1975	Restored	Blacksmith Shop rehabilitated through the repair and replacement of deteriorated wooden members.
CE 1977	Stabilized	Ruins of the Schoolhouse and the Greenhouse are stabilized.
CE 1978	Built	A building is constructed east of the road from the maintenance area to the utility area for use as a headquarters for the Youth Conservation Corps.
CE 1980	Damaged	The Blacksmith Shop is burned, leaving only the exterior walls standing.
CE 1980	Restored	Ironmaster’s House structurally reinforced and restored.
CE 1981	Rehabilitated	Blacksmith Shop is rehabilitated.
CE 1982	Rehabilitated	Exterior of Bethesda Baptist Church and the cemetery wall is restored.
CE 1984	Restored	East Head Race damaged caused by Hurricane Agnes in 1972 is repaired
CE 1985	Established	The park’s name is changed to Hopewell Furnace National Historic Site.
CE 1987	Reconstructed	The ca.1952 water wheel is reconstructed.
CE 1989 - 1990	Repaired	The Charcoal House roof is replaced.
CE 1990	Built	The Bally Building, named for the manufacturer of the prefabricated structure, is built on the site of the CCC mess hall near the Maintenance Building to house the collections of HOFU that are not on display.
CE 1999	Rehabilitated	The Connecting Shed roof is replaced.
CE 1999	Stabilized	The Charcoal Kiln ruins are stabilized.
CE 2004	Rehabilitated	Visitor Center picnic area is rehabilitated.
CE 2005	Repaired	Three CCC era spring houses are reroofed.
CE 2005	Repaired	Deteriorated exterior walkway to Ironmaster’s House kitchen is rebuilt.
CE 2005	Repaired	The exterior of Bethesda Church is repainted.
CE 2005	Repaired	The exterior of the Ironmaster’s House is rehabilitated.
CE 2006	Built	Solar lighting is installed in Visitor Center parking lot.
CE 2006	Rehabilitated	Ironmaster’s Garden Fence is replaced.
CE 2006	Altered	A soda shelter is added to the east façade of the visitor’s center.
CE 2006	Rehabilitated	Reconstructed Collier Hut is replaced.
CE 2008	Rehabilitated	East head race wall is repaired and replaced.
CE 2008	Planted	Ironmaster’s Garden is replanted.

Year	Event	Major Event Narrative
CE 2010	Built	24 foot by 24 foot period picket fence is added to the Ironmaster's Herb Garden.
CE 2012	Built	Missing trail signs are replaced and new waysides installed.
CE 2016	Graded	Roads between Cast House and North Maintenance Area are regraded to control drainage.
CE 2017	Removed	The deteriorating picket fence at Tenant House 3 is removed.
CE 2017	Built	Waysides are installed near school house ruin.
CE 2019	Rehabilitated	Spilt rail fence between fields 6B and 7, along Rt 345 and at the entrance road are replaced.
CE 2019	Rehabilitated	Ironmaster's Garden walkway and stairs are rehabilitated.
CE 2019	Graded	The non-compliant sloped walkway to the Visitor Center restrooms is regraded to meet ABA/ADA requirements.
CE 2020	Rehabilitated	The CCC Picnic Pavilion is rehabilitated (PEPC 85819).
CE 2021	Rehabilitated	The Bethesda Church Complex is rehabilitated.
CE 2022	Repaired	Tombstones are repaired in the Bethesda Cemetery.
CE 2022	Rehabilitated	Entrance sign is replaced.
CE 2024	Rehabilitated	Ironmaster's Garden fence is replaced.

Physical History:

INTRODUCTION

The following section provides information on the physical development and evolution of the site, organized by time periods and is drawn primarily from the draft "National Register Hopewell Furnace National Historical Park," prepared by Alex Flick, Seth Hinshaw, Michael Gall, and Robert Wise of Richard Grubb & Associates in 2024, and the "Cultural Landscape Report for Hopewell Furnace National Historical Park," prepared by Cultural Resources Group, Kise, Franks & Straw in association with Menke & Menke Landscape Architects in 1995.

SETTLEMENT AND DEVELOPMENT, 1770–1800

Hopewell Furnace was founded by Mark Bird, who came from a prosperous ironmaking family and owned several iron-related businesses. (HSR 2014: 10) Bird acquired the core of the furnace property in 1769, purchasing thirty-three acres from Owen Hugh. (Walker 1966: 20) It is unclear whether buildings were on the site at this date, although one tradition holds that Hugh had a residence near the present barnyard on the north side of French Creek. Bird had inherited most of the larger furnace tract from his father, William Bird, in 1761. The elder Bird, who operated a forge in Birdsboro, owned large tracts of woodlands in Union. In 1763, his son owned 8,050 acres in Union Township, half of which he had likely inherited from his father. Over the next century, the chestnut and hickory trees that grew on these acres were cut and converted into the charcoal that fueled the furnace. (Eggert 1994: 20; Lewis and Hugins 1983: 29)

In the early 1770s, Mark Bird built his new iron furnace on the edge of a meadow, where French Creek flows between Mount Pleasure and Brush Hill in Union Township, Berks County, Pennsylvania, very near the Chester County line. The local environment strongly influenced Bird's decision to build in this location. French Creek and its tributaries offered an adequate supply of waterpower to turn the wheels that powered the furnace's blast machinery. The sloping topography north of French Creek allowed the furnace stack to be sited against a hill, simplifying the construction of the charging bridge, which iron workers crossed to dump raw material into the top of the furnace. The raw materials required to make iron, including iron ore, limestone for flux, and charcoal for fuel, were readily available within a few miles of the furnace site.

The site's most significant shortcoming, however, was also a result of local environmental conditions. Situated between two hills and bisected by a creek, the site was often marshy. The area around the furnace flooded during spring and fall freshets and remained somewhat wet and boggy through a considerable part of the year. Bird's work crews dug drainage ditches to convey water away from the furnace's buildings and into French Creek. Over the years, the slag that resulted from furnace operations was dumped around the furnace, altering the course of French Creek and raising the elevation of the working area at the site's core, while marsh conditions permeated the surrounding landscape. Thus, the Tenant Houses lining the west side of the main road through the village all had boardwalks leading from the house to the road, with small wood footbridges spanning a ditch alongside the road that carried water from a spring on Mount Pleasure to French Creek. Likewise, the northern portion of the village's principal pasture remained marshy.

Despite its proximity to French Creek, the furnace did not use the creek for power during its first years. An East Head Race extended approximately one mile from its origin on Baptism Creek to the furnace, while a West Head Race extended for nearly two miles partially across land Bird did not own. Tradition holds that the people Bird enslaved dug the East Head Race about 1770. The original West Head Race likely dates from the same period. Both head races were open ditches, with stone retaining walls to hold back sloped land, and were likely lined with clay to reduce water loss. The races generally conformed to the site's contour lines, gently transporting water downhill from their sources to the water wheel at the furnace. As furnace owners did not have control of the water supply, by the early nineteenth century, they had dammed French Creek west of the furnace and built a new West Head Race. (Apple 1956: I-20, I-31, II-7–II-10, II-134–II-136)

The availability and location of transportation facilities was also an important factor in Bird's decision on where to locate the furnace, as reliable transportation was key to the financial success of his operation. He located Hopewell approximately 200 yards north of a public road which had opened in 1758 and connected the west bank of the Schuylkill River, opposite Reading in Berks County, to Coventry Forge in Chester County. Shortly after operations began at the furnace, a public road between Jones Mines and the Schuylkill River opened and passed near the furnace. Bird also built and maintained other private roads to connect the furnace to public roads. By the close of the eighteenth century, a network of public and private roads linked the furnace with mines and markets, connecting its isolated location with the local and regional economy. Hopewell Furnace remained dependent upon roads and highways, as it never had direct access to canals or railroads. (Walker 1966, 206-207)

Hopewell Furnace began operating around 1771; the year incised into the furnace's stone arch. A 1788 Pennsylvania Gazette advertisement for public sale of the furnace property states that Hopewell Mine had supplied ore to the furnace for seventeen years, which corroborates the date stone. The eighteen-century industrial site included several buildings essential to the operation of the works: a furnace, water wheel, charging bridge, cast house, blacksmith shop, store, barn, an ironmaster's house, and housing for workers. It is impossible, however, to determine whether the buildings mentioned in the eighteenth-century furnace records are the same buildings presently located at the site; it is possible they replaced earlier buildings and served similar functions as those erected during the first years of operation. Indeed, documentary evidence suggests that the Cast House, which was reconstructed in the mid-1960s, reflects a building erected about 1816, not the original eighteenth-century Cast House. The appearance of the eighteenth-century Cast House is unknown. However, the location of the furnace's hearth indicates that the building occupied roughly the same location as the later Cast House. (Cast House, Historic Buildings Survey Reports, 1960, 1964, 1966)

The documentary and archeological record indicates that the original water wheel, which provided power to the blast machinery, was oriented north-south, at right angles to the east-west orientation of the present wheel. Based upon the ca.1805 wheel, the existing water wheel measures five feet wide and twenty-two feet in diameter. It is somewhat smaller than the original north-south wheel, estimated to have measured thirty feet in diameter. (Apple 1956: I-11) The first reference to a wheelhouse dates from 1818, when the furnace underwent extensive repairs and alterations. (Apple 1956: I1-124). In addition to the wheel and cast house, the furnace operation also required a charging bridge to allow materials to be placed into the furnace from above. The existing bridge, known as the Bridge House, is covered. Whether a roof protected the earliest charging bridge from the weather is unknown.

Early documentary records also indicate that Hopewell Furnace included several buildings during its first years of operation. Testimony in an 1810 court case suggests that a portion of the Ironmaster's House existed as early as 1772. (Apple 1956: Il-71) The earliest portion of the house appears to be the northwest portion of the present main block. The Ironmaster's House reflects its 1870s appearance, following many enlargements and alterations. Other buildings mentioned in eighteenth-century records include a Blacksmith Shop and an Office & Store, both crucial elements of the operation and first mentioned in the records in 1784. According to 1779 Union Township tax records, Bird owned a barn used to shelter his sixteen horses, twenty-one cows, and forty-six sheep. The record also references furnace employee housing. Tradition maintains that the present Blacksmith Shop and Office & Store date from the eighteenth century and that the reconstructed Barn approximates the eighteenth-century building. (Apple, 1956: II-43-56, II-69-75, II-124-126)

The 1788 Pennsylvania Gazette sale advertisement provides a rough portrait of the furnace property less than twenty years after Bird began operations at Hopewell. The property contained 4,338 acres, with a six percent allowance for roads and highways. First-growth timber occupied about eight hundred acres of the tract, just less than twenty percent. An additional two hundred to three hundred acres of second-growth timber was fit for cutting. According to the advertisement, the tract included fifty to sixty acres of "good watered meadow made" that might "be increased to 90 acres at small expense," which suggests that Bird converted the wetlands along the south side of French Creek into meadows, possibly by constructing drainage works or by clearing the marshy land of trees and brush. (Pennsylvania Gazette, 2 April 1786) By 1788, the furnace tract included an "excellent young bearing orchard" of approximately 250 apple trees. This orchard, located north of the Ironmaster's House, in roughly the same location as the present orchard, indicates that Bird intended Hopewell Furnace to be a permanent presence in the landscape, with agricultural operations supporting the furnace community. (Pennsylvania Gazette, 2 April 1786)

The only buildings mentioned explicitly in the 1788 sale advertisement are workers' housing. The advertisement stated that the property includes "a sufficient number of houses to accommodate the workmen." (Pennsylvania Gazette, 2 April 1786) The number and location of these buildings and the nature of their construction are unknown. Tradition and previous scholarship suggest that the stone buildings known as Tenant Houses 1 and 2 may date from the late eighteenth century or the first quarter of the nineteenth century. (Apple 1956: II-141–142, II-149–150) It seems likely that some of

the earliest workers' housing consisted of log cabins demolished during the nineteenth century. The evidence, however, is inconclusive. (CLR Cultural Resources Group 1997: 29)

Bird's furnace was not an isolated entity, but a part of a larger, established agricultural community comprised of individual farms that were established prior to the construction of the furnace. While first and second-growth chestnut woods may have dominated the furnace tract, the countryside south of the furnace was largely cultivated farmland. Thomas Lloyd, for instance, occupied a 134-acre farm just east of the furnace property in Chester County. He built Bethesda Church in 1782 to serve the religious needs of the area's residents, mostly farmers who worked for the furnace during the agricultural season's slower periods as woodcutters or laborers. Hopewell Furnace also had its own agricultural lands. In 1795, Ironmaster James Wilson ordered that a minimum of 1,000 bushels of lime be placed on the furnace's arable lands and that clover be planted. Three years later, Samuel Cox farmed the two fields flanking the furnace race (probably the East Head Race). Cox planted these fields with corn and had other fields planted with buckwheat. (CLR Cultural Resources Group 1997: 22-30)

Bird suffered financial setbacks, partly because the government did not compensate him for work performed during the Revolutionary War years. In 1784, Bird explained that the furnace had not run for some time in appealing for a tax reduction. This appeal followed two sharp reductions in his tax liability. (Walker 1966: 29) A flood in the fall of 1786 further complicated Bird's position. Hopewell suffered damage due to this flood, but the nature and extent of the losses are unknown. (Walker 1966: 30) In April 1786, Bird offered to sell Hopewell Furnace, Birdsboro Forge, and Spring Forge. The sale advertisement in the Pennsylvania Gazette described the furnace property as consisting of four thousand acres of land and three banks of iron ore, "all within a reasonable distance." The terms of the sale required the buyer of the furnace to supply the two forges with "a certain quantity of pig iron at a stipulated price" for the next four years. The advertisement described the furnace as currently in the blast, with "a provision of five thousand cords of wood and eight hundred loads of ore." (Pennsylvania Gazette 26 April 1786) The furnace property also included five teams of horses. Apparently, the bids for the property proved inadequate, as no sales transaction was recorded. (CLR Cultural Resources Group 1997: 28-29)

Two years later, in 1788, Bird again offered Hopewell Furnace at a public sale, at which time Cadwallader Morris and James Old purchased the 5,163-acre tract. (Walker 1966: 32) The change in ownership did not bring prosperity to the furnace, even though it was Pennsylvania's second largest in 1789. During the next twelve years, the furnace property changed hands at least five times as various partners sold and resold their property shares. Ownership of the furnace remained unsettled until 1800, when the property came under the control of Daniel Buckley and his brothers-in-law, Thomas and Mathew Brooke. From the early 1800s to 1883, when the furnace ceased operations, Hopewell remained in the hands of the Buckley and Brooke families. (CLR Cultural Resources Group 1997: 29-30 citing Walker 1966: 32-37)

GROWTH AND PROSPERITY, 1800–1845

The new owners of the furnace made extensive improvements to the property during the first decade of the nineteenth century (Figure 1). The most significant of these improvements was the damming of French Creek and constructing a new West Head Race. As earlier noted, the original West Head Race was not entirely on furnace property. During the first years of the nineteenth century, a court action convinced Buckley and the Brooke brothers of the need to secure their waterpower sources. They erected a dam across French Creek a short distance west of the furnace and constructed a new head race to convey the water to the water wheel at the furnace. The new West Head Race delivered water to the wheel at a lower elevation than the original West Head Race, which required the installation of a new wheel measuring twenty-two feet in diameter, eight feet smaller than the original thirty-foot overshot wheel. The wheel pit was also reoriented to an east-west direction, at right angles to the original north-south pit. (CLR Cultural Resources Group 1997: 30, citing Apple 1956: I1-144) The dam's construction on French Creek, the wheel pit's reorientation, and the new water wheel's installation likely occurred about 1805, as furnace records note the hiring of a millwright on the furnace well that year. Two years later, in 1807, the dam broke on three occasions. Presumably, the original West Head Race was then abandoned. (Apple 1956: I1-118) Furnace records document several other improvements at Hopewell during Buckley's and Brookes' first years of property ownership. In 1801, Thomas "Loid" [probably Lloyd] received payment for logs, timber, rafters, shingles, and straw for a Coal House. The coal house likely protected the charcoal from the elements from the beginning of the furnace's operation. (Walker 1966: 40)

Farming continued at Hopewell during this early period. In 1804, Elishu Bard performed numerous farming activities for Hopewell's owner, Matthew Brooke. Bard's work included planting the "front lot" with flax during May. Later that year, he sowed this same lot, the barn lot, and the meadow, with turnip seed. In October, Bard brought rails to fence the turnip ground. During the year, Bard and his sons also fertilized the garden with dung, plowed potatoes in the garden, and cleared brush and cut clover in the orchard. In addition to Bard, Hopewell Furnace employed twelve people to work the furnace's farm fields between 1805 and 1807 (CLR 1997: 34, citing Walker 1956: 123-124,425)

The construction and repair of housing is a recurring topic in furnace records in the nineteenth century. During the first decade of ownership by Buckley and the Brooke brothers, the records note the construction of a log house in 1803 and a stone tenant house in 1806. Apple tentatively identified the 1806 house as the west section of the present Boarding House. (Apple 1956: I1-144 and Walker 1966: 44) He based this identification on an analysis of the number of perches of masonry contained in the building walls compared to the number of perches the masons received payment for in 1806. According to Apple's calculations, the masons received payment for 156 perches, while the west section of the Boarding House contained approximately 140 perches. The reference to a log house in the records raises the possibility that some, perhaps even most, of the early tenant and workers' houses at the furnace were impermanent log structures. Records suggest that the furnace owned ten to fifteen houses during the mid-nineteenth century, perhaps even more. Records cannot account for all these buildings, which indicate that some may have been log cabins of an impermanent nature, which the furnace records did not record as assets. (CLR 1997: 34, citing Apple 1956: 11-15)

The precise location of non-extant tenant houses is unknown, although scholars deduce their general location from available evidence. Tenant houses appear to have been located along the Birdsboro-Warwick Road in the present village core, along the 1809 Road (to Jones Mine), and along the north shore of Hopewell Lake. The four extant Tenant Houses – two single houses, a twin house, and the Boarding House – are in the village core, flanking a road laid out in 1804, and officially declared public in 1805, that extends from Warwick Furnace to Birdsboro via Hopewell. A private road probably existed along this alignment before 1804. Five years later, a new access road to the Jones Mine was declared public after likely having existed as a private road. An unknown number of tenant houses, perhaps three to five, lined this road. By 1939, the chimneys of two of the houses were all that remained. One of these remnants was designated the Strouck House (Building 90) by the National Park Service. At least three houses stood along the north shore of Hopewell Lake before the 1930s. The ruins of one of these houses, designated Frees House (Building 36) by the National Park Service, existed in the mid-1950s. The expanded Hopewell Lake likely submerged the other

two in the 1930s. (CLR 1997: 34, citing Apple 1956: 142-143) These houses were likely built after the dam's construction in about 1805. The opening of the 1804 and 1809 roads, combined with the flurry of construction activity during the first decade of the nineteenth century, suggests that tenant houses, historically known along these roads, may date from the first decade of the nineteenth century. (CLR 1997: 34-35, citing Apple 1956: 142-143)

Hopewell Furnace did not prosper during the first years of the nineteenth century despite its new owners' efforts to improve the physical plant. In fact, between 1808 and 1816, the furnace was out of blast entirely, at least partly because of a series of lawsuits that threatened the owners' title to the property. During this period, little work occurred on the furnace beyond routine maintenance. A stamp mill, installed at the furnace in 1805, was used to crush slag to recover beads of iron in the waste product. The stamp mill continued operating until at least 1816, when the furnace resumed full operations. (CLR 1997: 35, citing Walker 1966: 47-49)

In 1816, the owners of the furnace reorganized as Daniel Buckley & Company, partially due to the death of several members of the earlier firm. The new partnership spent approximately $8,000 to repair and upgrade the furnace property in preparation for a resumption of operations. In March 1816, the Hopewell store reopened, and by July 1816, the furnace was again in blast, probably with a new Cast House. The owners supplemented the essential furnace operation by erecting a cupola to refine pig iron and expand the molding operations at the furnace. Popular in the early nineteenth century, cupolas remelted pig and scrap iron, removing impurities and permitting finer casting. Cupolas were constructed of sheet iron and could be as high as eighteen feet. The larger units received their blast from the same water powered blast machinery as the furnace. While the cupola's location is unknown, it is believed to have been west of the furnace, near the Wheel House. (Walker, 1966: 55) Furnace records document other physical improvements either constructed or in place by 1820. These include the "new" wheelhouse described above, which was probably an entirely new building housing the reoriented water wheel, although not necessarily the first wheelhouse at the furnace, and a new water pipe between the Spring House and the Ironmaster's House. This last improvement, documented as extant in 1816, introduced running water into the Ironmaster's House. (CLR 1997: 35-36, citing Apple 1956: I I1-62 and 1-124)

The furnace had not yet reestablished when the Panic of 1819 drove the entire economy into a depression. Daniel Buckley & Company weathered this economic storm, and the furnace emerged into its most significant period of prosperity. Improvements in the region's transportation network, exemplified by the completed Schuylkill Navigation Canal in the 1820s, provided the furnace's manager, Clement Brooke, an opportunity to cut transportation costs and improve Hopewell's position within the regional market. By the mid-1820s, the road network near the furnace was essentially complete. Roads and traces presently evident as landscape features all existed by this date, except for the PA Route 345 loop road around the core village, which the Civilian Conservation Corps constructed between 1937 and 1938. Brooke concentrated on producing stoves, finished goods that commanded a relatively high price and for which a considerable demand existed during this period. The casting of stove plates remained the cornerstone of the furnace's operations until 1844 when casting ceased. Brooke's success at turning Hopewell into a profitable venture is evident in the fact that during the 1820s, Daniel Buckley & Company acquired new mine and forest lands, purchasing eight tracts, totaling approximately 265 acres, on the north slope of Brush Hill and two tracts, totaling approximately 189 acres, on the south slope of Williams Hill. Hopewell's owners purchased nearly five hundred acres of land between 1800 and 1845. These tracts provided additional charcoal and iron ore sources, which the successfully operating furnace consumed in considerable quantities. (CLR 1997: 35-36, citing Walker 1966: 56)

During the second half of the 1820s, the partners embarked upon several new construction projects as the furnace began to recover from the economic downturn associated with the Panic of 1819. By 1832, twelve skilled molders had worked in the furnace, casting stove plates and other items. Their presence at the furnace may have necessitated new construction to accommodate their needs. For example, oral tradition holds that some of the molders slept in the loft of the Carpenter's Shop. The need for wood molds for sand casting suggests the desirability of a carpenter's shop from 1820 to 1844 when molding was a significant activity at the furnace. This building was demolished about 1900 and has not been reconstructed as part of the furnace complex. Several of the molders, key

figures in the furnace's operations, took meals in the basement of the Ironmaster's House. Documentary evidence suggests that the Bake Ovens located east of the Ironmaster's House were erected in 1823, a period coincident with Hopewell's emergence from the economic depression of the early 1820s and the furnace's increasing commitment to the production of stove plates. The influx of molders during this period, a testament to the furnace's recovery, may have provided the impetus for constructing the Bake Ovens. Additional provision for the molders appears to have been made in 1828 when the documents record payment for masonry work at Smoke House. (CLR 1997: 35-36, citing Apple 1956: I1-63, I1-66, I1-105-107) The wood-frame Smoke House is clearly a different building than that described in 1828. Management documents date the present building to ca.1867, based upon the details of its construction and materials. The Ironmaster's House also experienced changes during this period, with the east wing added about 1826 and the south addition to the main block added around 1828. (NR 1985, Sec.7: np)

In 1826, a tenant house with an excavated cellar was completed. This building may be the John Church House, constructed for one of Clement Brooke's in-laws and located on the north side of the entry road into the site, just west of PA Route 345. Other housing constructed during this period of expansion includes the east addition to the Boarding House, which appears to date from ca.1830. Work at the furnace proper also occurred during the late 1820s. Documentary evidence suggests that in 1828, the furnace underwent major masonry repairs. Archeological evidence indicates that at approximately this date, the South Casting Shed, probably dating from about 1816, was removed, and a new shed, corresponding in floor area to the present reconstructed Casting Shed, was erected. The larger Casting Shed may have been required to meet the space requirements of the molders. (CLR 1997: 37, citing Apple 1956: I1-24 and Souder 1962: 4-7)

In 1831, the partnership that owned Hopewell Furnace was reorganized. M. Brooke Buckley, Clement Brooke, and Charles Brooke each owned one-third of the new partnership, known as Clement Brooke & Company. This reorganization coincided with significant changes to the landscape surrounding the Ironmaster's House at Hopewell. Documentary and archeological evidence suggest that in the late 1820s and early 1830s, the grounds surrounding the house were developed as a formal garden with walks, steps, a greenhouse, and planned beds and plantings. The work coincides with the residence of Clement Brooke and his family in the house, strongly suggesting that Clement Brooke or his family conceived of and oversaw the development of this portion of the site. The remains of a Greenhouse, including portions of the building's north, east, and west walls, are in the garden area adjacent to the 1757 road (Reading-Valley Forge Road). In the 1950s, Park Historian Russell A. Apple reviewed the extant furnace records and concluded that large glass purchases in March 1829 were related to the greenhouse construction. The appearance of this building remains unknown. Oral tradition holds that part of the greenhouse was used as a vineyard. If this tradition is accurate, the payments noted in furnace records to a "vine dresser" in 1832 tend to confirm the ca.1829 construction date for this building. (CLR 1997: 37-38, citing Walker 1966: 57 and Apple 1956: I1-11A-I1-20)

The horticultural activities at Hopewell during the late 1820s and early 1830s included planting a new orchard and possibly replacing old trees in the original orchard. In 1829, furnace records documented the purchase of 160 apple trees, with an additional 304 trees purchased in 1834. These figures represent a substantial orchard. Later documents specifically refer to two orchards at Hopewell. The new orchard was probably located east of the garden between Reading-Valley Forge Road and the East Head Race. By 1835, records suggest a peach orchard also grew at Hopewell. (CLR 1997: 38, citing Walker 1966: 133-134)

Between 1825 and 1827, Hopewell Furnace employed twenty-one farm workers. In 1829, Isaac Hayer contracted with Hopewell Furnace to farm thirty acres. He planted it with summer and winter grains, holding an acre for potatoes and flax, and was required to make and repair fencing around his fields. Common grain crops farmed at Hopewell included wheat, corn, oats, buckwheat, and rye. Hopewell Furnace farmed nearby land and owned land in neighboring townships. For example, in the 1820s Clement Brooke leased farms in East Nantmeal Township to Henry Shick and James Reperts. Area farmers supplemented Hopewell Furnace's agricultural production with grains, fruits, meats, dairy products, and vegetables. (CLR 1997: 38, citing Walker 1966: 122-123 and Apple 1956, I1-34)

The formalization of the Ironmaster's Garden in the early 1830s included the construction of walls, steps, and walkways. Construction of the Garden Fence occurred in 1832-1833 when masons spent nearly 103 days of work on "the stone fence." (Apple 1956: I1-34) The first section of the garden fence is located on the south side and separates the garden from the adjacent road. It is a two-foot-high stone retaining wall extending from the southwest corner of the Ironmaster's House to the East Head Race. Photographs from the late-nineteenth century depict a wire fence atop this stone wall. The second section of Garden Fence extended from the East Head Race, along the 1825 Road, and terminated at a gate immediately south of the southernmost garden terrace wall (no longer extant). This second section of the garden fence consisted of a stone wall surmounted by a picket fence approximately two feet tall. The third section of the fence began at the garden gate and continued along the west end of the garden, parallel to the 1825 road, and along the 1757 road east to a point east of the Summer/Ice House ruins. It may have been a simple wood picket fence, later replaced with a wire mesh fence. No evidence suggests that the stone Garden Fence existed in this location. The west edge of the garden is unknown. In 1932, the construction of a paved road by Berks County obliterated the west end of the garden. The road was returned to its nineteenth-century configuration in the mid-1950s, but the precise location of the garden's edge could not be determined. (CLR 1997: 38-39, citing Walker 1966: 121-134; Apple 1956: I1-30–36; Wells 1994: 39)

Additional work in the garden area during 1832 included the construction of the stone steps in the garden and, likely, the garden terraces. However, the furnace records do not mention these latter features. The terraces appear to have separated different areas of the garden. Oral tradition holds that west of the main path, the terrace immediately north of the East Head Race had a vegetable garden at its west end and flowers at the east. The intermediate terrace, located between the retaining walls, contained a vineyard and a large raspberry patch. The upper terrace supported beehives. Flowers and boxwoods were east of the main path. (CLR 1997: 39, citing Apple 1956: 39)

Additional buildings in the garden included a Gardener's Toolhouse, which was in ruins by the mid-1950s. Oral interviews describe this building as a wood frame structure measuring approximately eight feet by ten feet. The date of its construction is unknown, but it likely dates to the early 1830s. The garden also sheltered the Ironmaster's Privy, which provided toilet facilities to the residents of the Ironmaster's House before the introduction of plumbing into the house in the 1870s. Archeological investigations conducted in 1962 revealed an earlier privy. Since a privy was a necessary feature of the site from the earliest days of the operation in the 1770s, it seems likely that there may have been more than two privy pits in the garden during the history of the furnace. (CLR 1997: 39-40, citing Apple 1956: I1-20-21, 30-36, 39)

Near the point where the main garden path met the 1757 Road, at the garden's north end, was a combination Icehouse and Summer House. According to oral tradition, the Summer House, a latticework structure covered with vines, was octagonal in plan, with benches lining the inside walls. The Summer House sat atop the Icehouse; the walls projected one to three feet above grade. The Icehouse was a stone-walled pit, approximately fifteen feet square and twenty feet deep, used to store ice for the residents of the Ironmaster's House. Hopewell Lake provided the ice during the winter months. Furnace records first mention the Icehouse in 1834, when an employee worked two days at the structure. This reference appears to relate to an existing building rather than a construction project. This date suggests, however, that the Icehouse may have been constructed during the improvement of the garden in the early 1830s. Furnace records do not mention the Summer House. It is impossible, therefore, to determine whether it was built at the same time as the Icehouse, or was a later addition to the earlier, utilitarian structure. (CLR 1997: 39-40, citing Apple 1956: I1 20-28)

Brooke authorized other landscape work at the furnace during the 1830s. In 1831, 107 panels of four-rail fence were installed near John Wert's Boarding House. The extent of the fencing and the location stated suggest that this fencing may have enclosed the meadow between the Boarding House and French Creek on the east side of the village road. There is also evidence that both sides of Birdsboro-Warwick Road were later fenced and that some Hopewell tenants grazed their stock along the grassy areas between the road and fence. The furnace owned draft animals, including horses, oxen, mules, and general livestock. (Apple 1956: I1-144-147 and Wells 1994: 24) In 1832,

the furnace owned eighty-four horses; in 1850, the furnace had 50 draft animals. The furnace probably did not house all these animals in the village core. Some may have been housed at neighboring farms, with tenants, at the furnace's mines, or with teamsters who used the animals to haul furnace product. The Village Barn, located south of the Ironmaster's House, housed approximately thirty-six horses, mules, cows, oxen, or steers. A stable, measuring approximately twenty-four feet by twenty-six feet (no longer extant), was located south of this barn. Another barn, located on the north side of Reading-Valley Forge Road between the Ironmaster's House and the Church House, measured approximately seventy feet by forty feet (probably in the vicinity of the current entry road). (Insurance Company of North America, "Survey of the Property," 1879) In addition to preparing animals for the draft, the furnace kept cows, poultry, sheep, and hogs to provide meat, milk, eggs, leather, and wool. A forty-foot square pen located east of the barn housed hogs and chickens. Pasture lands near the furnace would probably have been used for draft animals and milk cows. (CLR 1997: 41, citing Walker 1966: 126-129 and Wells 1994: 39-46)

Production at Hopewell peaked during 1836-1837 when the furnace produced over 720 tons of iron. The furnace's owners reported that the furnace consumed approximately six thousand cords of wood per year in 1837, of which four thousand cords came from furnace-owned lands. The remaining two thousand cords were purchased, presumably from local landowners. During this period, the company paid to construct a public school at the furnace, suggesting a sizable population within the immediate area . In addition, the Union Township tax records assessed the company for ten tenant houses in the township in 1837. Hopewell Furnace continued to produce stoves and stove castings into the early 1840s. In 1844 stove-casting was halted at the furnace, and the skilled molders who had comprised the elite of the local workforce departed to seek employment elsewhere. From this date until the furnace ceased operations in 1883, Hopewell's principal product was unrefined pig iron. The exact reasons for the cessation of casting at Hopewell are unknown. However, the timing of the decision coincides with the expansion of anthracite iron production in the United States. Anthracite iron, produced using anthracite coal rather than charcoal as a fuel, was preferred by rolling mills. Additionally, the depletion of forest and ore reserves forced many charcoal furnaces out of business. Following the cessation of molding, in 1848, Clement Brooke retired from active furnace management and moved to Pottstown. In 1850 Charles M. Clingan, Brooke's son-in-law, became manager of the furnace. (CLR 1997: 39-41, citing Walker,1966: 6-11 and 59-61).

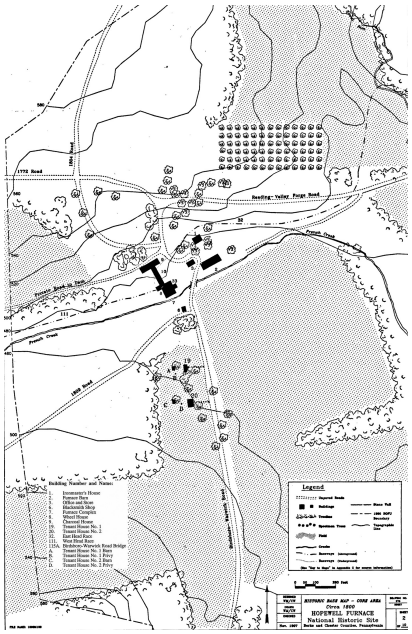


Figure 1. The 1800 Historic Period Plan for the Core Village illustrates feature locations based on documentation found primarily in the HOFU archives. Note the location of the Ironmaster's House, the orchard, and the field to forest ratio. (The Cultural Landscape Report for Hopewell Furnace National Historic Site--hereafter CLR--1997)

FURNACE DECLINE, 1846–1883

During the late 1840s, several changes affected the cultural landscape at Hopewell Furnace (Figure 2). Perhaps the most significant of these affected the appearance of the furnace complex itself. With the cessation of molding, the South Cast House was no longer required. This building may have been demolished about 1847 based on reasonably limited evidence. Oral tradition cannot place this building at the site in the 1860s. In 1853, an Anthracite Furnace was erected at Hopewell to adjust to the changing technology of iron production. This operation proved very short-lived, mainly due to technical problems using anthracite to smelt the iron ore available to the furnace. By 1857, the machinery from the new furnace was removed to Monocacy. Physical changes in the Hopewell landscape during the years before the Civil War included the installation of scales in the Bridge House ca.1847 and construction of a brick Kiln House ca.1849. The scales facilitated the accurate formulation of the furnace charge, while the Kiln House was used to make charcoal. The Kiln House failed to produce the desired quantity or quality of charcoal and was converted to a residence before the 1870s. (CLR 1997: 41-42, citing Walker 1966: 63 and Apple 1956: I1-99 – I1-102)

A half-acre plot of ground, located near the Kiln House, was used as a vegetable garden by mid-century. A second garden plot of about one-quarter acre was located immediately west of the barnyard and surrounded by a white picket fence. Tenant houses contained fenced gardens to protect the plantings from chickens and rabbits. Common vegetables found in Hopewell's gardens included onions, beets, lettuce, tomatoes, peas, radishes, cauliflower, cucumbers, squash, eggplant, and salsify. (CLR 1997: 42; Walker 1966: 132-133; Wells 1994: 28-29)

In 1856, a furnace employee, Nathan Care, acquired a parcel immediately south of the property along Birdsboro-Warwick Road. A log house may have stood on the parcel during this sale. Care built a two-story stone house ca.1856-1857 and added a barn to his property ca.1859. These buildings presently form the southern limit of the village, although they did not become part of the furnace property until ca.1916.

The Civil War revived Hopewell's fortunes, as the skyrocketing demand for iron drove prices up so rapidly that production costs ceased to be a financial issue. Pig iron that commanded thirty dollars per ton before 1860 brought eighty dollars per ton in 1864 and reached ninety-nine dollars a ton before prices began to slip. The increase in business stimulated repairs to the furnace in 1869, which included new interior fire brick walls in the furnace stack. (CLR 1997: 42, citing Dechant & Son, "Hopewell Furnace Lands" nd; Apple 1956, 1-7–1-9; and Walker 1966: 64-65)

Physical changes to the Hopewell landscape during the 1860s include the construction of Tenant House No. 3 and its associated barn. In 1864 Union Township taxed the furnace owners on ten tenant houses. Three years later, in 1867, the owners were taxed for ten single houses and one double house, which suggests that Tenant House No. 3 was erected between 1864 and 1867. The Tenant House Barn has an 1862 date scratched into the interior plaster, which tends to support a ca.1860 date for these two buildings. Apple suggests, based primarily on oral tradition, that Tenant House No. 3 was constructed for Hopewell employee John Shafer between 1845 and 1854. (Apple 1956: 105-151) When the Civilian Conservation Corps raised Hopewell Dam's height and increased the lake from twelve to sixty-two acres in the 1930s, two tenant houses were likely submerged. Other tenant houses in Union Township were likely located along the road to Jones Mine, south of French Creek. About 1869, a double house, half of which was occupied by a store, was erected on the west side of the Birdsboro-Warwick Road, south of Tenant House No. 3. Known variously as the Stubblebine House, the Boone Store, and Tenant House No. 4, this building burned in 1893. The furnace did not own the parcel containing Tenant House No. 4 until the twentieth century. Other changes during this period included alterations to the Ironmaster's House and the continued deterioration of the furnace complex. By ca.1867, the roof of the North Moulding Room had collapsed. Oral tradition suggests that the Cleaning Shed on the east side of the Cast House had been demolished before the 1860s since the building was not remembered by those interviewed in the late nineteenth century. (CLR 1997: 44-45, citing Apple 1956: I1-13-15,139-141)

During the 1870s, operations at the furnace were sporadic. In 1874, and again in between 1877 and 1878, the furnace was out of blast. In 1870, the Clingan family altered the Ironmaster's House, adding a second-floor toilet and extending the porch and the first-story windows that opened onto the porch. Additional construction work during this period included a series of frame additions to the barn (ca.1870) and a new schoolhouse (ca.1870) located approximately one-half mile west of the earlier schoolhouse along the 1809 Road (Figure 3). An increase in the price of iron stimulated Hopewell owners to resume operations in 1880. At this date, Edward S. Buckley emphatically instructed his managers to cut as much wood on the property as possible and turn it into charcoal to fuel the furnace. How much timber was cut is not known. During the first half of the 1880s, several alterations were made to the furnace and its associated buildings. These changes included re-roofing the Wheel House, which was rebuilt to connect to the Bridge House roof and constructing a new Charcoal House (ca.1880). In ca.1881, a boiler was installed in the Wheel House to provide auxiliary power during periods of low water. In 1882, an Ore Roaster was erected against the retaining wall between the furnace and the Office & Store. This piece of equipment was designed to remove impurities from the iron ore, thus improving the quality of the resulting iron. (CLR 1997: 45, citing Apple 1956, I-139-141 and Walker 1966: 65-66)

None of these efforts restored the furnace to profitability. In 1883, the furnace, according to Union Township tax records, owned only five tenant houses in the township, a fifty percent decline in a decade. The five houses no longer on the books in 1883 may have been sold to tenants, although records of such transactions do not survive, or they may have been demolished. Finally, on 15 June 1883, Hopewell Furnace went out of blast for the last time. After approximately 112 years, Hopewell Furnace stopped producing iron. (CLR 1997: 46, citing Walker 1966: 66)

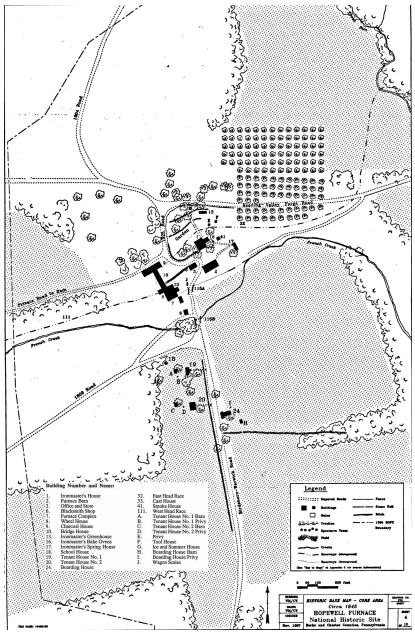


Figure 2. This 1845 Historic Period Plan of the Core Village illustrates change in the alignment of French Creek and buildings added since the early nineteenth century. (CLR 1997)

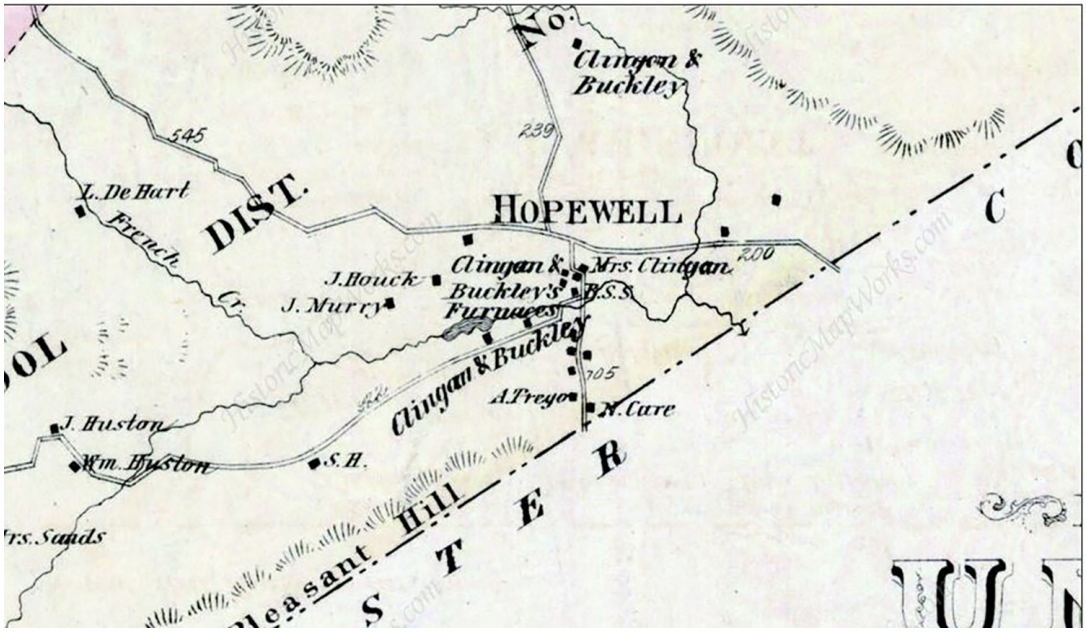


Figure 3. Detail of Union Township near Hopewell in 1876, shows locations of buildings. (F.A. Davis Illustrated Historical Atlas of Berks County, Pennsylvania)

SHUTDOWN AND SURVIVAL, 1883–1934

After the final blast of the furnace in 1883, the Brooke and Clingan families owned the property for half a century and returned most summers to live in the Ironmaster's House. Agriculture, building rental income, timber sales, charcoal production, and stone quarrying, though not iron production, helped the property remain profitable. (Glaser 2005: 8) In September 1886, the Reading Railroad purchased 100 tons of the nearly 360 tons of remaining pig iron from Edward S. Buckley and Maria Clingan, and within two years, all of Hopewell's iron was sold. In 1894, Maria Clingan offered to trade share in two Philadelphia store buildings in exchange for Buckley's half interest in Hopewell Furnace. Buckley agreed and transferred his half-share of the property to Clingan's children: Charles B. Clingan, Alan Hunter Clingan, and A. Louise Clingan Brooke. (CLR 1997: 50, citing Walker, 1956: 66-67)

Charles and Alan Clingan harvested Hopewell's forests for large wholesale lots of fence posts and rails. By 1902, they produced charcoal again for the Philadelphia iron manufacturers. Earlier in 1894, Richard Humphreys quarried stone on the Hopewell property, and in 1906, A. Louise Clingan Brooke sold rights on approximately 3,000 acres, most of it Hopewell Furnace lands, to the Schuylkill Stone Company for $157,000 for "quarrying, crushing, removing, and selling stone only." (Walker 1966: 68-69 and Dechant & Son 1915, rev. 1931) While it is unclear the extent to which the Schuylkill Stone Company quarried stone on the property, the Birdsboro Stone Company operated a stone-crushing plant approximately two and one-half miles north of Hopewell Village. Finally, the Pottstown Iron Company leased Hopewell mines as early as 1883 and continued to mine ore through 1913. By then, the Eastern Steel Company of Pottstown was purchasing almost a rail carload of Hopewell-mined ore a day. (CLR 1997: 50 citing Breou's Official Series of Farm Maps, 1883 and Walker 1966: 68-69)

Yet, with the iron furnace no longer blasting, the buildings and infrastructure directly associated with furnace operations received little maintenance. Buildings fell into disrepair. In 1887, only four years after the furnace ceased operations, the Carpentry (Wheelwright) shop neared collapse, the South Molding Room and Cleaning Shed had vanished, and the furnace began to disintegrate (Figures 4, 5, and 6). Ten years later only a portion of the Cast House's wood structure stood in front of the furnace stack. About 1893, the Boone House (Tenant House No. 4) was reportedly burned, and other tenant houses were in disrepair. One tenant noted that his home was "in a state of disrepair with its roof leaking, porch falling off, and fences rotting." The brick kiln house (presently a stabilized ruin), on the south side of the private road leading to Hopewell Dam, was likely abandoned before 1900. The Care Log Cabin near the boarding house, was cleared so that its site could be used for agriculture. The Clingans used the Ironmaster's House as a summer residence through 1915, and left site maintenance to a caretaker (Figure 7). Harker A. Long acted as caretaker through 1896, and following Long's departure, Nathan Care assumed the role of caretaker and lived in the rear wing of the Ironmaster's House. With limited resources, caretakers focused maintenance on farmed fields and occupied buildings, and the industrial core was essentially abandoned (Figure 8). (CLR 1997: 52-53, citing Dechant & Son, "Hopewell Furnace Lands"; Lewis and Hugins 1984: 67; Apple 1956: I-13 and 35; Walker 1966: 67-68)

Between 1907 and 1928, the Clingan family purchased 1,016 acres of land, the first of which was about 450 acres south of the village area, including the Painter, Lloyd, and Brandon tracts. During the 1910s and 1920s, purchased tracts were concentrated west of Hopewell Lake, including portions of Mount Pleasure. Most of the agricultural land was divided into farm fields by fences or stone walls. (Heite 1988: 27; Heite 1989: 26,33)

In 1926, the barn once associated with the Ironmaster's House was reconstructed to incorporate portions of the ca.1817 barn's stone walls and a ca.1830 addition. The large size of the new barn, coupled with the Clingan family's purchase of agricultural land, suggests its use for dairy operations at Hopewell, but its use has yet to be determined. A few years earlier, Nathan Care Jr. removed the steep grade between the Ironmaster's House's south side and the barn's north side, eliminating the need for steps near the Bake Ovens and required retaining walls to hold soil around the sycamore trees at the southeast corner of the Ironmaster's House. Farm fields near the old Furnace, including north and west of Hopewell Lake and south of Coventry Road from Birsboro-Warwick Road east to Bethesda Church, remained under cultivation (Figure 9). In contrast, by the 1920s, successional vegetation grew on former fields immediately west of current PA Route 345. (CLR 1997: 55, citing

Apple 1956, I1-55-56)

In 1932, Berks County road crews realigned portions of the 1804 and 1825 roads through the Hopewell Furnace property, most significantly in the vicinity of the Office & Store, where they demolished a large section of stone wall between the Office & Store and the Bridge House, and covered the foundations of the Ore Roaster, Cast House, and Carpenter's Shop (Wheelwright Shop). The new road passed the Blacksmith Shop, the Furnace remains, and the Charcoal House and ran through the Ironmaster's House yard, destroying a section of the west garden wall. The realignment flattened the road's steep grade and eliminated a tight turn between the Barn and Office & Store. (CLR 1997: 55, citing NPS Development Plan-Residence, Utility & Village Areas, Master Plan, 1956; Apple 1956: I1-36; Appleman, "Map of Hopewell Village," 1935)

In the 1930s, with the condition of the old furnace complex in decline, Louise Clingan Brooke contacted the Franklin Institute in Philadelphia to inquire whether they would be interested in preserving the water wheel and the blast machinery. Curious, the Franklin Institute sent staff and then a team of engineers to sketch the machinery, then to dismantle it and store it in the outbuildings. The Franklin Institute intended to use the machinery in an outdoor exhibit in Philadelphia, but this plan was not implemented. (Glaser 2005: 10)



Figure 4. In this photograph of the "Old Cast House, ca.1887, the buildings of the furnace are near ruin. (Stokes Collection, HOFU Archives)



Figure 5. Wheelwright Shop, circa 1890, was also in near ruin. (Bull Collection, HOFU Archives)



Figure 6. View of Office & Store, Barn and the Ironmaster's House looking north, ca.1890. (HOFU Archives)



Figure 7. View of the Ironmaster's House in the early twentieth century surrounded by lush vegetation and large shade trees. (HOFU Archives)



Figure 8. General view of village looking north in 1920, from the 1815 Road. French Creek is in the foreground. (Stauffer Collection, HOFU Photographic Archives)



Figure 9. View of the 1815 Road (Birdsboro-Warwick Road), looking north towards the tenant houses, ca.1914. (Photograph reproduced from Cornelia L. E. Brooke, Forges and Furnaces, HOFU Archives)

6. RECREATIONAL DEMONSTRATION AREA AND CCC CAMPS, 1934–1956

While interest in the old furnace village percolated, the federal government took initial steps toward acquiring and managing historic sites. The Coolidge administration expanded the definition of national monuments (formerly large natural areas mainly associated with Native Americans) by designating four forts and the Statue of Liberty in 1924 and 1925. In 1930, the Federal Government

designated the George Washington Birthplace a national monument and the Colonial National Monument in Virginia. (NR 2024, Sec.8: 60-61, citing Unrau and Williss 1983: 30-33)

Federal ownership of Hopewell Furnace Village began during the presidency of Franklin D. Roosevelt through an early and somewhat obscure New Deal program called the Recreational Demonstration Area (RDA). Under the RDA program, the federal government purchased unproductive farmland from economically stressed farmers and developed improvement plans to prepare the land for public recreation. The program included four property types: land within national parks, land to extend existing state parks, land to form highway waysides, and more general potential vacation areas. The RDA conservationists strove to prepare weekend campsites to provide fresh air to urban residents, which often included altering the natural features to support visitor use and demolishing unneeded buildings. Through the program, the federal government purchased land for 46 RDAs, five of which were in Pennsylvania. (NR 2024, Sec.8: 61, citing Glaser 2005: 14-15)

Hopewell Furnace Village and its environs made an ideal RDA candidate. The area, then known as "Hopewell Hills," had three advantages. Firstly, most of the acreage had only two owners. Indeed, Louise C. Brooke owned 4,227 of the 7,500 acres, divided into four separate tracts – the Hopewell Furnace lands, the Good Tract, the Laverty and Hager Tract, and the Shafer Tract – mostly within Union Township in Berks County. In addition, the federal government purchased approximately 1,200 acres of land adjacent to Brooke's land from the John T. Dyer Quarry Company for about $17,211. They also purchased approximately sixteen smaller tracts for the proposed RDA. (CLI draft 2003: 62, citing Chester County Historical Society Vertical Fine, "Hopewell National Park-Warwick Township Lands") Their purpose was to develop the property
"…for use as a public park and recreation area, for the restoration of structures of historic interest, the conservation of natural resources, the preservation of scenic beauty, forestation, and reforestation, and for use in connection with the construction of certain improvements for the purposes of the project." (Walker 1966: 69-70 and Cook 1993: np).

Secondly, the land was sparsely populated, so fewer people needed to be relocated. Lastly, the property provided recreational and historic interpretative opportunities: Hopewell Lake and the surrounding lands provided recreation, and the furnace ruins were a focal point for "historically-minded visitors." (Glaser 2005: 16)

Yet by the 1930s, many of Hopewell Furnace's buildings, including the Carpenter's Shop (Wheelwright Shop), Cast House, Molding Sheds, School House, tenant houses, and outbuildings, were in ruins or had disappeared completely. Those that remained, the Ironmaster's House, Church House, Blacksmith Shop, Office & Store, Boarding House, and Tenant Houses 1, 2 and 3, were deteriorating rapidly. Successional vegetation cloaked charcoal hearths, roads, trails, gardens, and fences, and the once blazing furnace stack threatened collapse. (CLR 1997: 59)

Another New Deal program was the Civilian Conservation Corps (CCC), a voluntary work relief program that ran from 1933 to 1942 for unemployed, unmarried men. The CCC supplied manual labor jobs related to the conservation and development of natural resources in rural lands owned by federal, state, and local governments. The CCC was designed to supply jobs for young men and to relieve families who had difficulty finding jobs during the Great Depression.

The first wave of the CCC, 200 young men of Company 2213, arrived at Hopewell on December 6, 1934, to carry out some of the first conservation projects. Long-time caretaker Nathan Care retired from his position so the CCC could use his house. The CCC also used the Charcoal House as a garage and the Blacksmith Shop as a general utility building. (NR 2024, Sec 8: 61 citing Glaser 2005: 22-23). The CCC men cleared underbrush, built roads, constructed foot and bridle paths, laid out camping sites, and assisted in excavating several lakes (Figure 10). Another CCC company of 200 men from Vermont joined the original CCC crew. Camp SP-17 was in French Creek State Park, and Camp SP-7 was at Hopewell Furnace, near the present utility area and quarters 98 and 99. The Hopewell Furnace CCC camp included mess halls, garages, an administration building, officer's quarters, and approximately ten barracks (Figure 11). Only three buildings – an oil house, a pump house, and a storage building – remain at Hopewell from the CCC's period. The pump house (Building 51) remains next to the park quarters. The other two buildings are northeast of the

maintenance building. (Walker 1966: 69; NR 2024, Sec. 7: 15)

In the summer of 1935, older and more experienced World War I veterans of Company 3301 and 3304 replaced the young men of CCC Company 2213. By 1936, the CCC crews began constructing a picnic area, including a covered picnic shelter and about 130 picnic tables with benches near Baptism Creek, east of a proposed bypass road (PA Route 345). They also built around thirty-five fireplaces with stones dug from nearby hillsides and two pedestrian bridges across Baptism Creek. Picnic area parking for one hundred cars was provided in a crescent-shaped area north of Hopewell Road. Most of the CCC-constructed picnic tables, fireplaces, and drinking fountains have since been removed or have fallen into disrepair. Portions of the parking area are still in use, and the National Park Service (NPS) mows the entire parking area regularly to reveal its historic boundaries. (NR 2024, Sec. 8: 61, citing Glaser 2005: 22-23; Review comments, A.Ruhe, 3 January 2025)

Interest in the historic importance of the village grew in the mid-1930s, leading to the first recommendation for restoration of the entire village. In 1935, Gustavus Mang, then serving as a CCC architect, reported that the village's "valuable heritage" was worthy of preservation. Soon after, Roy E. Appleman, a CCC historian, was assigned to evaluate historic properties where CCC camps were located. Appleman drafted a lengthy recommendation about the village. He outlined the role the furnace played in the industrial history of Pennsylvania along with its role in the American Revolution (later research has refined some of Appleman's initial conclusions). The most important of Appleman's recommendations was to restore the village to its appearance at the time the furnace was last used in 1883. The blast machinery, which had been dismantled by the Franklin Institute, remained in the outbuildings and could be re-assembled. Appleman envisioned informational displays in the Blacksmith Shop and Charcoal House and small signs identifying the historic buildings. In a later proposal, Appleman recommended a restoration back to the years 1785 to 1800, including the reconstruction of some lost buildings (Figure 12). He found the village to be an excellent candidate for a living history museum with live history demonstrations, like Williamsburg, Virginia and Dearborn, Michigan. Three historians who helped to initiate the federal management of the village, Ronald Lee, Roy Appleman, and Melvin Weig, began their long periods of service managing historic properties for the NPS at the village. (NR 2024, Sec 8: 60-62, citing Glaser 2005: 25-35,61)

Based on Appleman's plan the CCC, funded in part through the Works Progress Administration, began stabilizing the furnace stack, cleaning the water wheel pit, and assisting with building documentation and archaeological investigations. (Lew and Hugins 1983: 70) In 1937 to help preserve Hopewell Furnace's village and industrial core, the federal government began constructing a bypass road (PA Route 345) just east of the village. The bow-shaped road, which was completed in 1939, diverted automobile traffic around the village and connected to the historic Birdsboro-Warwick Road north and south of the village core. The government closed the segment of Birdsboro-Warwick Road running through the village to public traffic in 1955. (Thomas and Newswagner 1987: np) During this decade, the government also macadamed the Reading-Valley Forge Road (1757 Road) from the bypass road to the eastern park boundary and the 1809 Road (Road to Joanna). They also straightened the 1804 and 1825 Roads near the furnace in 1932. The yards of the Tenant Houses were raised about a foot to mitigate wet conditions. (CLR 1997: 60-62)

The government's intervention and the subsequent CCC activity at Hopewell Furnace resulted in dramatic changes to the site. These early efforts slowed what had become an unchecked deterioration of the site (Figures 13, 14, and 15). Activities included clearing overgrown areas and stabilizing historic fabric. Important as well were investigations intended to understand the site and its historic components. Another aspect of the government's intervention included the transformation of the site into a recreation demonstration project. This included construction of picnic grounds, campgrounds, and group camps, reconstruction of Hopewell Lake, and the construction of various hiking trails. The government's physical presence at the site also contributed to changes through the clearing and construction of CCC camps and the introduction of truck trails used during construction.

The Historic Sites Act of 1935 gave additional impetus to the restoration and reconstruction of the village. The act codified the initiative of the Hoover administration making the NPS the federal manager of historic preservation programs. Specifically, Section 2 of the Act authorized the NPS to

obtain the title to historic properties, manage the properties, and "restore, reconstruct, rehabilitate, preserve, and maintain historic or prehistoric sites, buildings, objects, and property…." NPS staff promoted the village because it was authentic, with no conjectural reconstructions of lost buildings or relocated buildings. (NR 2024, Sec.8: 62 citing Glaser 2005: 34)

Disagreements among NPS staff regarding reconstruction versus maintenance infused discussions, and in 1938 the NPS organized a conference to discuss a restoration project at the village. It was decided to allot federal funding for some initial work so that needed research could take place to prepare the way for further projects. Among the early projects were the stabilization and restoration of the furnace stack and repairs to the tailrace. Also at this time Roy Appleman, then serving as Acting Regional Historian, began to require the workers to photographically document their work. (NR 2024: Sec. 8: 62, citing Glaser 2005: 40-45)

In 1937, the NPS regional office in Philadelphia began urging the designation of the village as a National Historic Site to administratively separate it from the larger properties that were destined to become the French Creek State Park. Creating a separate entity for Hopewell Furnace Village made it possible to pursue recreational projects for the surrounding properties and conservation policies for the park and the furnace. The idea was controversial at the time and involved multiple discussions about separate management. NPS conservationists, who were pursuing recreational programs, worried that the funding would be entirely diverted to the village and resource conservation rather than investing in avenues for enjoying the scenic beauty of the area in the RDA. After delineating a boundary for Hopewell Furnace Village encompassing 213 acres, it was officially designated as a National Historic Site on August 3, 1938, the second NHS established in the nation. (NR Sec. 8: 63, citing Glaser 2005: 45-48)

Boundaries for the park followed the west side of the Pennsylvania Route 345 bypass road (under construction in 1938) on the east. The west boundary followed the old Birdsboro-Warwick Road on the north from its junction with the bypass road south approximately two thousand feet. At this point the boundary continued southwest approximately one thousand feet. It then followed an irregular diagonal line to the southeast for approximately three thousand feet, before continuing south to the junction of the old Birdsboro-Warwick Road and the bypass road, approximately seven hundred feet south of the Nathan Care House (Figure 16). (Federal Register 2039, 3 August 1938)

In 1938 the CCC located, mapped, and partially restored the East Head Race and restored the furnace's tail race. In 1940, they replanted part of the site's apple orchard. Yet at this point persistent internal NPS dissension needed to be addressed. Thor Borresen, an archeologist who worked in the NPS regional office, wanted the village to be managed like Williamsburg, with costumed interpreters selling period items and holding demonstrations of colonial life. Other NPS staff worried about the impact of heavy traffic in the historic buildings (Figures 17 and 18). Upon Borresen's request, an expert in interior furnishings evaluated the interior collections and stated that it was cheaper to display the existing interiors of the buildings (from the nineteenth century) rather than interpreting them with eighteenth-century furniture. Borresen therefore argued against the demolition of post-1785 buildings. With so many management issues needing immediate attention, the NPS held a conference in April 1940, during which the year 1880 was selected as the point of reference, with any later accretions to be removed from buildings. An interpretative program was recommended to explain the history of the site over time rather than trying to depict a single point in history. Lost buildings would be reconstructed as they originally appeared; interiors would reflect any point during the period of significance; and thorough research would precede any projects. This latter policy was applied at Hopewell Furnace NHS with the restoration of the Furnace Complex and the removal of the 1920s Barn and its replacement with the current Barn based on historic research and photographs. (NR 2024, Sec.8: 64, citing Glazer 2005: 60-61)

The focus of Hopewell Furnace Village shifted upon the nation's entry into World War II. Against the wishes of NPS staff, Congress incorporated the French Creek RDA into the Hopewell Village NHS's management, and archeological programs at the village ended. For the duration of the war, the chief purpose of the park would be recreation, and various groups came for stays of varying durations, among them the Boy Scouts, the National Guard, Valley Forge Military Academy, and groups of British and French sailors whose warships were undergoing repairs at the Philadelphia Navy Yard.

The sailors assisted with ongoing maintenance and fighting the occasional forest fire. A disagreement about the NPS policy of hunting on federal property paved the way for the former recreational areas to finally be transferred to the Commonwealth of Pennsylvania, which was accomplished in 1946. (NR 2024, Sec.8: 64 citing Glazer 2005: 76-109)

In 1941 the park constructed a new garage and a frame addition to the John Church House as part of the building's renovation to employee quarters. By the end of 1941 the CCC program at Hopewell Furnace was terminated as the United States entered World War II. During the war the French and British sailors used the former CCC camp as a rest area. In June 1942 Congressional legislation added the French Creek RDA to Hopewell Village NHS. However, just over four years later the Secretary of the Interior authorized the withdrawal of all lands acquire in the 1942 legislation "….which in his opinion are not required for historic-site purposes." These lands reverted back to a recreation demonstration area. The federal government deeded approximately 5,000 acres of land to the Commonwealth of Pennsylvania for use as French Creek State Park, with the NPS retaining approximately 848 acres for Hopewell Village NHS. While the furnace operated, its owners controlled just over half the area contained within the established boundaries of the historic site. The remaining portion, located south and east of the Boarding House, functioned as adjacent farmland, and was not part of the furnace land holdings until the twentieth century. (CLR 1997: 62-63, citing Apple 1956: I-23, I-31 and I-37, Lewis and Hugins 1954: 72, and Walker 1966: 70)

Following the war, the Nathan Care House was modernized in 1948 for use as quarters and a Quonset hut was constructed near the Tenant Houses (subsequently removed). During the 1950s restoration and improvement projects increased at the park. In 1951 the West Head Race was reconstructed and by 1954 a new entrance road and parking area had been completed. During 1955 the park restored the Spring House, Bake Ovens, and Bethesda Church carriage shed. (CLR 1997: 65, citing Jacox and Boyle 1985: 7: 4-14)



Figure 10. A CCC crew near the Ironmaster's House during the mid-1930s (HOFU Archives)



Figure 11. View of the CCC camp at Hopewell Furnace in the mid-1930s, (HOFU Archives)

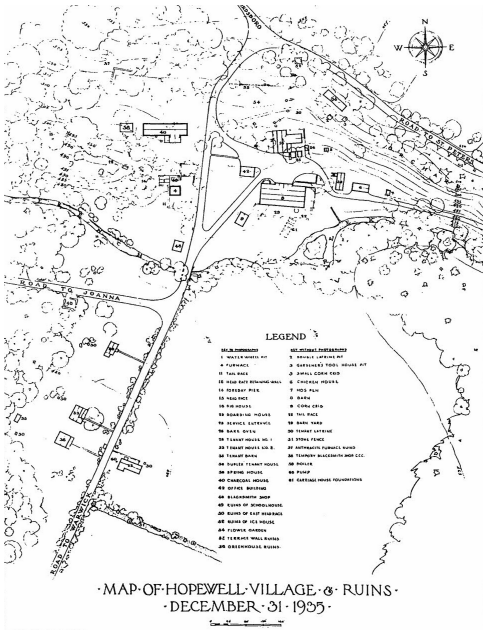


Figure 12. "Map of Hopewell Village and Ruins" by Roy Edgar Appleman, December 31, 1935. (HOFU Archives)



Figure 13. View of the garden terraces 1935. (HOFU Archives)



Figure 14. Ironmaster's House garden steps in ruins 1936. (HOFU Archives)



Figure 15. Tenant House No.2 and No.3, ca.1936. (HOFU Archives)

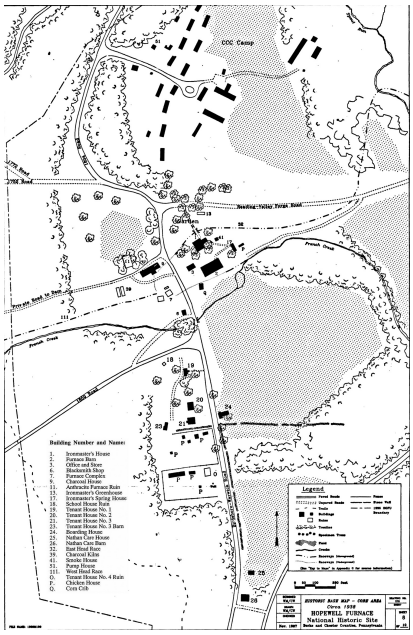


Figure 16. In this ca.1938 Historic Period Plan, features and locations are conjecture based on documentation primarily within the park archives. (CLR 1997)



Figure 17. Baptism Creek Picnic Area, 1936-1937. (HOFU Archives)



Figure 18. View looking north from the 1815 Road, looking north, ca.1940. (HOFU Archives)

MISSION 66 DEVELOPMENT, 1956–1966

The Mission 66 program was an initiative established in 1955 to enhance federal parks in preparation for the fiftieth anniversary of the NPS in 1966. The program began when NPS Director Conrad Wirth approached President Eisenhower with the idea for "a comprehensive program to launch the Park Service into the modern age." Mission 66 involved the improvement of facilities and infrastructure in parks, uniform entrance markers, additional employees and employee housing, as well as the construction of the first visitor centers. (Allaback 2000: 2-4) Among the Mission 66 projects at various federal parks were new entrances that lead to parking near the visitor centers, which were built adjacent to the historic sites but not intruding upon the historic setting. The Mission-66 projects at Hopewell Furnace NHS were representative of Mission-66 projects nationwide.

Each NPS park and site completed a Mission 66 prospectus in the mid-1950s. For Hopewell Furnace, the 26-page document outlined a host of needs, including research, a visitor's center, restoration, and an improved interpretive plan. Challenges identified by the park included restoration of the iron making facilities (including 18 associated resources), restoration of the village community (seven buildings and the orchard), fire protection, historic and archeological research, administrative facilities, and a lack of public accommodations. The prospectus thus laid out a bold proposal for the coming decade, much of which came to fruition. (NR 2024, Sec. 8: 55, citing Apple 1955)

The Mission 66 funding enabled restoration of several historic buildings, picking up where the CCC efforts left off. The first round of restorations was completed on the Bridge House and ramp in 1957 and the Wheelhouse and Charcoal House Shed in 1958. An archeologist discovered the Ice House and two stone pathways to the Ironmaster's House during these years as well. In 1959, the Visitor's Center, designed by Donald F. Benson, architect in the NPS's Philadelphia office, was built. The unsympathetically modern (Wisconsin dairy) Barn, which had been built in 1926 on the stone foundation of a historic barn, was demolished in 1959, enabling a more sympathetic reconstruction of the earlier barn. In addition, archeology was completed in preparation for the demolition of identified subterranean ruins of several other buildings. During 1960 and 1961, the Barn was rebuilt and the Office-Store was renovated to its early nineteenth-century appearance, with the latter work based on a historic structure report. Further renovation work was scaled back in the early 1960s after historians realized that the remains of the Wheelwright Shop had been obliterated when bulldozers had torn out the macadamized road through the village in 1955.

The most consequential project was the restoration of the Furnace Complex. The frame elements of the complex, which had collapsed in the 1930s, were entirely rebuilt to their historic appearance, using information from earlier historic structure reports and historic photographs. Renovation included the brick portion of the Furnace stack (1957-1958), the Wheel House (1957-1958), the Bridge House (1957), the Cooling Shed (1957), the Connecting Shed (1958 and 1965), the Cast House and Molding Sheds (1964-1965), and the Charcoal House (1965). Finally, the Springhouse behind the Ironmaster's House was renovated in 1965.

Mission 66 efforts also included construction of a new visitor center, two employee quarters, and a maintenance building. These buildings were completed in 1959 and are located north of the 1757 Road (Reading-Valley Forge Road). The visitor center replaced a small visitor shelter located at the parking area. Following completion of the new Visitor Center, park personnel relocated the visitor shelter to an area near the school house site. This shelter was demolished in 1972. The two living quarters were constructed near the southern end of the former CCC camp along a service road connecting the parking area with the 1825 Road to Birdsboro. A planned third quarters was not constructed. The maintenance building was constructed east of the quarters in a designated "Utilities Area" (Figures 19 and 20). ("Development Plan – Residence, Utility and Village Areas," 1956, revised 1961)

Between 1957 and 1959 the NPS brought slag from Joanna mine to recreate the slag piles around the furnace. They also completed several historic structures reports including Tenant Houses 1 & 2, the Charcoal House, and the Bridge House. Ongoing research shifted the park's interpretive effort from the furnace's colonial period of operation to that of the 1820s through 1840s, when the furnace experienced its greatest prosperity. ("Development Plan – Residence, Utility and Village Areas," 1956, revised 1961) Work outside the primary industrial zone included restoration of Tenant Houses 1 & 2, as well as the reconstruction of the Barn, Smoke House, and Boarding House. In 1964 the park demolished the Harrison Lloyd House. Ruins of the house and its associated outbuildings are still evident along the Harrison Lloyd Road, southeast of PA Route 345. ("Development Plan – Residence, Utility and Village Areas," 1956, revised 1961)

The NPS continued restoration and stabilization efforts throughout the 1970s and 1980s. The park stabilized outlying house ruins, including the Boone House, Woodlot House, and Brison House. The exterior of the Ironmaster's House was restored in 1979-1980 and the Blacksmith Shop was once again restored in 1981 following a fire. (NR 2024, Sec.7: 20)



Figure 19. Parking in the village for the Dedication of the Water Wheel ceremony, 1952. (HOFU Archives)



Figure 20. Photograph of Amish workers preparing beams prior to the Cast House reconstruction, 1964. (HOFU Archives)

MANAGEMENT SHIFTS AND THE BICENTENNIAL, 1966–1976

Between 1966 and 1976, the management focus at Hopewell Furnace NHS shifted from restoration to interpretation. The change was primarily prompted by the passage of the National Historic Preservation Act (NHPA) in 1966. In October 1966, the park was one of several federally-owned properties listed in the National Register of Historic Places, a program created by the NHPA. A fire in the Blacksmith Shop soon thereafter prompted questions about how to proceed during a time in which some of the National Register's terminology was either undefined or confusing. Section 106 of the NHPA created the process for reviewing alterations to resources listed or eligible for listing in the National Register. NPS staff met with staff of the Advisory Council on Historic Preservation to draft one of the earliest agreements about the use of federal funds for repairs to a listed property. The agreement was of such consequence that a regional conference was held at Hopewell Furnace Village to discuss the agreement, including issues around what constituted "restoration" as opposed to "rehabilitation" or "maintenance." After the conference, the NPS issued a document named "Administrative Policies for Historical Areas" that prescribed new preservation ideas of recommending against the restoration of historic resources to an earlier appearance. By the time of the 1976 US Bicentennial, funds were finally available to restore the Blacksmith Shop and the Ironmaster's House, but Bicentennial events at the Park generally centered on tours and living history demonstrations. (NR 2024, Sec.8: 66, citing Glasser 2005: 160-161)

NAME CHANGE AND PARK MAINTENANCE, 1976–2025

Near the end of 1976, as the Bicentennial events were winding down, NPS officials began discussing interpretation, leading to a new focus that guided policies during the next two decades. Park staff believed that the real importance of Hopewell was historic iron making and wanted to de-emphasize the Ironmaster's House along with the colonial experience of women at Hopewell. Advocates of the new policy began to use the name Hopewell Furnace instead of Hopewell Village to emphasize that the larger story of village life (as well as the American Revolution events) was a sub-theme to the park's industrial history. Additional research culminated in a revised National Register documentation, approved in 1985 under the name "Hopewell Furnace," that focused on the site's industrial significance. Congress officially changed the park's name to Hopewell Furnace National Historic Site in late 1985. (NR 2024, Sec.8: 66, citing Glaser 2005: 292-295)

The recent history of Hopewell Furnace has focused on maintenance, including control of invasives as seen in the maintenance of the cedar pasture, and new approaches to interpretation and outreach. Budget cutbacks in the 1980s resulted in the decision to scale back the living history events to Establishment Day (August 3), collier's apprenticeships, and cast/molding demonstrations. Reduced visitor numbers were sometimes attributed to the name change, which some staff believed gave a narrower sense of Hopewell's offerings and contributed to a decline in interest in visiting. In 1988, park staff began to expand the interpretation to include a larger emphasis upon the experience of African American workers and their families. Because Black workers had been part of the industrial family from the beginning, a body of primary sources was extant to gather information to present to visitors. This effort culminated in the booklet, "The African-American Experience at Hopewell Furnace" by Frances Delmar. (NR 2024, Sec.8: 67, citing Glaser 2005: 291,306-307)

In the mid-1990s, research, documentation and management of the cultural landscape was advanced with the production of a "Cultural Landscape Report for Hopewell Furnace, Site History, Analysis and Evaluation and Treatment, Volumes 1 and 2." In 1996 park staff began producing Spanish language materials as a means of outreach to the growing Hispanic community in the nearby City of Reading, a new source of potential visitors. Research to enhance the interpretation at Hopewell broadened the scope of the park once again but was drastically scaled back in 2020 because of the Corona virus pandemic, which necessitated the temporary suspension of interpretative activity at Hopewell. (NR 2024, Sec.8: 67, citing Glaser 2005: 291,306-307)

Conclusion:
Eight decades of federal ownership have shaped and preserved Hopewell Furnace NHS. Some of the earliest conservation projects completed by the CCC made the property accessible for recreational purposes and helped stop then-ongoing deterioration of the landscape and resources, setting the stage for later projects. The property was designated the second NHS by the federal government in 1938 due to its industrial importance. As an early NHS, the history of its management provides important clues to the growth in the overall field of historic preservation, including its many documentation projects that have contributed to knowledge about vernacular architecture and have informed Hopewell Furnace's interpretation program. The Mission 66 program provided federal funds that helped to preserve the historic landscape and restore the historic resources in their setting. The largest restoration project was the Furnace Complex (replacing the frame elements that had collapsed in the 1930s), but other projects included rebuilding the Barn, renovations to individual buildings, and landscape conservation through restoring the rural appearance of roads and management of forests and agricultural fields. An important outcome of the Mission 66 program was the construction of visitor centers around the nation, and the building at Hopewell Furnace is an early example of the building type. In several cases, documentation projects at Hopewell Furnace have helped to train NPS staff and other architectural historians about the general history of vernacular architecture, and commemorative events and demonstrations at Hopewell Furnace continue to transfer knowledge of previous practices to a new generation of historians and interpreters. (NR 2024, Sec.8: 59-68)

Uses

Functions and Uses:

Major Category	Category	Use/Function	Historic	Current	Primary
Domestic (Residential)	Village Site	Village Site	Yes	No	Yes
Landscape	Leisure-Passive (Park)	Leisure-Passive (Park)	No	Yes	Yes
Agriculture/Subsistence	Agricultural Field	Agricultural Field	Yes	Yes	No
Landscape	Natural Area	Forest	No	Yes	No
Recreation/Culture	Museum (Exhibition Hall)	Museum (Exhibition Hall)-Other	No	Yes	No
Industrial/Processing/Extraction	Extractive Facility (Mining)	Mine	Yes	No	No
Recreation/Culture	Outdoor Recreation	Picnic Shelter	No	Yes	No
Religion	Religious Structure (church)	Religious Structure (Church)	Yes	Yes	No
Industrial/Processing/Extraction	Manufacturing Facility (Mill)	Shot Furnace	Yes	No	No
Domestic (Residential)	Single Family Dwelling	Single Family House	Yes	Yes	No
Government	Government Office	Visitor Contact (Visitor Center)	No	Yes	No
Agriculture/Subsistence	Woodlot/Forest (Managed)	Woodlot/Forest (Managed)	Yes	No	No

Public Access:

Public Access: Other Restrictions

Public Access Narrative:

Hopewell Furnace NHS is open year round, Wednesday through Sunday, 9 a.m. to 5 p.m. The park is always open on Independence Day even if it falls on a Monday or Tuesday, but operations on other federal holidays are determined annually. On days when the park is closed, its historic buildings, parking lot and visitor center are unavailable for use, but its trails (which interconnect with those of neighboring French Creek State Park) remain open.

On select days of the park's summer season, visitors can experience the lifestyles and operations of the historic iron making community through demonstrations and living history programs. Activities occur on days staffing is available and vary from day to day. During September and October the park’s historic apple orchard is opened for picking by the public.

Associated Ethnographic Group

Ethnographic Study Status: Yes-Restricted Information

Ethnographic Narrative:

The 2007 report, “Cultures in Flux: New Approaches to 'Traditional Association' at Hopewell Furnace National Historic Site. Ethnographic Overview and Assessment” by C. Stanton is restricted to certain individuals within the National Park Service. The report is published by the National Park Service, Department of the Interior. Boston, MA.

Analysis & Evaluation of Integrity

Analysis and Evaluation of Integrity Narrative Summary:

The historic integrity of the Hopewell Furnace NHS Landscape is evaluated by comparing landscape characteristics and features present during the period of significance, 1771-1966, with the existing conditions as assessed in 2023. Many landscape characteristics and features from the period of significance remain today. The National Park Service's conservation of the park's historic resources and landscape over the course of 85 years has played a seminal role in the retention of the park's historic rural and industrial setting. This began with preservation, rehabilitation, and restoration projects undertaken by the Civilian Conservation Corps (CCC). The furnace complex, Ironmaster's House, and associated historic resources are extant, preserving the historic spatial relationships. The tenant village and the several outlying farmsteads that contributed to the success of the furnace in the eighteenth and nineteenth centuries also remain, as does the historic Bethesda Baptist Church and its walled cemetery. The historic road system has been returned to its nineteenth-century appearance, and CCC-constructed trails remain popular to visitors. The forested portions of the park (which had expanded between the final furnace blast in 1883 and the inauguration of federal ownership in 1935) have only minimally changed during the past century, representing both the furnace's reliance on natural systems and features and the park's introduction of recreational land uses. Stream-fed raceways still track through the landscape, while earthen terraces remain from extensive gardens. The Mission-66 program brought construction of the visitor center and parking, and staff residences and maintenance buildings to improve visitor interpretation and support park operations.

Since 1966 some landscape characteristics and features at Hopewell Furnace NHS have changed. Several resources have been renovated during the past 50 years, and the Blacksmith Shop was restored following a fire in the 1980s. New constructions have been the tenant house privy and small storage buildings, the latter located away from the park's historic areas. The park recently rehabilitated the CCC-constructed picnic shelter at the Baptism Creek Picnic Area. The terraced gardens are now grass save for a small demonstration plot. Also largely absent are small-scale features associated with the everyday lives of furnace workers and farmers.

Overall, Hopewell Furnace NHS retains a high degree of historic integrity when evaluated as a resource with a long and dynamic history that incorporates landscape change. The park continues to serve as an example of a historic iron furnace community, retaining each of the seven aspects of historic integrity.

INTEGRITY

The National Register of Historic Places defines integrity as the ability of a property to convey its significance through physical resources. The National Register program identifies seven aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. Retention of these qualities is necessary for a property to convey its significance; however, not all seven aspects must be present to retain integrity. The following evaluation is based on a 1771-1966 period of significance for the Hopewell Furnace NHS Landscape.

Location:
Location is the place where the historic property was constructed or the place where the historic event occurred. When evaluated in the context of above ground resources, integrity of location is retained due in large part to the federal government's acquisition of the park in the 1930s and subsequent conservation efforts. Importantly, the spatial relationship among the historic buildings remains intact as no historic resources have been relocated. While integrity of location to the eighteenth and nineteenth century cultural landscape may be diminished through the loss of buildings, structures, small-scale features, and vegetation dating to those centuries, the location of current cultural landscape features in large part reflects the landscape of early NPS ownership.

Design:
Design is the combination of elements that create the form, plan, space, structure, and style of a property. The design and layout of the park reflects both the preservation philosophies of the NPS, and the nineteenth-century landscape it preserves. Thus, integrity of design is apparent in alignment of eighteenth- and nineteenth-century roads used as pedestrian walks, in reconstructed buildings based on rigorous research, in the remaining Rustic Style elements of the CCC-era Baptism Creek Picnic Area, and in the contributing features of the Bethesda

Church landscape, including the gravestones and cemetery boundary wall. Holistically, the park retains integrity of design in the preserved layout of its industrial and domestic sites and their relationship to natural features.

Setting:
Setting is the physical environment of a historic property. Integrity of setting is retained by the surrounding woods and agricultural fields, through the relationship between the village core and natural features including Spout Run, French Creek, and Baptism Creek, and in circulation features that once linked the industrial site with surrounding markets. Overall, the park's rural and sparsely developed setting is intact.

Materials:
Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property. Integrity of materials is present in the eighteenth and nineteenth century buildings and structures, which included wood, stone, and stucco. These materials are also present in reconstructions dating to the early restoration period under the CCC. The introduction of asphalt during the later historic period has been removed from the historic roads. Several trees from the early nineteenth century also remain around the various yards. Although the chestnuts are gone, oaks and other hardwood species remain in the forests.

Workmanship:
Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory. Integrity of workmanship to eighteenth and nineteenth century is difficult to determine, due to extensive NPS restoration and recreation projects in the twentieth century. However, elements of workmanship have been retained, including the various elements of the Ironmaster's House (such as the stepped parapet) and the Greek Revival entrances of Tenant House No. 3. Workmanship is also evident in projects initiated by the CCC, including stone culvert headwalls, reconstructed stone walls in the village, and the wood and stone amenities at the Baptism Creek Picnic Grounds.

Feeling:
Feeling is the property's expression of the aesthetic or historic sense of a particular period of time. The rural and isolated feeling has been retained due in large part to the establishment of the park in the 1930s and subsequent conservation efforts by the NPS to preserve landscape characteristics and features relating to industrial, agricultural, residential, and public park uses during the period of significance. This aspect is somewhat diminished by the absence of some outbuildings and small-scale features associated with everyday historic use of the site. The noise, heat, and dirt associated with iron making are also gone, but the industrial core of the site is plainly evident in the furnace complex's visually distinct building and structures.

Association:
Association is the direct link between an important historic event or person and a historic property. This aspect is retained through continued agricultural use of the property that provides continuity of use within the cultural landscape. Association with the iron industry is retained through interpretation related to the eighteenth and nineteenth century industry, and through the history of the site as an early NPS historic preservation effort through the CCC.

.....

The next section presents an analysis of landscape characteristics and their associated features and corresponding Historic Structures Inventory names and numbers, if applicable. It also includes an evaluation of whether the feature contributes to the property's National Register eligibility for the historic period (1771-1966), contributes to the property's historic character, or if it is noncontributing, undetermined, or managed as a cultural resource. If a feature is non-contributing, it is evaluated as "compatible" (visually congruent with the historic character of the landscape) or "incompatible" (visually incongruent with the historic character of the landscape).

Landscape Characteristic: Archeological Sites

Archeological sites are the locations of ruins, traces, or deposited artifacts in the landscape and are evidenced by the presence of either surface or subsurface features. Hopewell Furnace NHS includes 48 archeological sites inventoried in the NPS Cultural Resource Inventory System (CRIS), formerly called the Archaeological Sites Management System (ASMIS). The CRIS contains information regarding the site name, the park resource identification number, the resource type, time period, condition, and a resource's status as a contributing or non-contributing element to the historic district. The 48 sites are present in isolated locations throughout the park's 848.06 acres. Of these, 46 sites are considered contributing resources and two are noncontributing. For further information about the archaeological sites within Hopewell Furnace NHS, please consult CRIS-Archeology. (NR 2024, Sec.7: 21)

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Charcoal Hearths	100063	Contributing	261966		Location	20046	Yes
Brison House ruins (55)	100062	Contributing	081456		Location	20122	Yes
Woodlot House ruins (76)	100079	Contributing	081437		Location	20126	Yes
Harrison Lloyd House ruins (72B)	100068	Contributing					No
Harrison Lloyd Barn ruins (74)	100065	Contributing	233842				No
Harrison Lloyd Blacksmith Shop ruin (72)	100066	Contributing	081443		Location	31428	Yes
Harrison Lloyd Well ruins	100069	Contributing					No
Manning House ruins	100073	Contributing					No
Anthracite Furnace ruin (1)	100059	Contributing	000680		Location	19636	Yes
Brick Kiln ruin (39)	100060	Contributing	000690		Location	20104	Yes
Gardener's Tool House ruins	100064	Contributing					No
Ice / Summer House ruins	100071	Contributing					No
Ironmaster's Greenhouse ruins (13)	100072	Contributing	006821		Location	20735	Yes
Mansion garden	100074	Contributing					No
Mule Stable ruin (83)	100075	Contributing	081450				No
Ore Roaster ruin (34)	100076	Contributing	006825		Location	20116	Yes
School House ruin (18)	100077	Contributing	000699		Location	20047	Yes
Wheelwright shop ruin (35)	100078	Contributing	000707		Location	31429	Yes
Harrison Lloyd Farm Bank Barn Ruin [LCS not CLR]	100067	Contributing	264559				No
Harrison Lloyd Worm Fence Ruins [LCS not CLR]	100070	Contributing	264615				No
Brison Field Wall & Foundation Ruin [LCS not CLR]	100061	Contributing	233800				No

Landscape Characteristic: Buildings and Structures

Historic Condition (to 1966):
Buildings are elements constructed primarily for sheltering any form of human activity in a landscape, while structures are elements constructed for functional purposes other than sheltering human activity. Several documented eighteenth-century buildings and structures remain at

Hopewell Furnace, including portions of the ca.1770s Ironmaster's House (altered and enlarged), the 1770s furnace stack (substantially rehabilitated in the 1930s), the East Head Race (repaired several times), and the 1782 Bethesda Church, perhaps the oldest building with the highest integrity. The Blacksmith Shop and the Office & Store may date to the eighteenth century, as similar buildings existed then, but whether they were the same buildings is unknown. Portions of the Village Barn also likely date to the eighteenth century, though the NPS rebuilt the structure in the 1960s. Tenant houses, which may have been log-constructed, were also present in the eighteenth century, but documentary evidence suggests that extant buildings date from the nineteenth century. Archeological reports indicate that at the Thomas Lloyd Farm, several barn structures, one of which is extant, in addition to a springhouse, and stone walls and other earthworks demarcating fields, may date to the eighteenth century. At the Harrison Lloyd Farm, one freestanding wall remains of what may have been a large barn, while several other foundations suggest a blacksmith shop and outbuildings of undetermined function. The NPS demolished the house at the Harrison Lloyd farm in the 1960s. (CLR 1997: 125-137)

During the first half of the nineteenth century, the furnace had its most prolonged period of prosperity, and many of the remaining buildings and structures at Hopewell Furnace NHS date to this period. These structures include portions of the West Head Race and the associated wheel pit, although the NPS rehabilitated and reconstructed portions of both resources. The east wing of the Ironmaster's House dates from 1826, and the south addition from 1828. Outbuildings near the Ironmaster's House also date from this period, including the Spring House (1816) and the Bake Ovens (1823). South of French Creek, the Boarding House and Tenant Houses Nos. 1 and 2 date to the early nineteenth century. Their permanence reflects the prosperity enjoyed by the furnace. The first village schoolhouse, located south of French Creek but no longer extant, was built in the 1830s. Outside the village, the John Church House and Barn, located near the intersection of Mark Bird Lane and PA Route 345, dates from this period. (CLR 1997: 125-137)

In 1846, the furnace began a period of decline, which ended in the industry's closure in 1883. Tenant House No. 3 and the Nathan Care House and Barn were built during the third quarter of the nineteenth century. Tenant House No. 4, located south of Tenant House No. 3, and a new schoolhouse built in the 1870s a half-mile west of the earlier school, do not survive. Portions of the Coal House were rebuilt in the 1880s, and portions of this structure remain. During this period, the Ironmaster's House assumed its present configuration. Note: an 1879 insurance map indicates a second, large (40 by 70-foot) barn, no longer extant, along the north side of the 1757 Road east of the Ironmaster's House. (CLR 1997: 125-137)

Following the cessation of operations at the furnace in 1883, most industrial buildings were abandoned and fell rapidly into decline. Several buildings burned, including the Cast House and Tenant House No. 4. Limited building construction included an addition to the Ironmaster's House to support its use as a summer home, and large additions to the Village Barn to convert it into a dairy barn. Chicken coops were erected near the former site of Tenant House No 4. (CLR 1997: 125-137)

The arrival of the CCC in 1934 inaugurated a massive building program at Hopewell Furnace. Camp SP-7 included a cluster of buildings north of the core village. Barracks, mess halls, recreation halls, and various support structures were all arranged around an open parade ground in accordance with military site planning precepts. The CCC crews stabilized and rehabilitated the furnace stack and tail race, as well as constructing the bypass road, and building trails, picnic areas, and other recreational facilities. Only four CCC-era buildings remain: the Pump House, two maintenance structures, and a Rustic Style picnic shelter and concession building near the Baptism Creek Picnic Area. (CLR 1997: 125-137)

In 1958, the NPS began another building campaign related to Mission 66 efforts in the village core. Buildings constructed during this period include the Visitor Center (1958-1959), a Quonset Hut (1948), and a maintenance building (1958-1959). Later buildings include the Youth Conservation Corps Building (1978), the Collier's Hut (1990s), the chicken house near the Ironmaster's House, the Cedar Pasture Shed (ca.1985), the Privy at Tenant House No 2. (ca.1998), the Radio Repeater Building (ca.1976-1982), the Maintenance Tool Shed (ca.2000), the Eastern National Parks and

Monuments Association Storage Building (1975), the Butler Building (1975), and the Bally Building (1990). The NPS rebuilt the Blacksmith Shop following a fire in the 1980s. (CLR 1997: 125-137)

Outside the immediate village core are two historic building clusters with peripheral associations to the furnace. Although not open to the public, these clusters include buildings dating from the furnace's period of operation. At the John Church cluster, near the intersection of Clement Brook Lane and PA Route 345, in 1941, the NPS constructed an addition to the existing house and a garage to convert the house to a staff residence. The Nathan Care cluster, located immediately south of the core village, is isolated from its historic agricultural fields and was modernized as a staff residence by the NPS in 1948. (CLR 1997: 125-137)

The Thomas Lloyd Farm is the most intact and representative of the outlying farmsteads. It is used as a staff residence and is not open to the public. However, at the Harrison Lloyd farm, the NPS demolished the house and barn in 1964. One freestanding wall remains of what is presumed to have been a large barn structure. A blacksmith shop foundation and foundations of several other small outbuildings remain and are stabilized and preserved. (CLR 1997: 125-137)

Evaluation:
The basic buildings and structures at Hopewell Furnace NHS have changed little over the past two hundred years. The essential organization of Furnace, Ironmaster's House, worker housing, and outlying building clusters survives remarkably intact. Within these clusters, however, there are significant examples of buildings reconstructed during the mid-twentieth century. There are numerous smaller buildings and structures that are missing. The result is a village that never existed at any one time in the past, instead representing various periods of significance. This situation emphasizes the multi-faceted history of the property.

Evaluated Building and Structure Features:
--1815 Road Bridge (Warwick Mine Road / Birdsboro-Warwick Road) (#115A).
(Contributing)
This stone bridge crossed French Creek near the furnace as part of the eighteenth-century road. It was altered when the creek course was changed and buried in 1932 when the state realigned and straightened the road. The bridge was restored after it was uncovered by 1962-1963 archeology work (Figure 31). It currently crosses the subterranean tail race.

--Anthracite Furnace Ruin (#011).
(Contributing)
The ruin is the remains of a structure built into the rising hillside on the north side of the walking trail. It was built in 1853 as part of an unsuccessful effort to modernize the furnace with anthracite coal, and was operational only a few years. The standing ruin includes a truncated pyramid of a red sandstone hearth and chimney with a circular core featuring heat-glazed in-walls and out-walls of dressed block and filler stone. A dominant feature of the ruin is the damaged archway leading into the furnace. Stabilized in 1963-1964 (Figure 32). (NR 2024, Sec.7: 11)

--Bally / ENPMA Building.
(Noncontributing)
The Bally Building is a small storage building constructed in 1990. The one-story building provides additional storage of artifacts and manuscripts and has few windows. The Eastern National Parks and Monuments Association Storage Shed, constructed in 1975, is a one-room steel building used for storage. (NR 2024, Sec.7: 15-16)

--Baptism Creek Picnic Shelter (#122).
(Contributing)
One-story building located in the northeastern portion of the park along a walking path named the Lenape Trail. CCC workers built the shelter in 1936, and the park rehabilitated it in c.2020. The building has two sections. The larger section is an open pavilion with a gabled roof supported by stone corners with intermediate wooden posts. The smaller section is an enclosed space with a similar design but with the space between the stone corners framed in with small windows (Figure 33). (NR 2024, Sec.7: 20)

--Bethesda Baptist Church (#079).
(Contributing)
A one-story vernacular house of worship with a front gable facing east. It was built ca.1782 with a light restoration in 1974-1975. The building represents the type of house of worship used by Baptists and Methodists in the very late eighteenth and early nineteenth centuries. Its stucco-over-stone walls feature historic six-over-nine shuttered windows and cross-paneled doors dating to the 1890s. The interior is a single room with an informal chancel area and open benches (not boxed pews). The Bethesda Church is also identified as a contributing feature in the 1995 National Register documentation for the North Warwick Historic and Archeological District, which includes part of Hopewell Furnace NHS (see Figure 23). (NR 2024, Sec.7: 18)

--Bethesda Baptist Church Carriage Shed (#080).
(Contributing)
An open shed where congregants could tie and shelter their horses during services. It has an overhanging roof extending to the south and three stone walls. Constructed ca.1827, the shed was restored in 1955. The carriage house is also identified as a contributing feature in the 1995 National Register documentation for the North Warwick Historic and Archeological District, which includes part of Hopewell Furnace NHS. (NR 2024, Sec.7: 18)

--Bethesda Baptist Church Cemetery Wall (#079A).
(Contributing)
This wall is a stucco-clad stone enclosure (“pale”) around the church and gravestones. The wall runs a total of 525 feet and averages just over three feet high. It includes wood-shingle coping and an iron gate in front of the church anchored into granite piers with apex capitals. The cemetery wall is also identified as a contributing feature in the 1995 National Register documentation for the North Warwick Historic and Archeological District, which includes part of Hopewell Furnace NHS (see Figure 23). (NR 2024, Sec.7: 18)

--Bethesda Baptist Church Privy (#081).
(Contributing)
The privy is a small frame building located along the western walled enclosure behind the church. It has a gabled roof, flush vertical siding, and a fieldstone and concrete foundation. Its exterior measurements are approximately four feet square. It was constructed ca.1935 and repaired in 1971. The privy is also identified as a contributing feature in the 1995 National Register documentation for the North Warwick Historic and Archeological District, which includes part of Hopewell Furnace NHS (see Figure 23). (NR 2024, Sec.7: 18)

--Blacksmith Shop (#006).
(Contributing)
The Blacksmith Shop is a one-story stone building located south of the Furnace Complex and facing east onto the 1815 Road. Its end-gabled roof is clad with orange-red clay tile and features a slightly elevated lantern centered on the ridge and a stucco chimney on the west slope of the roof. The stucco walls have batten doors on the north and east elevations and a slider window on the east elevation north of the main entrance. Various dates have been suggested for the building, mostly in the early nineteenth century; it was restored in 1949 with later restorations after fires in 1975 and 1980 (see Figure 26). (NR 2024, Sec.7: 10)

--Boarding House (#024).
(Contributing)
The one-and-a-half story masonry building is on the east side of the 1815 Road, facing north towards the furnace. The late eighteenth-century building has a shed-roofed rear addition (ca.1850). The building’s key features include its large stone chimneys, stucco-over-stone walls, and multi-light windows. A small porch is located near the northwest corner just off the road. The house was partially restored in 1963 (Figure 34 see also Figure 26). (NR 2024, Sec.7: 15)

--Bridge House (#010).
(Contributing)

The Bridge House is an area abutting the furnace where charcoal “charge” was stored while awaiting its use to fuel the furnace. The Bridge House thus connected the Furnace to the Connecting Shed. It has a gabled roof and walls of flush vertical siding over heavy timber framing. The Bridge House was constructed in 1957. It is a reconstructed version of the earlier Bridge House which collapsed in 1931 (Figure 35). (NR 2024, Sec.7: 9)

--Brison Field Wall & Foundation Ruins (#055A).
(Contributing)
Stone walls, measuring 87 feet long running in an east-west direction, turning 90 degrees then running 89 feet long in a north direction. Portion of the longer length is foundation to storage/root cellar building. (HSI #233800)

--Brison House Ruin (#055).
(Contributing)
Only portions of four exterior walls remain of this small stone structure. Served as tenant house for George Brison, an African-American furnace worker for furnace employee. Built in 1860, stabilized in 1983. Archeological work in 2002 mapped the ruin as measuring 30 by 22 feet. The NPS HSI describes ruin as a 15 by 10-foot (approx.) stone foundation with 6-10-foot high stone wall remnants, with the north wall at grade level. (NR 2024, Sec.7: 32-33; NR 1985, Sec.7: 10; HSI #081456)

--Butler Building.
(Noncontributing)
The Butler Building is a metal building with a trapezoidal shape built in 1975 (Figure 36). (NR 2024, Sec.7: 16)

--Cast House (#033).
(Contributing)
The Cast House is the visually dominant section of the Furnace Complex due to its belfry, even though it stands on a lower grade than other sections of the overall Furnace Complex. Its frame elements were rebuilt in 1964-1965. The L-shaped section has the appearance of a two-story building; the height was needed to help disperse the heat generated by the furnace. The steep roof is clad with tile, and the steeply-pitched pyramidal belfry is located near the east end of the ridge. The section’s frame walls are clad with flush vertical siding and have several multi-light windows arranged mostly symmetrically. The section has a rubble stone foundation. The interior is organized into a central area with a sand floor for the casting of pig iron, flanked by wood floored areas to the north and south for casting flasks (Figure 37). (NR 2024, Sec.7: 9)

--CCC Firehouse Foundation (Site).
(Noncontributing)
A concrete pad associated with the former CCC firehouse is located in the vicinity of Quarters 98 and 99. (NR 2024, Sec.7: 38)

--CCC Pump House.
(Contributing)
One-story building built by the CCC in 1935. It has a front gabled orientation, beneath which is a 12-light window, and beneath the window is a two-door entrance, each featuring five cross panels. The building is clad with machined shingles and has a small shed addition. (NR 2024, Sec.7: 16)

--CCC Block [Storage] Building.
(Contributing)
A small one-story resource built in 1941. Its gabled roof is clad with asphalt shingles and features an overhanging on the south elevation; its block walls have two doors on the south elevation and one on the east elevation, and six-light windows with metal sashes (see Figure 36). (NR 2024, Sec.7: 16)

--CCC Oil House.
(Contributing)

A one-story, three-bay block building built in 1941 by CCC workers; it has a loading dock in front and three sets of two-leaf metal doors (see Figure 36). (NR 2024, Sec.7: 16)

--Cedar Pasture Shed.
(Noncontributing)
Remnants of a wood shed are located on the north side of the pasture. (NR 2024, Sec.7: 52)

--Charcoal House (#009).
(Contributing)
The Charcoal House is one of two buildings standing parallel to each other and forming the northern portion of the Furnace Complex. Built ca.1800 and restored in 1965. It is a one-story stone building where charcoal was stored prior to use in the furnace. It has a gabled roof, flush vertical siding above the eave line in the gables, and stucco over stone walls (Figure 38). (NR 2024, Sec.7: 10)

--Charcoal Kiln Ruin (#039).
(Contributing)
The Charcoal Kiln Ruin is the mostly-subterranean remains of two brick charcoal kiln houses built in the 1850s. Originally two narrow buildings situated parallel to each other in close proximity, the ruin today consists of one brick foundation measuring 12.5 by 39.5 feet and a stone foundation measuring 10.5 by 39.5 feet. The ruin was stabilized in 1961 (Figure 39). (NR 2024, Sec.7: 10)

--Cleaning Shed (#033).
(Contributing)
Also known as the East Shed, the Cleaning Shed is a one-story gabled wing centered on the main (east) elevation of the Cast House. The section is considered part of the Cast House in the LCS and Structure enumerations, as the two were rebuilt together in 1964-1965. The structure has a gabled roof clad with tile and frame walls clad with flush vertical siding. A passageway extends through the section, leading to the Cast House, with the enclosed room on the south side called the Carpenter’s Shop. The Cleaning Shed was the location where castings were brushed clean of molding sand (see Figure 37). (NR 2024, Sec.7: 9)

--Collier’s Hut.
(Noncontributing)
The collier’s hut is a replica of nomadic living quarters for colliers. The hut has a generally conical shape eight feet in diameter and is built of wood, leaves, and soil. According to the 2012 SHPO correspondence, a hut built in the 1980s is no longer extant. Today there is a replica hut located west of the Charcoal Kiln Ruins, apparently built by the Boy Scouts in the early 1990s and evaluated as noncontributing in the 2004 Historic Resource Study. (NR 2024, Sec.7: 11,36)

--Connecting Shed (#010A).
(Contributing)
This elevated passageway extends from the Bridge House north to the Charcoal House. The Connecting Shed, rebuilt in 1958, has six bays, the northernmost of which was built in 1965, resulting in an overall length of 45 feet. It has a gabled roof and open walls on either side. The southern portion of the Connecting Shed stands on a stone foundation rising from the lower grade of the hillside in that area (see Figure 35). (NR 2024, Sec.7: 9)

--Cooling Shed (#009).
(Contributing)
One of two buildings standing parallel to each other and forming the northern portion of the Furnace Complex. Built ca.1800 and restored in 1957. The Cooling Shed is an open shed with wooden corner and side posts supporting a gabled roof. It was used to store hot charcoal prior to storage in the Charcoal House (see Figure 38). (NR 2024, Sec.7: 9)

--East Head Race (#032).
(Contributing)
One of two head races that supplied water to power the furnace, this is the original head race for the Furnace Complex. Originally built ca.1771, it brought water to the furnace from Baptism Creek,

which is approximately 1.5 miles east of the village. As the race approached the furnace, it ran underground through a six-inch cast iron pipe. The race was partially restored in 1938, 1956, and 1984 (Figure 40). (NR 2024, Sec.7: 11)

--East Head Race Retaining Wall (#032A).
(Contributing)
Mortared stone wall, approximately 100 feet long and 4 feet high runs along the 1815 Road then eastward parallel to the East Head Race (Figure 41). (NR 2024, Sec.7: 11; HSI #081463)

--French Creek Bridge (115B).
(Ineligible-Managed as a Resource)
This bridge carries the 1815 Road across French Creek. A historic photo shows a bridge at this location in 1920. The bridge was rebuilt in the 1930s as part of park improvements, and has been rehabilitated or rebuilt several times since 1940. The original 18 feet long by 4-feet wide stone abutments support a 12-foot-wide road bed constructed of four steel I-beams. Side railings consist of squared wood-cased steel posts and rails (see Figures 24 and 26). (NR 2024, Sec.7: 52; HSI #081446)

--Furnace Bank and Retaining Wall (#008).
(Contributing)
The linear, terraced stone wall runs east/west between the Cast House and the Charcoal House. The wall is approximately two feet thick and has a height varying between eight and 18 feet and extending 128 feet east of the Connecting Shed and 56 feet to its west. Further west is a curving wall extending an additional 83 feet. The wall includes two sets of stone steps. The wall was altered in 1932 for road improvements but reconstructed to its historic appearance in 1957 (see Figure 37). (NR 2024, Sec.7: 10)

--Furnace Stack (#007).
(Contributing)
The furnace, where the “charge” was super-heated to produce iron, is a stepped stone structure 38 feet high that is embedded into the Furnace Complex. The furnace stack rises from a foundation measuring 28 feet by 27 feet, with a Tuyere arch and tunnel head on the north side and a cast arch on the east side. Stone on either side have the date “1771” inscribed. The furnace was improved periodically, with its height increased with brick. It was restored in 1936-1938, and the brick upper furnace stack was rebuilt in 1957-1958 (Figure 42). (NR 2024, Sec.7: 8-9; HSI #000691)

--Harrison Lloyd Blacksmith Shop Ruin (#072).
(Undetermined)
The Blacksmith Shop Ruin likely dates to the period between ca.1820-1860, during the ownership period of Thomas Lloyd III. Archeological investigation in 2002 by John Milner Associates, Inc identified ruins of a 20 by 20-foot blacksmith shop. The coursed, dry-laid stone foundation ruins are approximately 18 by 20 feet and up to 3 feet high, with side hearth ruin in the northeast corner measuring 6 feet square by 3 feet high. (NR 2024, Sec.7: 34: HSI #081443)

--Harrison Lloyd Barn Ruin (#074).
(Contributing)
The visible barn remnant is a stucco stone wall approximately 2 feet wide, 13-14 feet high, and 28 feet long. Two “legs” approximately 12-inch square by 12-inch high extend above ground, each having a tenon carved into the top face for receiving a wood sill member. The remainder of the stone foundation is below grade. The barn ruin is also identified as a contributing feature in the 1995 National Register documentation for the North Warwick Historic and Archeological District, which includes part of Hopewell Furnace NHS. (NR 2024, Sec.7: 8-9; HSI #233842)

--Harrison Lloyd Farm Bank Barn Ruin (#074A).
(Contributing)
Archeological investigation in 2002 identified the bank barn ruins, consisting of substantial remains of foundation walls and a bank driveway berm to former first story/storage area. Outlines and remains of livestock area in ground story. Overall measurements are 45 feet long by 40 feet wide,

and the drive berm is 20 feet long by 33 feet wide. Stones are coursed and squared laid. (NR 2024, Sec.7: 34; HSI #264599)

--Harrison Lloyd House Ruin (#044).
(Contributing)
Archeological investigation in 2002 identified the house foundation and ruin. The ruins are a rough fieldstone foundation approximately 4-5 feet high, partially concealed and overgrown with dense vegetation. (NR 2024, Sec.7: 34; HSI #416844)

--Harrison Lloyd Stone Walls (#073).
(Contributing)
Archeological investigation in 2002 identified several dry-laid fieldstone wall remains of various lengths, approximately 1-foot high by 3-feet wide, at the edge of fields that were (and some still are) used to grow crops. (NR 2024, Sec.7: 34; HSI #081440)

--Ironmaster’s Bake Ovens (#016).
(Contributing)
Two contiguous Bake Ovens are located in the kitchen yard east of the Ironmaster’s House. The ovens baked large quantities of bread and pastries and dried fruit and corn for winter storage for the Ironmaster and his family as well as for furnace employees. A gabled roof extends over the stucco-over-stone walls that contain the two brick barrel-vaulted interiors. Built ca.1825 and enlarged ca.1840, the bake ovens were restored in 1955. The north oven was accurately rebuilt by the Harper's Ferry Training Center (NPS) in 2002-2005. (NR 2024, Sec.7: 13; HSI #000681)

--Ironmaster’s Chicken House.
(Noncontributing)
Located east of the Ironmaster’s Spring House, it is a small frame building located within the fenced Hog Pen enclosure. (NR 2024, Sec.7: 13)

--Ironmaster’s Greenhouse Ruin (#013).
(Contributing)
The Greenhouse Ruin is located on the earthen terraces north of the house. The earlier greenhouse was built ca.1829; its remaining stone foundation walls were stabilized in 1977. (NR 2024, Sec.7: 13)

--Ironmaster’s House (Mansion / Big House) (#001).
(Contributing)
The Ironmaster’s House, also known as the Mansion or the Big House, is one of the largest buildings in the NHS and reflected the prominent social position of the iron master. The house consists of a two-story, five-bay main block built in two sections and a two-story rear tee section. It is a Federal style residence that faces west to the furnace. The north end of the main block was constructed ca.1800 as a side hall plan house, with the “south wing” constructed ca.1828 to complete the main block. The tee section was built on the east side ca.1836. The main block has an end-gabled roof clad with wood shingles and featuring large, stucco chimneys at each end of the ridge of the main block. The tee section has small dormers and a center chimney on the ridge. The south end of the main block features a stepped parapet, a rather rare feature for such a rural location. The building has stucco-clad stone walls. Fenestration is symmetrical, with historic double hung sash windows throughout (six-over-six units on the upper level dating to the early nineteenth century; two-over-two floor to ceiling or “walk out windows” on the first floor of the main block, likely dating to the second half of the nineteenth century; and six-over-nine windows on the first floor of the tee section, likely dating to the early nineteenth century). Louvered shutters flank most windows. A porch extending along the main elevation features bracketed eaves supported by six octagonal columns connected by intersecting balusters. Two small porches are located on the south elevation, and a small frame second floor addition is located in the void on the north elevation. The foundation is stone. The house’s exterior was restored in 1979-1980, and its interior is partially restored (Figure 43). (NR 2024, Sec.7: 12)

--Ironmaster’s House Kitchen Yard Wall (#001C).

(Contributing)
Retaining walls enclose the area around rear of the Ironmaster's House. The walls to the north and east of the house were built before the ca.1826 construction of the house's east wing and the bake ovens. The wall to the south of the house was built in 1922 by Nathan Care, Jr. during work to eliminate the steep slope between the house and the barn, requiring construction of the wall to hold soil around sycamore trees at the southeast corner of the house. In 2000 the south wall was reconstructed 1-foot away from the trees to avoid the tree roots, which required to use of an arch structure. The dry-laid and mortared stone retaining wall to the south of the house (around the east, north, and west sides of two historic sycamores), is around 2.3 feet high; the wall to the north of the house is 6.5 feet high by approximately 16 inches thick; and the wall to the east of the house is around 5.3 feet high by 12-22 inches thick and adjoins the bake ovens (Figure 44).(NR 2024, Sec.7: 12; HSI #081461)

--Ironmaster's House Yard Wall (#001A).
(Contributing)
The ca.1832 wall serves as a retaining wall and boundary for the front yard. It may have once served as a foundation for a picket fence that bordered the garden on the south and west. The wall is 2 feet high and approximately 125 feet long, and topped with chamfered stones that protrude slightly over the supporting stones to make a rain cap. The wall is interrupted by a path that leads to the house's front door (see Figures 41 and 43). (NR 2024, Sec.7: 12; HSI #081433)

--Ironmaster's Smoke House (#041).
(Contributing)
The Smoke House is a small frame building located northwest of the spring house. It was built ca.1867 and restored in the 1960s. Used to butcher and smoke meat for inhabitants of the Ironmaster's House and for sale to furnace workers and their families. The building has a wood shingled roof and frame walls clad with board and batten. A batten door near the southwest corner accesses the interior. (NR 2024, Sec.7: 13)

--Ironmaster's Spring House (#017).
(Contributing)
Constructed 1806-1808, the Spring House is located east of the Ironmaster's House and northeast of the Village Barn. The building provided drinking and cooking water and served as an "ice box" for cooling milk and butter for the Ironmaster's House and its boarders. An 1808 addition on the south end of the structure with fireplace and chimney was used to boil water for washing and cooking and to render lard. The Spring House was restored in 1957-1958 and again in 1965. Its gabled roof is clad with wood shingles. The stucco-over-stone walls feature two interior spaces, each accessed by doors on the southwest elevation. The door leading into the reservoir is recessed below a gabled roof overhang. The southeast end of the building contains a wash house section, with a large chimney at the end of the ridge (Figure 45). (NR 2024, Sec.7: 13)

--John Church Garage.
(Noncontributing)
The garage is located northwest of the John Church House at the end of the driveway. It is a two-car frame garage with two overhead garage doors on its east gable and six-over-six windows on its north and south elevations. The garage was built in 1941 by the CCC, but does not possess the Rustic Style characteristics associated with the CCC. (NR 2024, Sec.7: 17)

--John Church House (#027).
(Contributing)
John Church was the company manager and clerk who worked in the Office-Store and maintained the company records. The house is a two-story, four-bay, Federal style house (ca.1845) with a two-story frame addition (1941) off its west end. The house has a wood shingled roof, stucco clad stone walls, large end chimneys, multi-light windows, and a small front porch. It was renovated in 1940 for use as park staff residence and again in 1990. The addition is a one-bay extension with an end chimney, frame walls, multi-light windows, and a small gabled porch off its west end. The house has been used as a residence for park staff but was vacant in 2020 (Figure 46). (NR 2024, Sec.7: 17)

--John Church Mule Barn (#028).
(Contributing)
Located along the north side of Mark Bird Lane at the eastern terminus of the John Church Retaining Wall and Steps. The two-level agricultural outbuilding, ca.1845, was restored in 1958. It has a wood shingled roof and stucco clad stone walls. Most of the wall openings are on the south elevation, including a loading door on the upper level and two batten doors on the lower level with a slat window in between (see Figure 30). (NR 2024, Sec.7: 17)

--John Church Retaining Walls and Steps (#027A).
(Undetermined)
The John Church Retaining Wall and Steps, dating to ca.1941, are part of the improvements and developments implemented by the CCC. One section is located behind the John Church House at the garage, and consists of three 3-foot high segments between 20 and 40 feet long that create a turnout. The second section is located along the north side of Clement Brook Lane and consists of a 3-foot high by 171-foot long curving wall with a lined-channel ditch and a 5-foot-wide stairway (see Figures 30 and 46). (NR 2024, Sec.7: 18; HSI #081460)

--Lenape CCC Spring House (#088B).
(Contributing)
The Lenape Spring House was constructed by the CCC at the Baptism Creek picnic area. It is identical to two other extant spring houses built between 1936-1941, at the same time as the Hopewell Furnace was being restored by the CCC. The structure is a 6 by 7-foot, 3-4-foot high structure with rough-cut, random course and mortared local stone walls and wood shingle gable with roof rake boards in the gables. The opening to the interior is on the east wall with its vertical-board door currently laying on the roof. (HSI #233758)

--Maintenance Building.
(Noncontributing)
Located 450 feet north of the Visitor Center. This one-story, rectangular-shaped Modern Style building was constructed in 1958-1959 for artifact storage and as a maintenance shop. It has an irregular footprint and a flat roof. The south elevation has a window band below the eaves along most of the side, with two garage bays to the east. The park constructed additions on the north and south elevation in the 1980s. Due to major exterior alterations and additions, as well as interior renovations and reconfiguration, it is noncontributing (see Figure 29). (NR 2024, Sec.7: 15-16)

--Mule Stable Ruin / Mule Barn (#083).
(Contributing)
Located south of the Village Barn and likely built as early as the 1770s. The mule stable ruin consists of a rough-cut and -laid, coursed-stone foundation with an entry sill (Figure 47). (HSI #81450)

--Nathan Care Barn (#026).
(Contributing)
Built by Nathan Care within a few years of his 1856 house, the barn was used for farming the 17 acres of the Care property. The stone barn is located south of the house, on the east side of the 1815 Road. It is an example of a closed forebay Standard barn and was constructed ca.1850. The west elevation, facing the road, includes an earth ramp that accesses two large rolling batten doors, beyond which is the barn’s threshing floor. The east wall, facing away from the road, is the location of the barn’s frame forebay. Beneath the forebay are four batten doors accessing the barn’s lower or stall level. (NR 2024, Sec.7: 19)

--Nathan Care Boundary Stone Wall (#025B).
(Contributing)
One of two walls associated with the Nathan Care House, this wall runs along a historic property line. The wall runs east-west on the west side of the 1815 Road. The wall is 155 feet long, 3 feet wide, and 2 feet high. (NR 2024, Sec.7: 19)

--Nathan Care CCC Spring House (#088C).

(Contributing)
The 6 by 7-foot, 3-4-foot high structure features rough cut, random course and mortared local stone walls and a wood-shingle gabled roof. There is one access opening to the interior via a vertical-board door. It is one of three spring houses built in the park by the CCC. (HSI #851747)

--Nathan Care House (#025).
(Contributing)
Residence of Nathan Care, who was manager of the Furnace and its last Founder (1850-1883), succeeding other members of the family in that role. The property was purchased by Care in 1856, who constructed the stone house soon after. The NPS rehabilitated the building for employee housing 1947-1948. The house is a two-story, three-bay vernacular building facing south. It was built ca.1850 by Nathan Care, iron founder and molder. Its stone walls are clad in stucco. The building features multi-light windows with batten shutters and a screened porch on the south elevation (Figure 48). (NR 2024, Sec.7: 19)

--Nathan Care House Field Stone Wall (#025A).
(Contributing)
This wall demarcates the boundary between the historic farm fields and the Nathan Care House's lawn. The more intact portion of the wall is approximately 5-6 feet high and 80 feet long. A trace of the wall can be seen stretching from the 1815 Road to the intact portion. It is one of two walls associated with the Nathan Care House. (NR 2024, Sec.7: 19-20)

--Office-Store (#003).
(Contributing)
The Office ran the business side of furnace production and kept employee records. The Store was the nearest source of food and sundries for most furnace workers. The Office-Store is a two-story bank building located between the Furnace Complex and the barn. Built ca.1780, in ca.1820 a frame shed was added and in ca.1860-1870 the roof was raised to form a second story and doorways and windows were added and/or altered. The building was restored by the NPS in 1960 to its pre-1860 appearance. The 1815 Road winds its way around the eastern end of the Office-Store, although in the early twentieth century the road was shifted to the west side of the building, piercing the stone retaining wall. It has a wood shingled roof, painted stone walls, and a frame addition on its east end. Batten doors access the lower level on the south side and the upper level on the north side. (NR 2024, Sec.7: 10)

--Ore Roaster Ruin (#034).
(Contributing)
This small ruin is located between the Cast House and the Furnace Bank and Retaining Wall. It was built with a truncated conical shape of rough dressed red sandstone, ten feet high, seven feet in diameter at the base, and two feet in diameter at the top. Built in 1880-1882 to improve the quality of the iron produced by eliminating sulphur (see Figure 37). (NR 2024, Sec.7: 11)

--Quarters 98.
(Contributing)
Quarters 98 was built in 1958 as a staff residence at the former CCC camp site. The one-story, ranch frame building has an L-shape due to an attached garage. Designed in the Mid-Century Modern Style, Quarters 99 currently is used for a conference room and library. (NR 2024, Sec.7: 16)

--Quarters 99.
(Contributing)
Like Quarters 98, this Mid-Century Modern Style house was built in 1958 for park staff at the site of the former CCC camp. The L-shaped, one-story frame building has an attached garage. It is currently used for a conference room and library (Figure 49). (NR 2024, Sec.7: 16)

--Quonset Hut.
(Noncontributing)
Northeast of the Bally Building is the Quonset Hut, a steel barrel-vaulted building dating to 1948.

The Quonset Hut is a storage building constructed before the Mission 66 program began. (NR 2024, Sec.7: 16)

--Radio Repeater Building.
(Noncontributing)
A small building housing communications equipment in the Baptism Creek Picnic Area. Built 1976-1982.

--Reservoir and Pump House.
(Noncontributing)
The Pump House, constructed in 1974, houses a 50,000-gallon underground water reservoir, a chlorinator, and a pump. (NR 2024, Sec.7: 17)

--School House Ruins (#018).
(Contributing)
Located south of the Furnace Complex along the 1809 Road, a short distance west of Tenant House No. 1. The public schoolhouse was constructed by the owners of Hopewell Furnace in 1836 and it continued to be used until a new school building was constructed farther to the west in 1872. A portion of the stone schoolhouse foundation is still visible on the ground surface and the site area is located in a maintained grassy yard with interpretive signage. (NR 2024, Sec.7: 37)

--Storage Shed.
(Noncontributing)
Small wood shed southwest of the Anthracite Furnace Ruin on the 1804 Road. It is open on one side and accessed by a set of wood steps.

--Tail Race (#110).
(Contributing)
The Tail Race conveyed water away from the water wheel to its confluence with French Creek. Originally constructed ca.1771, the expansion of the Furnace Complex required its slight re-location sometime in the early nineteenth century. Today the tail race runs underground from the furnace, the Wheelright's Shop Ruin, the 1815 Bridge, and then continues as an open channel to French Creek. Portions of the tail race were restored ca.1938. (NR 2024, Sec.7: 12)

--Tenant House No. 1 (#019).
(Contributing)
One of three extant nineteenth-century houses constructed for furnace workers on the west side of the 1815 Road and just south of the village. This building is a two-story, two-bay building facing east to the road with a shed addition to the south. It was constructed in the early nineteenth century and has a large stone chimney along its southern wall. The stucco-over-stone walls have multi-light windows that appear historic (three-over-six on the second floor and six-over-six on the first floor) and a batten front door with six inset lights. The shed addition to the south is accessed by a batten door. The house was restored in 1968. (NR 2024, Sec.7: 14)

--Tenant House No. 2 (#020).
(Contributing)
This Tenant House has a similar appearance to its neighbor to the north, Tenant House No. 1. All but its walls were destroyed by fire ca.1880, but it was rebuilt in 1905 and a porch and shed added after 1920. It consists of a one-story, two-bay core facing east and a one-story shed-roofed addition to the south. The house was remodeled in the 1870s and again in 1968 when the park removed the porch/shed. The roof was heavily damaged by a falling tree limb during a hurricane and repaired by the park in 2003. Today, the house has a large stone chimney along the south wall, a wood shingled roof, and stucco-over-stone walls. The main entrance is a batten door with an inset four-light window. Windows are small six-over-six double hung sash units that appear historic if not original. The interior of the addition is also accessed by a batten door. Nearby is a nonhistoric privy. (NR 2024, Sec.7: 14)

--Tenant House No. 2 Privy.

(Noncontributing)
Wood-frame structure built in 1998 north of the house. (NR 2024, Sec.7: 14)

--Tenant House No. 3 (#021).
(Contributing)
The largest of the three tenant houses on the west side of 1815 Road. Its date of construction is given variously to the years 1840 to 1855. Constructed as a twin, the two units were merged when the building was used for park staff housing beginning in 1958. The roof and modern porch were replaced in 1964. Tt is currently used for storage of interpretative materials. Today the two-story, four-bay vernacular house has small brick end chimneys, multi-light windows, original Greek Revival style doors featuring two large vertical panels each and opening onto a joint front porch, and replacement metal doors on the rear opening below cantilevered hoods. The building was renovated in 1958-1959 (Figure 50). (NR 2024, Sec.7: 14)

--Tenant House No. 3 Stable (#023).
(Contributing)
The Stable is a two-level masonry outbuilding located west of Tenant House No. 3. Built ca.1850, the stable was restored in 1953. It has a wood shingled roof, a loading door on its south end accessing the grain and hay storage on the upper level, and two batten doors on the east elevation accessing the stalls on the lower level. Small slat windows on the lower level provided natural light and ventilation (see Figure 50). (NR 2024, Sec.7: 14-15)

--Thomas Lloyd House (#071).
(Contributing)
House of Thomas Lloyd II and his son, David Lloyd. whose farmstead is representative of small Pennsylvania farms of the early 1800s. The Lloyds were an influential family in the area during the entire period that Hopewell Furnace was in operation and were involved in the founding of the Bethesda Church. The two-story vernacular residence has three bays on the north elevation and four on the south elevation. It was built ca.1807 and was enlarged in 1825. Key features include its end chimneys, stucco-clad stone walls, small porch on the north (main) elevation, and full-length porch on the south elevation (Figure 51). (NR 2024, Sec.7: 18-19)

--Thomas Lloyd House CCC Spring House (#087).
(Contributing)
This spring house is a stone barrel-vaulted building built by the CCC ca.1936. It stands on the west side of the Farm Lane near its northern terminus. (NR 2024, Sec.7: 19)

--Thomas Lloyd Stone Walls (#071C).
(Contributing)
Dry-laid, stacked stone walls of various lengths, heights, and widths. General heights vary from 2-5 feet and widths from 1-5 feet. The stone wall is a contributing structure lining the side of the road. (NR 2024, Sec.7: 19; HSI #081455)

--Thomas Lloyd Wagon Shed (#071A).
(Contributing)
The Wagon Shed is a unique two-level outbuilding located west of the farmhouse. Built ca.1820, the building consists of a stone lower level with a frame upper level. Like most wagon sheds, it was built as a drive-through building, but the rear exit has been sealed as part of alterations by the NPS to facilitate park uses. Key features include its clapboard walls on the upper level, historic multi-light windows, two-leaf loading doors on its east end, and batten Dutch doors accessing the lower level interior (see Figure 51). (NR 2024, Sec.7: 19)

--Village Barn (#002).
(Contributing)
The Village Barn is the largest building associated with the Ironmaster’s House. The original nineteenth-century barn was demolished and rebuilt as a Wisconsin Dairy barn in 1928, and in 1961 that barn was demolished and a reconstruction of the original barn (the current barn) was built as an open forebay Standard barn with a double threshing floor plan, a common barn type in the

late nineteenth century. It has a wood shingled roof, stucco-over-stone walls, and an attached frame forebay on the downhill (southeast) elevation. On the northwest elevation, which faces the Ironmaster's House, is a ramp leading up to two sets of paired barn doors that access the threshing floors inside. Dutch batten doors on the southwest and southeast elevations access the stalls on the lower level (see Figures 45 and 47). (NR 2024, Sec.7: 13)

--Visitor Center.
(Contributing)
Designed by Donald F. Benson, an architect in the NPS Philadelphia office, the frame, Modern Style building was constructed in 1958-1959 into a sloping hillside. The Visitor Center's north (main) elevation has a one-story Ranch House-like appearance featuring a large engaged stone chimney beside an off-centered entrance, flanked by wide expanses of wall surface, and topped with an end-gabled roof. The south elevation, which is visible from the village, has a Pennsylvania Bank Barn-like design, with a second floor overhang shading the lower level housing administrative offices. On the interior, the west end is a museum exhibit area, and the east end is an auditorium. The exterior of the visitor center retains much of its original exterior fabric, however interior renovations have modified much of the interior space, particularly on the lower level (Figure 52). (NR 2024, Sec.7: 15)

--West Head Race (#111).
(Contributing)
One of two head races that supplied water to power the furnace, the West Head Race is an accurate reconstruction of the original ca.1802 head race that conveyed water through a flume from Hopewell Lake via French Creek. The West Head Race delivered water at a lower elevation than the East Head Race, necessitating the construction of a new, smaller water wheel in a new east-west position. It was destroyed by the 1930s construction of the lake's dam and was reconstructed ca.1951 to provide water to the water wheel, for interpretive purposes. The race measures approximately 0.25 miles long and runs through an area of dense vegetation and steep slopes in some spots. A stone retaining wall is present as the race approaches the water wheel flume (Figure 53). (NR 2024, Sec.7: 12,25)

--Wheel House (#082).
(Contributing)
\Frame building housing the Water Wheel and the Blast Machinery. The Wheel House is an open frame building with a shed roof, standing on a stone foundation wall. The heavy timber framing is mostly exposed, allowing views of the Water Wheel, but with some areas of flush vertical siding. The Wheel House had completely collapsed by 1935 and was rebuilt in 1957-1958. The Water Wheel measures 22 feet in diameter, with 10 spokes and 60 buckets. It is suspended in the wheel well in an east/west direction. The Water Wheel is considered a noncontributing feature of the Wheel House because it was completely rebuilt in 2006. The Blast Machinery is partially powered by the Water Wheel; it is not a building but a set of industrial objects including the blast tubs, the receiver, the Tuyere, the steam boiler and engine, and remnants of the original wheel pit. The original elements of the Blast Machinery are located in the Franklin Institute, which have been replicated in the Wheel House. The Blast Machinery is collectively considered a noncontributing feature of the Wheel. (NR 2024, Sec.7: 9)

--Wheelwright Shop Ruin (#035).
(Contributing)
The Wheelwright Shop was an annex structure on the east side of the Casting House and adjacent to the 1815 Road. The 1820s structure is thought to have been used as a carpenter's shop, where castings were boxed and prepared for shipping, and as a "molder's sleeping room." The building also served as a wheelwright's shop for a short period in 1876. Nothing remains of the structure above grade except the stone pit used for suspension of wheels while spokes and rims were fitted. It is a subterranean resource that was damaged on occasion while the 1815 Road was being upgraded. The ruin was stabilized in 1963. (NR 2024, Sec.7: 25; NR 1985, Sec.7: 10)

--Woodlot CCC Spring House (#088A).
(Contributing)
The Woodlot Spring House is identical to two other extant spring houses built between 1936-1941,

at the same time as the Hopewell Furnace was being restored by the CCC. The small, 6 by 7-foot stone, gable roofed structure is located in the woods in the northeastern section of the park. It was part of the Woodlot Farm property and its stone construction, and simple, but well-crafted details are typical of the CCC's reconstructions and restorations at Hopewell Furnace. (NR 2024, Sec.7: 32)

--Woodlot House Ruin (#076).
(Contributing)
The Woodlot House Ruin is located in an open wooded area on the north side of Hopewell Road, approximately 560 feet north of the Thomas Lloyd House Complex, in the eastern section of the park. The site is believed to have been occupied by tenant furnace laborers or farmers prior to 1860. Research into the site suggests that one of the nineteenth-century occupants of the Woodlot House was James Hilton, an African-American furnace worker. Today there are above-ground wall ruins of the fieldstone home. (NR 2024, Sec.7: 32)

--Youth Conservation Corps Building.
(Noncontributing)
This one-story, five-bay building was built at the end of spur off of the Maintenance Area Road in 1978. (NR 2024, Sec.7: 16)

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
1815 Road Bridge (Warwick Mine Road / Birdsboro-Warwick Road) (115A)	208266	Contributing	81447		Location	31474	Yes
Anthracite Furnace Ruin (011)	208267	Contributing	680		Location	19636	Yes
Baptism Creek Picnic Shelter (122)	208268	Contributing	81435		Location	19338	Yes
Bethesda Baptist Church (079)	208269	Contributing	6829		Location	19339	Yes
Bethesda Baptist Church Carriage Shed (080)	208270	Contributing	6831		Location	19672	Yes
Bethesda Baptist Church Cemetery Wall (079A)	208271	Contributing	6830		Asset	19731	Yes
Bethesda Baptist Church Privy (081)	208272	Contributing	6832		Location	20755	Yes
Blacksmith Shop (006)	208273	Contributing	683		Location	19633	Yes
Boarding House (024)	208274	Contributing	684		Location	19321	Yes
Bridge House (010)	208275	Contributing	416851				No
Brison Field Wall & Foundation Ruins (055A)	208276	Contributing	233800				No
Brison House Ruin (055)	208277	Contributing	81456		Location	20122	Yes
Cast House (033)	208278	Contributing	416880		Location	19635	No
CCC Pump House	208279	Contributing	799226				No
CCC Block [Storage] Building	208280	Contributing	799244				No

CCC Oil House	208281	Contributing	799235				No
Charcoal House (009)	208282	Contributing	688		Location	19651	Yes
Charcoal Kiln Ruin (039)	208283	Contributing	690		Location	20104	Yes
Cleaning Shed (033)	208284	Contributing	416880		Location	19635	No
Connecting Shed (010A)	208285	Contributing	416870		Location	19654	Yes
Cooling Shed (009)	208286	Contributing	688		Location	19651	No
East Head Race (032)	208287	Contributing	692		Location	20130	Yes
East Head Race Retaining Wall (032A)	208288	Contributing	81463				No
Furnace Bank and Retaining Wall (008)	208289	Contributing	12113		Location	20734	Yes
Furnace Stack (007)	208290	Contributing	691		Location	19636	Yes
Harrison Lloyd Barn Ruin (074)	208291	Contributing	233842				No
Harrison Lloyd Farm Bank Barn Ruin (074A)	208292	Contributing	264599				No
Harrison Lloyd House Ruin (044)	208293	Contributing	416844		Location	30462	Yes
Harrison Lloyd Stone Walls (073)	208294	Contributing	81440		Location	30462	Yes
Ironmaster’s Bake Ovens (016)	208295	Contributing	681		Location	19315	Yes
Ironmaster’s Greenhouse Ruin (013)	208296	Contributing	6821		Location	20735	Yes
Ironmaster’s House / Mansion / Big House (001)	208297	Contributing	695		Location	19313	Yes
Ironmaster’s House Kitchen Yard Walls (001C)	208298	Contributing	81461		Location	31431	Yes
Ironmaster’s House Yard Wall (001A)	208299	Contributing	81433		Location	20728	Yes
Ironmaster’s Smoke House (041)	208300	Contributing	6822		Location	19634	Yes
Ironmaster’s Spring House (017)	208301	Contributing	700		Location	19317	Yes
John Church House (027)	208302	Contributing	6826		Location	19780	Yes
John Church Mule Barn (028)	208303	Contributing	6827		Location	19684	Yes
Lenape CCC Spring House (088B)	208304	Contributing	233758				No
Mule Stable Ruin / Mule Barn (083)	208305	Contributing	81450				No
Nathan Care Barn (026)	208306	Contributing	6828		Location	19650	Yes
Nathan Care Boundary Stone Wall (025B)	208307	Contributing	81449				No
Nathan Care CCC Spring House (088C)	208308	Contributing	851747				No

Nathan Care House (025)	208309	Contributing	686		Location	19649	Yes
Nathan Care House Field Stone Wall (025A)	208310	Contributing	81448				No
Office-Store (003)	208311	Contributing	698		Location	19657	Yes
Ore Roaster Ruin (034)	208312	Contributing	6825		Location	20116	Yes
Quarters 98	208313	Contributing			Location	19336	Yes
Quarters 99	208314	Contributing			Location	19337	Yes
School House Ruins (018)	208315	Contributing	699		Location	20047	Yes
Tail Race (110)	208316	Contributing	702		Location	30467	Yes
Tenant House No. 1 (019)	208317	Contributing	703		Location	19318	Yes
Tenant House No. 2 (020)	208318	Contributing	704		Location	19319	Yes
Tenant House No. 3 (021)	208319	Contributing	705		Location	19322	Yes
Tenant House No. 3 Stable (023)	208320	Contributing	22839		Location	31426	Yes
Thomas Lloyd House (071)	208321	Contributing	697		Location	19340	Yes
Thomas Lloyd House CCC Spring House (087)	208322	Contributing	81444		Location	31436	Yes
Thomas Lloyd Stone Walls (071C)	208323	Contributing	81455				No
Thomas Lloyd Wagon Shed (071A)	208324	Contributing	17267		Location	19341	Yes
Village Barn (002)	208325	Contributing	6823		Location	19314	Yes
Visitor Center	208326	Contributing	tbd				No
West Head Race (111)	208327	Contributing	693		Location	30464	Yes
Wheel House (082)	208328	Contributing	416885		Location	19635	Yes
Wheelwright Shop Ruin (035)	208329	Contributing	707		Location	31429	Yes
Woodlot CCC Spring House (088A)	208330	Contributing	81436				No
Woodlot House Ruin (076)	208331	Contributing	81437		Location	20126	Yes
French Creek Bridge (115B)	208332	Noncontributing - Managed as a Cultural Resource	81446				No
Bally / ENPMA Storage Building	208333	Noncontributing – Compatible					No
Butler Building	208334	Noncontributing – Compatible					No
CCC Firehouse Foundation (Site)	208335	Noncontributing – Compatible	799253				No
Cedar Pasture Shed	208336	Noncontributing – Compatible					No
Collier Hut	208337	Noncontributing – Compatible					No

Ironmaster's Chicken House	208338	Noncontributing – Compatible					No
John Church Garage	208339	Noncontributing – Compatible	799267				No
Maintenance Building	208340	Noncontributing – Compatible			Location	19327	Yes
Quonset Hut	208341	Noncontributing – Compatible					No
Radio Repeater Building	208342	Noncontributing – Compatible					No
Reservoir and Pump House	208343	Noncontributing – Compatible					No
Storage Shed	208344	Noncontributing – Compatible					No
Tenant House No. 2 Privy	208345	Noncontributing – Compatible					No
Youth Conservation Corps Building	208346	Noncontributing – Compatible					No
Harrison Lloyd Blacksmith Shop Ruin (072)	208347	Undetermined	81443		Location	31428	Yes
John Church Retaining Walls and Steps (027A)	208348	Undetermined	81460		Location	20748	Yes

Landscape Characteristic Graphics:



Figure 31. View looking east at the 1815 Road Bridge. (OCLP 2023)



Figure 32. The Anthracite Furnace Ruin, view looking west. (OCLP 2023)



Figure 33. The Baptism Creek Picnic Shelter was built by the CCC. (OCLP 2023)



Figure 34. North and west facades of the Boarding House, view looking southeast. (OCLP 2023)



Figure 35. View looking south at (image left to right) the Cast House (white building with belfry), Bridge House, the open-sided Connecting Shed, and portion of the Charcoal House. (OCLP 2023)



Figure 36. The maintenance area includes (image left to right) the CCC Oil Shed, Butler Building, and CCC Block (Storage) Building. View looking north. (OCLP 2023)



Figure 37. View looking west at the east side of the Cast House and the smaller, attached Cleaning Shed. In the background is the stone Furnace Bank and Retaining Wall in front of which is the Ore Roaster Ruin (image center right). In the foreground is the 1815 Road. (OCLP 2023)



Figure 38. Northeast facades of the Charcoal House (image left) and Cooling Shed (right), view looking southwest. The 1815 Road is in the foreground. (OCLP 2023)



Figure 39. Charcoal Kiln Ruin, view looking southeast. (OCLP 2023)



Figure 40. Portions of the East Head Race, such as this section east of John Church House, are lined with stone walls. (OCLP 2023)



Figure 41. This section of retaining wall for the East Head Race is west of the Ironmaster's House, adjacent to the 1825 Road. The shorter wall in the foreground is the Ironmaster's Front Yard Wall. (OCLP 2023)



Figure 42. View looking north at the Wheel House (image left), Furnace Stack (center), and Cast House (right). (OCLP 2023)



Figure 43. The front (west) facade of the Ironmaster's House, view looking east. In the foreground is a portion of the yard wall and steps. (OCLP 2023)



Figure 44. View looking southwest at the Ironmaster's House Kitchen Yard Retaining Wall, next to the Bake Ovens. (OCLP 2023)



Figure 45. View looking northeast from the Ironmaster's House to the Ironmaster's Spring House (image center) and Village Barn (right). (OCLP 2023)



Figure 46. The John Church House, stone steps, and path, view looking northwest. (OCLP 2023)



Figure 47. View looking north at the Mule Stable Ruin/Mule Barn. The Village Barn is at image left. (OCLP 2023)



Figure 48. Nathan Care House, view looking northeast. (OCLP 2023)



Figure 49. View looking north at the south and east facades of Quarters 99. (OCLP 2023)



Figure 50. View looking southwest at the east and north sides of Tenant House No.3. In the background is the home's stable. (OCLP 2023)



Figure 51. The Thomas Lloyd Farmstead's house (image left) and wagon shed (right), view looking south. (OCLP 2023)



Figure 52. The south and west facades of the Visitor Center, view looking north. In the foreground is the intersection of the 1757 Road and 1825 Road. A small section of the Ironmaster's Garden Fence is seen at far image right. (OCLP 2023)



Figure 53. The West Head Race, view looking west. (OCLP 2023)

Landscape Characteristic: Circulation

Historic Conditions (to 1966):
Circulation refers to the spaces, features, and applied material finishes that constitute systems of movement in a landscape. During the furnace's early operation, Hopewell's walks, charcoal trails, and the roads connecting the furnace to distant markets all served its functional needs. Indeed, a factor in choosing the furnace's location was its proximity to the public road connecting Scarlet's Mill, near Reading, to Coventry Forge in Chester County. This east-west 1757 Road (known variously as Reading-Valley Forge Road, Reading Road, Coventry Forge Road, St. Peters Road, and Baptism Road) was the main market road in the eighteenth century. The road passed about 250 feet north of the furnace and formed the northern boundary of the Ironmaster's House grounds. The 1815 Road (Birdsboro-Warwick Road), a primary north-south route, was likely in place during the eighteenth century but was not a publicly designated road until 1815. It divided the center of the village, crossed French Creek over a bridge near the furnace, and ran between the Village Barn and the Office & Store before connecting with the 1757 Road just west of the Ironmaster's House. (CLR 1997: 89-97)

As there were no canals or railways near Hopewell Furnace, local roads carried products to market. Both the east-west 1757 Road and the north-south 1815 Road were especially critical to the furnace's economic prosperity, delivering iron ore to the furnace from the Hopewell and Jones Mines, respectively, and providing market access for furnace products. Additional roads were built as the Furnace Complex evolved and grew, including the 1772 Road (the Road to Jones Mine), 1804 Road (the northern road to Birdsboro), and 1809 Road (western road to Joanna Furnace) that crossed French Creek at a ford. All roads of this period were unpaved, rutted with wagon wheels, dusty in summer, and muddy in winter. Slag may also have been used to improve the road surfaces. (CLR 1997: 89-97)

Minor dirt lanes connected the main roads with area farmsteads, including the Thomas Lloyd and Harrison Lloyd farms. Numerous charcoal trails led through the woods to clusters of charcoal pits where workers cut timber to burn into the charcoal that fueled the furnace. Pedestrian boardwalks spanned marshy ground to link the Tenant Houses with the 1815 Road. The ground nearest the furnace was likely more compacted and likely did not require board walkways. (CLR 1997: 89-97)

During the late 1820s and early 1830s, the Ironmaster's House garden was designed with paths incorporating stairs and benches. Garden pathways likely were maintained throughout the second half of the nineteenth century around the Ironmaster's House. The walks depicted in 1930s National Park Service plans, surfaced with loose stones between brownstone steps and with a wooded footbridge over the East Head Race, may reflect a ca.1830 design or late nineteenth-century modifications. (CLR 1997: 89-97)

Documentary evidence reveals little about changes made in roads and paths during the second half of the nineteenth century when the furnace was in decline. Likely, diminished furnace operations required fewer roads to access timber for charcoal production. In 1932, Berks County realigned and paved the 1815 Road, eliminating a sharp curve between the Village Barn and the Office & Store so that the road continued straight, passing just east of the furnace stack and over the site of the casting shed foundations. This construction resulted in the demolition of part of the stone wall between the furnace and the Office & Store. Subsequently, substantial fill reduced the elevation change between the lower portion of the village and the intersection with 1757 Road northwest of the Ironmaster's House. The west end of the Ironmaster's garden was destroyed as part of this work. By the second half of the nineteenth century, the Harrison Lloyd Road (called Laurel Road on some maps and roughly corresponding to the alignment of a portion of the present Horse Shoe Trail) existed as an unpaved, crushed stone road. Other unpaved roads from this period included dirt roads within the Harrison Lloyd and Thomas Lloyd farm properties. The dirt road leading to the Manning house remained on park plans as late as 1937. (CLR 1997: 89-97)

Between 1937 and 1939, the federal government built a bypass road (PA Route 345) to divert automobile traffic to the east and away from the village core. As part of the project, the CCC improved several bridges and constructed others using the NPS Rustic Style, including the PA Route 345 crossing of French Creek, two crossings of branches of Baptism Creek by the 1757 Road (now Hopewell Road), and the crossing of Spout Run by Mark Bird Lane/Clement Brook

Lane. The CCC also built a driveway between the John Church House and PA Route 345. The 1815 Road's 1932 realignment was retained at this time, but the CCC dramatically lowering the grade of the road, thereby raising the grade of the yards surrounding Tenant Houses. (CLR 1997: 89-97)

The CCC also built many temporary roads to haul earth from borrow pits, provide access to old stone field walls for gravel and crushed stone use, and for other construction-related activities. It also constructed a 100-car parking area near the Baptism Creek Picnic Area. Lastly, the CCC built many new hiking trails, some along former charcoal and logging roads that were widened and cleared of vegetation. However, comparing the 1930s plans with the current trail map suggests that most existing trails do not align with the former charcoal roads. Several extant trails do follow historic roadways, however. Trails created or altered by the CCC include Boone Trail (near Hopewell Lake), Lenape Trail (mostly north of Reading-Valley Forge Road), Mill Creek Trail (along the northern boundary of the site), and Raccoon and Buzzard Trail (mainly east of PA Route 345). Most of the trails link to trails that either originate at or continue to French Creek State Park. (CLR 1997: 89-97)

The NPS made several major changes to the site's roads as part of Mission 66 site improvements. In 1955, the NPS banned public vehicular traffic in the core village core and removed the macadam and asphalt surfaces on these roads. In 1956, the NPS realigned the 1815 Road to its pre-1932 route through the village, which allowed reconstruction of the retaining wall between the furnace and the Office & Store. (CLR 1997: 89-97)

As part of the construction of the visitor center, the NPS built a new entrance road, extending from PA Route 345 to a pair of visitor parking lots located immediately north of the building. The entrance road, comprised of what are now named Mark Bird Lane and Clement Brook Lane, incorporated portions of the 1757 Road alignment near its intersection with the bypass. This entrance road continued beyond the parking lots, connecting to the NPS maintenance area and extending past several staff quarters by way of a former CCC camp road to the park's west boundary, connecting to the modern road network. (CLR 1997: 89-97)

Evaluation:
The historic circulation system is intact through numerous extant historic roads and pedestrian paths. In general, the basic pattern of the site's major historic roads is readily discernible due to their alignments and general appearances. Within the core village these roads largely function as pedestrian walkways for visitors. Other walkways and trails date to the CCC period or earlier. The bypass road, entrance and maintenance roads, and parking lots reflect contemporary uses.

Evaluated Circulation Features:
--Baptism Creek CCC Parking Area (#125).
(Contributing)
Built in 1936, the 100-vehicle lot featured a slag surface with log guardrails along the perimeter. Portions of the original surface and rails, as does the open, crescent-shaped configuration. The park has partially restored a portion of the parking area. (NR 2024, Sec.7: 20,39; HSI #799185; Review comments, A.Ruhe, 3 January 2025)

--Bethesda Church Trail.
(Undetermined)
Additional research needs to be conducted for this trail, which connects to the Lenape Trail.

--CCC Camp Entrance Road.
(Noncontributing)
This 450-foot long paved road was originally an entrance to the CCC Camp. Although constructed by the CCC in the 1930s, it does not embody the characteristics of the Rustic Style associated with CCC work (Figure 29).

--CCC Camp Traffic Circle.
(Noncontributing)

This is a remnant circulation feature at the CCC Camp, which during its operation was the site of a flagpole. Although constructed by the CCC in the 1930s, it does not embody the characteristics of the Rustic Style associated with CCC work (see Figure 29).

--CCC Hiking Trails (#128).
(Contributing)
The trails were constructed by the CCC in the 1930s to connect the Baptism Creek Picnic Area to the village core and adjacent French Creek State Park. While some incorporated historic farm tracks and perhaps timbering routes, most trails were designed based on recreational criteria. The six named trails are 2-6 feet wide and vary in length. They were constructed in the Rustic Style using log and stone steps, in part for erosion control. The six trails include:
--Boone Trail: at far west end of village at junction of the 1772 Road and 1810 Road (mostly outside of NHS boundary).
--Horse-Shoe Trail: portions are outside of the NHS boundary near Hopewell Lake, then enters park to connect to the Nathan Care Farmstead and south of the Harrison Lloyd Farmstead (along 1815 Road).
--Mill Creek Trail: at north edge of park along border with state park near intersection of State Route 345 and Shed Road.
--Lenape Trail: connects the Mill Creek Trail to Baptism Creek Picnic Area.
--Buzzard and Racoon Trails: located within the picnic grounds.
--Bethesda Church Trail: heads to the church and cemetery.
(NR 2024, Sec.7: 20; HSI #799219)

--Ford at French Creek.
(Undetermined)
The ford was associated with the 1809 Road and allowed passage across French Creek. The ford was not observed during field work in 2024.

--Hearth Road Trace (#121)
(Contributing)
Located off Harrison Lloyd Road, Hearth Road was an integral component of the furnace complex, providing the means of transporting charcoal to the furnace from the charcoal hearth pits and colliers within the woods. The trace is approximately 8 feet wide, 400 feet long, and with portions overgrown with vegetation. (HSI #081454)

--John Church Driveway.
(Noncontributing)
Gravel driveway extending 300 feet from State Route 345 to the John Church Garage. It appears as an unpaved road in a 1938 map. Although constructed by the CCC in 1938, it was determined ineligible in 2012 because it does not embody the characteristics of Rustic Style associated with CCC work.

--Maintenance Area Access Road.
(Noncontributing)
Paved and gravel surfaced road, 0.25 miles long and 6-10 feet wide, from the CCC Camp Traffic Circle to the Butler Building, CCC Oil House, and CCC Storage Building to the northeast. A short, 300-foot long branch of the road accesses the YCC Building and Quonset Hut (see Figure 29). (NR 1985, Sec.7: 14)

--Mark Bird Lane / Clement Brook Lane.
(Undetermined)
Built in 1954, the road serves as the entrance road into the park, connecting PA Route 345 to the visitor center parking lot, and ending at the CCC Camp Traffic Circle. The asphalt road extends 0.45 miles and is 10 feet wide. The Clement Brook segment was built over the original unpaved 1757 Road (Figure 30). The significance of its association with the Mission 66-era visitor center requires further research. (NR 1985, Sec.7: 14)

--Private Charcoal House Turn-Around.

(Contributing)
This road connected the Charcoal House through a portion of the Bridge House, allowing horse and mule-drawn wagons to stack on either loop, unload ore and limestone, and turn around to proceed back. (HSI #081458)

--Private Road to Dam.
(Contributing)
This road was an access road from the furnace complex to the ca.1805 dam, probably used for hauling materials to dam for construction and repairs. It was cleared in 1930s for use as hiking trail (part of Boone Trail). The 700-foot long by 8-foot wide road is composed of gravel, wood chip, and earth. It begins at the north side of Charcoal House and travels west to park boundary and beyond to Hopewell Lake. (HSI #0081457)

--Road System: 1757 Road (Reading to Valley Forge Road) (#116).
(Contributing)
The 1757 Road is a portion of the historic road from Coventry Forge in Chester County to the west bank of the Schuykill River in Reading. The 1,782-foot long road runs east-west, north of the village from the western boundary of the park to an acute intersection with Mark Bird Lane (part of the 1957 entrance road) and proceeds east under the name Clement Brook Lane (the entrance road) (see Figures 25, 27, and 30). (HSI #006836; NR 2024, Sec.7: 7,45; NR 1985, Sec.7: 11)

--Road System: 1772 Road (Jones Mine Road) (#114).
(Contributing)
West of the intersection of the 1804 Road and the 1757 Road is a split where the 1757 Road heads northwest and the 1772 Road heads west. Within the park boundary, the road measures 180 feet long and 4 feet wide, and now serves as a trail to Hopewell Lake. Originally led from Hopewell Furnace to Joanna Furnace and Jones Mine. (HSI #081442; NR 2024, Sec.7: 45; NR 1985, Sec.7: 11)

--Road System: 1804 Road (Birdsboro Road) (#117).
(Contributing)
This curving road is around 1,774 feet long and 12 feet wide, consisting of traces, paved road, and gravel roadbed, and begins at the intersection of the 1815 and 1825 Roads just north of the Charcoal House-Cooling Shed, heads west and then curves north to the park's north boundary. It was also part of the original roadbed of PA Route 345. (HSI #006837; NR 2024, Sec.7: 45; NR 1985, Sec.7: 11)

--Road System: 1809 Road (Joanna Road) (#119).
(Contributing)
The 1809 Road begins at the 1815 Road just north of Tenant House #1, passes the School House Ruin, and then continues southwest to the park boundary. This public road provided better access from Hopewell to the Jones Mine than had been provided by the 1772 road. By 1844 an east-west cutoff was built 150 feet to the south to eliminate the creek crossing, and now exists as a trace. Today the road is 1,056 feet long and 12 feet wide and currently used as a walking trail (Boone Trail) connecting with French Creek State Park. (HSI #006839; NR 2024, Sec.7: 45; NR 1985, Sec.7: 11; CLR 1997: 44)

--Road System: 1815 Road (Warwick Mine Road / Birdsboro-Warwick Road) (#115).
(Contributing)
The 1815 Road begins at junction with the 1809 and 1825 Roads at the Charcoal House-Cooling Shed and runs south to State Route 345. It is approximately 2,228 feet long and 9 feet wide (including traces). A portion of the road is open to vehicular traffic north of the Nathan Care House to access a parking lot south of Tenant House No. 3. Part of the original cartway of PA Route 345, the road was improved and designated a public road in 1815. Berks County realigned and paved the road in 1932, eliminating its sharp curve in the village; the road was returned to its original appearance and configuration by the NPS in 1956 (see Cover and Figures 24 and 26). (HSI #006835; NR 2024, Sec.7: 45; NR 1985, Sec.7: 12)

--Road System: 1825 Road (#118).
(Contributing)
The 1825 Road is a short road built to bypass the steep grade of the portion of the 1804 Road south of the 1757 Road. The 1825 Road is now used as a tour path. It is approximately 300 feet long, surfaced in gravel and slag, and runs north/northwest from its junction with the 1815 and 1804 Roads to the 1757 Road. (HSI #006838; NR 2024, Sec.7: 45; NR 1985, Sec.7: 12)

--Road System: Harrison Lloyd Road (#74C).
(Contributing)
Connects Harrison Lloyd Farm with the road to Hopewell Village (now Green Lane), ca.1800. Most of the road today is an overgrown trace visible by its sunken appearance and the natural, volunteer allee of trees demarking the sides of the road. The section closer to the road is gravel. Measures 8-10 feet wide and around 1,400 feet long. (NR 2024, Sec.7: 34; HSI #234902)

--Stone Path and Steps, Ironmaster's House.
(Undetermined)
A series of paths and stone steps, featuring both long and short treads, connects the visitor center area to the front of the Ironmaster's House. The 175-foot long feature begins at the 1757 Road and ends at the north side of the house. It also crosses the East Head Race via a wood footbridge. This circulation route appears on Apple's Historical Base Map, 1830-1840. Future research is recommended to determine its historic significance (see Figure 22).

--Tenant House No. 1 Walkway (019A).
(Ineligible – Managed as a Resource)
Representation of nineteenth-century boardwalk that provided access for tenants to the house over marshy ground and helped bridge the open ditch at the west side of the 1815 Road. Built in the 1980s, the walkway features planks laid horizontally on grade for a length of approximately 74 feet. (HSI #081453)

--Tenant House #3 Parking Lot.
(Noncontributing)
Gravel parking lot located south of Tenant House #3, with two points of ingress/egress that connect to the 1815 Road. Historic maps indicate numerous chicken coops and other small farm structures were once located here. (CLR 1997: 144)

--Thomas Lloyd Farm Lane.
(Contributing)
The earthen-gravel farm lane connects the farmstead to Hopewell Road, which connects to the village. The total length of the lane is around 475 feet, with the longest segment running from to the Lloyd House to the road. Two traces exist east (25 feet) and west (100 feet) of the farm lane. (HSI #081459)

--Upper Parking Lot.
(Undetermined)
A one-way paved loop road off of Mark Bird Lane encircles a grass parking area located between the visitor center parking lot and the Maintenance Building. The angled stalls are delineated by concrete car stops. Built in the 1950s. The significance of its association with the Mission 66-era visitor center requires further research. (CLR 1997: 80,95,162)

--Visitor Center Parking Lot.
(Undetermined)
The paved rectangular-shaped, asphalt-surfaced parking lot accommodates 65 vehicles. The parking lot is divided lengthwise by a grass median, which splits traffic on Mark Bird Lane into one-way traffic as it passes through the parking lot. Constructed in the 1950s. The significance of its association with the Mission 66-era visitor center requires further research. (CLR 1997: 80,95,162)

--Visitor Center Slate Walk.
(Undetermined)

A slate walkway parallels the south side of the visitor parking lot and connects to walkways fronting the visitor center. The park recently resurfaced it so that it matches the rest of the walkways fronting the building. The significance of its association with the Mission 66-era visitor center requires further research. (CLR 1997: 80,95,162; Review comments, 3 January 2025)

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Baptism Creek CCC Parking Area (125)	208240	Contributing	799185				No
CCC Hiking Trails (128)	208241	Contributing	799219		Location	19302	Yes
Hearth Road Trace (121)	208242	Contributing	81454				No
Private Charcoal House Turn-Around (113)	208243	Contributing	81458		Location	31438	Yes
Private Road to Dam (112)	208244	Contributing	81457		Location	31437	Yes
Road System: 1757 Road (Reading to Valley Forge Road) (116)	208245	Contributing	6836		Location	21219	Yes
Road System: 1772 Road (Jones Mine Road) (114)	208246	Contributing	81442		Location	31440	Yes
Road System: 1804 Road (Birdsboro Road) (117)	208247	Contributing	6837				No
Road System: 1809 Road (Joanna Road) (119)	208248	Contributing	6839		Location	31439	Yes
Road System: 1815 Road (Warwick Mine Road / Birdsboro-Warwick Road) (115)	208249	Contributing	6835		Location	31442	Yes
Road System: 1825 Road (118)	208250	Contributing	6838		Location	21221	Yes
Road System: Harrison Lloyd Road (74C)	208251	Contributing	234902		Location	30473	Yes
Thomas Lloyd Farm Lane (071B)	208252	Contributing	81459		Location	31434	Yes
Tenant House No. 1 Walkway (019A)	208253	Noncontributing - Managed as a Cultural Resource	81453		Location	20740	Yes
CCC Camp Entrance Road	208254	Noncontributing – Compatible					No
CCC Camp Traffic Circle	208255	Noncontributing – Compatible	799263				No
John Church Driveway	208256	Noncontributing – Compatible					No
Maintenance Area Parking	208257	Noncontributing – Compatible					No
Mark Bird Lane / Clement Brook Lane	208258	Noncontributing – Compatible	799274				No

Tenant House #3 Parking Lot	208259	Noncontributing – Compatible					No
Bethesda Church Trail	208260	Undetermined					No
Ford at French Creek	208261	Undetermined					No
Stone Path and Steps, Ironmaster's House	208262	Undetermined					No
Upper Parking Lot	208263	Undetermined					No
Visitor Center Parking Area	208264	Undetermined					No
Visitor Center Slate Walk	208265	Undetermined					No

Landscape Characteristic Graphics:



Figure 29. Once the focal point of the CCC Camp, the traffic circle was the site of the camp's flagpole. In this view the CCC Camp Entrance Road is in the foreground, the Maintenance Area Road heads northeast (image left) and Mark Bird Lane heads south (right). The Maintenance Building is at image center. (OCLP 2023)



Figure 30. The section of the park entrance road, formerly the alignment of the 1757 Road and now named Clement Brook Lane, passes by the south side of the John Church Barn/Mule Barn. The John Church Retaining Wall and Steps are visible at image left. (OCLP, 2023)

Landscape Characteristic: Land Use

Historic Condition (to 1966):
Land uses are the principal activities in a landscape that form, shape, and organize the landscape as a result of human interaction. Significant shifts in land use on the site include the cessation of furnace operations in the late nineteenth century and the federal acquisition of the property in the 1930s. The furnace and its supporting structures were used as a charcoal iron furnace from the 1770s to the 1880s. After a period of abandonment, the NPS rehabilitated the furnace for interpretation. It is currently interpreted through historic and reconstructed structures as a ca.1820-1840 charcoal iron furnace. The Village Barn and open meadow were used for agriculture during the active furnace period, as well as after as a dairy farm and later as part of the park's interpretive program. The Ironmaster's House and its surrounding yard, garden, and support structures were used for residential purposes from the eighteenth century until the second quarter of the twentieth century. Workers' housing was located in the area south of French Creek beginning in the early 1800s. When the furnace ceased operations, this area was partially abandoned. (CLR 1997: 73-80)

Land usage outside the historic village core also demonstrates continuity. Areas devoted to agricultural use, either by the furnace owners or by independent farmers, largely remained in agricultural use until the federal property acquisition. A major shift from row crops to dairy farming occurred in the late nineteenth century, but land largely remained agricultural until the 1930s. After the NPS acquired the property, woody, successional vegetation filled many of these former farms, fields, and pastures, leaving much of the cultivated land to lay fallow or grow hay. The NPS also did not maintain many drainage systems, boundary walls, or fences, which then deteriorated or overgrown. This shift away from productive agricultural use represents one of the most significant changes in land use at Hopewell. (CLR 1997: 73-80)

Furnace operators used surrounding woodland as a renewable source of charcoal fuel. After the furnace's closure in the 1880s, the woods continued providing charcoal for outside markets, fence posts, and rails. Since federal acquisition in the 1930s, the woods were not harvested. Many roads and trails that laced the woodlands have disappeared or been converted into recreational hiking trails. (CLR 1997: 73-80)

In 1935 the federal government began to develop the entire property as the French Creek Recreation Demonstration Area, with group camps for organized recreational camping, picnic areas, and trails and lakes for recreation. CCC camps furnished the work force employed in this development work. In 1938 the boundaries of the park were set apart from the recreation area. (CLR 1997: 73-80)

Evaluation:
The former usage and activity patterns remain apparent within the historic village core, mainly due to the CCC's work in the 1930s and the park's interpretive efforts. At present the furnace complex is interpreted, using a combination of historic buildings and reconstructions, as a ca.1820-1840 charcoal iron furnace. The Ironmaster's House is interpreted as the owner's residence. Surviving worker's housing buildings are interpreted as the residences of furnace employees. Outside the village core the integrity of the historic patterns of land use and activity are more compromised as successional vegetation has been allowed to grow within some of the formerly open agricultural fields. However, when analyzed within the context of the later period of significance with an emphasis on recreational use of the property, the integrity of the formerly open fields, now woodland, increases.

Evaluated Land Use Features:
--Bethesda Church Cemetery.
The Bethesda Baptist Church is surrounded by a cemetery, which itself is enclosed by a stone wall with an iron gate. There are approximately 200 gravestones (dated 1807-1997) inside the enclosure and they generally face east. The cemetery is also identified as a contributing feature in the 1995

National Register documentation for the North Warwick Historic and Archeological District, which includes part of Hopewell Furnace NHS (Figure 23). (NR 2024, Sec.7: 37)

--Baptism Creek Picnic Area.
The Baptism Creek Picnic Area is situated in a wooded portion of the Hopewell Furnace property on the north side of Baptism Creek. It was constructed ca.1936 by the CCC and was designated "Picnic Area No. 4" on a 1937 map of the Hopewell Furnace property. Extant, above-ground features at the site include a stone and wood picnic shelter/concession stand with a brick patio, footbridge, water fountain, stone fireplaces/hearths, and a parking area. (NR 2024, Sec.7: 39)

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Bethesda Church Cemetery	208229	Contributing	081613				No
Baptism Creek Picnic Area	94817	Contributing			Location	20756	No

Landscape Characteristic Graphics:



Figure 23. Bethesda Baptist Church, looking northeast, and the cemetery. A privy and part of the stone cemetery wall are visible in the background. (OCLP, 2023)

Landscape Characteristic: Natural Systems and Features

Historic Condition (to 1966):
Natural systems and features are the natural aspects that have influenced the development and physical form of the landscape, and can include geology, geomorphology, hydrology, ecology, climate, and native vegetation. Natural features significantly influenced the siting of Hopewell Furnace in the eighteenth century. The site offered abundant timber resources, ample water courses, and adequate agricultural lands; all necessary for the operation of a charcoal-fueled iron furnace. Deposits of iron ore and limestone, essential ingredients in the iron making process, were located within a few miles of the furnace site. The surrounding area also offered additional timber and agricultural land to supplement that on furnace property. (CLR 1997: 68-71)

The site's landforms also influenced the location of the furnace. The steep slopes of Brush, Chestnut, and Williams Hills enabled logs to be skidded or otherwise conveyed downhill, taking advantage of gravity, to clusters of pits where the logs were converted into charcoal. Construction of the furnace against the slope of Brush Hill facilitated charging the furnace from above and eliminated the need for extensive charging bridges. Separating the hills were stream valleys occupied by French Creek, Baptism Creek, and Spout Run. The streams were at elevations sufficient to generate the necessary waterpower for operating the furnace. The proximity of the furnace to these water sources allowed the furnace owners to build the East and West Head Races to assure maximum use of available water. Original owner Mark Bird also converted the wetlands south of French Creek into meadows through construction of drainage works or clearing away the trees. (CLR 1997: 68-71)

Field stone, common throughout the site, served as a natural building material. The stone buildings at Hopewell are typical examples of the vernacular architecture found throughout this portion of Pennsylvania. These buildings reflect the permanence of stone masonry construction rather than a representative sample of the eighteen-century built environment. It is likely that wood and log buildings also occupied the site during this period, as they did at farms and settlements elsewhere in the region. Most of the wood and log buildings have deteriorated and disappeared from the landscape. Although the furnace ceased operations in 1883, the site's natural features continued to facilitate timbering, quarrying, and farming. (CLR 1997: 68-71)

The response to, and management of, the natural environment changed dramatically following the site's acquisition by the United States government in 1935. After this date the site's natural features were viewed as supporting recreational and interpretative activities. The New Deal's Civilian Conservation Corps (CCC) program developed the wooded hillsides as settings for hiking trails and picnic sites. They also used local stone to build amenities at the picnic grounds and as part of new drainage features. (CLR 1997: 68-71)

Evaluation:
The basic components comprising Hopewell Furnace's natural environment have remained relatively consistent through the site's almost 200-year period of historical significance. At present the evidence of historic responses to Hopewell's natural environment most closely corresponds to that implemented after the NPS acquired the property, with a central, interpreted historic core area surrounded by a large natural area. The locations of the bypass road, entrance road, parking areas, and visitor center, and maintenance area also reflect the NPS's response to the site's natural environment. (CLR 1997: 68-71)

Evidence of earlier historical responses to the natural environment remain visible. These include the location of the furnace and reconstructed bridge house against the slope of Brush Hill. French, Spout, and Baptism Creeks remain as natural watercourses. While woodlands have expanded from their nineteenth century boundaries and changed in composition from primarily chestnut trees to a mix of poplar, gum, beech, sassafras, sycamore, black walnut and oak species, their presence alludes to the use of woodland for charcoal production. (CLR 1997: 68-71)

Evaluated Natural Features:
--Baptism Creek (Upper Branch and Lower Branch).
The spring-fed Baptism Creek flows southwest near the county line to its confluence with French Creek southeast of the village. Portions of its waters were collected in the East Head Race to help

supply the furnace. (NR 2024, Sec.7: 6-7,22; CLR 1997: 15-17)

--French Creek.
Hopewell Furnace's main source of water is French Creek. The creek flows generally east from Hopewell Lake (in the adjacent French Creek State Park) and through Hopewell Furnace Village, and then proceeds to the southeast towards Phoenixville and eventually the Schuylkill River. The presence and course of this stream was the principal reason for Mark Bird's location of an iron furnace, which utilized the stream's waterpower at this site. The creek supplied water to the furnace via the West Head Race, while runoff from the blast machinery was carried by the tail race back to French Creek. The creek was dammed west of the site during the historic period, creating Hopewell Lake, and in the 1930s the dam and lake were enlarged to provide recreational opportunities for what is now French Creek State Park. The dam still controls the flow of water in the creek through an agreement with the state park (Figure 21). (NR 1985, Sec.7: 1 and Sec.8: 5; NR 2024, Sec.7: 6-7,22; CLR 1997: 15-17; Review comments, A.Ruhe, 3 January 2025)

--Mixed Hardwood Woodland.
Eighteenth- and nineteenth-century furnaces were best suited to areas with abundant hardwood forests. Most of the woodlands originally associated with the furnace are now outside of the park's boundary, but the woodlands that are in the park represent the furnace's massive consumption of charcoal. In contrast to their historic appearance, the woodlands presently do not have clear cut areas. In addition, while the furnace woodlands were primarily chestnut, nearly 75 percent (635 acres) of the park today includes secondary growth hardwood forest that includes oak, birch, black cherry, maple, poplar, sycamore, and walnut. An additional 16.5 percent (140 acres) of the property is maintained as pasture, forage crops, hay, and grasses. (CLR 1997: 5, NR 2024, Sec.7: 22; NR 1985, Sec.7: 2)

--Spout Run.
The creek is north of the core village and augmented the furnace's waterpower provided by French Creek. Water was collected in the East Head Race before it flowed into Baptism Creek. Like Baptism Creek, it originated from natural springs. There were several small stone dams along the stream, the remnants of which are archeological sites. (NR 2024, Sec.7: 22; CLR 1997: 15-17)

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Baptism Creek (Upper and Lower Branch)	208237	Contributing					No
French Creek	208238	Contributing					No
Mixed Hardwood Woodland	208227	Contributing					No
Spout Run	208239	Contributing					No

Landscape Characteristic Graphics:



Figure 21. French Creek east of the 1815 Road, view looking east. (Olmsted Center for Landscape Preservation--hereafter OCLP--2023)

Landscape Characteristic: Small Scale Features

Historic Condition (to 1966):
Small-scale features are elements that provide detail and diversity for both functional needs and aesthetic concerns in the landscape. Scholars can deduce the composition of small-scale features in the eighteenth and nineteenth centuries from the industrial and residential requirements of the time. Slag piles surrounded the furnace from its earliest operation and became more extensive as the furnace operated. Similarly, piles of iron ore and limestone lay around the charcoal house. Simple wood hitching posts were likely near the Office & Store and the Ironmaster's House, and firewood stacks near residences for heat and cooking. Boardwalks bridged marshy land and ditches, such as between Tenant Houses Nos. 1 and 2 and the 1815 Birdsboro-Warwick Road. Wooden fences and stone walls delineated fields, though in some cases, their exact locations are unknown. The graves at the Bethesda Baptist Church date as early as the eighteenth century. (CLR 1997: 146-158)

The CCC constructed numerous small-scale features during the 1930s at the Baptism Creek Picnic Area, including stone fireplaces, drinking fountains, pumps, footbridges, picnic tables, and latrines. Along the outlying trails, CCC crews stripped the bark from logs and laid them at angles to form steps or divert water from the paths. Some outlying trails, such as the Lenape Trail, include Rustic Style steps.

Evaluation:
Several small-scale features at Hopewell Furnace NHS date to the period of significance, mostly associated with the CCC. In the village core, the general lack of privies, outbuildings, and the general paraphernalia of everyday life contributes greatly to the present overly pastoral, picturesque

quality of the site. Contemporary small-scale features typical of NPS sites include wayside signs, entrance signs, regulatory signs, trail signs, benches, picnic tables, lighting, and a flagpole. There are also modern amenities present where farmsteads are used as staff housing or offices.

Evaluation of Small-Scale Features:
--Baptism Creek CCC Fireplaces (#124).
(Contributing)
Located in the Baptism Creek Picnic Area, the stone fireplaces/hearths were built by the CCC in 1936. Over 100 were originally built with local stone, and at least 35 survive, but are generally unmaintained and in varying conditions. (NR 2024, Sec.7: 39-40; HSI #799173)

--Baptism Creek CCC Foot Bridges (#127).
(Contributing)
Located in the Baptism Creek Picnic Area, the footbridges were built by the CCC in 1936. Approximately nine foot bridges were constructed. Designed in the Rustic Style, the bridges were constructed of timber set onto stone abutments. Two bridges connected the parking area over the creek to the picnic area; the other seven are located in the hiking trails. The timber components of the footbridges have been replaced in-kind and the original stone abutments remain in place. (NR 2024, Sec.7: 39-40; HSI #799209)

--Baptism Creek CCC Water Fountain (#126).
(Contributing)
Located in the Baptism Creek Picnic Area, the stone water fountain was built by the CCC in 1936. Records show that around four stone water fountains were built, but only one, between the entry path and the concession building, remains (Figure 54). (NR 2024, Sec.7: 39-40; HSI #799198)

--Bethesda Church Cemetery Gravestones (079B).
(Contributing)
The gravestones are located inside a stone wall enclosure and generally face east. The oldest legible gravestone shows an 1807 date. The stones are mostly located south of the church building, with others to the north and west (see Figure 23). (NR 2024, Sec.7: 18)

--Blast Furnace and Water Wheel.
(Noncontributing)
See description for Wheel House (#082) in Buildings and Structures section. They are evaluated as noncontributing.

--Boarding House Pump and Well Cover (024A).
(Contributing)
The Pump and Well Cover is located just west of the Boarding House, and was entirely reconstructed in 1957-1960. (NR 2024, Sec.7: 15)

--Cannon.
(Undetermined)
A replica cannon is located at the Furnace Complex. The history of this feature is unknown. Pending future research, it is evaluated as Undetermined.

--Cedar Pasture Fence (004).
(Ineligible–Managed as a Resource)
Reconstruction of fence seen in ca.1920s historic photograph around Cedar Pasture. The pasture was reserved for horse and mule grazing, with the fence erected to prevent straying of animals and to demarcate pasture limits. The post and rail fence is constructed of cedar with four rail stiles, but many sections are damaged or missing. (HSI #081451)

--Charcoal Hearths (123).
(Undetermined)
Sites containing several charcoal hearths representing the area’s iron-making industry in the eighteenth and nineteenth centuries. The circular, 20-30' diameter, charcoal hearths typically

consist of broad flattened areas; some having built-up sides to in-sloped area, others with cuts into hillsides to create flat area. Each hearth site is evidenced by a clearly-defined absence of vegetative growth due to the extensive burning of wood over the years; the sites were established near timber stands good for making charcoal. Burning the wood produced charcoal or "coal" that was then used to create super-hot fires for smelting iron ore. The 1995 National Register documentation for the North Warwick Historic and Archeological District, which includes part of Hopewell Furnace NHS, also evaluated hearths as contributing. A 2005 update to the List of Classified Structures (LCS, now HSI) identified “six original wooded sites at which charcoal was produced…” They were evaluated as contributing features. The 2024 National Register Update evaluated seven sites as undetermined. They were not located during field work for the CLI, so for purposes of this CLI they are evaluated as Undetermined.

--Fence System.
(Noncontributing)
The 2024 National Register Update generally evaluated fences in the park as noncontributing, although several are contributing or managed as cultural resources, as enumerated in this section. Field work for this CLI identified the following noncontributing fences:
John Church House Fencing (split rail along PA 345)
Meadowbrook Road Fence
Village Meadow Fence

--Harrison Lloyd Well.
(Undetermined)
Archeological field work in 2002 identified several features visible on the ground surface, including a stone-lined well. Pending future research, it is evaluated as Undetermined. (NR 2024, Sec.7: 34)

--Ironmaster’s Garden Fence (001B).
(Contributing)
The fence is a 1956 reconstruction of ca.1830s fence (probably picket, later replaced with wire mesh fence) that enclosed north and west side of the Ironmaster’s Houses large garden. The capped picket fence is 3.5 feet high and approximately 250 feet long, with a gate at a path to the Ironmaster’s House. The fence runs along the 1825 Road to its intersection with the 1757 Road, then follows the 1757 Road eastward past the Visitor Center (see Figure 52). Note: this is not the fence that encloses the current demonstration garden. (HSI #081434; NR 2024, Sec.7: 13)

--Ironmaster’s Hog Pen
(Noncontributing)
Located east of the Ironmaster’s Spring House, the wood-fenced enclosure includes a small chicken house. It is noncontributing. (NR 2024, Sec.7: 13,29)

--Ironmaster’s House Garden Footbridge.
(Noncontributing)
Wood bridge with wood rails that spans the East Head Race on the north side of the Ironmaster’s House. (NR 2024, Sec.7: 52)

--John Church Driveway CCC Culvert (027B).
(Undetermined)
The 18-inch culvert pipe with stone headwalls runs under the north end of the driveway. The stone headwall at the south end features a new limestone cap. The culvert may have been built by the CCC. Pending future research, it is evaluated as Undetermined. (HSI #081581)

--Slag Pile.
(Noncontributing)
The slag pile is an elevated mound south of the Furnace Complex. Historically, metals removed during the refining of the iron were discarded here, but over the decades Union Township used the slag for road projects. The slag pile was rebuilt by the NPS in the late twentieth century to restore its visual impact. It is currently cloaked in grasses (Figure 55). (NR 2024, Sec.7: 9)

--Spout Run CCC Culvert (029).
(Contributing)
This double 3-foot diameter pipe culvert is located on Clement Brook Lane just south of the John Church House. The north side headwall is 16 feet long by 4.5 feet high. The angled endwall on the south side of the road is 31 feet long by 6 feet high. (HSI #081462)

--Visitor Center Parking Lot Culvert.
(Undetermined)
This 14” culvert pipe features stone headwalls and likely dates to the Mission 66 period. Pending future research regarding its significance, it is evaluated as Undetermined.

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Baptism Creek CCC Fireplaces (124)	208353	Contributing	799173				No
Baptism Creek CCC Foot Bridges (127)	208354	Contributing	799209				No
Baptism Creek CCC Water Fountain (126)	208355	Contributing	799198				No
Bethesda Church Cemetery Gravestones (079B)	208356	Contributing	81613		Asset	21217	No
Boarding House Pump and Well Cover (024A)	208357	Contributing	81445		Location	20743	Yes
Ironmaster’s Garden Fence (001B)	208358	Contributing	81434		Location	20731	Yes
Spout Run CCC Culvert (029)	208359	Contributing	81462		Location	31432	Yes
Cedar Pasture Fence (004)	208360	Noncontributing - Managed as a Cultural Resource	81451		Location	20733	Yes
Blast Machinery and Water Wheel	208361	Noncontributing – Compatible	416885		Location	19635	No
Fence System	208362	Noncontributing – Compatible					No
Hog Pen near Ironmaster’s House	208363	Noncontributing – Compatible					No
Ironmaster’s House Garden Footbridge	208364	Noncontributing – Compatible					No
Slag Pile	208365	Noncontributing – Compatible					No
Cannon	208366	Undetermined					No
Charcoal Hearths (123)	208367	Undetermined	261966		Location	20046	Yes
Harrison Lloyd Well	208368	Undetermined					No
John Church CCC Driveway Culvert (027B)	208369	Undetermined	81581		Location	20750	Yes
Visitor Center Parking Lot Culvert	208370	Undetermined					No

Landscape Characteristic Graphics:



Figure 54. A CCC-era water fountain at the Baptism Creek Picnic Area. (OCLP 2023)



Figure 55. View looking northwest at the slopes of the Slag Pile, from French Creek. At image right is the Blacksmith Shop. (OCLP 2023)

Landscape Characteristic: Spatial Organization

Historic Condition (to 1966):
Spatial organization is the three-dimensional organization of physical forms and visual associations in a landscape, including the articulation of ground, vertical, and overhead planes that define and create spaces. The spatial organization of the Hopewell Furnace property reflects the patterns of land use that have characterized it throughout its history. For more than a century, the furnace operation's needs determined land use and site organization. As with land use, significant shifts in the patterns of spatial organization are associated with major changes in the property's use and ownership. (CLR 1997: 83-88)

From 1770 to 1883, spatial organization centered on the furnace and its associated support structures. The Ironmaster's House and grounds, some workforce tenant housing, and the primary agricultural buildings and fields all clustered around the furnace. Additional tenant houses and independently owned farms were located further away from the furnace. Charcoal woods that supplied the furnace with fuel dominated the property's periphery. After the cessation of furnace operations in 1883, the central focus of the property shifted from the furnace to the Ironmaster's House, which became the focal point of an extensive agricultural operations and a dairy farm. During this period, the industrial core of the site, and to a lesser extent, the tenant housing associated with the furnace, were abandoned. (CLR 1997: 83-88)

The 1930s federal acquisition of the property brought about the most significant changes to the historic patterns of spatial organization. The site's activity shifted to the CCC camp, located north of the village core. The village was essentially reorganized into a single entity, an outdoor museum dedicated to preserving the site's industrial and social history. The former agricultural fields and farmsteads, and the surrounding charcoal woods, were managed as a natural or recreational area, a previously unknown pattern of organization at Hopewell. (CLR 1997: 83-88)

After 1938, the NPS refined the patterns of spatial organization introduced by the CCC. The historic core served as the primary focus of preservation and interpretation efforts, while a park support area that corresponded roughly to the area occupied by the CCC camp was developed. Outlying park areas were managed as natural and recreational zones. (CLR 1997: 83-88)

Evaluation:
Although the patterns of spatial organization at Hopewell Furnace NHS are more straightforward today than those of previous periods, the historic patterns are still readily discernible, especially within the village core (Figures 24, 25, and 26). In the peripheral areas of the site, those historically associated with agricultural activities and the exploitation of the woodlands, management for recreation rather than agriculture has diminished the diversity of the nineteenth-century patterns of the site's spatial organization.

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Village Core, open vs. closed space	97501	Contributing					No
John Church property, open vs. closed space	97497	Contributing					No
Thomas Lloyd property, open vs. closed space	97500	Contributing					No
Harrison Lloyd property, open vs. closed space	97496	Contributing					No
Nathan Care property, open vs. closed space	97499	Contributing					No
Brison House property, open vs. closed space	97495	Noncontributing					No
Woodlot House property, open vs. closed space	97502	Noncontributing					No
Manning House property, open vs. closed space	97498	Noncontributing					No

Landscape Characteristic Graphics:



Figure 24. View looking north at the furnace complex from the French Creek Bridge on the 1815 Road. (OCLP 2023)



Figure 25. View looking south from the visitor center, across the 1757 Road, to the Ironmaster's House area. The furnace complex is in the background at image right. A small representation of the Ironmaster's House Garden is within the picket fence at image right. (OCLP 2023)



Figure 26. At the Blacksmith Shop (image right), the 1815 Road crosses French Creek via a bridge, and heads south into the residential area comprised of Tenant Houses Nos. 1-3 (right) and the Boarding House (left). (OCLP 2023)

Landscape Characteristic: Vegetation

Historic Condition (to 1966):
Vegetation includes deciduous and evergreen trees, shrubs, vines, groundcovers, and herbaceous plants and plant communities, whether indigenous or introduced in the landscape. Evidence regarding the location and plant types grown in gardens during eighteenth and early nineteenth centuries is limited. Fenced gardens likely grew herbs, flowers, and vegetables near residential structures. Onions, radishes, lettuce, cauliflower, tomatoes, salsify, peas, squash, eggplant, cabbages, potatoes, turnips, beets, and pickles (cucumbers) are documented to have grown at Hopewell. (CLR 1997: 108-125)

An orchard was extant at Hopewell as early as 1788 when furnace records document the planting of 250 fruit trees. There are extensive references in the furnace records to apple products, including dried apples and apple jack. At various dates the furnace store sold apples, plums, prunes, quinces, cherries, cider, vinegar, and peaches. (CLR 1997: 108-125; Walker 1966: 133)

Wheat, rye, and corn were the major field crops at Hopewell, with sharecroppers such as Samuel Cox (1798), and farmers such as Elishu Bard (1804), providing grain crops for consumption at the furnace. Corn was grown at Hopewell “above and below” the furnace, and as early as 1798 Cox grew buckwheat. Titanium – a three-foot-tall cereal-like plant that thrives in areas too poor or wet for other grains – could have grown in areas adjacent to French Creek. Oats were also grown at Hopewell, a conclusion based upon descriptions of summer and winter grains that Cox, Bard, and others grew. Farmers also harvested meadow hay, including Timothy grass, to feed livestock, and planted clover between orchard trees. (CLR 1997: 108-125; Walker 1966: 122-124; Pendleton nd: 32-33)

Harvested forest trees produced charcoal to fuel the furnace. Hopewell records indicate that workers harvested the woods north of the furnace before the 1770s. The successively regenerating woods were predominantly chestnut until the arrival of blight in the early twentieth century when mixed oaks became dominant. Sawers retained “seed trees” in harvested woods and roughly fenced stands to keep animals from chewing the stump sprouts. (In the 1930s, the NPS noted this practice on the Harrison Lloyd farmstead, where 100-year-old oak trees with multiple trunks grew among a younger forest). These specimens (trees 130 years or older) likely marked property boundaries. Though most are now oaks, American chestnuts and hickories also served as boundary markers in this region. (CLR 1997: 55,108-125)

As the furnace industry grew in the early 1800s, so did agriculture, including grain crops and vegetables for workers and their families, and corn and oats for furnace animals, including horses, oxen, mules, cattle, dairy cows, hogs, and sheep. Flax (used to make linen) grew in a large field near the Village Barn in spring and summer, and turnips in fall and winter. Furnace records noted only two vegetable gardens, one-quarter to one-half-acre in size, near the furnace and the Village Barn. An 1833 formula for analyzing the farm products required to produce one ton of furnace product suggests that Hopewell residents would have consumed seven acres of potatoes, substantially more than produced in these two plots. This finding indicates the presence of additional, undocumented vegetable gardens and individual gardens that likely grew alongside the Tenant Houses. Residents may have also purchased produce from area farmers. (CLR 1997: 108-125; Walker 1966: 123)

Ornamental terraced gardens grew near the Ironmaster’s House as early as 1829. The first planting documentation in this terraced garden dates from later in the site’s history; thus, the plantings of this early period are unknown. Orchard maintenance, including new tree plantings, continued through the early nineteenth century. By 1935, a peach orchard grew at Hopewell. A new orchard, probably located east of the Ironmaster’s House, was planted ca.1844. Clover was planted as a hay crop under and among the orchard trees and harvested several times during the growing season for livestock feed. During this growth and prosperity period, charcoal timbering continued as well, and estimates suggest the furnace consumed more than an acre of forest per day for fuel. (CLR 1997: 108-125; Walker 1966: 122-124, 133)

During the second half of the 1800s, a gradual decline in furnace operations may have led to less intensive agriculture as the village population declined, but there were no significant changes in

vegetative patterns. Vegetable gardens grew near the Ironmaster's House, Tenant Houses, and the Charcoal Kiln, which was then a residence. Harker Long's recollections of this period include a quarter-acre area vegetable garden located west of the barn and enclosed with white picket fencing, an acre plot by the Charcoal Kiln, and a "backfield" with vegetables. (CLR 1997: 108-125; citing Walker 1966: 120,133 and Wells 1994: 29)

The garden at the Ironmaster's House, which became a summer residence after 1883, expanded. This late nineteenth-century and early twentieth-century garden is the most thoroughly documented, with information about specific plants drawn mainly from an interview with Mary Krewson around 1940. Krewson described rustic lattice garden seats covered with ivy and arbors thick with trumpet creeper and grape vines. Flowers and herbs included several beds of bluebells (Mertensia sp.), an "old fashioned" garden bed, as well as poppies (Papaver sp.), foxglove (Digitalis sp.), mignonette (Reseda sp.), sage (Salvia sp.), rosemary (Rosemarinus sp.), thyme (Thymus sp.), daylilies (Hemerocallis sp.), violets (Viola sp.), daffodils (Narcissus sp.), and red, yellow, and pink rambler roses (Rosa sp.). Boxwood (Buxus sp.) hedges lined a walk, and lilacs (Syringa sp.) grew near the house. The garden also contained Rose-of-Sharon (Hibiscus syriacus), mock orange (Philadelphus coronarius), snowball bush (Viburnum opulus sterile), and a spirea hedge (Spiraea pp.) growing near the picket fence at the garden's northern boundary. (CLR 1997: 108-125; USDI Division of Construction, "Plan of Mansion Gardens, Ironmaster's House")

Several existing trees near residences, including willow (Salix sp.), sycamore (Platanus occidentalis), black walnut (Juglans nigra), black gum (Nyssa sylvatica), red cedar (Juniperus virginiana), Tree-of-Heaven (Ailanthus altissima), flowering dogwood (Cornus florida), and catalpa (Catalpa sp.), appear to date from the late nineteenth and early twentieth centuries. The village area also contains mature specimens of black oak (Quercus velutina), red ash (Fraxinus pensylvanica), white ash (Fraxinus americana), and tulip poplar (Liriodendron tulipifera), though only a few likely date before 1883. Based on core samples, Morris Arboretum arborist Bill Graham estimated that only a few trees predate 1850. Mature black walnuts appear throughout the village and along field edges, with the largest specimens in the southern portion of the village south of the Boarding House. In contrast, specimens of American sycamore in moist soils near the Ironmaster's House likely date to the late nineteenth century. Other large specimens of tree species growing in the village include tuliptree (Liriodendron tulipifera), white and green (or red) ash, red maple (Acer rubrum), black locust (Robinia pseudoacacia), hackberry (Celtis occidentalis), black cherry (Prunus serotina), and shagbark hickory (Carya ovata). A detailed survey of the area near the Ironmaster's House from the 1930s noted large sycamores and large numbers of the exotic Tree-of-Heaven. The NPS removed most of the these invasive trees, although a cluster remains east of the Bake Oven. The mature catalpas still grow in the Ironmaster's Garden area. The survey also noted numerous pear and cherry trees in the apple orchard. A newer orchard appeared south of Tenant House No. 3 during the early nineteenth century, close to several sheds described as chicken coops in contemporary documents. (CLR 1997: 108-125)

Beyond the core village, analysis of early twentieth-century photographs suggests that farmsteads and fields dominated the southern two-thirds of the property. By 1938, however, many of the formerly open fields of the Thomas Lloyd, Harrison Lloyd, and Nathan Care farms had reverted to successional woodland. In outlying areas, portions of the wooded stands east of PA Route 345 and south of Hopewell Road (Reading-Valley Forge Road) indicate tree cover typical of abandoned cultivated areas, including tulip poplar, gray birch (Betula populifolia), and red maple. Black oak, scarlet oak (Quercus coccinea), chestnut oak (Quercus prinus), and white oak (Quercus alba) grow in other areas of the woodland, suggesting that these areas were formerly forested stands. (CLR 1997: 108-125)

Introduced species growing near extant buildings and former building sites at the Thomas Lloyd, Harrison Lloyd, and Nathan Care farms include Tree-of-Heaven, catalpa, mulberry (Morus sp.), and spruce (Picea sp.). Core samples indicate that woods growing near the Harrison Lloyd farm date to the early twentieth century, with trunks emerging from the stumps of mature trees, cut about 1900. In the early twentieth century, regenerating oak and maple trees grew in forests once dominated by the fast-growing, now chestnut blight-infected American chestnut. Several fires also affected forest composition, including a 1,449-acre fire on the Dyer Tract in 1925, which burned the site east of the

powerline near the Woodlot and Brison building ruins. In 1930, a fire destroyed 224 acres on Mt. Pleasure, southwest of the Nathan Care House and Barn. (CLR 1997: 108-125; Forest Type Map, French Creek Project, 1936)

During the CCC era, no effort was made to maintain the gardens, orchards, or agricultural fields at Hopewell Furnace. While leases may have permitted local farmers to cut hay, no evidence found thus far documents this supposition. At the time, a forest with old oak trees grew near Baptism Creek, and the NPS construction of the Baptism Creek picnic area represented an effort to locate a modern recreational facility within the beauty of the old forest. While the CCC attempted to preserve woods as a natural resource in their construction of trails, facilities, and temporary roads, the expansion of Hopewell Lake destroyed some woodlands to the south and west. (CLR 1997: 108 -125; Stearns, 1939: Revised Type Mapping Report)

Evaluation:
At present the core village appears as a pastoral landscape, rather than as a working industrial and agricultural landscape. Large areas of mown lawn and slag piles covered with grass and weeds do not accurately convey the historic appearance of the site. Gardens near the Tenant Houses and Ironmaster's House in the village are small interpretive representations of historic landscape features, while the specimen trees growing nearby evoke the property's late nineteenth-century appearance. In the Cedar Pasture, located near the Anthracite Furnace Ruins and indicated on the 1938 plan, the NPS likely removed deciduous trees from among the red cedars in the 1950s. Currently, an orchard grows on both sides of the Entrance Road, approximately in the location of the historic orchard that once grew "on the hillside above French Creek near the Ironmaster's House." The older trees grow in the south, and a grove of ca.1960 trees grows to the north, spreading eastward beyond the visitor parking area. (CLR 1997: 108-125)

The historic village meadow is a fenced pasture reflective of its historic function. The NPS maintains other agricultural fields as open spaces through brush hogging and agricultural use permits—deer browsing limits what can be grown in the fields economically to hay. Many fields surrounding the Nathan Care farmstead, the Thomas Lloyd farmstead, and the Harrison Lloyd farmstead have reverted to woodland. The incursion of successional vegetation into former agricultural fields encourages invasive plant species, including barberry, bittersweet, honeysuckle, poison ivy, rugosa rose, and others. About three-quarters of the site is forested, and fields are located mainly in the southern portion. Dominant forest tree species include red maple, tulip tree, and sweet birch (Betula lenta). Understory species include flowering dogwood, witch hazel (Hamamelis virginiana), serviceberry (Amelanchier arborea), and sassafras (Sassafras albidum). Shrubs include black huckleberry (Gaylussacia baccata), azalea (Rhododendron sp.), viburnum (Viburnum sp.), and blueberry (Vaccinium sp.). Herbaceous plantings include bedstraw (Galium sp.), hay-scented fern (Dennstaedtia punctilobula), jack-in-the-pulpit (Arisaema triphyllum), wild sarsaparilla (Aralia nudicaulis), wood-sorrel (Oxalis sp.), hog-peanut (Amphicarpa bracteata), and cinquefoil (Potentilla sp.). The open areas within the woods, especially the locations of former charcoal hearths, are host to grasses and mosses. (CLR 1997: 108-125)

Vegetation at Hopewell Furnace NHS generally evokes eighteenth and nineteenth-century industrial, agricultural, and residential land uses. Patterns of vegetation also reveal methodologies and priorities during the CCC and the Mission 66 eras that guided the NPS in preserving and opening the historic site and its resources to the public. Thus, the integrity of vegetation is difficult to determine holistically, as it is primarily an interpretive tool limited by available documentation and the capacity of NPS management. However, vegetation is roughly in the same location as during the end of the period of significance in 1966. The present orchard is in the approximate location of a historic orchard, though bifurcated by the park entrance drive. Non-historic roads subdivide historic fields as well. In the south, woody vegetation grows along the edges of fields, reducing their size, obscuring historic boundary demarcations, and encouraging invasive vegetation. Yet, the pattern of field and forest, including the mature oaks within the Baptist Creek Picnic Area, remain to reveal the relationship between agriculture, industry, and recreation at Hopewell Furnace, as do introduced species around former farmsteads and within Bethesda Church Cemetery.

Evaluated Vegetation Features:

--Bethesda Church Cemetery Vegetation.
(Undetermined)
Additional research is recommended.

--Cedar Pasture.
(Contributing)
The Cedar Pasture, located near the Anthracite Furnace Ruins, may have been planted in the 1930s. Sometime in the 1950s deciduous trees growing among the red cedar were removed. In 1973 the pasture was cleared of all species but cedars. (CLR 1997: 121)

--Ironmaster's House Garden.
(Noncontributing)
The demonstration garden that lies west of the Ironmaster's House today is a fraction of the size of the documented historic gardens. Enclosed by a fence, it does not appear to be based upon any historical documentation. Historically, the hillside north and east of the Ironmaster's House, between the Ironmaster's House and the 1752 Road, were developed into terraced gardens ca.1830. The terraces appear to have been used to separate different areas of the garden. Oral tradition holds that, west of the path, the terrace immediately north of the East Head Race had a vegetable garden at its west end and flowers at the east end. The intermediate terrace, located between the two retaining walls, is described as containing both a vineyard and a large raspberry patch. The upper terrace apparently supported beehives. A few scattered plants along the terrace likely date from the Mission 66 period (see Figure 22). (NR 2024, Sec.7: 13; CLR 1997: 118)

--Mature Oaks near Baptism Creek Picnic Area.
(Contributing)
Mature oaks trees at the picnic area date to the CCC period, or perhaps older. (CLR 1997: 115)

--Mature Trees in the Village.
(Contributing)
The core village contains mature specimen vegetation. The predominant trees are sycamore, black walnut, and tulip poplar. Other observed trees include red ash, black gum, black oak, Eastern catalpa, Eastern red cedar, flowering dogwood, hackberry, pin oak, redbud, slippery elm, sugar maple, and white ash. (CLR 1997: 21,114-118)

--Orchard.
(Contributing)
Historically the site included apple and peach orchards. Today, an apple orchard straddling Mark Bird Lane and the 1757 Road contains around 200 apple trees of multiple varieties. Originally planted 1785, it was partially replanted in 1940 and 1959 (Figure 27). (NR 1985, Sec.7: 11; NR 2024, Sec.7: 7)

--Pattern of Field and Forest.
(Contributing)
The park landscape retains patterns of field and forest beyond the core industrial, village, and administration areas. Today, nearly 75 percent (635 acres) of the Hopewell Furnace NHS includes secondary growth forest consisting of various hardwood species, while an additional 16.5 percent (140 acres) of the property is maintained as pasture, forage crops, hay, and grasses (Figure 28). (NR 2024, Sec.7: 5,22)

Agricultural fields are located south and east of the village, and other large fields are located in the southern portion of the park. Field crops such as oats, corn, wheat, rye, and buckwheat were raised, as were such vegetables as beets, cabbage, potatoes, and spinach. In addition, farm animals such as cows, sheep, hogs, chickens, and turkeys were raised, and work animals such as horses, mules, and oxen were used. (NR 1985, Sec.8: 2; NR 2024, Sec.7: 7)

Wooded hillsides rising to the north, northeast, and southwest. While the surrounding woodlands were at one time primarily composed of chestnut trees, the present woodlands primarily contain poplar, gum, beech, sassafras, sycamore, black walnut, and various species of oak. (NR 2024,

Sec.7: 6,22)

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Cedar Pasture	208230	Contributing					No
Mature Trees near the Village	208231	Contributing					No
Mature Oaks near Baptism Creek Picnic Area	208232	Contributing					No
Orchard	208233	Contributing					No
Pattern of Field and Forest	208234	Contributing					No
Ironmaster’s House Garden	208235	Noncontributing – Compatible					No
Bethesda Church Cemetery Vegetation	208236	Undetermined					No

Landscape Characteristic Graphics:



Figure 27. The apple orchard stands astride the 1757 Road, view looking east. (OCLP 2023)



Figure 28. The park's field and forest patterns highlight this view looking south from the Thomas Lloyd House. (OCLP 2023)

Landscape Characteristic: Cluster Arrangement

Historic Condition (to 1966):
Cluster arrangement is the locations and patterns of buildings, structures, and associated features in the landscape. During the historic period the site's focal point was the village core, which could be described as three distinct clusters of buildings: the furnace cluster, which contained buildings and structures directly associated with iron making; the Ironmaster's House cluster that included the Ironmaster's House and its associated outbuildings; and the tenant housing cluster consisting of three Tenant Houses, the Boarding House, and their associated outbuildings. Two other nineteenth century building clusters were located just outside the core village: the Nathan Care cluster, a farmstead located south of the village on the 1815 Road (Birdsboro-Warwick Road); and the John Church farmstead cluster was located near the intersection of Clement Brook Lane and PA Route 345. Immediately north of the village was a National Park Service cluster, consisting of a CCC camp, visitor services buildings, maintenance facilities, and staff quarters. (CLR 1997: 125)

Outside the core village were a number of clusters associated with outlying farmsteads, such as the Thomas Lloyd and Harrison Lloyd farm clusters, ruins and outbuildings associated with the furnace, the Woodlot and Benson houses, an institutional cluster at Bethesda Baptist Church, and a CCC-related cluster at the Baptism Creek Picnic Area. (CLR 1997: 125)

Evaluation:
The basic clusters of buildings and structures at Hopewell Furnace NHS have changed little over the past two hundred years. The essential organization of Furnace Complex, Ironmaster's House, worker housing, and outlying building clusters survives remarkably intact. Within these clusters, however, there are significant examples of buildings reconstructed during the mid-twentieth century. This work has resulted in a core village that never existed at any one time in the past, instead representing different buildings and spaces that are associated with various periods of significance. There were many smaller-scale buildings at the site that are no longer extant. The absence of these features results in a site that is less cluttered and more pristine than at any point in its past.

Landscape Characteristic: Topography

Historic Condition (to 1966):
Topography is the three-dimensional configuration of the landscape surface characterized by features (such as slope and articulation) and orientation (such as elevation and solar aspect). Aside from changes associated with building construction, the local topography was altered by the presence of slag piles (metals removed during the iron refining process) that were created throughout the furnace's operation. Construction of roads in 1757, 1772, 1804, 1809, 1815, and 1825 likely involved some cutting and filling, but for the most part these routes followed the local topography. (CLR 1997: 61,91,93)

In the 1930s several road projects changed topography. In 1932 Berks County realigned and paved the 1815 Road, eliminating the sharp curve between the Village Barn and the Office & Store so that the road continued straight, passing just east of the furnace stack and over the site of the casting shed foundations. Substantial fill reduced the elevation change between the lower portion of the village and the intersection with 1757 Road northwest of the Ironmaster's House. In contrast, the grade of the 1815 Road south of the village was cut down, thereby raising the grade of the yards at Tenant Houses Nos. 1-3. In 1937-1939 the federal government constructed a bypass highway north and east of the village core to divert thru traffic on PA 345, which altered grades of several fields and stream crossings. In the 1950s the NPS restored the 1815 Road historic alignment through the village core. At the same time, topography was altered north of the 1752 Road to build the visitor center, entrance road (Mark Bird Lane), visitor parking lot, and upper parking lot. (CLR 1997: 61,91,93)

By 1832 the hillside north and west of the Ironmaster's House was transformed into a terraced garden. The terraces were delineated by stone walls and bisected by a northwest-southeast oriented stone path and steps that connected the house to the 1757 Road. Within the terraces were a greenhouse, tool shed, ice house/summer house, and a privy. (CLR 1997: 39,111,148)

Evaluation:
Minimal topographic changes have occurred since the historic period. The most significant was the creation of a representative slag pile by the NPS in the late nineteenth century. Although alterations occurred during the almost 200 year period of significance, the current topography represents the property's evolution (Figure 22). Overall the site's historic topography remains legible.

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Earthen Terrace Garden Remnants	208228	Contributing					No

Landscape Characteristic Graphics:



Figure 22. View looking west from the Ironmaster's House at the garden terraces. A stone path and steps connect the house to the 1757 Road, and then the visitor center (image background). (OCLP 2023)

Landscape Characteristic: **Views and Vistas**

Historic Condition (to 1966):
A view is the expansive and/or panoramic prospect of a broad range of vision that may be naturally occurring or deliberately contrived. A vista is a controlled prospect of a discrete, linear range of vision, which is deliberately contrived. Within the vernacular, industrial, and agricultural landscapes of Hopewell Furnace NHS, the elevation of development sites, and vegetation clearing created important views within the village. Until the construction of the Visitor Center, the Ironmaster's House occupied the highest ground within the village, asserting its status through commanding views of the adjacent industrial area and the tenant housing to the south. The historic roads offered multiple views of the village core and surrounding fields, forests, and farmsteads. By the 1930s vegetation grew adjacent to roads and along the stone walls, obscuring views across the fields. Construction of the bypass at this time also altered the historic patterns of spatial organization and introduced several new views.

NPS construction of the visitor center, park entrance road, and the parking area in the 1950s was on ground higher than the Ironmaster's House. The locations created new views of the industrial and housing areas. The siting of the visitor center also made it visible from these areas.

Evaluation:
Intact historic views from the Ironmaster's House and visitor center to the furnace complex and surrounding village, and from historic roads to the farms, fields, and forests, contribute to the character of the site. Views of the visitor center are distracting.

Landscape Features:

Feature Name	CLI Feature ID	Feature Contribution	CRIS-HS Resource ID	Associated CRIS-AR ID	FMSS Record Type	FMSS Record Number	FMSS Exact Match
Views from Ironmaster's House to Furnace Complex and Surrounding Village	208349	Contributing					No
Views from Historic Roads to Farms, Fields, and Forests	208350	Contributing					No
Views from Visitor Center to Ironmaster's House and Surrounding Village	208351	Contributing					No
Views of Visitor Center from Ironmaster's House and Surrounding Village	208352	Noncontributing – Incompatible					No

Condition

Assessment Interval (Years): 7

Next Assessment Due Date: 04/08/2032

Condition Assessment and Impacts

Condition Assessment: Fair

Assessment Date: 04/08/2025

Condition Assessment Explanatory Narrative:

The overall condition of the Hopewell Furnace NHS Landscape is evaluated as “Fair.” The property shows clear evidence of minor disturbances and deterioration by natural and/or human forces, and that some degree of corrective action is needed within 3-5 years to prevent further harm to its cultural and/or natural values. If left without the appropriate corrective action, the cumulative effect of the deterioration on many of the landscape characteristics will cause the property to degrade to a poor condition. Preservation maintenance and/or use must be combined with corrective action to halt deterioration. The primary concerns regarding the landscape are the intrusion of woody plants and invasive species into fields and along boundary walls and fences; and flooding and erosion along stream beds, roads, and walls; and damage and deterioration of historic features at the Baptism Creek Picnic Area.

Impacts

Type of Impact: Impending Development

Other Impact:

External or Internal: External

Impact Narrative: Incompatible development outside of park boundaries, such as the proposed race track and housing developments, could affect the park's soundscape and night sky.

Date Identified: 04/08/2025

Type of Impact: Inundation/Flooding

Other Impact:

External or Internal: Both Internal and External

Impact Narrative: The village was built in what is now known to be a flood plain. Water intrusion, surface runoff, underground springs, and flooding of French Creek pose significant threats to certain structures. Runoff and groundwater are eroding roads, retaining walls, and foundations. Periodic flooding inundates the cast house and the Spring House, and the resulting high water table causes problems in the tenant houses.

Date Identified: 04/08/2025

Type of Impact: Release To Succession

Other Impact:

External or Internal: Internal

Impact Narrative: The growth of woody successional and invasive vegetation in former fields, and at the edge of existing fields and along stone boundary fences threatens the character of the historic landscape.

Date Identified: 04/08/2025

Type of Impact: Deferred Maintenance

Other Impact:

External or Internal: Internal

Impact Narrative: Historic resources at Baptism Creek Picnic Area are being damaged or are deteriorating. Some are now located in wetlands.

Date Identified: 04/08/2025

Type of Impact: Vegetation/Invasive Plants

Other Impact:

External or Internal: Internal

Impact Narrative: Exotic invasive vegetation at Hopewell can pose potential threats to both the cultural landscape and the forest in general. Approximately 115 exotic plants have been identified growing at Hopewell Furnace. Asiatic bittersweet (Celastrus orbiculatus) and Japanese honeysuckle (Lonicera japonica) are major vegetative issues at Hopewell. They are encroaching in agricultural fields, former home sites, and along the border of forest and field and are in danger of spreading further. Other plant materials such as multiflora rose (Rosa multiflora) and tree of heaven (Ailanthus altissima) also pose problems in recently disturbed sites.

Date Identified: 04/08/2025

Treatment

Stabilization Measures

Treatment Documents

Treatment Type:	Preservation
Treatment Completed:	No
Document Type:	Cultural Landscape Report Parts 1 and 2
Document Date:	1997-01-01
Title:	
IRMA Link:	
Narrative:	

The 1997, “Cultural Landscape Report, Hopewell Furnace National Historic Site” by Menke & Menke Landscape Architects and Kise Franks & Shaw, recommended Preservation as the treatment strategy:
“This strategy acknowledges the long and significant history of the site and its evolution as a cultural landscape over a period of more than two hundred years. Preservation, with its emphasis on protection, stabilization, cyclical maintenance, repair, and limited rehabilitation of character defining landscape features, will assure the retention of historic fabric from all of Hopewell's periods of historical significance.”

“Preservation represents a conservative approach to the Hopewell landscape. The emphasis upon protection, maintenance, and repair should reduce the possibility that a significant or contributing landscape element will be lost through neglect, deterioration, construction, or maintenance policies that subsequent historical findings reveal as misguided. This plan's treatment policy recognizes that elements from a host of historic periods contribute to Hopewell’s cultural landscape. Preserving the present landscape assures that all of these periods will continue to be represented within the landscape.”

While this recommendation will, in general, maintain the status quo, it should not be taken as preventing or prohibiting change. There are numerous opportunities for change at Hopewell, both in the management and interpretation of the landscape, that will serve the goal of preserving all the historic and significant elements of the landscape. Most of these opportunities are associated with specific components of the landscape, such as circulation routes, boundary demarcations, clusters of buildings, etc., rather than with the broad patterns of the landscape within which these component elements are located.” (CLR 1997: 174-175)

Many of these recommendations have been implemented, including addressing overgrown fields. (Review comments, A.Ruhe, 3 January 2025)

In 2017 the National Park Service completed a “Foundation Document,” which is intended to provide basic guidance for planning and management decisions. The report identified several fundamental resources and values – features, systems, processes, experiences, stories, scenes, sounds, smells, or other attributes – determined to warrant primary consideration during planning and management processes because they are essential to achieving the purpose of the park and maintaining its significance. One of the fundamental values specifically referenced the cultural landscape’s association with the village:
“Hopewell Furnace showcases an early American industrial landscape from natural resource extraction to enlightened conservation. The communities of Hopewell Furnace sought to be mostly self-sufficient. They modified the landscape to provide housing and food for workers; raw materials, technical expertise, and machinery for production; and marketing and transportation systems to deliver products for sale. The cultural landscape includes the cultural and natural resources that are associated with the iron-making community that exist today. These include the historic roads, trails, vegetation, small-scale features, spatial organization, and historic viewsheds. The current cultural landscape, shaped by past and present human activities, still provides for people today, with resources such as open space, scenic views, drinking water, bird habitat, dark skies, and scenic rivers.” (FD 2017: 6)

A secondary value related to the landscape concerned the site’s association with the CCC:
The Civilian Conservation Corps resources at Hopewell Furnace National Historic Site are an integral link between the early iron industry and ongoing preservation and interpretation of these important resources. The CCC and other New Deal relief program workers performed archeological work and stabilized many buildings at Hopewell Furnace National Historic Site before the program ended in 1942. The work of the Civilian Conservation Corps to preserve and restore park resources was a significant component in the early establishment of the park. The impact of the Civilian Conservation Corps on this site is part of the rich history that is Hopewell Furnace. In addition to their work in the Village, there are several buildings and structures within Hopewell Furnace National Historic Site that were built by the Civilian Conservation Corps. They include three structures used to support maintenance functions and structures built for the Baptism Creek Picnic Area. (FD 2017: 7)

Approved Treatment Costs

Cost Narrative:

Bibliography and Supplemental Information

Bibliography:

Citation Author	Citation Title	Year of Publication	Citation Publisher	Citation Type	Citation Location	Citation Number
Albright, John and Norman M. Souder	Historic Structure Report: Blacksmith Shop and Wheelwright-Carpenter Shop and historic furnishing study, Blacksmith Shop, Wheelwright-Carpenter Shop and Charcoal House.	1974	National Park Service			
Allaback, Sarah	Mission 66: Visitor Centers: The History of a Building Type.	2000	U.S. Department of the Interior, Washington, D.C.			
Apple, Russell A	Hopewell Village National Historic Site, Documentation for the Historical Base Maps, 1830-1840, Part of the Master Plan	1956	National Park Service, on file at HOFU			
Bining, Arthur C.	Pennsylvania Iron Manufacture in the Eighteenth Century	1938	Pennsylvania Historical Commission			
Brooke, Cornelia	Forges and Furnaces in the Province of Pennsylvania	1914	Pennsylvania Society of Colonial Dames in America III			
Cook, Derrick M.	Statement for Management, Hopewell Furnace National Historic Site	1993	National Park Service			

Crownover, Donald A.	Manufacturing & Marketing of Iron Stoves at Hopewell Furnace, 1835-1844	1970	National Park Service			
Davis, Anthony R., Gregory J. Edinger, Sarah B. Andersen, Anthony M. Wilkinson, and Jill R. Belfornti	A Natural Areas Inventory of Berks County, Pennsylvania	1991	Pennsylvania Science Office of the Nature Conservancy			
Delmar, Frances.	The African-American Experience at Hopewell Furnace. Hopewell Furnace National Historic Site, Elverson, Pennsylvania.	2012	National Park Service			
Eggert, Gerald G.	The Iron Industry in Pennsylvania	1994	The Pennsylvania Historical Association			
Elms, W. B.	Hopewell Furnace NHS, Tree Species and Locations	1973	Department of the Interior National Park Service			
Fairbairn, Charlotte J.	The East Headrace. Hopewell Village NHS. Ironmaster's House, Building #1 (the Big House) Historic Structure Report.	1963	National Park Service			
Fegley, Winslow H.	Farming, Always Farming	1987	Pennsylvania German Society			
Fischer, David H.	Albion's Seed: Four British Folkways in America	1989	Oxford University Press			

Gerhardt, Juliette J., Tim Mancl, and Elisabeth LaVigne	Phase I Archeological Testing in Advance of New Sign Installation, Hopewell Furnace National Historic Site, Elverson, Pennsylvania.	2012	On file, Pennsylvania State Historic Preservation Office, Harrisburg, PA.			
Gerhardt, Juliette J., Tim Mancl, and Elisabeth LaVigne	Phase I Archeological Testing, Regrade, Stabilize, and Pave Unpaved Section of Back Entrance Road, Hopewell Furnace National Historic Site, Elverson, Pennsylvania.	2012	On file, Pennsylvania State Historic Preservation Office, Harrisburg, Pennsylvania.			
Glass, James A.	The Beginnings of a New National Historic Preservation Program, 1957 to 1969	1990	American Association for State and Local History			
Glaser, Leah	Hopewell Furnace National Historic Site Administrative History	2005	National Park Service			
Graham A. William Jr.	Forest Age Documentation and Other Forest Management Issues at Hopewell Furnace NHS	1996	National Park Service			
HDR Inc and John Milner Associates	Nathan Care House and Barn HSR	2017	National Park Service			

Heite, Edward F	Report of archaeological surveys in two tracts at Hopewell Furnace National Historic Site, Berks and Chester Counties, Pennsylvania	1988	n/a			
Heite, Edward F	Report of Archaeological Surveys on 198 Acres at Hopewell Furnace National Historic Site	1989	n/a			
Heitert, Kristen, Nichole Gillis, Erin Timms, Wade P. Catts, Juliette Gerhardt, and James Kurtz	Hopewell Furnace National Historic Site Archeological Overview and Assessment, Berks and Chester Counties, Pennsylvania, Volume I.	2011	National Park Service			
Heydinger, Earl	Historic Structure Report: Anthracite Furnace, Structure No. 11. Hopewell Village NHS.	1962	National Park Service			
Heydinger, Earl	Historic Structure Report: Tenant House #1. Hopewell Village NHS.	1964	National Park Service			
Heydinger, Earl	Historic Structure Report: Cast House Crane, Hopewell Village. Hopewell Village NHS	1973	National Park Service			

Houck, Lafayette	Studies of the Old Hopewell Furnace and Village	1936	n/a			
Hugins, Walter E.	Early Nineteenth Century Iron Furnaces, a Comparative Study.	1954	National Park Service			
Jacox, Diann L., and Joseph Lee Boyle	Hopewell Furnace National Register of Historic Places Nomination	1985	n/a			
Jones, Lawrence H.	Restoration of the Furnace Group at the Hopewell Village National Historic Site	1981	National Park Service			
CLR Cultural Resources Group, Kise Franks & Straw	Adjacent Lands Study, Hopewell Furnace National Historic Site	1997	CLR Cultural Resources Group			
Menke & Menke Landscape Architects and Kise Franks & Shaw	Cultural Landscape Report, Hopewell Furnace National Historic Site	1997	Department of Interior, National Park Service			
Kelso, William and Rachel Most, eds.	Earth Patterns: Essays in Landscape Archaeology	1990	University Press of Virginia			
Kurjack, Dennis C.	Hopewell Village National Historic Site. National Park Service Historical Handbook Series No. 8	1954	National Park Service			
Lewis, W. David and Walter Hugins	Hopewell Furnace National Historic Site	1983	National Park Service			
Long, Harker A. and Roy E. Appleman	Historical Sketch of Hopewell Furnace	1935	National Park Service			

Mikan, Carl J., and Marc D. Abrams	Vegetation, Edaphic and Historical Analysis of Charcoal Hearths at Hopewell Furnace National Historic Site, Pennsylvania	1994	Pennsylvania State University			
Morris, Richard B., ed.	American Encyclopedia of American History	1953	Harper & Brothers			
Muhlenberg, Nick, et al.	French Creek Watershed Study	1987	University of Pennsylvania			
Mueller, Eileen and David Jenkins Ph.D.	Hopewell Furnace National Historic Site Ethnographic Resource Inventory Report	2002	Department of Interior, National Park Service			
National Park Service	Foundation Document, Hopewell Furnace National Historic Site, Pennsylvania	2017	Department of Interior, National Park Service			
National Park Service	General Development Plan; Residence, Utility & Village Areas, Part of the Master Plan, Hopewell Village National Historic Stie	1956	n/a			
National Park Service	Topography Hopewell Village Recreational Demonstration Project, French Creek – Key to Buildings at CCC Camp SP-7	1938	National Park Service			

National Park Service	Hopewell Furnace National Historic Site, Pennsylvania	1989	National Park Service			
Paige, John C.	The Civilian Conservation Corps and the National Park Service, 1933-1942: An Administrative History	1985	National Park Service			
Parker, Scott K., and Wade P. Catts.	Report of an Archeological Survey of Five Domestic Sites at Hopewell Furnace National Historic Site, Berks and Chester Counties. On file, Hopewell Furnace National Historic Site Archives, Elverson, Pennsylvania.	2002	National Park Service			
Pendleton, Philip E.	Oley Valley Heritage, The Colonial Years: 1700-1775	1994	The Pennsylvania German Society			
Robinson & Associates	Hopewell Furnace National Historic Site: Historic Resource Study Final.	2004	National Park Service			
Rothman, Hal	Preserving Different Pasts: The American National Monuments	1989	Chicago: University of Illinois Press			
Russel, Emily W. B.	Vegetation Study Hopewell Furnace National Historic Site	1987	Center For Coastal and Environmental Studies			
Rupp, Daniel L.	History of the Counties of Berks and Lebanon	1984	The Reprint Company			

Schmult, Brian	Evolution of the Hopewell Furnace Blast Machinery. IA: The Journal of the Society for Industrial Archeology 42 (2): 5-22.	2016	n/a			
Sevon, W.D.	Physiographic Provinces of Pennsylvania.	2000	Pennsylvania Department of Conservation and Natural Resources, Harrisburg, Pennsylvania.			
Sharpe William E. and C. William Neff	Hopewell Furnace National Historic Site Water Recourse Management Plan	1993	Environmental Resources Research Institute			
Stearns, Charles H.	Revised Type Mapping Report	1939	n/a			
Storm, Gerald L., Walter M. Tzilkowski, Todd W. Bowersox, and Stephen E. Fairweather	Plant Community Development in Historic Forest Stands at Hopewell Furnace National Historic Site	1994	National Park Service			
Stone, Roger et al.	Hopewell Furnace NHS Field Maintenance Plan	1992	National Park Service			
Souder, Norman M. and Joseph Prentice et al.	Historic Structures Reports	1962	National Park Service			
Stanton, Cathy	Cultures in flux: New approaches to 'Traditional Association' at Hopewell Furnace National Historic Site	2007	National Park Service			

Thomas & Newswanger	Hopewell Furnace Historic Structures Report and Engineering Study	1994	Department of the Interior, National Park Service			
Unrau, Harlan D. and G. Frank Williss	National Park Service Administrative History: Expansion of the National Park Service in the 1930s	1983	National Park Service, Washington D.C.			
U.S. Bureau of the Census	Manuscript Population Schedule, Sixth Census (1850) of the United States, Union Township, Berks County, Pennsylvania	1850	n/a			
Walker, Joseph E.	Hopewell Village: The Dynamics of a Nineteenth Century Iron-Making Community	1966	University of Pennsylvania Press			
Wells, Stuart W.	Hopewell Furnace Historic Scene Report	1994	Department of the Interior, National Park Service			
Vanderwerff, William D.	The Vascular Flora of Hopewell Furnace National Historic Site	1994	n/a			
Yocum, Barbara A	The Furnace Group: Hopewell Furnace National Historic Site, Elverson, Pennsylvania.	2008	National Park Service, Historic Architecture Program, Northeast Region			
Zerbey, Benjamin J.	Historic Structure Report: Boarding House – Building #24. Hopewell Village NHS.	1964	National Park Service			

Zerbey, Benjamin J.	Historic Structure Report: Nathan Care House – Building #25. Hopewell Village NHS.	1964	National Park Service			
Zerbey, Benjamin J.	Historic Structure Report: Spring House – Building #17. Hopewell Village NHS.	1964	National Park Service			
Zerbey, Benjamin J.	Historic Structure Report: Tenant House #2. Hopewell Village NHS.	1964	National Park Service			
Zerbey, Benjamin J.	Historic Structure Report: Wheelwright Shop. Hopewell Village NHS.	1964	National Park Service			

Supplemental Information:

Supplemental Information Title: A Map or General Plan of the Several Tracts Belonging to the Warwick Co., Messieurs Rutter & Potts...Situate in the Townships of East Nantmeal & Coventry in Chester County & the Township of Union in Berks County

Supplemental Information Narrative:

Lightfoot, Thomas, 1787. On file at the Chester County Historical Society.

Supplemental Information:

Supplemental Information Title: Aerial Photographs

Supplemental Information Narrative:

Various aerial photographs of Hopewell Furnace and French Creek State Park areas dating from 1986. On file at Hopewell Furnace National Historic Site.

Supplemental Information:

Supplemental Information Title: Atlas of Chester County, Pennsylvania

Supplemental Information Narrative:

Bridgens, Henry F. and A. R. Witmer., Lancaster Co., Penn.: A. R. Witmer, 1873

Supplemental Information:

Supplemental Information Title: Base Map - Hopewell Village National Historic Site

Supplemental Information Narrative:

National Park Service; 1937. On file at Hopewell Furnace National Historic Site

Supplemental Information:

Supplemental Information Title: Breou's Official Series of Farm Maps, Chester Co., Pennsylvania

Supplemental Information Narrative:

Philadelphia: W.H. Kirk & Co., 1883.

Supplemental Information:

Supplemental Information Title: French Creek Area, Revised Layout Plan, Baptism Creek Picnic Area

Supplemental Information Narrative:

National Park Service; circa 1940. On file at Hopewell Furnace National Historic Site

Supplemental Information:

Supplemental Information Title: General Development Plan - Residence, Part of Master Plan, Hopewell Village National Historic Site

Supplemental Information Narrative:

National Park Service; February 1956, rev. On file at Hopewell Furnace National Historic Site.

Supplemental Information:

Supplemental Information Title: Historic Photographs

Supplemental Information Narrative:

Photographs from the Hopewel Furnace National Historic Site Archive

Supplemental Information:

Supplemental Information Title: Historic Vegetative Map

Supplemental Information Narrative:

National Park Service; June 6, 1956, rev. Novermber 1961. Part of Master Plan Hopewell Village National Historic Stie. On file at Hopewell Furnace National Historic Site

Supplemental Information:

Supplemental Information Title: Historical Atlas of Berks County, Pennsylvania

Supplemental Information Narrative:

Davis, F. A.; Reading, Penn.: A. M. Davis, Reading Publishing House, 1876

Supplemental Information:

Supplemental Information Title: Historical Survey French Creek

Supplemental Information Narrative:

National Park Service; NE Area, circe 1930s, four sheets; B-64-67. On file at Hopewell Furnace National Historic Site

Supplemental Information:

Supplemental Information Title: Honey Brook Quadrangle - N.E.

Supplemental Information Narrative:

Regional Planning Federation of the Philadelphia Tri-State District. n.d. On file at Hopewell Furnace National Historic Site

Supplemental Information:

Supplemental Information Title: Hopewell & French Creek Area West Detail

Supplemental Information Narrative:

Aerial Photo 4-23-51. On file at Hopewel Furnace National Historic Site

Supplemental Information:

Supplemental Information Title: Hopewell & French Creek Area, Detail, AHJ 7MM7 757623 CFL209.80

Supplemental Information Narrative:

Aerial Photo 9-24-71. On file at Hopewel Furnace National Historic Site

Supplemental Information:

Supplemental Information Title: Hopewell & French Creek Area, W. Detail

Supplemental Information Narrative:

Aerial Photo 9-15-37-1-15. On file at Hopewel Furnace National Historic Site

Supplemental Information:

Supplemental Information Title: Hopewell Furnace Lands and Contiguous or Adjacents Tracts, Property of A. Louise C. Brooke

Supplemental Information Narrative:

Dechant, William H. & Sonn, August 1915, rev. to January 1931. Map on file at Hopewell Furnace National Historic Site.

Supplemental Information:

Supplemental Information Title: Hopewell Furnace National Historic Site Apple Orchard Plan

Supplemental Information Narrative:

National Park Service; revised December 1991. On file at Hopewell Furnace National Historic Site

Supplemental Information:

Supplemental Information Title: Map of Berks County, 1820

Supplemental Information Narrative:

Richards, Henry M.; 1820. On file at the Historical Society of Pennsylvania, Philadelphia, PA

Supplemental Information:

Supplemental Information Title: Map of Berks County, Pennsylvania

Supplemental Information Narrative:

Fagain, L.; Philadelphia: Henry F. Bridgens, 1860

Supplemental Information:

Supplemental Information Title: Map of Hopewell Village & Ruins

Supplemental Information Narrative:

Appleman, Roy Edgar., December 31, 1935. On file at Hopewell Furnace National Historic Site.

Supplemental Information:

Supplemental Information Title: Map of New Jersey and Pennsylvania

Supplemental Information Narrative:

Gibson, Mark E., American Automobile Association, Princeton, N.J.; 1989.

Supplemental Information:

Supplemental Information Title: Map of the Clingan & Buckley Hopewell Funace Lands at Hopewell

Supplemental Information Narrative:

Survey by Kendall Bro's, Novermber and December 1875. Map on file Hopewell Furnace National Historic Site

Supplemental Information:

Supplemental Information Title: Plan of Mansion Gardens, Ironmaster's House

Supplemental Information Narrative:

USDI NPS Division of Construction-Eastern Division; NHS-HV, August 1, 1956. On file at Hopewell Furnace National Historic Site

Supplemental Information:

Supplemental Information Title: Property Line Map Hopewell Village National Historic Site

Supplemental Information Narrative:

Baker, Michael Jr., Civil Engineer & Surveyor, April 1, 1946, with survey to reset #14-18, 1992. Drawing number NHS-HV 9384, Hopewel Furnace National Historic Site

Supplemental Information:

Supplemental Information Title: Restoration Map of Hopewell Village, 1785-1800

Supplemental Information Narrative:

Appleman, Roy Edgar, prepared 1936. On file at Hopewell Furnace National Historic Site.

Supplemental Information:

Supplemental Information Title: Statistical Data Base Plan for Restoration of Mansion Gardens

Supplemental Information Narrative:

Kurjack, Dennis C., Drawing number NHS-HV-3001. On file at Hopewell Furnace National Historic Site.

Supplemental Information:

Supplemental Information Title: Survey of the Property of Edward S. Buckley and Maria L. Clingan

Supplemental Information Narrative:

Insurance Company of North America. Five insurance policies dated July 19, 1879. Policies on file at CIGNA Archives, Philadelphia, Penn.

Supplemental Information:

Supplemental Information Title: Topography Hopewell Village Recreational Demonstration Project, French Creek - Key to Buildings at CCC Camp SP-7

Supplemental Information Narrative:

National Park Service; July 1937, rev. March 1938. On file at Hopewell Furnace National Historic Site

Supplemental Information:

Supplemental Information Title: Upper Reaches of French Creek

Supplemental Information Narrative:

Hartzog Lader Richards and White, January, 1991. Plans prepared for the French and Pickering Creeks Conservation Trust, Coventryville, PA, On file at Hopewel Furnace National Historic Site

Supplemental Information:

Supplemental Information Title: Water and Sanitary Plans, French Creek State Park

Supplemental Information Narrative:

The General State Authority, Harrisburg, PA, Drawing P-6. On file at Hopewel Furnace National Historic Site