



Sustainable Future of Washington Crossing Historic Park Master Plan 2014



preservation • cultural

heritage • natural history • recreation



prepared for **Pennsylvania Historical and Museum Commission** by

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key to acronyms

ADA	Americans with Disabilities Act
BCPC	Bucks County Planning Commission
BHWP	Bowman's Hill Wildflower Preserve
D&L	Delaware & Lehigh Canal National Heritage Corridor
D&R	Delaware & Raritan Canal (NJ)
DCNR	PA Department of Conservation & Natural Resources
DEP	PA Department of Environmental Protection
DRGP	Delaware River Greenway Partnership
EPR-DGS	Enhanced Programmatic Report for DGS Capital Improvements Project
FWCP	Friends of Washington Crossing Park
HSR-LP	Historic Structures Report-Lower Park
MG	Memorial Gateway
PHMC	Pennsylvania Historical and Museum Commission
PofE	Point of Embarkation
RFP	Request for Proposals
UMT	Upper Makefield Township
WCHP	Washington Crossing Historic Park (PA)
WCSP	Washington Crossing State Park (NJ)
WC2026	Washington Crossing 2026
WWTP	Waste water treatment plant

photo credits

Photographs by Marianna Thomas Architects (MTA) except as otherwise noted

TRP	Toole Recreation Planning
VLS	Viridian Landscape Studio

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1 executive summary

introduction

One might ask why prepare a master plan for physical improvements in a park which people agree is “all almost right” as a place.

- This park is nearly 500 acres and includes 57 buildings, nearly half of which are listed in or eligible for the National Register of Historic Places (NRHP.) It is the second largest site of the Pennsylvania and Historical Commission (PHMC) and one of only two designated as a park.
- Washington Crossing Historic Park (WCHP) is more than the Christmas Day event – it is 365 days of education and recreation in an important site known for its history, scenic beauty and natural resources.
- It has the potential to be linked with other Revolutionary War parks such as Independence, Valley Forge and Brandywine Battlefield.
- It sits in the midst of the 60-mile Delaware Canal State Park and the 165-mile towpath in a national heritage area (one of only 14 nationwide.)
- It is beloved.
- It has potential national/international constituencies.

PHMC undertook preparation of this new master plan for WCHP in response to various opportunities and challenges, including the following:

- WCHP faced major challenges with drastic state budget cuts in 2009, and the need to develop effective management and business plans is crucial, given the fact that the staff has been reduced from 26 to 4;
- Citizens rose to keep the park open and revive it;
- The park has had a capital budget of \$5.5 million for the Visitor Center and another \$7.5 million for improvements within the park;
- Policies and practices developed under the previous master plan, from 1975, no longer reflect current realities;
- The park improvements that are the most important are related to environmental conservation and stewardship, protection of the historic buildings, and enhancements that will create memorable visitor experiences for those who visit once in a lifetime as well as those who use the park everyday including event attendees, tourists, school groups, nature lovers, cyclists, soccer families, trail users, picnickers, and learners of all ages.

While the Master Plan focuses on physical improvements, we recommend that PHMC follow up on critical needs not addressed in the physical planning:

- we found the need for the development of management, program, financing and partnership systems essential to protect this investment of \$13 million

- Things that will make the park sustainable over the long term require additional study that is compelling and urgent, including a maintenance management plan, more programming, the cultivation of partnerships, and establishment of a customer service program.

vision: a sustainable park

The Master Plan vision is to develop sustainable use of the Park in which PHMC collaborates with partners toward long-term financial stability for WCHP to be a world class resource, rooted in history, nature, recreation, and memorable visitor experiences.

The goal is to develop a Master Plan that defines the core elements of significance and develops alternatives for maintaining the park long-term in a sustainable way. It will serve as the basis for planning, operations and decision-making. It is rooted in a robust public participation process, which yielded much useful information that is incorporated into the plan. It builds also upon re-evaluation of PHMC goals, objectives and guiding principles in light of its mission.

This Master Plan makes physical planning and land management recommendations for Lower Park and Upper Park. An accompanying Management and Operations Plan should be prepared in the near future to address organization, policies, programming and funding for implementation.

background

WCHP contains two sections, totaling approximately 499 acres, along the banks of the Delaware River in Bucks County. The 100-acre Lower Park and a small portion of Upper Park are located in Upper Makefield Township; the larger Upper Park lies 3.5 miles to the north, mostly in Solebury Township. In contrast with the groomed village and lawns of Lower Park, the northern Upper Park section encompasses the height of wooded Bowman's Hill, a natural overlook punctuated by the memorial park tower, as well as the outflow of Pidcock Creek. The park is part of a National Historic Landmark District which includes a section in New Jersey. Of fifty-seven cultural resources in WCHP, 26 are listed in or eligible for listing in NRHP.

The Park is a treasure with potential yet to be realized. Created between 1917 and 1930, the memorial park celebrates a significant military offensive which revived hopes in 1776 of a successful War for Independence. In the auditorium a replica of the iconic painting by Emanuel Leutze of Washington Crossing the Delaware on Christmas night imaginatively captures intangible values of the place. The park contains commemorative landscape features along with natural environments and recreational amenities for public inspiration, education and enjoyment.

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As a place for people, administered by the Commonwealth of Pennsylvania, the park is understood through the multiple perspectives of history, natural history and recreation, in a dynamic balance which changes with changing times. Surrounded by suburbanization, the park's authentic historic and natural features are increasingly appreciated, along with its recreational trails. A prior master plan for WCHP was prepared in 1975, in anticipation of large Bicentennial crowds interested primarily in history and craft practices. That plan is outdated. Since then, building uses and visitation patterns have changed. Today's park visitors are interested in a broader range of memorable experiences, including more nature-based and recreational opportunities. At the same time, traditional governmental budgets have shrunk, particularly for ongoing operations. This holistic overview and new Master Plan responds to the current context.

WCHP resources and strengths

The Master Plan highlights the full diversity of key assets and recommends development of new linkages that will ground and enrich visitor experiences:

- History: site of the daring crossing of the Delaware River led by General George Washington, as prelude to a successful 10-day campaign to capture Trenton and Princeton. The park has resources that tell the tale:
 - McConkey's Ferry Inn, Thompson-Neely Farmstead (which served as a war-time field hospital), Soldiers' Graves.
- Natural history: diverse ecological systems offer opportunities for environmental education and leadership in stormwater management: riverfront, Pidcock Creek, wetland, meadowland, Bowman's Hill igneous geology and regenerating forest.
- Commemoration, as represented by the copy of Emanuel Leutze's painting, monuments, and the memorial landscape, which includes Soldiers Graves, Bowman's Hill Tower, Valley of Concentration and Point of Embarkation.
- Additional assets:
 - o Delaware Canal and towpath connect two separate sections of the park, and link it with other attractions nearby and along the 165 mile Delaware & Lehigh National Heritage Corridor from Wilkes Barre to Philadelphia.
 - o Development as both park and historic site.
 - o Variety of experiences: open space, vistas, riverfront, historic village, night sky, silence, sister park in New Jersey.

Foundations of Master Plan vision for WCHP:

- Programs, services and events broadly related to the park's historic, natural and recreation resources.
- Partnerships and collaboration
- Financial sustainability and revenue generation
- Operations based on sound business practices
- Excellent customer service
- A sustainable land and water management plan

Proposed Site Improvements

While the focus of this Master Plan is physical improvements, the recommendations are rooted in the vision of collaboration with partners. They aim to set the stage for outstanding programming and events. Inevitably this plan delves into the vision of collaboration, although many key issues are left to be developed in a separate Management and Operations Plan.

Highlights of recommended site improvements:

- Reinforce landscapes of the memorial park design, which symbolize the historic Crossing event and give form to its intangible values.
- Restore the memorial gateway to prominence as part of the arrival path to the Visitor Center, and down the stepped hillside to the rebuilt Point of Embarkation at the river's edge. Enliven the entrance plaza as a gathering place.
- Reinforce park identity and sense of place with great new civic spaces: Visitor Center plaza, Point of Embarkation, Tower Forecourt, Taylorsville Promenade linking commercial entrances and Village Square, linking park and village.
- Broaden park focus and facilities for 365 days a year, with the Crossing as a signature event.
- Concentrate PHMC historic interpretive programs in the historic core of each park section and develop partnerships for programming elsewhere.
- Adaptive reuse, primarily commercial, of Taylorsville by investor-tenants, serving visitors and community.
- Strengthen canal and towpath connection between Upper and Lower Parks, and with destinations beyond.
- Develop premier supporting facilities.

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Phased Implementation

short range, years 1–3: the Master Plan recommends easily achievable projects upon which larger efforts can be built thereafter. It also recognizes the opportunities offered by construction of significant park improvements during 2015–16 under a separate state-funded Capital Improvements Project, administered by the Department of General Services (DGS). Thanks to PHMC coordination of planning for that concurrent project with preparation of the Master Plan, there will be upgrades in place to support implementation of Master Plan recommendations. Together the DGS project and early steps of Master Plan implementation will set the stage during the first 3 years for sustainable management of land and facilities. Many of the short range recommendations focus on planning for projects that will not have tangible results until later phases. The collaborations with partners for planning those projects, however, are themselves fruits, as well as seeds for long-term partnerships for programming and sustainable park management.

- Development of a strategic plan related to operations, management and programming and financing.
- Signage and way-finding would be short-range achievable successes with large payback in terms of extending a welcoming invitation to potential visitors. Signage is an example of a project which can strengthen existing partnerships with neighbors and promote park usage.
- A new Land Manager would be retained and a new sustainable land management plan adopted as the basis for environmentally sound land management practices. While the roll-out would be more labor-intensive for years 1–3 in any given area, labor-saving benefits would accrue as new practices for maintaining tree canopy, meadow, wetland, riverbank, woodland and managed forest become established.
- Development of an interpretive plan with expanded storylines about significance of the park from pre-Revolutionary to current times will provide the foundation for multi-faceted programming that supports efforts to expand the Park's audience.
- Development of a circulation/recreational plan for vehicles, pedestrians, trail-users and parking.
- Establishment of long-term lease program(s) and selection of adaptive reuse tenants and/or resident curators through open proposal processes.
- Implement stormwater management education programming to build partnerships for upstream management of the stormwater that damages the park.
- Convert Visitor Center entrance plaza into a gathering place.
- Plan and install infrastructure improvements to support the Activities Zone in the

Valley of Concentration

- Planning and design for mid-range initiatives.
- Consolidation of PHMC collections and programming within the Historic Core, allowing opportunities for revitalizing of underutilized facilities with or by partners.
- Installation of interpretive exhibits in the Visitor Center.

mid-range, years 4 – 7:

- As sustainable land management practices incrementally cover more of the Park, results of the initial prototypes will become observable and benefits will accrue from less labor intensive land management.
- Construct recommended modifications to Park infrastructure, including pathways, trails, vehicular circulation, parking, pavilions, restrooms and utilities.
- Upgrade the Memorial Gateway as a memorable place in conjunction with implementation of circulation and parking improvements in the Lower Park.
- Restoration/ renovation of historic buildings outside the historic cores by long-term adaptive-reuse tenants.
- Revenue generation through programs, events and promotion.
- Creation of new civic spaces associated with tenant-renovated buildings--Village Square and Taylorsville Promenade.

long-range, years 8 – 15+:

- On-going expansion of collaborations, programming, revenue generation, and land management practices.
- Development of new special places.
- The relocated Point of Embarkation will become the culminating step in re-establishing a processional path connecting the Valley of Concentration with the Delaware River and linking the Visitor Center entrance with that path.
- Development of the Bowman's Hill Tower Forecourt will establish an appropriate boundary in the challenging conditions between managed forest and a sustainable woodland landscape which provides visitor amenities.
- Repair of Pidcock Creek stormwater damage caused by upstream development is considered a long-range improvement in the hope for strengthened municipal regulation.

2 about this plan methodology

introduction

With public and private funding and enthusiasm from the community, the WCHP Visitor Center was enlarged and completely renovated. That major step in park revitalization marks the beginning of a new path for the park's growth into a national historic treasure. Cherished areas such as historic Taylorsville, McConkey's Ferry Inn, Valley of Concentration, Thompson-Neely Farmstead and Bowman's Hill Tower are visited each year by thousands of people from the community and from around the world.

The Washington Crossing Master Plan establishes a clear park vision and key directives. This plan addresses the preservation and maintenance of these historic gems and the park's natural and recreational riches, within a framework of sound fiscal planning.

The Master Plan proposes numerous project types of varying sizes. The plan is phased to tap multiple funding streams, stakeholder support and timing opportunities.

It is the road map for long-term park success, written as a result of a participatory process spearheaded by the Pennsylvania Historical and Museum Commission and enriched by their stakeholders, including the Friends of Washington Crossing Park.

It is meant to be a living document, and as such is capable of being fine-tuned by future park stewards.

methodology

A multi-discipline team of consultants prepared the Master Plan, working closely with a Steering Committee assembled by PHMC. Marianna Thomas Architects led the core team, which also included Viridian Landscape Studio, Ltd. and Toole Recreation Planning. Stantec provided civil engineering consultation, and archaeological consultant CHRS, Inc. mapped areas of archaeological sensitivity in Upper and Lower Parks. The Master Plan Steering Committee and the extensive outreach to stakeholders as part of the process are described in Chapter 4.

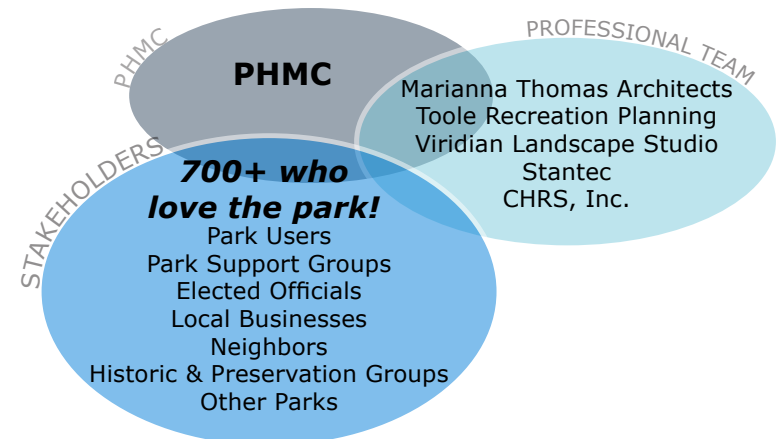
In the initial scope definition for the master plan, there was an underlying assumption that a shift of PHMC attention from recreational expansion toward focus on the historic core would make it possible to adapt to declining public funding and resources while developing partnerships for areas outside the historic core. To that end, the approach started with tasks of historic and physical analysis:

- review of WCHP mission in relation to the overall mission of PHMC
- identification of core park elements as expressions of the significance of WCHP
- definition of sustainable maintenance of the park

Right: Master Plan Open House at Visitor Center (VLS)

Inventory and Analysis: The consultant team undertook a multi-faceted assessment of WCHP's history, its physical attributes, park use and park operation:

- historic significance of the park
- cultural resources, including analysis of use potential of the buildings
- environmental resources
- landscape ecosystems
- land use and identification of mission-related cores
- circulation
- context of the park
- infrastructure
- park visitation and support facilities
- organization, operating budget, staffing and maintenance



2 about this plan methodology

Programming/Guiding Principles:

The process of considering Master Plan alternatives unfolded organically and somewhat differently from the next intended step, defined as formulation of a program of use for park land and facilities. Instead of a program of uses, the Master Plan Steering Committee and the consultant team jointly established a set of Guiding Principles, based on the assessment findings and based on the mission statement of PHMC. The team prepared analytical site diagrams of existing conditions, land management and circulation. After presentation of those findings, team members guided individual Steering Committee members through a vision sketch process. That exercise elicited a mix of landscape management approaches, questions about appropriate land use, and problem identification related to circulation, way-finding and disconnection between Upper and Lower Parks.

Alternative Concepts:

For the Master Plan alternatives phase, the consultant team generated site plans showing alternative use zones. Organizing approaches in the Park included potential improvements to vehicular and pedestrian circulation and reinforcement of site interpretation through restoration of symbolic components of the Memorial Park design. Alternative approaches for the buildings identified some for interpretive display and others for adaptive reuse. The intended scope for the Alternatives phase included identification of potential partnerships for specific recommendations and preparation of associated staffing and cost estimates. PHMC concluded, however, that a cost estimate for recommended capital improvements would be premature. In lieu of a budget analysis chapter, PHMC asked for inclusion in the text of instructive information, for example about tax credits for building rehabilitation and operating budget for conversion of lawns to meadows.

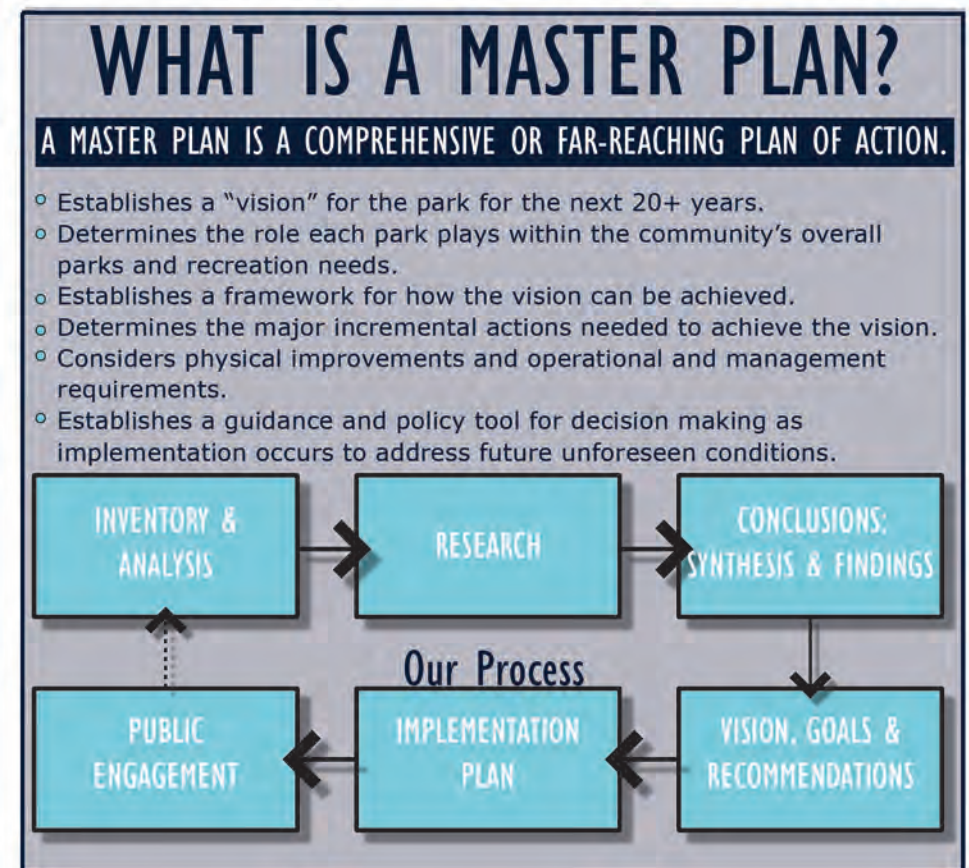
Refined Alternative Concept:

PHMC selected components from the various alternatives presented to be synthesized and developed into a refined alternative for Lower Park. For Upper Park, the refined alternative was to address historic core and circulation, but some of the land use decisions were deferred pending PHMC discussions with key partners in Upper Park.

The consultant team presented the refined alternatives, along with the site assessment diagrams and powerpoint summaries of the site assessment findings in the first of two public meetings. The open house format provided an opportunity for direct dialog between Steering Committee members and the consultant team and stakeholders and park users. As such, it gave team members a chance for direct feedback on how well they had addressed concerns gleaned in the interviews and surveys.

Draft Master Plan:

Development of the Draft Master Plan incorporated comments received from both the Steering Committee and Public Meeting attendees. The second Public Meeting presented updated drawings for public comment and initial thoughts about relative priority and phasing.



3 goals and objectives

Guiding Principles

1. Modifications and activities within the park shall promote PHMC values and vision through:
 - Environmentally sustainable land use
 - Building uses compatible with existing historic construction and natural environment
 - Appropriate partnerships to assure economic sustainability.
2. Core areas shall enhance interpretive and educational mission and surrounding areas shall protect critical viewsheds.
3. PHMC encourages active park use by other entities, consistent with PHMC mission, objectives and protective guidelines.
4. Building alterations/additions shall enhance PHMC's interpretive mission, and shall be consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties.
5. PHMC shall undertake or work with others to adopt a new energetic strategic plan for financial sustainability through collaboration, partnerships, and fundraising.

PHMC Mission Statement

Washington Crossing Historic Park, working through a wide range of partnerships, is interpreting our Nation's past, providing world class outdoor recreation and education opportunities, fostering economic development of our Commonwealth, and improving the quality of life in our local communities. PHMC works in partnership with others to preserve the Commonwealth's natural and cultural heritage as a steward and advocate for the people of Pennsylvania and the nation.

Successful Park Ingredients

Recognizing that the duality of WCHP as both an historic site and a public park broadens the issues, the consultant team emphasized the potential contribution of pro-active goals for strengthening the park, based on findings for successful parks. Research conducted by the Trust for Public Land found that there are seven factors that define excellence in public park systems.¹ They include the following:

1. Clear expression of purpose
2. Ongoing planning and community involvement
3. Sufficient assets in land, equipment and resources to meet public need
4. Equitable access
5. User satisfaction
6. Safety from physical hazards and crime
7. Benefits to the community beyond the borders of the park

¹ Harnik, Peter. The Excellent City Park System What Makes it Great and How to Get There, Washington, D.C.: Trust for Public Land, 2003.

4 public participation

A Key Element of the Master Plan

The Washington Crossing Historic Park Master plan was rooted in a strategic public engagement process. Our culture and society embraces the philosophy that people have the right to influence what affects them. Involving the public and seriously considering their input and needs is more often than not the right thing to do. Public participation provides a method for incorporating the public's ideas, values, and interests into decisions, resulting in more responsive and democratic governance.

Engaging the Public and Stakeholders

Public participation included five components: a Master Plan Study Committee, key person interviews, focus groups, public opinion questionnaires, and public open houses and meetings. This process provided valuable information from those in the community who are involved in various park-related efforts, as well as the general public, such as park supporters, visitors, local businesses, elected officials, and representatives of agencies and non-profit organizations promoting tourism and economic development.

Master Plan Steering Committee

The Master Plan Steering Committee guided the planning process. Its PHMC members included James Vaughan, Executive Director of PHMC, Andrea Lowery, Architectural Supervisor and Project Manager; Brenda Reigle, Director of the Bureau of Historic Sites and Museums; Joan Hauger, Washington Crossing Historic Park Site Administrator; Michael Bertheaud, Eastern Division Chief and former Site Administrator; Barry Loveland, Chief of the Division of Architecture and Preservation; Cory Kegerise, Community Preservation Coordinator, the Bureau of Historic Preservation Eastern Region. Additionally, John Godzieba represented the Friends of Washington Crossing Park as its President throughout the process. Representatives of DCNR joined the Steering Committee partway through the project: Robert P. Barth, Division Chief, Resources Management and Planning and Jeff Johns, Planning Section Chief. To discuss specific topics, the Steering Committee invited other participants, such as the elected officials of Upper Makefield and Solebury Townships.

Why Does Public Participation Matter?

Public participation has practical, ethical, and financial benefits. Important reasons for involving the public include the following:

- **Quickly identify key difficulties, challenges, or opportunities.** Participation by the public early on and throughout the planning or decision-making process provides early notice about issues, options, or opportunities. Generally, the sooner such information comes to light, the more useful it is.
- **Create better understanding of the situation, problems, issues, opportunities, and options for action.** For an effective decision-making process, both the decision makers and the public need to fully understand the situation, problem, issue, opportunity, along with available options. Public participation helps the decision-making process because it clarifies the definition of problem, provides a forum for sharing ideas and concerns, helps produce clear and accurate information, and brings people together to focus on what's worth doing.
- **Build better relationships.** Asking, considering, and involving people in work and decisions that affect them will naturally create and enhance relationships with them. These relationships – or “social capital” can be a useful foundation and resource for future work, including the work of implementing a decision.
- **Manage single-issue advocates.** Because public participation illuminates many issues and many viewpoints, it can help manage single-issue advocates. When people are part of a broad-based, interactive process, they usually understand better challenges of making decisions in complex situations involving many different views about what can and should be done. While their zeal for their issue will not diminish, they may allow space for consideration of other issues and needs.
- **Manage conflict more effectively.** A process that involves people early on, fosters better understanding, and builds relationships is also more likely to result in better conflict management. Such a process is more likely to be “hard on the problem and easy on the people,” focus on interests and not positions, respect the differences people bring and the contributions people have to make, and be able to create an atmosphere to welcome “win-win” solutions.
- **Build a coalition of support.** When people are involved in solving problems, making decisions, or creating plans, they typically develop a sense of ownership, commitment to, and stake in the results of those efforts and initiatives. Frequently, they will then become stronger advocates and help bring them to life. This may take the form of political advocacy, volunteerism, partnering, publicity, securing funding, and so on.
- **Get it right the first time.** If people have had their issues addressed and considered throughout the process, the resulting decisions should better meet their needs. This diminishes the desire and capacity of someone to stop a decision either late in the decision-making process or even during the implementation phase. Many initiatives to stop a project are aimed less at the actual decision and more at failures in the decision-making process – because key stakeholders were not included in the process, options were not considered, meetings were not announced or open, the analysis was flawed, and so on.
- **Enhance future problem-solving capacity.** A good process can greatly enhance, rather than diminish or poison, future problem-solving capacity.
- **More substantive decisions and better outcomes.** Better results occur as a consequence of:
 - **More information.** A public involvement process brings more information into a decision-making process, including information that goes beyond historical, scientific or technical knowledge. Especially important is gaining knowledge of stakeholder interests and concerns – the kind of political information essential for effective decision making.
 - **More perspectives.** The participation by a range of interested people adds more perspectives and expands options, thus enhancing the values of the ultimate decision.
 - **Increased mutual understanding.** Public participation provides a forum for both decision makers and stakeholders to better understand the range of issues and viewpoints. Thus it broadens their own knowledge base as they contribute to the decision.

Source: Bryson, John M. and Carroll, Ann A. (2002) The What, Why, Who, How, When, and Where of Public Participation. Minneapolis, MN: University of Minnesota Extension Service.

Interviews

Interviews were conducted with more than 100 individuals and organizations about Washington Crossing Historic Park, who generously shared their thoughts and time. Interviewees included representatives of community organizations, citizens with identified interests, people who asked to be interviewed, elected and appointed officials at the local, county and state levels of government, business people, private non-profit organizations, regional recreation, park and trail groups, municipal management and staff, park visitors, and historic, tourism, environmental and recreation based organizations.

- PHMC management and staff including central and regional administration; architectural and community preservation departments
- Washington Crossing Historic Park management and staff
- Friends of Washington Crossing president, Business Manager, members, volunteers, volunteer coordinator, and staff
- Re-enactors
- Washington Crossing 2026
- Businesses in Upper Makefield Township
- Park visitors using the park for different purposes including history, tours, recreation, picnicking, Bowman's Hill Wildflower Preserve, and special events
- Friends of the Delaware & Lehigh Canal Executive Director
- Delaware & Lehigh Canal Trail Towns Director
- Delaware Canal State Park Superintendent and park rangers
- Delaware & Lehigh Canal National Heritage Corridor Commission
- Delaware River Greenway Partnership
- Delaware Riverkeepers
- Washington Crossing State Park, State of New Jersey
- Bucks County Commissioners' Chief of Staff and Director of Planning
- Bucks County Parks & Recreation Director
- Bucks County Visitors and Convention Center
- State Representative Scott Petri
- State Senator Charles McIlhinney
- Upper Makefield Board of Supervisors
- Upper Makefield Township Manager and Zoning Officer
- Upper Makefield Visitors Association
- Upper Makefield/Newtown Soccer Club/Patriots FC
- Solebury Township Manager and Recreation Director
- Author of books on Washington Crossing State Park in New Jersey and Washington Crossing Historic Park in Pennsylvania
- Bowman's Hill Wildflower Preserve Executive Director and Education Coordinator
- Citizens who asked to be interviewed

Open Houses and Public Forums

Two open houses and public forums were held. During the open houses, those attending could view project maps and materials and interact with the planning team and PHMC management. The purpose of the first open house/public forum was to present the findings of the park assessment to the public along with recommendations for potential park improvements. The feedback from the participants enabled the planning team to revise the suggested improvements to be in line with project goals, the PHMC mission and public opinion. In the second open house attendees reviewed and discussed the revised and refined recommendations. Attendance included 54 in the first forum and 61 in the second one for a total of 115.

Public Opinion Questionnaires

The consulting team used questionnaires to solicit public opinion. The questionnaires were available in the Visitors' Center, at open houses and public forums, and during special events. The team changed the format from a ten question format to a 3" by 5" comment card with only three questions. The comment cards took only about two minutes to complete and worked much better, especially if the team members personally asked people to complete them.

The consulting team reached out to WCHP visitors in a strategic approach to involve participants in major park events including George Washington's Birthday Celebration, the grand re-opening of the Visitors Center, and the Brewfest. Due to the timing of the planning process, the Crossing was not included in this outreach element. Participants in these events came out to the park for a variety of reasons including learning about history, enjoying the setting, to socialize with family and friends, to have fun in the outdoors, and to enjoy the special events.

The team worked within the crowd on interviews and solicitation of feedback on comment cards. The team found that people were eager to provide their comments and ideas. While 674 people provided input, only one person refused due to time constraints. Overwhelmingly, the responses were positive with people expressing their love of the park, their enjoyment of the programs, and their desire to use the park and its programs more often.



Focus group completing questionnaires at Brewfest (TRP)

4 public participation what we learned

The major finding was that people love Washington Crossing Historic Park. They recognize the historical significance of the park, appreciate its scenic beauty and natural resources, and enjoy its recreational opportunities. Many bring their children here to witness where the course of world history was changed. Although PHMC's main goal for this master plan was directed toward physical park improvements, most of the comments from key stakeholders, citizens, and park visitors dealt with programs, information, customer service, and policies rather than facilities. Overall, PHMC has a great deal of support and interest in Washington Crossing Historic Park. In an era of fiscal challenges and cutbacks, that is a very good thing.

Strengths

- **People LOVE Washington Crossing Historic Park (WCHP).** The park is so important to the citizens that a group of citizens formed to support it by raising funds, volunteering, supporting staff, programming public events and promoting the park through an advertising program.
- **The Friends of Washington Crossing Park spend countless hours in support of the park through fund-raising, volunteerism, programming, and organizational support.**
- **WCHP is important for many reasons. People understand that it is the site of one of the most important events in world history, the Christmas night Crossing of the Delaware River by General Washington and his troops to defeat the Hessians during the American Revolution.** And they also recognize the many other important elements of the park: nature, historic buildings, Taylorsville, scenic beauty, river access and views, a community destination, world class prominence, source of public pride, the special events and things to do. While people described the importance of the annual crossing re-enactment, they also stated how important the park is for the 10-Day Campaign and the other 50 weeks. Activities mentioned include fishing, boating, bird watching, accessing the canal and towpath, nature enjoyment, walking, dog-walking, working out and fitness, photography, painting and drawing, school programs, taking out-of-towners to show off the park, going to the Bowman's Hill Tower, camping, scout events, soccer and watching family events. People in the area have fond memories of the park and would like to see it return to its glory days of high park visitation. Business owners in the area say that the better the park does, the better their businesses will be.
- **Several broad audiences have particular interest in WCHP.** These include economic development related organizations; local businesses; tourism; schools; residents of the local community; national, state, county and municipal parks; recreation, historic and conservation organizations; cyclists; dog-walkers; re-enactors; walkers and runners; participants in spe-

cial events; and the hundreds of people that drive through the park every day. Interviews with visitors found people from Sweden, Japan, England, Holland, France, Canada, and many states. WCHP is truly an international destination.

- **Concern about the future of Washington Crossing Historic Park looms large.** Memories of the major cutbacks in 2009 are fresh in the minds of local residents. The state of the economy and the Pennsylvania state budget cause people to question the future financial stability of the park.
- **General satisfaction with physical aspects of the park. Negative remarks about the park facilities were few and far between.** They think it is safe, clean, beautiful and a point of pride in the region.
- **Bowman's Hill Wildflower Preserve is renowned and important to the community.** Park visitors commented on how nice it is to be able to enjoy the diverse features of WCHP that also include Bowman's Hill Wildflower Preserve.
- **WCHP has the support of elected state officials who take a deep interest in it.** This is very unusual, as typically public sites have limited visibility and support at higher levels of government where competing interests for funding are intense.

Challenges

- **Lack of information.** The public perceives getting information about the park to be very difficult.
- **There's not much for kids to do here.** WCHP should be more family-oriented.
- **Things that would make the park more enjoyable need to be in place especially for tourism and special events.** This would include places to sit and socialize, food and beverages, and places for children to play.
- **The museum has very few exhibits.** Visitors expressed disappointment and a desire to see more.
- **The park needs better maintenance.**
- **The Visitor Center needs to be a more lively and interesting place.** It is more about the physical building and not about the people who use it. There's no plan for the use of the Visitor Center.
- **Policies for park fees, rentals, use, food service etc. need to be developed, clarified or re-visited.** Information about policies needs to be easily available to the public.
- **The park is not perceived as a welcoming place.** Enhanced customer ser-

vice is a major need. People talked about how important the whole “experience” of coming to the park is. Making memories here was a theme.

- **Although it is a state historic park, the interpretive exhibits are scarce and people would like to have exhibits throughout the park.**
- **The Upper Park and the Lower Park are disconnected.** People have trouble navigating between the two due to the distance and lack of signage.
- **Tours should have more variety including audio, smart phone use, and different levels of complexity.** People are willing to pay for higher end more in-depth tours and experiences.
- **People want more programs, events, and activities.**
- **Although NJ and PA each has a state historic park for Washington’s Crossing, the parks bear no relationship.** Those interviewed described the lack of information available in each of the parks about the other park.
- **Different views on park use exist and serve to divide people.** Feelings are strong. Many local residents want no tourism, traffic, and commercialism. People who value the park but live elsewhere see its potential for economic development, tourism, and better opportunities for people to enjoy the park. The common factors held by most parties include a deep love of the park by all concerned, the desire not to commercialize the area like Peddler’s Village, and the wish to preserve Taylorsville as both historic and community asset.
- **Conflict among park supporters, advocates, and the various state agencies responsible for the park over the years has been ingrained in the operation of WCHP almost from its inception.** These conflicts far exceed the usual challenges of managing public facilities. They wind up in punitive actions, legal battles and legislative changes. Important key stakeholders described this as a major issue. Finding effective ways to abandon this long history and move into a collaborative framework will be a major challenge in the implementation of this master plan.
- **Efforts at fundraising are fragmented.** Different organizations expressed a desire to raise money for the park but were concerned about how their efforts fit in overall. A new emerging organization expressed the same interest and concern about competing fundraising interests and purposes.

Opportunities

- **WCHP has tremendous opportunities for building upon the support of people and organizations with an interest and passion for the park.** People want to know how to get more involved and how to volunteer.
- **Some simple fixes will help greatly.** A signage system, more and better

information in the visitors’ center, website program updates, and food service at special events could help improve the visitor experience easily.

- **Make the park more family oriented and child friendly.** Add a playground and more programs for children and families.
- **Establish management plans for maintenance, customer service, interpretation, partnerships, fundraising, friends group(s), and a business plan for the visitors center.**
- **Securing the conservation and appropriate use of Taylorsville emerged as a theme among a variety of organizations and citizens.**
- **A collaborative working relationship between WCHP and Bowman’s Hill Wildflower Preserve could generate more benefits to both organizations as well as to the constituencies they serve.**

Highlights of what we learned through public participation include a wide range of ideas, many of which are explored and developed in the Master Plan:.

opportunities

World-class park
 Strengthen connection between both parks
 Enhance trail system
 Easy wayfinding
 Access to river
 Boat ramp
 Active recreation
 Embrace soccer culture
 Passive recreation
 Education
 Community Assisted Agriculture
 Ferry
 Tourism
 Sustainable environment
 Dog park
 ‘Kodak moment’ site
 Campground/campground amenities
 Exciting public spaces
 Garden
 Historic buildings
 Small commercial businesses
 Memorial cemetery
 Restrooms
 Managed riverfront
 Expanded historic interpretation

challenges

Understaffed
 Not enough workers for park maintenance
 Not enough public outreach
 Not enough programs to drive the park
 Lack of tourism
 Lack of partnerships
 Disconnect between WCHP Upper & Lower Parks
 Disconnect between WCHP and WCSP
 Taylorsville buildings maintenance needs
 Lack of signage
 Crossing River Road safely

need more

Water access
 Visitor amenities
 Concessions
 Linkages
 Programs
 Signage
 Habitat Interpretation
 Partnerships
 Outreach

5 background land history

Team members reviewed a variety of primary and secondary sources to familiarize themselves with the history of Washington Crossing and its stories that provide meaningful depth to the planning process. Those sources recount evolving land use along the Delaware River, from agricultural settlement and ferry crossings at the time of the War for Independence, to canal-related commerce in the 19th century, and 20th century creation of the commemorative park in a context of emerging suburbanization. As recounted in this chapter, creation of the park emerges as an expression of historic commemoration, creation of outdoor recreational opportunities, and preservation of the natural environment. The Master Plan draws upon the deep roots of those aspects of the park, which are significant today and will continue to enrich the future of the park.

Pre-Settlement: Dense Old Growth Forest

“Pennsylvania under natural conditions,” says Joseph T. Rothrock¹, “was one of the very best wooded states, if not the very best, in the eastern half of the Union. Not only were her forests dense and her trees large and valuable, but they comprised a variety that were of greater commercial importance than could be found, probably, in any other state.”²

“The forest is so thick that the trees trunks almost touch, by their height and their matted branches making a dimness, cold and fearful even at noon on the clearest day. All beneath is grown up green and impenetrable bush. Everywhere lie fallen trees or those half fallen, despite their weight not reaching the ground. Thousands of rotten and rotting trunks cover the ground, making every step uncertain; and between lie fat beds of the richest mould that sucks up like a sponge all the moisture... One can with difficulty penetrate this growth even a little way.”³

1700s: Forest Clearing by Europeans

“Had Palantines, Yankees or planters led the way, the US might have remained an Atlantic Littoral state, an eastern enclave like French Quebec.”⁴

Secondary forest clearing was practiced.

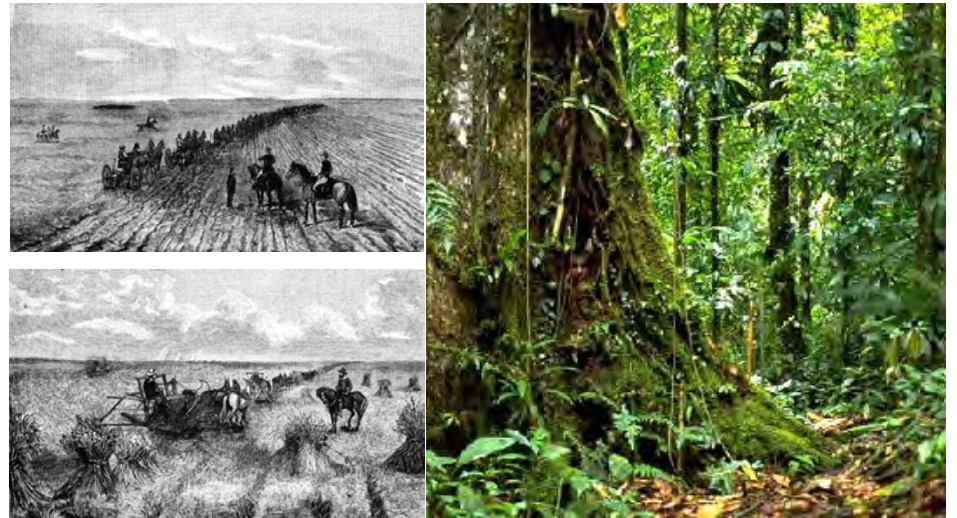
“When the land was fresh and new,” said John Watson of Bucks County, “it produced from fifteen to twenty-five or thirty bushels of wheat per acre.”⁵



“For more than a century, from 1725 until 1840, Pennsylvania was foremost among the colonies and states in the production of food... Pennsylvania was ‘the bread-basket of the nation’ because much of her soil was fertile and because her farmers were traditionally wise in the lore of the land.”⁶

1800’s: Agricultural Settlement

The landscape consisted of “gently rolling hills.” The fertile soil was supplied by a few creeks, but less watered than in most townships. Population was employed almost exclusively in agriculture. This meant that any relatively flat land was utilized for farming. The growth of forests and forest ecosystems suffered during this time. Areas where farming was not possible or ideal is where the then young forests began to grow back.



Present Day: Suburbanization

“Today, it is not farming but rapid suburbanization that threatens the remaining forest in the region. Even protected areas like Bowman’s Hill cannot escape the impacts of the building boom that has converted most of Bucks County’s remaining open space – farmland, woodlots and forests – to residential and commercial development. The results of this widespread and often careless and wasteful use of land has been extensive erosion and sedimentation due to watershed mismanagement, the spread of invasive exotic plants, excess nutrient loads in our soils and waters, climate changes due to atmospheric pollution, and overabundant deer.”⁷

¹ Pennsylvania’s first Commissioner of Forestry.

² Fletcher, Stevenson Whitcomb Pennsylvania Agriculture and Country Life. 1640-1840. Harrisburg: Pennsylvania Historical and Museum Commission, 1971. (Second printing, first printing 1950)

³ Ibid.

⁴ Jordan, Terry G. and Kaups, Matti. The American Backwoods Frontier: An Ethnic and Ecological Interpretation. Baltimore and London: Johns Hopkins University Press, 1989.

⁵ Fletcher, Pennsylvania Agriculture and Country Life. 1640-1840.

⁶ Ibid.

5 background cultural resource history

After arrival of the Europeans, cultural history represented at WCHP includes its role in the War for Independence, the 19th century growth of commerce, and the 20th century creation and evolution of the Memorial Park.

1776:

One building and the basement of another date back to the time of the Crossing event. The Historic Structures Report, prepared by Frens and Frens in 2004 for the Thompson-Neely property analyzes construction chronology of the house, which started with the center section built by John Pidcock. Memorial plaques on the site note that Pidcock built mills and established a trading post with the native Americans on the land he acquired in 1684 and date his house, disputably, to 1702. During the War for Independence, it served as a field hospital for soldiers of the encampment. Lieutenant James Monroe recuperated there and a dedication stone in the park's collection commemorates the death there of James Moore, Captain in the New York Artillery. The Thompson property served another support role in 1776: Thompson's Mill on Pidcock Creek, a predecessor of the existing mill, was one of the Bucks County mills that ground wheat to feed the Continental troops.

Two buildings, McConkey's Ferry Inn and Thompson's Mill, are links with earlier buildings which served key roles in 1776 events. The Historic Structures Report, Lower Park (HSR-LP) prepared by Martin Jay Rosenblum in 1988 infers from documentary, archaeological and built evidence that the present stone inn replaced a former log tavern standing at the time of the Crossing, where General Washington held strategy talks with troop commanders. The ferry and inn (of which the basement remains), carried the name of Samuel McConkey, owner at the time of the Crossing.⁷

The Mill serves as a reminder of the continuity on the Thompson-Neely property of milling of wheat, which was the primary Bucks County crop in the 18th century. Although the present building dates to the 1830s, it represents a continuous milling tradition on the property from pre-revolutionary times. Operated through multiple generations of the Thompson family, the mill ceased operation in 1910, with mill races, water wheel and all the machinery left in place and restored in 1976.⁸



Taylorsville:

Ongoing Taylor occupancy and the development of the village along present-day Route 532 starting in 1777 characterizes the period between the military Crossing event and the creation of a state memorial park in the 20th century. Most of the land acquired for the park was large intact tracts belonging to the Taylors throughout the 19th century. As recounted in the HSR-LP, Benjamin Taylor acquired the ferry and surrounding farm, less than a year after the Crossing. Bernard and Mahlon Taylor, two of Benjamin's four sons, built a number of existing Lower Park buildings between 1812 and 1828 as part of the ferry-centered development of Taylorsville.⁹ The author of the HSR-LP concludes that the present Ferry Inn building includes an initial western section built by Benjamin Taylor in about 1785 and two additions by merchant Mahlon Taylor one in about 1817, about when he built his own house across the road, and another later addition.

Perhaps anticipating growth opportunities when the 1828 digging of the Delaware Canal brought new commerce, Mahlon and Bernard founded Taylorsville.¹⁰ Running between their properties and close to Mahlon's inn and store, Bernard and Mahlon Taylor laid out River Road, which relocated overland transport to their riverfront land when the canal supplanted the earlier road, Baker's Lane. The extant Hibbs and Frye houses were among the first built by the Taylors along the new River Road. Designation of Mahlon's store as the Taylorsville Post Office in 1829 marked the growth of the village, strengthened further by the 1831 construction of the first Washington Crossing toll bridge, a timber span across the Delaware River.¹¹ Although storms have necessitated superstructure replacement twice, the 1831 piers remain in place, now carrying a 1904 steel superstructure of double Warren truss design.¹²

⁷ HSR-LP establishes that the ferry and inn both were established by about 1752 by Samuel Baker. National Heritage Corporation prepared an Architectural Research Report on the McConkey's Ferry Inn in 1977.

⁸ Based on his own primary research, Walter Brosz, volunteer tour guide at Thompson-Neely farmstead, filled in intervening mill history, including the need to build another mill further upstream in the 1830s, when the original stood in the way of the new canal route and commercial progress.

⁹ Three Taylor brothers farmed the land. Charles Taylor built a house at the intersection with Baker's Lane, where his property was later bisected by digging of the canal in 1828.

¹⁰ Brosz recounts their establishing a sawmill and plaster business as well as constructing houses.

¹¹ Brosz mentioned also that Mahlon Taylor commissioned Quaker painter Edward Hicks in 1835 to create paintings commemorating the Crossing on that covered bridge.

¹² Delaware River Joint Toll Bridge Commission website.



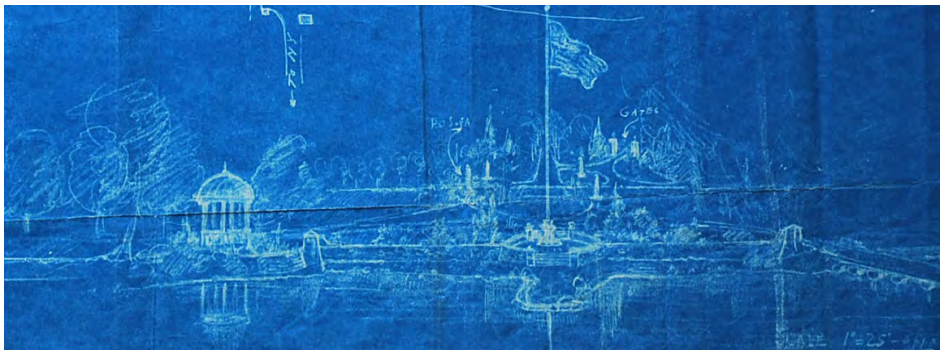
From the left: Crossing Re-enactment with Durham boat; Thompson-Neely House; Taylorsville viewed from River Road

5 background cultural resource history

Memorial Park

Historian Peter Osborne documents an evolution of commemorative ideas and practice at Washington Crossing, progressing from depictions (re-enactments, paintings, poems, films) and monuments on tiny plots to creation of large public parks on both sides of the river with preserved historic structures and symbolic landscape features designed to memorialize historic events.¹³ Two of those monuments stand in the Lower Park, the 1895 Bucks County Memorial and the 1916 statue of George Washington installed by the Patriotic Order of Sons of America atop a classical column. From 1901 to 1912, the commemorative idea led to an unsuccessful attempt to create a national park and steps toward two state parks. In the hope that the land would become part of a park, Dr. Isidor Strittmatter acquired key historic sites and riverfront property in New Jersey in 1903 and, between 1901 and 1909, in Pennsylvania, including large holdings still owned by Taylor family members. Commemorative planning in Pennsylvania culminated in the 1917 enactment of legislation creating the Washington Crossing Park Commission (WCPC) and authorizing land acquisition up to 100 acres at the Crossing site for creation of a “public place or park, . . . to be laid out, preserved, and maintained as nearly as possible in their original condition as a military camp, and may be preserved for the enjoyment of the people of the state.”¹⁴ From 1918-1926, the WCPC acquired land from Strittmatter and others, and in 1921, the “Memorial Park” was dedicated. Acquisitions included McConkey’s Ferry Inn, residences along the riverfront, Thompson’s Island, and land stretching westward to the canal.¹⁵

The memorial park was developed as designed by landscape architect, Professor Arthur W. Cowell of State College, PA. Responding to the military camp mandate, his 1925 site plan shows a symbolic landscape design commemorating Points of [troop] Concentration and Embarkation to the north of McConkey’s Ferry Inn. River Road was relocated inland to increase the land around the Point of Embarkation, a curved landing terrace at river level. A processional approach to the terrace included stairs on axis with the flagpole, set in a memorial square, which still marks the entry to the Valley of Concentration. The



Arthur Cowell drawing for Point of Embarkation, with flagpole and Memorial Gateway beyond



Left: Existing Point of Embarkation: stone landing with 2 stone piers, and 2 remaining trees

Right: Mahlon Taylor House

The Cowell plan provided for recreational activities within the Valley of Concentration for “enjoyment of the people of the state,” designated as “playfield” and “picnic groves,” a bathing beach south of Washington Boulevard, and a children’s beach on the island. Cowell called for a “Lily Pool” (the current Lagoon) located in the wetland mentioned in 18th Century property descriptions as “the Great Swamp.”¹⁶ Across the road from the Taylorsville houses, Cowell proposed a village square and, further north, a “garden in the colonial manner.”

In anticipation of the approaching 1926 Sesquicentennial of the Declaration of Independence, park improvements started immediately, including removal of many existing bungalows and houses, some of which now occupy lots in the adjacent residential subdivision laid out by realtor A.P. Townsend in the 1920s. During the same period, architect Oscar Martin oversaw repair and restoration of run-down Taylorsville houses including Frye and Hibbs houses north of McConkey’s Ferry Inn. Martin incorporated visitor amenities: restrooms in the Mahlon Taylor basement and a bathhouse in the Eliza Taylor house, which was later converted to a Teahouse when a new bathhouse was built closer to the river. The Taylorsville Store housed the post office in the 1920s. Carrying forward its historic use as a park amenity, McConkey’s Ferry Inn was rented to private restaurateurs until 1948. Consequently it was not part of the first major campaign of park restorations.

¹³ Osborne is currently writing a history of Pennsylvania’s Washington Crossing Historic Park. He previously summarized the historic context of commemoration of the Crossing in his 2012 book, Where Washington Once Led, a History of New Jersey’s Washington Crossing State Park (Once Led).

¹⁴ HSR-LP, p. 77.

¹⁵ With only half of his holdings included in the initial 100 acres, Strittmatter sold a significant portion of his land north and south of Washington Boulevard, including the Bernard Taylor house (now the Washington Crossing Inn), to realtor Arthur P. Townsend. Concurrent with growth of the park, Townsend developed the subdivision, with streets named for Continental generals, that lies between General Washington Boulevard (present Route 532) and the Valley of Concentration.

¹⁶ LP-HSR p 3.

Park Expansion

During the 1920s, the Pennsylvania legislature authorized acquisition of 400 additional acres and the park expanded northward. Property acquisitions along the river included the Lower Park tract north of the Valley of Concentration (currently used as soccer fields and open space), and, further upriver, tracts containing Bowman's Hill, the Thompson-Neely farmstead and Thompson's Mill. Development of the Upper Park followed closely the site plan, apparently in Cowell's hand although title block and date have been torn off. The key memorial component was Cowell's planned Flagstaff at Continental Graves (which incorporated stones from the original 13 states) surrounded by an "Old Colonies Grove" of 13 white oaks and abutting a Memorial Grove. The Observation Tower was erected on Bowman's Hill in 1930-31, on axis with the Graves memorial as shown on the plan. The plan noted also the Thompson-Neely farmstead, the Mill and mill race, the pine plantation (established in 1928 between the canal and River Road), walking trails, staff use of Victorian Neely and Andrassy houses, a refectory near the Mill (not built?), a picnic pavilion [Captain Moore Pavilion] in an old orchard west of River Road, and campground along the riverfront.

Bowman's Hill Wildflower Preserve (BHWP)

Supporters of a more natural setting obtained dedication in 1934 of 100 acres within the park for a wildflower preserve on Bowman's Hill, to be developed through a gift from the Council for Preservation of Natural Beauty in Pennsylvania. The Preserve featured native plants "as a living memorial" to the soldiers who died during the encampment in 1776. A 1939 Works Progress Administration (WPA) plan shows the trails and key features of

Ranger's Log Cabin (in BHWP)



Soldiers' Graves (Old Colonies Grove of white oaks has been removed)



the Preserve, including roads, stone bridge over Pidcock Creek, walking trails, dam, mill race, pond and park ranger's log cabin. From 1933-41, Depression era projects undertaken by the Pennsylvania Department of Public Assistance, federal WPA and Civilian Conservation Corps (CCC) added park infrastructure: roads, Captain Moore picnic pavilions, and three small rustic stone privies (Captain Moore, General Glover and Bowman's Hill.) BHWP records that Penn's Woods Arboretum, planted in 1944, was the first state memorial reforestation project, honoring William Penn's 300th birthday. A 1949 amendment to the park enabling legislation added "beautification" of the park, specifically at BHWP, as an explicit park objective.

Further Park Evolution

Thompson-Neely House opened to the public in 1949 after restoration guided by architect Edwin Brumbaugh. Brumbaugh also planned restoration of McConkey's Ferry Inn in 1965, implemented in the mid-1970s. For recreational activities, Brumbaugh designed the 1949 conversion of the bathhouse into the George Washington Pavilion after the polio scare ended swimming in the park. The General Sullivan Pavilion was added in 1955.

A new keystone-shaped Memorial Building, designed by Micklewright and Mountford, opened in 1959, with the iconic Washington Crossing the Delaware painting by Emanuel Leutze in the auditorium. When the painting was returned to the Metropolitan Museum of Art in New York in 1969, a replica by Robert Williams replaced it (now represented by a digital print.) The building was renovated and enlarged in 1976, and again in 2011-12 following a 6-year closure.

The approaching 1976 Bicentennial, and (unfulfilled) expectations of increased visitation, brought a burst of park improvements. After assuming responsibility for the park in 1971, PHMC led this second construction campaign. Restorations were completed at Thompson's Mill, including historic machinery, Pidcock Creek Bridge and seven historic buildings, including McConkey's Ferry Inn. Improved maintenance and operations were the impetus for construction of new facilities in that period: the Durham Boat Barn, Lower Park maintenance shop, two new restrooms, and two sewage disposal systems for Upper and Lower Parks.

BHWP expanded or replaced its headquarters in 1965 and 1972, and fenced its forest area in 1991 to exclude deer and protect native species.

5 background current park use

current visitor use

The park is in the process of re-building its visitation after severe budget cuts curtailed programs and services in 2009. The formation of the Friends of Washington Crossing Park in 2009 and the grand re-opening of the Visitor Center in 2013 were significant and highly symbolic, demonstrating deep public support and love of Washington Crossing Historic Park as well as a state commitment to the restoration of park facilities.

Park visitation centers on three core elements:

1. Historic and educational programs, events, activities, and tours in the historic buildings and Bowman's Hill Tower;
2. Self-directed recreational use of the park for cycling, walking, dogwalking, picnicking, special events, enjoyment of the scenic beauty, soccer league play, painting, reading, photography, bird watching, fishing and other activities; and
3. Natural and horticultural programs and trail use at Bowman's Hill Wildflower Preserve.

visitor services

Historic and Educational Programs, Events, and Services:
The WCHP Site Administrator develops a monthly Park Visitation and Revenues Report. This includes park admissions for Bowman's Hill Tower, the Lower Park, Thompson Neely House, school groups, complimentary visitors, commercial tours and rentals of the pavilions, campground, and special park uses such as photography. In 2012-2013, park visitation for organized programs, events, tours etc. was about 41,000. By far the biggest event is the re-enactment of the Christmas Day Crossing and its dress rehearsal in early December. Other signature events include Washington's Birthday Party and the sheep-shearing event in the spring. The Friends of Washington Crossing Park have developed the annual Brewfest as a major fund-raiser for the park. Widely regarded as one of the finest in the nation, the Brewfest regularly sells out with a ticketed attendance of about 2,700. Visitor experiences in the Visitor Center are limited by the current exhibition area, which is being developed for the newly renovated facility. Park staff also facilitates programs offered by other organizations by providing special use permits and the facility support needed for a successful event.

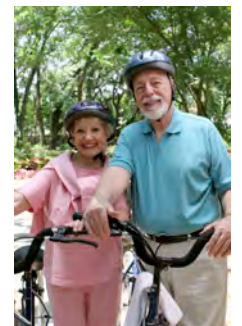
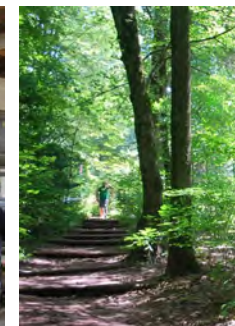
Recreational Usage of the Park

Typically an anecdotal formula on estimating the recreational use of parks without direct counts equates to a ratio of 72 percent general, self-directed use to 28 percent scheduled, organized use. If applied here, visitation of 18,000 would equate to about 64,285 annual estimated visitation. However, other numbers are available to help estimating park visitation. According to the Rail Trail Conservancy's 2012 User Survey & Economic Analysis report, the section of the D&L trail from New Hope to Morrisville through Washington Crossing Historic Park had 112,942 visits in 2012, second only to the Jim Thorpe area along the entire 165-mile Heritage Corridor. The Upper Makefield Newtown Soccer Club/ Patriots FC has an annual participation of 700 players, 300 adult volunteers, and an e-mail list of 1,278. The D&L Marathon had 1,000 participants, which were counted in the Park Visitation and Revenues Report as a park rental. The Friends of Washington Crossing Park and the Visitor Center receive requests from visitors and callers to the park who ask for the following:

- To see all of the historic buildings,
- For more exhibits to be located in the Visitors Center,
- More recreational activities and things for children and families,
- Rent kayaks and bicycles,
- Food and beverages, and
- Information on what to do here.

Bowman's Hill Wildflower Preserve:

BHWP is a membership-based organization that has several thousand people participating in its programs annually. The programs range from a gala and the annual environmental symposium that attracts professionals from far and wide to nature-based reading programs, the arts, school groups, environmental education, stewardship, and plant sales. Programs are for all ages. Between 100 and 200 people per month participate in the daily trail walks provided by volunteers. About 150 people volunteer for various programs and events. The Preserve's Master Plan calls for a new visitors' center to replace the dysfunctional building that is nearly 50 years old. The new center would enable the Preserve to provide more public service..



Left: Durham Boat Barn
Center: BHWP woodland path
Right: cyclists (photo provided by TRP)

current building use

Historic core buildings:

PHMC currently occupies buildings in the historic core areas of Lower Park and Upper Park for a variety of uses in its public mission of preservation, stewardship and education.

- Interpretive display, open to the public on varying schedules: Bowman's Hill Tower, Durham Boat Barn, the Blacksmith Shop and portions of Thompson-Neely House and Barn, McConkey's Ferry Inn, Hibbs and Frye Houses. Exhibit space in Visitor Center is available for interpretive exhibits.
- Reception: Visitor Center, Thompson-Neely House, Tower Visitor Center
- Administrative offices: Visitor Center
- Auditorium: Visitor Center
- Meeting room: Visitor Center
- Gift shop: Visitor Center
- Collections storage: Visitor Center. PHMC plans to relocate collections currently stored in upper floors of McConkey's Ferry Inn, Thompson-Neely House, Mahlon Taylor House and other Taylorsville houses.

Supporting spaces: Facilities used to support PHMC mission include visitor amenities, maintenance facilities and infrastructure.

pavilions:

- Although there are no food concessions in the park, five picnic pavilions are available for "bring-your-own" visitors, as rentals for group events, and at unreserved times on a first-come first-served basis.
- Each pavilion has a fireplace or outdoor fire pit and minimal "park-pack" lighting. Movable wood picnic tables with built-in benches furnish the pavilions. No drinking fountains are provided.

restrooms:

- Multi-fixture restrooms for visitors and staff: Visitor Center, Thompson-Neely Farmstead, BHWP Headquarters.
- Small functional restrooms are in close proximity at Washington and Moore Pavilions, and available at a greater distance for Greene. Although all three restrooms are disabled-accessible, only Moore has an ADA-compliant route between the pavilion and the restroom. The route from Greene to the Valley of Concentration restroom is long and ungraded. At Washington Pavilion, there is no ramp or gradually sloped walk up the hill to the restroom.

- There are no functioning restrooms for the Bowman's Hill Tower or campground pavilions, which are served instead by portable toilets.
- Portable toilets are used also for large events, which exceed the 2- or 4-toilet capacity of the small permanent facilities.

maintenance space:

- Existing space is used to capacity for current operations.
- Maintenance equipment: In Lower Park, the 3,000 sq. ft. maintenance shop and vehicle bays are heavily used. Fuel tanks supply 8,000 gallons and 3,000 gallons respectively of gasoline and diesel for annual vehicle operation.
- The 1,375 sq. ft. Upper Park shop is used about once a month for carpentry, and the run-down vehicle shed houses a tractor and "zero-turn" during mowing season.
- Maintenance materials: Lower Park stockpiles of dirt, sand, salt.

infrastructure

- Sanitary sewage treatment: PHMC's Lower Park plant next to the Maintenance Shop serves all Lower Park buildings, including Taylorsville, and the Methodist Church (now converted to offices.) The Upper Park plant at the north end of the campground serves Thompson-Neely restrooms, BHWP (including Moore restrooms), Andrassy and Victorian Neely houses.
- Several separate wells supply the domestic water systems of Lower and Upper Parks. They serve the Visitor Center, Valley of Concentration and Thompson-Neely restrooms, Lower Park Maintenance Shop, Bowman's Hill Wildflower Preserve, Andrassy and Victorian Neely houses. Planning is underway for replacement of much of the Lower Park water service. The system in Lower Park was shut down during 2013 due to the extent of leaking pipes. The Lower Park system supplies McConkey's Ferry Inn, Taylorsville, Washington restrooms, Hibbs and Eliza Taylor houses and the Durham Boat Barn. However, a separate system for the Visitor Center remains operational. Frye House has no water supply.

Some buildings are not used currently for directly park-related occupancy, including Victorian Neely and Andrassy houses in Upper Park, and most Taylorsville houses in Lower Park. The latter have been vacated except for interim storage use. Andrassy House is used currently for staff housing, and Eliza Taylor House also served that purpose until it became necessary to shut down the water supply system in Lower Park.

5 background context

present day context

Washington Crossing Historic Park (WCHP) is the site of a significant historic event, a memorial to military history of the independence of the United States and a generous reservation of public open space with a rich natural diversity and opportunities for outdoor recreation. State Route 32 and the Delaware Canal and towpath connect the two riverfront tracts, which are approximately 3.5 miles apart. The southern Lower Park section straddles state Route 532 at the Pennsylvania abutment of the inter-state bridge, connecting WCHP with New Jersey's sprawling Washington Crossing State Park.

Bucks County encourages farmland preservation under conservation covenants, and countywide and regional conservation organizations promote protection of natural environments. Historic districts now protect the unique character of many villages developed with the growth of river ferry traffic and canal commerce. The landscape and historic heritage of the rural past attract both tourists and new residents. Located between Philadelphia and New York City, and served by the main Amtrak rail line and I-95 highway, the area, particularly southern Bucks County, has undergone development as a bedroom suburb for both cities, with increasingly high-end subdivisions expanding northward between the two sections of WCHP.

nearby attractions

The biggest tourist attractions in Bucks County, New Hope, Peddler's Village and Sesame Place, cater to audiences ranging from art and antique connoisseurs to children and their families. With its eye on urban dwellers, the county Conference and Visitors Bureau promotes rural get-away weekends to bed & breakfast inns, fine dining and an abundance of cultural destinations, including the Bucks County Theater in New Hope, James A. Michener Art Museum, Fontheil, the Mercer Museum, and the Moravian Pottery and Tile Works in Doylestown. Increasingly the county's attractions have also drawn sports teams to schedule their meets and stay in the county.

While Bowman's Hill Wildflower Preserve within WCHP is probably the pre-eminent attraction for naturalists, they also find nearby the Audubon Center in Creamery and nature-based programming in Washington Crossing State Park across the river.

Direct linkage with the preserved 165-mile long Delaware and Lehigh Canal Heritage Corridor and its towpath trail is a unique recreational attraction that opens up parkland and towns along the canal to trekkers and cyclists. The Delaware & Lehigh towpath follows the historic anthracite route from mines around Wilkes Barre to Philadelphia markets. Those recreational riches contribute to the popularity of this section of the trail, which is second only to Jim Thorpe in use. WCHP is also strategically located across the river from the 70-mile long Delaware & Raritan Canal & towpath, and at mid-

length of two D&L Heritage Corridor planning efforts. The River Towns is a National Trust for Historic Preservation Main Street program building linkages between the business districts of Bristol, Morrisville, Yardley and New Hope. The Trail Towns initiative connects trail users with businesses in additional towns.

In addition to managing the Delaware Canal, DCNR operates three nearby recreational waterway parks. The inland Tyler State Park is creek-centered. Neshaminy in Lower Bucks County features a swimming pool and motor boat access to the Delaware River. Whitewater boating and rock climbing are highlights at Ralph Stover in Bedminster. Two Upper Makefield parks along River Road between Lower and Upper parks accommodate local team sports. Although Brownsburg Park was developed primarily for soccer, the popular sport fills both it and the soccer fields in WCHP Lower Park. Parks in Solebury Township are located further away, to the north and west of New Hope.

For military history buffs, the David Library houses a unique collection of Revolutionary War documents. Nearby sites of the 10-day campaign (12/25/1776 – 1/4/1777) include Old Barracks Museum in Trenton and Princeton Battlefield, operated as a New Jersey state park. Later episodes of the War for Independence are celebrated at PHMC's Brandywine Battlefield and Valley Forge National Park. Vast acreage near Newtown was dedicated recently for the National Cemetery, a site of interest to the veterans who tend and other visitors who celebrate the Soldiers' Graves in WCHP.



6 site analysis: significance

introduction to site analysis:

The site analysis chapter starts with a Statement of Significance for WCHP as the context for analyzing use and management of the landscape and facilities in the park. The analysis of physical components of the park progresses from big picture land use and land management to the circulation patterns, vehicular and pedestrian, and parking by which visitors and staff access the park, and finally to signage and wayfinding. The Historic Resources analysis summarizes archaeological considerations for planning in the park and addresses current use and issues for potential future use of key architectural resources.

statement of significance:

The national significance of Washington Crossing is summarized in a 1960 survey form, which was the basis of National Historic Landmark status.¹⁷ Author C.E. Shedd argues that the Pennsylvania and New Jersey parks, “connected by an automobile bridge, constitute an outstanding preservation of a key site in the winning of American independence.” In the Pennsylvania park, the survey form cites the McConkey’s Ferry Inn (“superimposed on the original ferry house of the Revolutionary period”), the Emanuel Leutze painting displayed in the Memorial Building (on loan from the Metropolitan Museum at the time), the 1916 Washington monument “overlooking the embarkation site”, the Thompson-Neely House, the old mill, the memorial flagstaff at the soldiers graves, the state wildflower preserve, and the memorial observation tower.¹⁸ With a similar listing of features in the New Jersey park, the nomination thus recognizes both the events of 1776 and the 20th century memorial parks. Shedd succinctly acknowledges an important dichotomy between “the almost legendary character which the [Crossing] event has assumed in the American tradition” and its history as “a realistic and carefully planned stroke to rescue a waning cause.”¹⁹

Despite national significance of the site, the two state parks developed separately, along parallel paths, especially after the 1937 failure in the U.S. Congress of a long quest for federal funding of a memorial bridge connecting the two state parks.²⁰ The bridge mentioned in the survey form is the current utilitarian 1904 steel truss superstructure supported on piers remaining from the first Washington Crossing Bridge built in 1831. Although its piers date from Taylorsville’s heyday and its superstructure has stood for over a century, WCHP representatives report that the bridge has been determined to be ineligible for the National Register.

The dichotomy between legend and actual history presents rich interpretive questions, but also challenges for defining the historic significance of existing zones and structures within WCHP. Current interpretation emphasizes the crossing of the Delaware in 1776, led by General Washington, with little presented about the interpretive context of

the Memorial Park and Taylorsville. The actual historic buildings preserved as part of the Lower Park represent not the military history of 1776, but instead the long Taylor family stewardship and development of the site starting in 1777 and continuing until establishment of the memorial park. Taylorsville has been determined to be eligible in its own right for listing in the National Register of Historic Places. Before the Crossing, the important planning meeting of General Washington with his commanders at McConkey’s Ferry Inn occurred not in the existing stone building started by Benjamin Taylor, but in the log structure that preceded it on the site. Only the basement of that earlier building remains, as the foundation of the present building.

The Crossing itself, the *raison d’être* for the park, is represented by memorial artifacts and landscapes, which further exemplify the dichotomies. Lower Park extends equally north and south of McConkey’s Ferry Inn, symbolizing the deployment of the Continental troops along many miles of riverfront in both directions from an established crossing location, where McConkey operated his ferry. Marking the initially acquired park land, the river wall, a retaining wall parallel with the water’s edge, represents that extent, but it also changed the historic riverbank. Except for the river wall, currently interpreted resources and the Visitor Center are located north of Route 532, and its Washington Crossing Bridge, the current successor to the ferry for travel across the river. While Route 532 is the center of the park’s river frontage and the main street of Taylorsville, it has become a *de facto* southern boundary for historic interpretive activity, particularly after growth of the present Visitors Center supplanted the central role of Mahlon Taylor House as the park headquarters in 1959.

Structures added in that historic core, the Visitor Center, the Durham Boat Barn and the Blacksmith Shop, support re-enactment, living history and other interpretive activities related to 1776. But the historic Hibbs and Frye Houses and the new buildings complicate interpretation of the Ferry Inn vicinity in 1776, when the landscape would have been agricultural. A more comprehensive interpretation is needed, adding emphasis on Taylorsville and creation of the Memorial Park to make sense of the existing historic core. With neighboring houses gone, those first Taylorsville development houses along River Road, are disproportionately prominent to represent the village, but can be understood in relation to the other Taylorsville houses across Route 532. Similarly, the added structures, especially the Visitor Center, contribute not only as support for 1776 interpretation but also as ingredients of the evolving Memorial Park.

The Upper Park also has historic dichotomies. These are geographic, due to introduction

¹⁷ Author C.E. Shedd, Jr. was historic sites historian for the National Park Service.

¹⁸ Quotes from text of Survey Form, 1960.

¹⁹ *Ibid.*

²⁰ *Once Led*, p. 199.

6 site analysis: significance

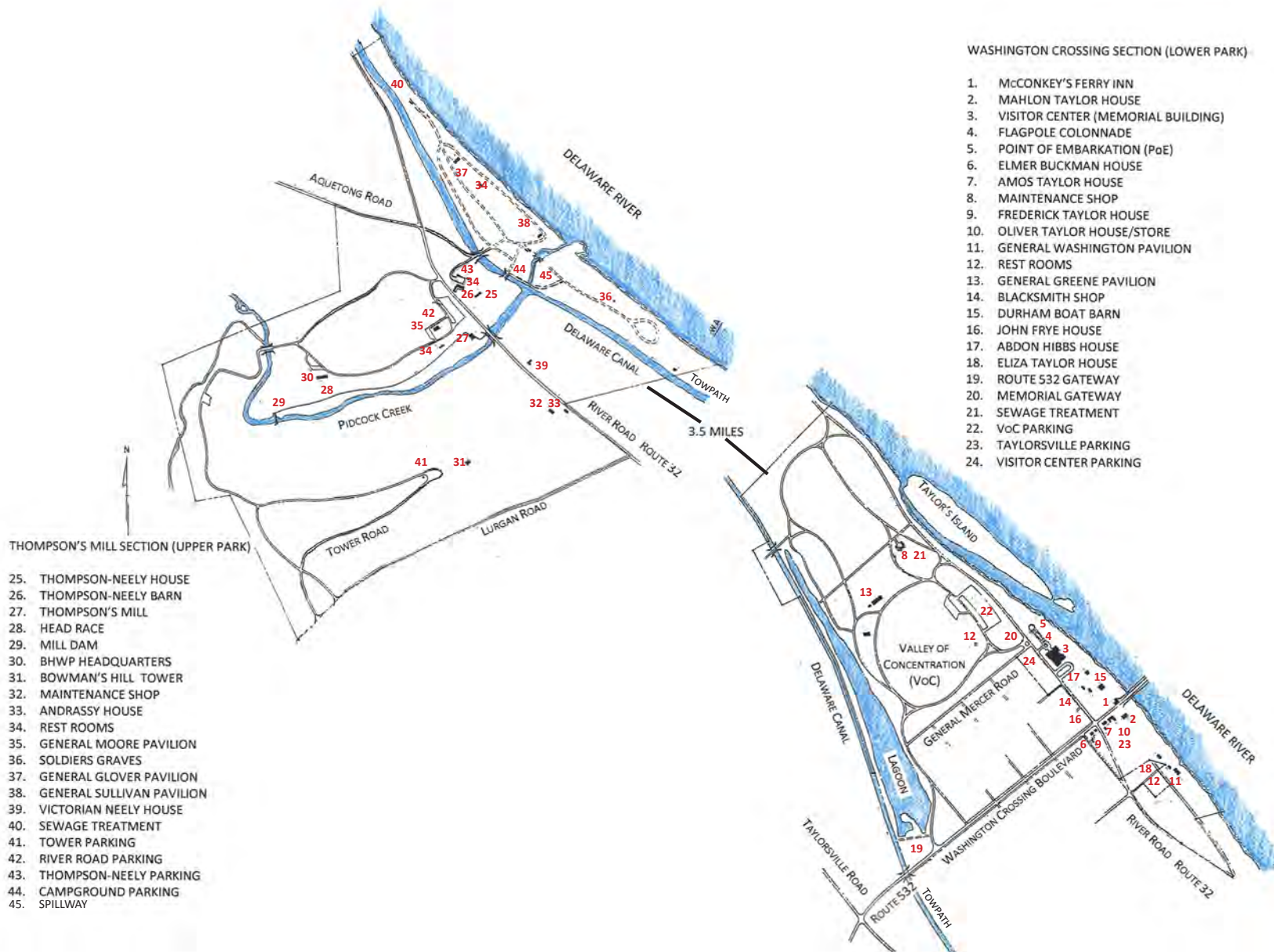
of the canal, which cut through the Thompson-Neely farmstead in the late 1820s. The separation of the mill from the farmstead, resulting when the canal forced mill relocation, is mirrored today in the effective barrier of heavy traffic on River Road. Today's separation creates circulation difficulties for combined visitation to Thompson-Neely farmstead and the mill, with the result that the mill is currently seen as being outside of the historic core of Upper Park. Despite its physical separation and 19th century construction date, Thompson's Mill has interpretive potential in relation to evolving economic viability of the farmstead and to provisioning of the encampment.

Throughout the State's stewardship of the park, there has been a dynamic balance of respectful commemoration and natural conservation, on the one hand, and the potential, on the other hand, for active recreational landscapes. To the extent of research current in the 1920s and 30s, the reforestation projects and the creation of Bowman's Hill Wildflower Preserve not only promoted natural conservation but also addressed the stated goal of recreating the 1770s landscape, assumed anachronistically to be more wooded than the open agricultural land acquired for the park. By diversifying the landscape, those projects enriched the setting for recreational picnic groves, a campground, a bathing beach, play fields, a lily pond with winter ice skating, as well as for the contemplative Soldiers Graves.

Bowman's Hill is significant in natural history and in Americans' changing understandings of the natural environment and conservation. Under a management agreement with PHMC, Bowman's Hill Wildflower Preserve (BHWP) has, within an area along Pidcock Creek and its sloped banks, nurtured and monitored a unique regenerating woodland, free of deer, where native Pennsylvania flora and fauna thrive in an ongoing natural succession. Based on sightings of additional types of rare flora, BHWP representatives believe that the heights of the hill offer opportunities to expand the coherent conservation area, adding further diversity to the reviving native ecosystem.

In summary, the significance of WCHP taken as a point of departure for the Master Plan by the professional team encompasses a broad narrative with multiple themes represented not just by 1776 military history, but also by the growth of Taylorsville, creation of memorial parks on both sides of the river, and natural nurture of the Bowman's Hill Wildflower Preserve.

6 site analysis: key maps



6 site analysis existing conditions



Lower Park

Waterways are defining features of both Lower and Upper Parks, which stretch along the west bank of the Delaware River and also share a relationship with the Delaware Canal. The canal and its towpath form the western boundary at the wide north end of the nearly 100-acre Lower Park. Lawn covers the relatively flat and open recreation fields. Trees in the Lower Park grow in a buffer zone along the canal, and in planned groves and allees of aging shade trees. Vegetation grows with minimal intervention (infrequent pruning) along the canal buffer zone, and the riparian edges of the lagoon and river. Floodwaters and occasionally ice floes scour the banks of the park mainland and Taylor's Island, while silt and floating debris are deposited at the foot of the island.

PHMC visitors focus on the interpreted core group of riverfront buildings north of Route 532, between McConkey's Ferry Inn and the Visitor Center. Primary areas for recreational use are the Valley of Concentration and playing fields to the north. Lower Park lawns are used for strolling, dog-walking and other self-directed recreation, with more active recreation (hiking, cycling and running) on the park roads connecting to the towpath. A few annual events are staged on the lawns, including the Christmas Crossing reenactment along the river bank. The north end of Lower Park is laid out as six soccer fields and practice space for organized recreation by local soccer clubs. Across from the Hibbs House is a small kitchen garden.



Upper Park

Upper Park waterways include the canal and Pidcock Creek, which meanders around the steep landform of Bowman's Hill, then crosses the Canal to the river. The majority of the 400 acres in the Upper Park consists of dense woodland and riparian buffers. The canal runs close to the river in the Upper Park and the towpath is a central feature there, physically linking meadows, lawns and planned tree groves of the south end, with the central Thompson-Neely Farmstead, and with the campground at the north end, where a high tree canopy shades the cleared understory.

Land use in the Upper Park has been shaped by its varied environments. The land along the canal and river includes sections maintained for historic interpretation and commemoration, including the Thompson-Neely Farmstead, and the Soldiers' Graves. PHMC visitors at the Upper Park focus on two areas, Thompson-Neely Farmstead and Bowman's Hill Tower. Bowman's Hill Wildflower Preserve operates 134 acres of the hillside, creek and meadow to promote appreciation of native plants and preservation of a healthy and diverse natural world. Other areas are available for self-directed recreation, such as dog-walking, bird-watching, hiking, cycling and running. Serving for occasional organized use by the Boy Scouts and for the annual Brewfest, the campground's primary uses are as a quiet retreat and informal towpath trailhead.

land management



Lower Park

Waterways management reflects current uses of park resources and reductions in staff and budget over the past decade. Current management of the Lower Park is minimal, including lawn mowing, some riverbank management, snow removal, and tree triage (a reactive approach which prioritizes tree removal or repair based on keeping public paths clear and correcting unsafe conditions.) The relatively level Valley of Concentration and recreation fields are maintained as regularly mowed low grass. Riverbank management is subject to divergent goals of clear vistas and vegetative bank stabilization. Taylor's Island accumulates debris and sediment, which often hinders passage of the Durham boats for the Crossing event. Invasive plants populate the banks of the Lagoon, which is habitat of the protected red-bellied turtle and which assists as an un-planned detention facility for storm water.

At variance with other park objectives, soccer fields create noise, crowds, speeding traffic, and nighttime lighting. However, the soccer fields are remote from historic core activities and help other goals, engaging youths who may become future park supporters and building partnerships that can increase volunteer participation and steady revenue. The soccer club maintains the playing fields.

Upper Park

Current land management in Upper Park is also minimal, focused on mowing lawns and tree triage. The red outline represents the area for which PHMC is currently responsible. Included within this boundary are the Thompson-Neely Farmstead, Bowman's Hill Tower, Thompson's Mill, Soldiers' Graves, trail system, picnic pavilions, the mouth of Pidcock Creek, and Victorian Neely and Andrassy houses.

Portions of Upper Park are managed by others. West of River Road, BHWP manages Bowman Hill's lower north slope, Pidcock Creek valley and meadow as an excellent model for forest and meadow management, in which reviving ecosystems of native species are thriving. The 100-acre fenced BHWP forest contrasts strikingly with the effects of deer forage, invasive species and soil erosion outside the Preserve and around the Tower. BHWP's Director points to the hopeful sign, in crannies which the deer cannot reach, of remnant species native to the hill's historic diabase ecosystem.

DCNR manages the 60-mile long corridor of the Delaware Canal, focusing its limited resources on maintaining the water level and clearing fallen trees. However, upstream development has increased the impact of stormwater on creekbanks within WCHP, accelerating erosion and damaging structures like the mill dam and bridge. DCNR controls water levels in the canal, using the spillway to release water as a stormwater readiness strategy. As PHMC uses the spillway to access the Soldiers Graves for special events, DCNR coordinates these releases with PHMC.



6 site analysis circulation

general: lower and upper parks

State roads and the Delaware Canal Towpath connect Lower Park and Upper Park, which are separated by a distance of 3.5 miles. The Visitor Center in Lower Park is located next to River Road, Route 32, which provides a scenic connecting route with all resources in Upper Park. However, there are several possible points of confusion along the way: absence of directional and distance signage, an unexpected turn and intersection with Taylorsville Road, and the unannounced encounter of historic Brownsburg village before reaching Upper Park. The less scenic Taylorsville Road is a direct vehicular alternative from Washington Crossing village.

For cyclists, joggers and pedestrians, the Delaware Canal towpath not only provides a recreational trail connection between Lower and Upper Parks. It also connects them with a network of trails and destinations beyond the WCHP. Using the Washington Crossing Bridge in Lower Park offers a choice of two +15-mile loop trails on towpaths on both sides of the Delaware River, connected by bridges at Morrisville and New Hope respectively. While the stretch of the northward towpath connecting the two parks is relatively level, canal locks accompany grade changes on both loop trails beyond the park.



lower park

Vehicular circulation:

Scenic Taylorsville Road, along the canal, provides a direct vehicular route from I-95 to Route 532 in Washington Crossing village. Unfortunately the intersection and both arrival points along Route 532, lack adequate visual cues and directional signage for WCHP.

The first arrival point is de-emphasized since its route to the Visitor Center is circuitous. A rustic stone gateway at the Lagoon leads to the Valley of Concentration and General Mercer Road, the boundary between the park and adjacent residences. Although current vehicular circulation patterns distract from the original design intent, the processional path from the Valley of Concentration, through the Memorial Gateway, remains in place leading to the river. The Visitor Center faces that path, and a paved entrance terrace marks the location where of the Visitor Center entry meets the processional path.

The main arrival point from Route 532 is more direct, but feels like a back door. Before reaching the row of Taylorsville houses and McConkey's Ferry Inn, the driver turns north onto River Road, approaching the rear of the Visitor Center. With the front hidden from view, and the nearest parking lot entrance on axis with the service drive, visitors gravitate toward the locked service door. No signage directs drivers toward the large parking lot north of the Memorial Gateway, which serves the Visitor Center, the Valley of Concentration and soccer fields. Distracting circulation patterns include high speed traffic on River Road, unclear pedestrian routes, and a large vehicular drop-off loop at the Visitor Center entrance. Interviewees listed high speed traffic associated with soccer use as a consistent safety problem.

Pedestrian circulation:

Inadequate visual cues and way-finding represent a missed opportunity to convey the full extent of Lower Park where River Road arrives at its extreme north and south ends. Lack of information and the perceived barrier of River Road reinforce tendencies of historical visitors to stay east of the road and recreational users to stay to the west.

Embarkation Drive provides a pedestrian path the entire length of Lower Park. The traffic-calming crosswalk and stop signs at its Route 532 crossing contrast successfully with the ambiguities of the River Road crossing. West of River Road, pedestrians use the internal park roadways interchangeably with walking across the lawns.

circulation



upper park

Vehicular Circulation:

A 3.5 mile stretch of River Road provides vehicular connection between Upper Park and Lower Park. The road not only cuts through the heart of Upper Park but also has poor sightlines and high speed traffic, making it a significant barrier there. Upper Park has three vehicular access points, two to the west side of River Road and a third to the east. First, a steep road off Lurgan Road climbs the south face of Bowman's Hill to the Bowman's Hill Tower. A second road across from Thompson-Neely farmstead serves Bowman's Hill Wildflower Preserve, Moore Pavilion and Thompson's Mill. That road originally connected up the north side of Bowman's Hill with the Tower road, making a continuous roadway between the two entrances. While it remains open as a pedestrian path, it is closed to vehicular use and its bridge across Pidcock Creek is storm-damaged. The third road, into the east portion, forms a 4-way intersection with Aquetong Road. That road serves Thompson-Neely farmstead and bridges the canal to terminate in lots serving Soldiers' Graves and a loop with pull-off parking for the campground pavilions.

Pedestrian Circulation:

A network of trails provides access to all portions of Upper Park except the river's edge. The canal towpath connects the Soldiers Graves at the south end, the campground at the north end, and, via foot bridge, the Thompson-Neely farmstead. A creekside path under the River Road bridge connects the east and west halves of Upper Park, emerging at Thompson's Mill and meandering up toward the Moore Pavilion or continuing along the mill race into BHWP. Within BHWP, walking trails, including the closed portion of the tower road (shown as a black dash line on the Circulation Plan) lead through the diverse habitats along the creek and hillside. Whereas paths in Lower Park are nearly level and have long vistas, those at Upper Park contain a variety of slopes and steps, and greet explorers with surprises at every bend. An un-maintained trail ascends to Bowman's Hill Tower at a 30% slope, the last reminder of a former Boy Scout trail network. In the absence of planned access to the river, several "fishers' paths" in the campground have been tramped down by visitors, exposing roots to erosion and users to stumbles.



Upper Left: Lower Park, Visitor Center service entrance
Upper Right: Lower Park, Embarkation Drive, looking south

Middle Left: Upper Park, looking north at Thompson-Neely Farmstead on right

Lower left: Upper Park, Delaware Canal pedestrian bridge
Lower right: Upper Park, "fisher path" in campground



6 site analysis parking

available parking:

The total number of parking spaces for visitors to use on a daily basis in the Lower Park equals 298. With a 2.5 visitor per vehicle average this provides enough parking for 745 visitors a day if all parking spaces are used. These numbers do not reflect the drop-off for buses which bring in over 200 children per day using multiple buses.

The Upper Park will provide a smaller number of parking spaces among the separated parking lots. The total number is approximately 155 spaces, including 35 in the campground floodplain. Using the 2.5 visitor per vehicle ratio the lots in the Upper Park will provide enough spaces for 387.5 visitors a day. Using the average number of visitors per vehicle, the parking in both parks can accommodate 1,132 visitors a day, excluding bus drop-offs.

Large crowds attending events like the Crossing Re-enactment, Brewfest, and Firemen's Carnival create a need for overflow parking. If attendees arrive 3 or 4 in a car in the expectation of difficulty finding Crossing parking, the following numbers of spaces would be required:

- Dress rehearsal for Crossing: 1,000-2,000 attendees @ 2.5/car need 800 spaces.
- Crossing re-enactment: 6,000-7,000 attendees @ 3.5/car need 1,715 - 2,000 spaces.
- Brewfest (in campground) 3,000 attendees @ 2.5/car need 1,200 spaces.

lower park:

Five existing parking areas currently serve Lower Park, with 298 spaces, excluding temporary parking along Route 532 near the bridge to New Jersey. Measuring 350' x 125' and 375' x 75', the main lots at the Valley of Concentration accommodate 192 cars. The lot west of the Visitor Center contains 47 spaces, of which 6 are ADA compliant.



Lower Park parking lots:
Upper left: Main parking lot at Valley of Concentration, with River Road to right
Upper right: Route 532 Gateway and Lagoon parking lot beyond
Middle right: Route 532 pull-off parking



Additionally, there are 22 spaces at the Lagoon, and 37 spaces on the lots behind Taylorsville (100' x 30' and 75' x 30'). A half dozen direct pull-off parking spaces across from Taylorsville are excluded from the total because they were provided as a short-term accommodation to the location of temporary park offices near McConkey's Ferry Inn. Since those parking spaces involve maneuvers in the cartway, they conflict dangerously with the heavy bridge traffic.

In Lower Park, attendees of large events arrive predominantly from the south and fill spaces of the Washington Crossing businesses, while poor way-finding may leave the large parking lots at the Valley of Concentration partly empty.

upper park:

Multiple small parking lots serve separate destinations in Upper Park. Several gravel-paved pull-outs serve the wooded campground and trail users, accommodating 30 to 40 cars. Those lots within the floodplain are subject to river flood damage.

An asphalt lot for 14 cars abuts Thompson-Neely farmstead, including 2 ADA-compliant spaces. A 38-space asphalt lot serves Bowman's Hill Tower.

The majority of parking is available on the west side of River Road, by the meadow next to the Moore Pavilion. In addition to 8 asphalt-paved spaces (2 ADA compliant) at the Moore Pavilion, larger gravel paved lots along River Road (320' x 125') add 60 overflow spaces for large events. Regular use of that parking for east side activities is tacitly discouraged by absence of any direct paths, signage and marked pedestrian road crossing. The one grade-separated crossing, the scenic path along the creek under the road, also lacks signage. In practice, pedestrians find their own crossing paths oblivious to blindspots of the drivers speeding along River Road.

Upper Park parking lots:
Below left: Loop road parking lots near Campground
Below right: parking lot on west side of River Road



6 site analysis wayfinding

Signage and Wayfinding:

Sparse and poorly located wayfinding information is a critical shortfall for a park split into two sections and containing diverse scattered resources.

Standard PHMC brown and white signs greet visitors at the I-95 exit ramp to the south and upon arrival within Lower Park. Most vehicular signage is located after decision points, however, resulting in driver confusion and u-turns. Lack of way-finding signage from Lower to Upper Park, and particularly lack of distance information probably contributes to the significantly lower visitation at Upper Park.

A pedestrian-oriented keymap greets visitors at the Lower Park parking lot, showing locations of destinations within Lower Park and Upper Park, and usefully indicating the distance between the two sections of WCHP. While it could be a component of a park-wide wayfinding system, it is currently a stand-alone. Comparable maps are not located at other strategic entrances, and there is no set of “trail blazes” or

Interpretive signage kiosks are located near the resources which they interpret. Although those kiosks contain maps, they provide no guidance at arrival points at the extremities of Upper or Lower Park along the canal and River Road and no directional signposts linking the two park sections and resources within them. Off-putting individual signs address prohibitions without mention of the values they protect.

Existing signage:

Upper right: Wayfinding map at Visitor Center parking lot, showing Upper and Lower Park

Below left: Pier with park identification sign, followed by directional sign to Bowman's Hill Tower, located after turnoff to the Tower.

Below right: Uncoordinated piecemeal signage containing directional information and prohibitions



Existing D&L National Heritage Corridor signage:
Left: wayfinding map on one side of 3-sided kiosk
Right: interpretive and wayfinding signage panels

site analysis existing cultural resources

archaeological resources

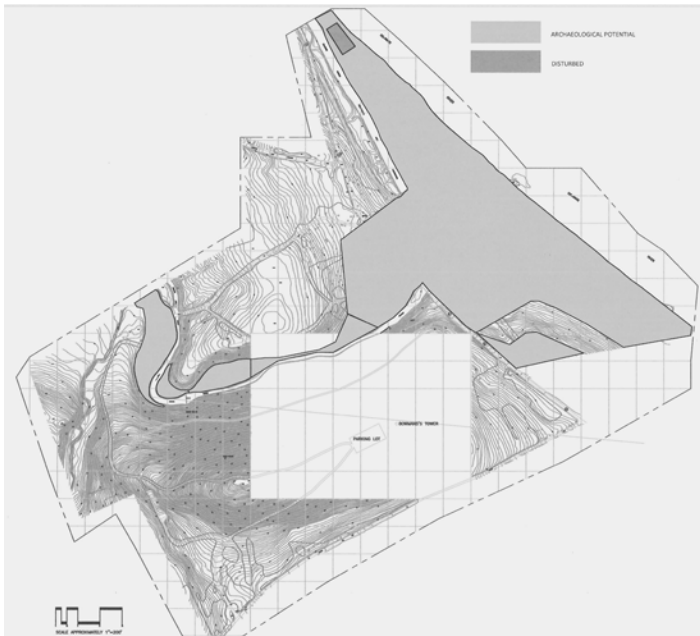
Team archaeological consultant CHRS, Inc. mapped portions of WCHP which might hold buried resources of historical and/or archaeological significance. Based on records of Native American and early European occupation of land along the Delaware River and Pidcock Creek, they assumed the presence of significant archaeological resources on waterfronts and low-slope land in both sections of the park. PHMC has records of numerous investigations, in locations of specific construction or underground utility projects. Archaeological resources have been found in each investigation. Since none of the investigations was comprehensive, however, it cannot be concluded that previous archaeological work satisfies the investigation requirements for future ground-disturbing projects.

In addition to the areas of sensitivity, the maps show areas which have been so extensively disturbed, to depths below historically undisturbed soil, that significant intact archaeological resources would not be expected. Those locations include the Visitors Center, its parking lot and the flagpole colonnade in Lower Park and the sewage treatment plants in Upper and Lower Parks. Construction of the 1920s retaining wall, and associated re-grading of the embankment, along the Lower Park river's edge would have added local disturbance there.

architectural resources

PHMC lists 57 structures within the park, including historic buildings, support facilities, monuments and landscape structures. The Master Plan addresses potential usefulness of existing buildings to promote PHMC's mission of preservation, stewardship and education. Thirty-four of the buildings are considered as four groups, based on geographic proximity and related history or uses. Two groups of resources connected directly or commemoratively with the revolutionary-war era are discussed as core historic facilities, one in each section of the park. Those resources representing the subsequent history of Taylorsville and the Memorial Park are treated as a third and fourth group, which include some landscape structures. Their potential uses are considered in relation to current and possible future park visitation, which is discussed in Chapter 5.

Deteriorated physical conditions and inaccessibility to disabled persons are two issues common to all the historic buildings. Adaptive reuse of vacant buildings or portions of buildings will necessitate significant interior restoration and/or renovation, as discussed for individual buildings in Appendix 3, Building Use Analysis. Building renovations undertaken in the two major campaigns have outlived their usefulness. Bathrooms and kitchens added in the early years of the park have been removed from buildings in the historic core, leaving scars of removed partitions and capped pipes exposed on upper floors. The 1970s Bicentennial renovations, as craft workshops in several of the Taylorsville houses, are neither serviceable nor compliant with current codes. Functional facilities remain in Oliver Taylor House, Taylorsville Store and Elmer Buckman House, which continued in non-compliant use until recently for park-related support, gift shop and collections storage/processing respectively. With its 1970s kitchen and bathroom, Eliza Taylor House continued to provide staff housing until recently. Andrassy House now serves that purpose.



1. Lower Park Historic Core***

- McConkey's Ferry Inn
- Outbuildings: Ice House, Root Cellar
- Monuments: Bucks Co. Historical Society monument, Washington monument (Patriotic Order of Sons of America)
- Hibbs House
- Frye House
- Blacksmith Shop**
- Visitor Center* **
- Durham Boat Barn and boats**

* facilities added during the 1950s to support increased park use.

**buildings significantly expanded or constructed as support facilities during PHMC stewardship of the park (primarily in the 1970s in anticipation of the Bicentennial),

***See page 33 for Memorial Park facilities which are located within the geographic areas shown as Historic Cores on maps. Those include the Gateways and the Point of Embarkation in Lower Park., and the Soldiers Graves memorial landscape in Upper Park.

Renovated and reopened in March 2013, the energy efficient and ADA-compliant Visitor Center accommodates activities which were scattered in other buildings while it was undergoing renovation. In addition to the auditorium at its core, the building provides reception areas, a conference room, public restrooms, a gift shop, a climate-controlled exhibit gallery area, staff office and work space and collections storage. The updated 247-seat auditorium hosts shallow-stage performances, lectures, film screenings and community meetings. Educational programs, conferences and business groups can take advantage of the reception space, auditorium and Lockheed Martin conference room. A variety of gatherings, from school groups to wedding parties, can use the reception space, enriched by river vistas year-round. The entrance plaza invites warm outdoor weather use.

The Durham Boat Barn, Blacksmith Shop and first floors of the historic buildings in the core area are used for historical interpretation. The barn houses the Durham boat replicas used for re-enactments. With disabled accessibility and more floor area than any of the historic buildings, the unheated barn accommodates group instruction, sheltered from sun, wind and precipitation.

Period furnishings enhance the interpretive narratives at McConkey's Ferry Inn and the Hibbs House. The entire first floor of the Inn and the western portion of the second are used for tavern interpretation. The rest of the Inn second and third floors are unoccupied. With the front crowded against the bridge abutment, visitors enter through a rear door in the latest portion of the building, presenting interpretive challenges. The Hibbs House first floor and the Blacksmith Shop are used for living history demonstrations of cooking and iron forging in the early 19th century. In addition to its interpretive role, the Frye House provides support space for event participants.



Above: Panoramic view of Visitor Center and Delaware River
Right: Hibbs House, Blacksmith Shop, Frye House, Durham Boat Barn (partially hidden behind trees)



Clockwise:
McConkey's Ferry Inn and Ice House, viewed from the north
Visitor Center, auditorium during restoration, before installation of Leutze picture
Durham boats moored to temporary wood dock
McConkey's Ferry Inn interior



6 site analysis existing cultural resources

2. Upper Park Historic Core Areas

- Thompson-Neely House
- Thompson-Neely Barn
- Farm Outbuildings: Ice House, Smoke House, Privy
- Monument: John Pidcock
- Soldiers Graves***

PHMC has identified two historic core areas in the Upper Park associated with the era of the War for Independence. Thompson-Neely Farmstead, the core of a larger previous farm, is bounded by River Road, the Delaware Canal and Pidcock Creek. The Soldiers Graves memorial landscape encompasses an area large enough to denote multiple unmarked graves, located south of Pidcock Creek, between the canal and Delaware River. See page 33 for description of the Soldiers Graves and Bowman's Hill Tower, which is interpreted as a third historic core.

The Thompson-Neely Farmstead is the historic focal point of a visitor's trip to Upper Park. The site is interpreted as the core of an 18th century farmstead existing at the time of Washington's Crossing, including house, barn, outbuildings and milling that provided the family's livelihood. Farm interpretation has focused on household animals, such as live sheep and a chicken coop, and at times on the cultivation of wheat that dominated 18th century Bucks County agriculture. Thompson-Neely House is open to the public on a regular basis. The open-air barn which, accommodates sheep and potentially interpretive and living displays, and other outbuildings are interpreted but not open to visitors. The house is not disabled accessible, due to steps at entrances, level changes within the main floor and doors narrower than 3'-0". Grade level entry to one east basement room is insufficient because it does not provide access to interpreted spaces.

3. Taylorsville Buildings South of Route 532

- Mahlon Taylor House
- Taylorsville Store
- Oliver Taylor House
- Frederick Taylor House
- Amos Taylor House
- Elmer Buckman House
- Eliza Taylor House
- Gazebo

Five of the Taylorsville buildings, including the Store, are spaced close to the road (Route 532) and close to each other, establishing a village main street setting, in which Mahlon Taylor House fits as the larger house of the town's merchant and co-developer, surrounded by a generous riverfront yard, containing a gazebo. Accessory structures behind Elmer Buckman House include a a potter's kiln and workshop built in 1976.

PHMC sees its use of the Taylorsville buildings as temporary. Activities which occupied the houses during renovation of the Visitor Center have moved to the renovated facility already. Collections and program materials stored in some of the buildings will be relocated to the Visitor Center in the near future. As described in Appendix 3, Building Use Analysis, interiors contain remnants of former apartment layouts, and outdated kitchens and bathrooms. The extent of deterioration, intrusive structural reinforcements and inappropriate insulation vary by building, and each has its own separate heating system.

Left: Upper Park views of Soldiers' Graves and Thompson-Neely House
Below: Taylorsville as seen from the south, looking toward Washington Crossing Bridge.



4. Memorial Park Facilities

- Bowman's Hill Tower
- Landscape structures: Gateways, Point of Embarkation, Pidcock Creek Bridge, Dam and Mill Races
- Bowman's Hill Tower Visitor Center**
- Thompson's Mill
- Farm Outbuildings: Chicken Coop, Corn Crib
- BHWP Headquarters
- Log Cabin
- Picnic Pavilions: Moore, Washington
- Picnic Pavilions*: Glover, Greene, Sullivan
- Restrooms: Moore, Glover
- Restrooms*: Greene
- Restrooms**: Washington, Valley of Concentration, Thompson-Neely
- Maintenance Shops
- Sewer Treatment plants*
- Andrassy House
- Victorian Neely House
-

Many of the landscape features were designed to give concrete form to abstract ideas which are not represented by historic buildings or artifacts. In Lower Park, the Valley of Concentration and Point of Embarkation give form to the idea of a route of troop movement from inland encampments to the riverfront where the troops, their horses, artillery and supplies embarked in small boats and ferries for the military offensive. The original Lower Park gateway served a memorial role, marking the route's passage, and defining the edge of a "memorial square" intended to present the monuments in formal quadrants. In Upper Park, the Soldiers Graves is a memorial zone, consisting of an elevated lawn and flagpole overlooking the river, separated by a retaining wall and steps from undedicated space. The original array of 13 oak trees no longer stands in the lawn. The condition of the stone work at the Soldiers' Graves is more intact than at the boat landing and steps at the Point of Embarkation, which is partly collapsed.

Thompson's Mill is a candidate for historic interpretation, but it is closed to the public, partly because its location creates logistical visitation dilemmas. It is located outside the delineated historic core and separated from it by River Road. While close to BHWP, which contains the dam and most of the mill race, the building's historic use is unrelated to the BHWP mission. The mill dam, head and tail races were reconstructed in the 1930s, and the building and its machinery were restored for display in the 1970s. Grade level disabled accessibility could be designed for lower level and intermediate levels.

Memorial Park recreational facilities and visitor amenities are spread over separate hubs in Upper and Lower Parks.

- Bowman's Hill Tower is a key destination in its own right and a location for interpretation of park themes ranging from 1776 military strategy to natural conservation.
- The pavilions and restrooms currently serve as visitor amenities, set in varied forest and meadow locations, several near the river and canal.

BHWP operates its programs from its outdated and outgrown headquarters building set in a woodland clearing. Diminutive in appearance from the parking lot, it opens at the back to downhill views. The 1930s log cabin, built as a park ranger station, is part of the BHWP landscape, along with maintenance and other accessory buildings which support nursery propagation and other programs.

Two Upper Park houses along River Road, Andrassy and Victorian Neely, are not critical to interpretive themes of the park. In contrast with Lower Park, where unrelated buildings were removed, these houses which predate park land acquisitions, remain in place.

- Although the large Victorian Neely house had a family connection to 19th century owners of Thompson-Neely house, that connection is not interpreted due to isolation of the house and its date later than current interpretation of the farmstead.
- Across River Road to the south, Andrassy House has no known interpretive connection.



Clockwise starting from upper right (all located in Upper Park except as otherwise noted):
Bowman's Hill Tower with Visitor Center (center) and elevator machine room (right)
Point of Embarkation (Lower Park)
Thompson's Mill
Log Cabin
Washington Pavilion (Lower Park)



7 recommendations general lower park



Lower Park land use plan

goals

- Long term sustainability
- Manage riverbank
- Convert lawn to meadow
- Convert roads to trails
- Consolidate parking
- Clarify River Road crossings
- Enhance visitor experience
- Enrich site interpretation
- Adaptive reuse of Taylorsville buildings
- Strengthen sense of arrival
- Provide towpath trailhead
- Restore wetland habitat
- Improve wayfinding

highlights

- Preserving the Historic Core
- Recreational opportunities
- Naturalized landscape
- Minimal vehicular traffic
- More parking areas
- Village Square
- Small-scale Taylorsville commercial adaptive reuse
- Enhance existing habitats
- Riverbank management
- Woodland buffers
- Pond and wetland restoration
- Improved pedestrian approach to Visitor Center
- Separation of vehicular from pedestrian traffic
- Meadow at south and north ends of Lower Park
- Trails and signage link Lower Park and Upper Park
- Event space
- Premier group picnic area



Upper Park land use plan

upper park

goals

- Long term sustainability
- Increase managed forest
- Reinterpret Thompson Neely Farmstead as a Field Hospital
- Strengthen Upper Park connections
- Manage riverbank
- Convert lawn to meadow
- Convert roads to trails
- Consolidate parking
- Improve pedestrian safety
- Clarify River Road crossings
- Enhance visitor experience
- Enrich site interpretation
- Adaptive reuse of historic buildings outside core areas
- Improve towpath trailhead
- Easy wayfinding

highlights

- Expand managed forests and stream stabilization
- Enhance existing parking areas
- Thompson-Neely Field Hospital tours
- Enhanced pedestrian circulation
- Special event space
- Premier group picnic areas
- Revitalized and improved trailhead/campground
- Memorial Soldiers Graves
- Natural play areas
- Strengthen sense of place at Bowman's Hill Tower
- Tie quadrants together through vistas, programs, and interconnected circulation
- Trails and signage link Lower Park and Upper Park

7 recommendations lower park plan

Objective: implement sustainable long-term land management practices

- See Land Management Guidelines section for discussion of land management recommendations.
- Specific locations are listed with other objectives since they serve dual purposes.

Objective: preserve and maximize use of park buildings

- Concentrate PHMC interpretive and educational activities in the historic core, shown as an orange overlay.
- Visitor Center serves as headquarters for PHMC programming, display, administration and operations.
- Taylorsville: Adaptive reuse should support visitor experience and economic sustainability, for example rental of bicycles, canoes and/or kayacks, as well as offering food and beverages for all park visitors (See Memorable Places).
- Team with existing and new partners for increased use of other facilities and areas of WCHP.

Objective: Provide a clear, welcoming arrival at the Visitor Center

- Clarify visitor and service circulation through site layout, planting and signage.
- Restore the Memorial Gateway as a pedestrian-only hub, providing connections between the Valley of Concentration, the Historic Core, and other destinations within and beyond the park.
- Relocate Visitor Center vehicular drop-off north of new crosswalk at Memorial Gateway, and landscape as part of the pedestrian arrival zone.
- Allocate ADA parking spaces in the staff parking lot and provide walk to front entry.
- Redirect vehicles, including buses, to the parking area at the Valley of Concentration. Expand lot southward to bring visitors close to the Memorial Gateway. The plan includes parking for 298 cars with buses dropping off visitors at the southeast end of the parking lot and laying-by along the eastern edge of the lot. During off-peak times, buses can park right over the eastern row of parking spaces.
- Re-vegetate existing visitor center parking lot on the west side of River Road with meadow, which can be mowed and used for overflow parking during large events.
- Remove the existing parking entrance, on axis with the Visitor Center service drive to eliminate confusion over the building entry.

Objective: Enrich visitor experiences and improve recreational opportunities

- Renovate the Valley of Concentration as multi-use open space (See Memorable Places)
- Strengthen interpretive themes of the Memorial Park design through landscape revisions.

- Use site layout, planting and signage to direct pedestrians from the main parking lot to their various destinations: the Visitor Center via the Memorial Gateway, the historic core, the Valley of Concentration, the Delaware Canal towpath, Taylorsville, or the soccer fields within the park.
- Rename “Embarkation Drive” as “Embarkation Walk”.
- Provide a trail network connecting Lower and Upper Parks and other trails
- Convert parkland west of River Road to a pedestrian zone, except at the main parking area and circulation road
- Continue soccer use of the fields in the near future, to be phased out gradually. Use of parking lot near soccer fields to be phased out with soccer phase-out.
- Develop a network of pedestrian paths to connect varied landscapes from soccer field and lawn to meadow to wooded buffer to pond ecosystems.
- Develop a trailhead at the pedestrian bridge over the Delaware Canal connecting to the canal towpath.
- Paths are eight feet wide to allow small service vehicles to maintain the park and soccer coaches to deliver equipment field side.
- Connect to the DCNR Delaware Canal State Park, the Delaware & Lehigh National Heritage Corridor and the Delaware & Raritan Canal towpath in New Jersey:
 - o Provide trailhead in Lower Park for Delaware Canal Towpath at bridge near soccer fields.
 - o Provide directional signage from the parking lots to trailhead and from trailhead to destinations in the park, including restrooms, which are a recognized need in this portion of the D&L National Heritage Corridor.

Objective: create memorable places

- Transform Memorial Gateway into a landscaped pedestrian arrival plaza:
 - o Demarcate a clear cross-walk to the Visitor Center entrance plaza and the Delaware River on the east side of River Road.
 - o Align the new pedestrian crossing on axis with the new Point of Embarkation to re-establish the original design connection.
 - o Reconfigure General Mercer Road into a cul-de-sac to protect residential neighbors from the flow of visitor traffic.
- Restore the Point of Embarkation as access to Delaware River:
 - o Reconstruct the Point of Embarkation to provide visitors with a symbolic and physical interaction with the Delaware River site of Washington’s famous December crossing. It is a place for re-enactors to make safe entry, a place for both historic and natural interpretation, a place for kayak or canoe put-in and take-out, and a place fulfilling people’s natural desire to get close to the river.



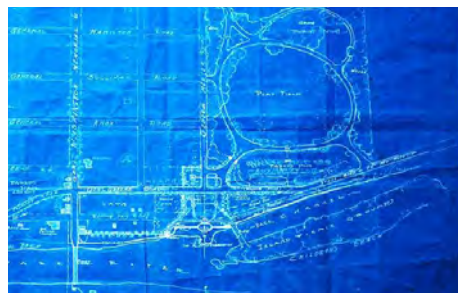
Lower Park land use plan

7 recommendations lower park plan

- o Convert steep portions of sloped lawn to stepped terrace configuration, as a natural grandstand for re-enactment viewers and informal seating along the riverbank at other times.
- o Continue use of Embarkation Walk for annual use as route between the Boat Barn and the Durham boat launching point, whether that be the existing boat ramp or the new Point of Embarkation.
- o Use Embarkation Walk north of the Point of Embarkation as a service route kayak and canoe drop-off.
- o Dredge channel between Taylor's Island and the mainland to provide reliable depth for the Durham boats during Crossing Re-enactment.
- o Establish maintenance program for Taylor's Island to protect the channel from clogging with debris.
- Renovate the Valley of Concentration as multi-use open space:
 - o Develop concentric landscape care zones, ranging from regularly maintained to natural.
 - o Rededicate the perimeter road encircling the Valley of Concentration as a trail, with small mowed seating areas cut into the meadow under the trees.
- Develop a green Village Square across from Taylorsville, strengthening the Memorial Park design
 - o Provide pathway and wayfinding links between park visitors and businesses of Washington Crossing village and Taylorsville.
 - o Create a focal point in Village Square, a sculpture or specimen trees, visible to drivers arriving on Routes 32 and 532.
 - o Memorial Park design to be a source of inspiration.
 - o To be designed as a new civic space, Village Square will be the location for any new artwork or memorials proposed for WCHP. That will allow other landscapes to retain their rural character.

Objective: improve wayfinding and interpretation through a comprehensive communication system

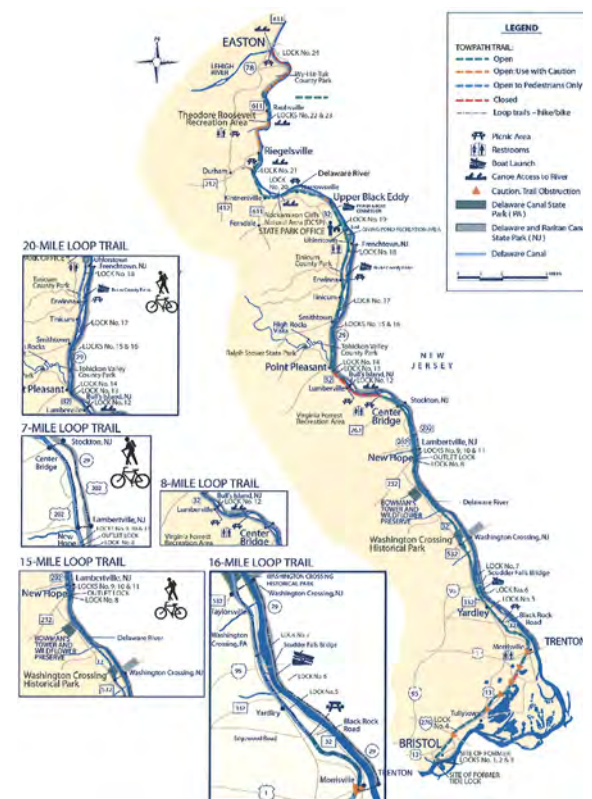
- See separate section on Wayfinding and Signage.



Original Cowell design blueprints



Above: Connection of north end of Lower Park to Delaware Canal towpath at pedestrian bridge



Right:: Map of Delaware Canal from Easton to Bristol, showing 15-mile northward loop and 16-mile southward loop from Washington Crossing at lower left corner.





Lower Park Zoom-In detailed plan

7 recommendations lower park plan



Valley Forge National Historic Park, naturalized meadows (VLS)

Landscapes of the Lower Park

Unified by flat terrain and broad horizon, the Lower Park is broken into six major landscape zones each with its own character, care guidelines and interpretation opportunities. In keeping with the memorial park design intent, landscape design remains the primary language of commemoration, with a vocabulary of vegetation, retaining walls, walkways, pond, flagpoles, pre-planned park-related monuments and adaptively reused historic buildings.

Objective: implement sustainable long-term land management practices

- **See Land Management Guidelines section for discussion of land management recommendations.**
- **Specific locations are listed with other objectives since they serve dual purposes. Each land management area should have an associated management plan developed as funding allows. The plans should include clear directives on management techniques, planting, deer control, invasive species management and be linked to education opportunities.**

1. Historic Core:: In the near future, the Historic Core should be maintained as lawn and grand canopy trees. A management plan for arbor care and tree replacement should be developed. This plan could be completed under the auspices of University of Pennsylvania or Pennsylvania State University's fine urban forests consultants, or with a consulting arborist who understands long-term tree management plans.

Long-term management of the core area can include landscape enrichment to enhance visitor experience. This enrichment can involve plantings selected to establish identity

Opposite: left: Valley of Concentration (TRP); right: Fairmount Park, lawn with tree canopy abutting naturalized meadow

and a sense of place, and to reinforce pedestrian pathways in the Historic Core, particularly Embarkation Walk, and the proposed Village Square. These enrichments should coordinate with a landscape interpretation plan and should be designed to offer opportunities for additional programming and interpretation. Care must be taken to avoid residential style plantings and interventions. As the landscape is enriched a long-term care and management plan should be developed in partnership with Bowman's Hill Wildflower Preserve or like-minded organizations. As a basis to begin enrichment, designers should research the Cowell Plan to understand the memorial landscape at the point of conception

2. Lawn/ Picnic Areas:

There are areas of the park that should remain mown lawn. These include select areas within the Valley of Concentration, the Historic Core area and the soccer fields. Today a partnership for soccer field maintenance is in place. This care plan should continue and be enhanced through a stronger partnership with the hundreds of soccer families who frequent the park. As the plan for the Historic Core area in the near future involves simplification, the small garden across from the Hibbs House will be removed.

3. Meadow:

In addition to the meadow conversion in the Valley of Concentration, the Master Plan recommends establishing meadow at the north and south ends of the Lower Park. While these landscapes were for hundreds of years farmed landscapes, this conversion will recall the wilder aspects of unfarmed areas. This tradition of lawn to meadow follows other parks like Valley Forge National Park where the long-term desire was to evoke a wilder time in US history and reduce the costs of mowing. In addition, meadows will yield richer visitor experiences, stormwater management and other environmental benefit.





The Delaware River riverbank, with river wall separating lawn from naturalized shoreline



Boat ramp, looking down toward river with Taylor's Island in background (TRP)

4. Riverbank Management

The master plan recommends the development and implementation of a Riverbank Management Plan, as discussed below in Land Management Guidelines section. To avoid obscuring views of the river especially during the annual Crossing re-enactment, the master plan recommends planting and management of appropriate riparian restoration species with careful selection for species height and a selective pruning plan at important views and vistas. The boat ramp should be maintained as part of the riverbank management recommendations, to be complemented by the new Point of Embarkation for visitors' kayacks and canoes.

5. Pond/Wetland

With the exception of a few overlook areas, mowing at the pond edges should be stopped. Most of the waterline should be enriched with plants to protect water quality and create wildlife habitat. The goal is to have a pond that has multiple benefits to people and planet. See additional recommendations within the Land Management Guidelines.



Lagoon north end, from path to Canal bridgeL



Lagoon, looking westward across mid section



6. Wooded/Tree Canopy/Buffer

As with all individual trees, tree groves and buffers should be under a long-term tree care plan developed with a certified arborist. These important park features buffer surrounding properties and protect internal park view sheds, make park character and provide climate control for park users. The management plan should refer to the historic park records for more formal planted areas and look to the best arbor science for restoration plantings. Serving interpretive as well as sustainable objectives, the tree management program would incorporate both new plantings and selective clearing or pruning to expose and maintain overgrown vistas. Early planning for a tree campaign would attract a range of partners over time to invest in growing and endowment of trees--to restore the formal allee along Embarkation Walk, groves around the Valley of Concentration, and buffer areas.

Ultimately the riverside woods, especially on Taylor's Island, should have a comprehensive restoration plan that takes into account exposure to the river, and the inability to exclude browsing deer and riverborne seeds. In the near future a certified arborist can evaluate for hazard repair/removal, care and replacement.



Riverbank should be managed to minimize soil compaction by crowds attending the annual Crossing Re-enactment



7 recommendations upper park plan

Objective: implement sustainable long-term land management practices

- See Land Management Guidelines section for discussion of sustainable landscape recommendations.
- Specific locations are listed with other objectives since they serve dual purposes.

Objective: preserve and maximize use of park buildings and structures

- Concentrate historic interpretive and educational activities in the historic core, shown as an orange overlay, consisting of 3 hubs centered on Thompson-Neely Farmstead, Bowman's Hill Tower and the Soldiers' Graves memorial.
- Clear and prune vistas to reinforce the triangle of 3 hubs.
- Adaptive reuse by partners of existing buildings which are not critical to PHMC mission
 - o Work with legislators toward passage of enabling legislation for a state "resident curatorship" program.
 - o Partners preserve, renovate and maintain Andrassy and Victorian-Neely Houses under long-term "resident curator" lease agreements.
 - o Adaptive re-use of Thompson's Mill, by PHMC or a partner, with accompanying historic interpretive narratives.

Objective: Improve vehicular and pedestrian arrival and circulation in WCHP

- Clarify visitor and service circulation through site layout, planting and signage. Minimize vehicular presence in historic core, and separate pedestrian from vehicular circulation.
- Clarify vehicular arrival at Upper Park using new and strengthened existing visual cues, such as meadow vistas and small blaze signs that indicate park woodland.
 - o Signal arrival in the park, by converting lawn to meadow at Lurgan Road turn for Bowman's Hill Tower and at the Aquetong Road entry to the east portion of Upper Park.
 - o The entrance at the Aquetong Road intersection remains the primary arrival point for the east portion of Upper Park. Directional signage is critical to lead visitors to the riverside parking lots, and from there to the diversity of available trail destinations along the canal to Soldiers' Graves or campground, or across the canal bridge to the Thompson-Neely Farmstead.
 - o The entrance across from Thompson-Neely Barn remains the primary arrival point to the west portion of Upper Park, including BHWP, taking advantage of the visibility and sightlines available on that stretch of River Road. Any new park roads should share that arrival point as a unified introduction to the diversity of resources. New entrances from, but not necessarily exits onto, Lurgan Road or Aquetong Road are discouraged to avoid diluted cues and visitor confusion.

- Retain vehicular access to Bowman's Hill Tower via the narrow steep one-way loop road from Lurgan Road, in order to minimize re-grading and to preserve the memorable experience of journeying to this lookout point high above the Delaware River. PHMC has prioritized restoration of the tower road and parking lot as a project to be completed under the current capital improvements allocation.
- Organize parking unobtrusively and near public roads
 - o Parking lot at Thompson-Neely Farmstead remains as is, including ADA spaces
 - o Use River Road parking lot as overflow parking during large events and festivals, with pedestrians using the Pidcock Creek Trail, or traversing River Road with special measures in place such as police-assisted crossing.
 - o Allocate Moore parking lot for users of Moore Pavilion and Thompson's Mill.
- Establish service use only of direct gravel road from River Road to Thompson's Mill by adding a fence and gate.
- Abandon gravel road between Thompson-Neely House and Pidcock Creek and revegetate as meadow, serving secondarily as access to parking lots next to the meadow.
- Limit vehicular use of gravel pullouts in campground to loading/unloading, with parking located in lots near vehicular canal bridge.

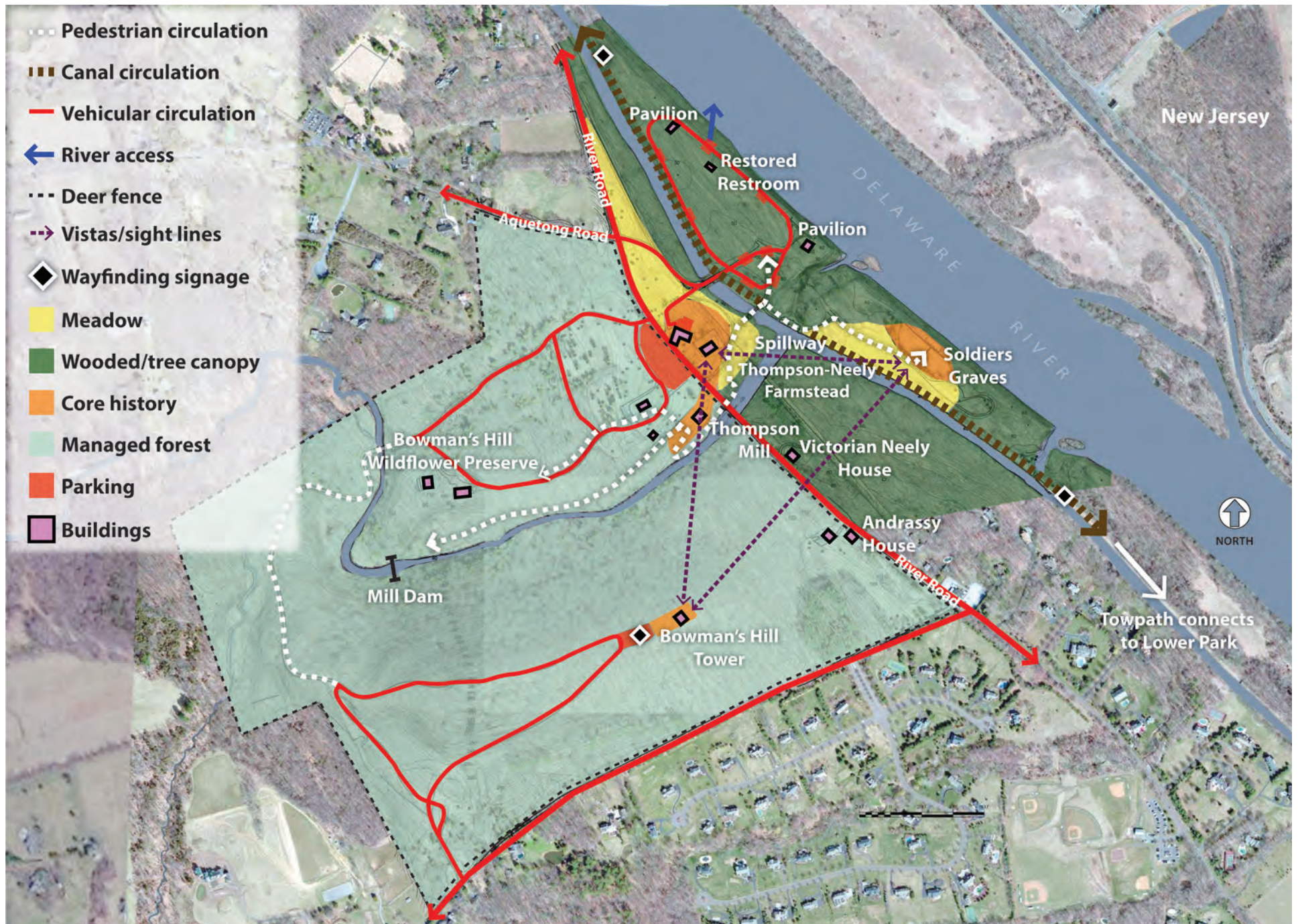
Right: Looking north on River Road toward Thompson-Neely Barn



Thompson-Neely Farmstead: Barn and pasture



Thompson-Neely outbuildings



Upper Park land use plan

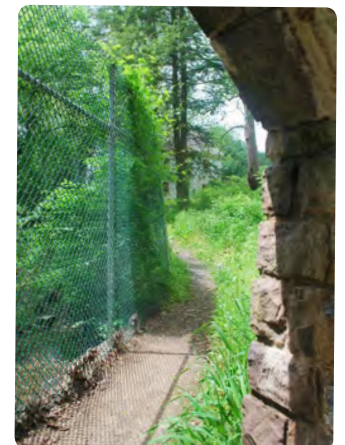
7 recommendations upper park plan

Objective: Enrich visitor experiences and improve recreational opportunities

- Expand visitor experience of WCHP. Encourage cross-over experiences of the park through new linkages between resources and with Lower Park--programs, trails, visual and way-finding.
 - The Thompson-Neely Farmstead is the historic focal point of a visitor's trip to Upper Park:
 - o Detailed pathway and viewshed planning, particularly in relation to the Soldiers' Graves, will reflect the new story lines of site interpretation, focused on wartime service as a field hospital.
 - o Convert additional lawn to meadow at Thompson-Neely Farmstead to clearly differentiate a residential lawn from a critical mass of meadow to evoke the agricultural context of 1776, and to differentiate park land from adjacent properties.
 - Thompson's Mill is interpreted in relation to the landscape:
 - o Restoration of the creekside path and mill race paths reinforces interpretation of Thompson's Mill, and removal of vegetation from the mill races enhances their interpretation as the mill's one-time source of water power.
 - o Include Thompson's Mill in the viewshed clearing program, since it is located on the sightline between Bowman's Hill Tower and Thompson-Neely Farmstead, and since it can be considered potentially part of the interpretive core.
 - Develop a plan for an Upper Park network of different types of trails (steep mountain hikes, paved walkways, mowed meadow paths) that are served by trailheads, that connect with existing Delaware Canal towpath and with revised BHWP trail layout, and that fill gaps:
 - o Trail layout through the Thompson-Neely farmstead is re-designed for disabled accessibility, to connect varied landscapes from lawn to meadow to creek and to the Delaware Canal towpath. ADA-compliant trails will lead to the path under the bridge as the primary pedestrian connector between park areas separated by River Road.
 - o Develop an ADA-compliant path connecting east and west portions of Upper Park. Widen and modify existing path along Pidcock Creek, under the arched stone River Road bridge connecting it with switchback paths to tie in with trail networks at Pidcock monument and Moore Restrooms respectively.
 - o Working with BHWP and trail user groups, develop 2 or 3 new trails, of varying degrees of difficulty, up to Bowman's Hill Tower and connecting to BHWP trail system, Delaware Canal towpath and other trails in WCHP. Access would include a pedestrian bridge across Pidcock Creek and/or a trailhead outside the existing deer fence at the south end of the River Road bridge over Pidcock Creek. One trail location might be a switchback route as proposed in the
1. BHWP Master Plan, accessed via a new bridge or canopy walk in BHWP, approximately midway between Thompson's Mill and the mill dam. For trekkers who now climb the steep gully closer to River Road, an ecologically planned trail, from a new trailhead, would protect understory vegetation from trampling by multiple unmapped routes.
- Coordinate way-finding signage and cross-promotion with the DCNR Delaware Canal State Park, the Delaware & Lehigh National Heritage Corridor and the Delaware & Raritan Canal towpath in New Jersey
 - Provide visitor access to the Delaware River.
 - o Maintain mowed paths at north and south ends of the Soldiers' Graves for river overlook views behind the memorial.
 - o Develop 2 or 3 paths along the campground ring road down to the river's edge.
 - o At steep bank along middle of campground, rustic steps, with railings where needed, will provide safe conditions for visitors and protect riverbank vegetation from trampling.
 - o At north end of campground, a path wide enough for portage of canoes and kayacks will descend diagonally down the gradual slope to the water's edge.



Existing Pidcock Creek trail under River Road along BHWP deer fence



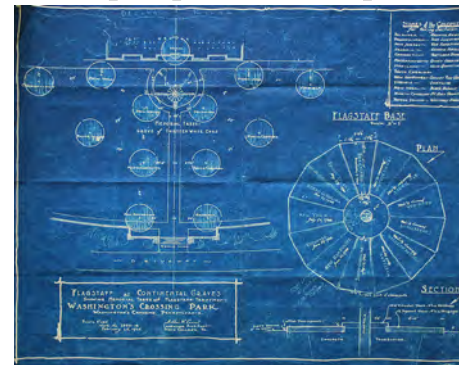


Upper Park Zoom-In detailed plan

7 recommendations upper park plan

Objective: create new and reinforce existing memorable places

- Bowman's Hill Tower Forecourt: Develop the summit of Bowman's Hill as a landscaped Forecourt adjacent to the Tower to minimize excess pavement, clarify parking, incorporate hillside trails, and make a simple pedestrian Forecourt for the Tower. Inspired by the unbuilt design of Thomas W. Sears, construction of an exedra or plinth would offer visitors a full circumambulation and views even if they do not ascend the Tower. Leading from the paved parking lot to the exedra, the forecourt would use native plantings to restore vegetation to the degraded hilltop woodland and to define borders of a gravel-paved pedestrian pathway with seating alcoves. If the hilltop remains outside the managed forest area, then consideration of deer-resistant plantings will be required. The landscape management plan will recommend regular pruning/ clearance to maintain specific visual links of the Tower with the Soldiers' Graves and Thompson-Neely farmstead, and to assure long vistas to the Delaware River and surrounding countryside. Interpretive signage would include mapping of observable landmarks. Beverage concession along with the ticketing at the existing tender's cabin would enhance visitor experiences. Consistent with educational messages instilling respect for the environment, visitors would be responsible for their trash removal on a carry-in/carry-out basis (or only carry-out for concession items.)
- Soldiers' Graves are preserved as a respectful memorial:
 - o The master plan preserves the Soldiers' Graves with the memorial flagpole representing the original 13 colonies and recommends replanting of the formation of 13 white oaks, now gone, which were part of Arthur Cowell's design.
 - o The lawn under those oaks remains mowed, and the meadow outside the retaining wall is enriched as the natural landscape planned by Cowell, extending to the towpath.
 - o Riparian vegetation protects the river edge and forms a natural backdrop for the formal Soldiers' Graves.
 - o Selectively clear Cowell's original viewsheds from the Soldiers' Graves to Bowman's Hill Tower and to the Thompson-Neely Farmstead. Direct attention to those vistas in interpretive signage, which also reminds visitors that this is part of Cowell's planned memorial landscape and that Revolutionary War soldiers' unmarked graves are scattered throughout the area.
 - o Restore the informal Memorial Grove with tree care and additional plantings to the north of the Soldiers' Graves extending toward Pidcock Creek.
 - o A question addressed during the Master Plan process was whether to build a bridge across Pidcock Creek instead of relying on low water level where the towpath crosses on the creek spillway. It was decided that collaborative management by PHMC and DCNR is a satisfactory solution in lieu of permanent physical changes.



Left: Arthur Cowell plan for Memorial Soldier's Graves
Above: looking south across spillway toward Soldiers' Graves, with Delaware Canal to the right

- Bowman's Hill Wildflower Preserve:
 - o This Master Plan for WCHP anticipates an integrated approach to master planning with BHWP. The goal is to strengthen the organization's stewardship of the natural ecosystems and its programming with an updated site plan, and appropriate visitor, nursery, propagation and maintenance facilities.
- Continue camping and picnic use of pavilions:
 - o Based on high demand at nearby campgrounds and the unique character of the quiet shaded riverside location, the master plan recommends extend campground use. That recommendation depends, however, on the emergence of partner(s) interested in operating the campground, and on coordination of campground operation with pavilion rentals and park events such as the Brewfest.
 - o The decayed tent platforms must be either removed or rebuilt to support large boy scout tents and/or vendor shelters for events.
 - o With restored facilities and with proactive management, this area can be used for public camping as well as other pavilion rentals, particularly if the DCNR towpath trail supports a camping experience.
 - o Provide for recreational activities associated with Pavilion use, such as lawn around the Moore Pavilion and cleared understory immediately surrounding woodland pavilions.



This 1957 concept by Thomas W. Sears shows a wall including a vista area surrounding the tower.

Bowman's Hill Tower exedra

Objective: improve way-finding and interpretation through a comprehensive communication system:

- See separate section below on Way-finding and Signage.

Landscapes of the Upper Park

The upper park is broken into six major landscape zones each with its own character, care and interpretation opportunities.

1. Historic Core:

The landscape of the Historic Core areas of the Thompson Neely Farmstead and Soldiers Graves will consist of naturalized meadows and groves of trees, with selected areas maintained as mown lawn around Thompson-Neely House and in the elevated area of the Soldiers Graves memorial. This landscape will allow for great vistas of the surrounding site and give the feel of its previous life as a working farm and field hospital.

2. Meadow/Lawn:

Other portions of the Upper Park will contain naturalized meadows. These areas are the pockets in between the unmanaged woodlands and managed forests of Bowman's Hill Wildflower Preserve. In addition to the Historic Core lawns, there are limited other areas of Upper Park that should remain in mown lawn: around Moore Pavilion and in the center of the parking loop road at the entry to the woodland campground.

3. Wooded/Tree Canopy:

The wooded area along the Delaware River will remain an open-canopy forest with little to no growth on the forest floor. Deer browse and inadequate light penetrating the tree canopy thwart growth of the secondary species. This creates an ideal situation for camping, festivals and events on the forest floor, although the minimal understory vegetation makes it vulnerable to undirected foot traffic and soil compaction.

4. Managed Forest:

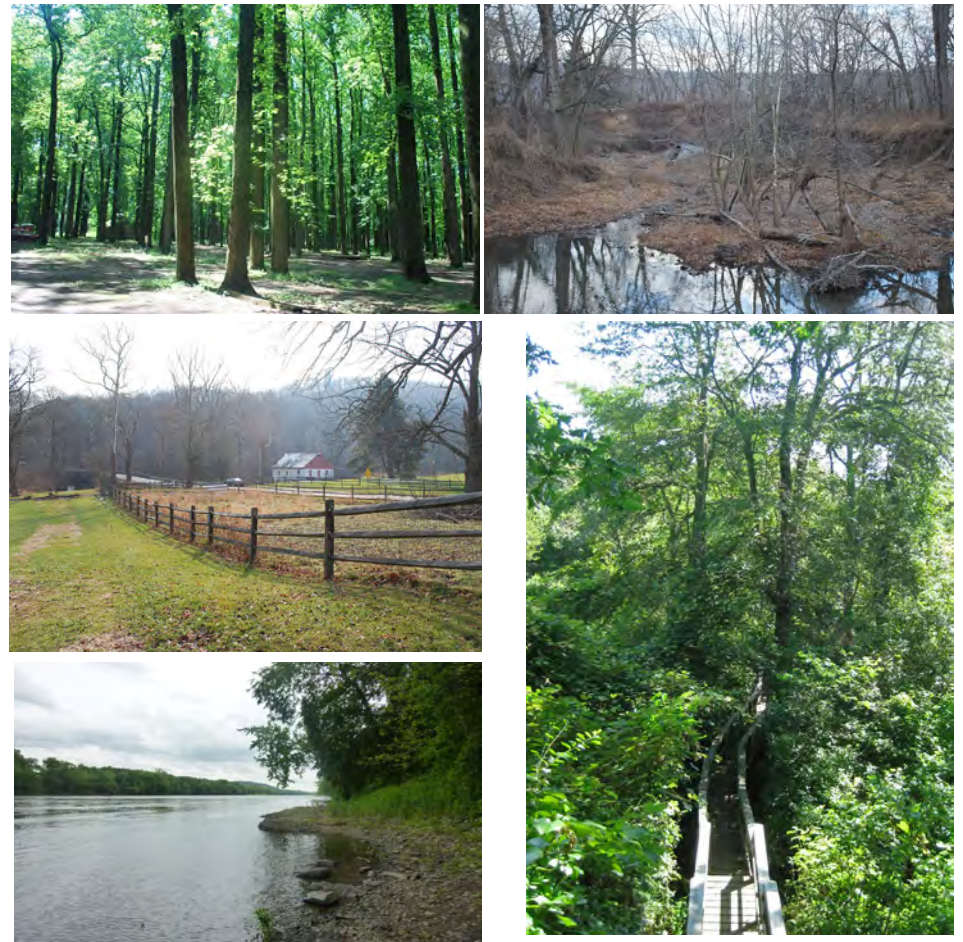
Managed forest will be expanded to include all of Bowman's Hill, with features designed to maintain vistas and minimize invasive species in the heavily visited zone of access to Bowman's Hill Tower, where managed forest practices may be challenging.

5. Riverbank:

In addition to paths to the river's edge, the master plan recommends direct access for launching kayacks, canoes and similar lightweight craft. The riverbank is less steep at the north end of the campground than elsewhere in Upper Park and thus supports a path for portage of small craft into the Delaware River. This could be used for short river trips to the Lower Park once Embarkation Point is built, providing a corresponding launching point there for portaged craft. The numerous "fisher trails" will be replaced by planned paths, which may include boardwalks and steps, to limit erosion of the steep river bank and protect the floodplain.

6. Stream Stabilization:

Above the Delaware Canal, Pidcock Creek is stabilized and restored. Particularly above the Delaware Canal, stream management will be consistent with environmental and aesthetic goals for the managed forest. Stream stabilization and management should be undertaken in targeted partnerships with BHWP and others. It will address the root causes that have resulted in a 'flashy stream', whether they be upstream land management changes or climate change and large storms.



Above: High canopy woodland at Campground
Middle: Exent of meadow to be increased at Thompson-Neely farmstead
Below: -Delaware River edge with steep wooded bank to right

Above: Pidcock Creek erosion
Below: Boardwalk with steps for paths through wetlands, steep slopes or tree canopy

7 recommendations land management

A formal maintenance management plan should be developed for the park as a collaborative process with management, staff and park partners. This would include park quality standards, work standards, planning, directing, controlling and evaluating maintenance. Until a full maintenance management plan can be established, determining maintenance benchmarks from DCNR for its parks would be helpful in terms of ratios of workers per acre, costs per acre by type of area (natural vs. high use visitor areas).

- Each land management area should have an associated management plan developed as funding allows. The plans should include clear directives on management techniques, planting, deer control, invasive species management and be linked to education opportunities.
- The Master Plan recommends that a professional Land Manager be retained to lead and monitor management of the land.
- Any major park improvement should include the development of a maintenance plan to sustain the respective improvement over time. Costs, revenue sources, roles and responsibilities should be spelled out.

Stream Stabilization:

A stream study should determine the causes of chronic erosion at the sharp bend upstream of the bridge in BHWP, at the mill dam and at the creek outlet below the canal spillway. Based on the findings, measures should be developed in conjunction with BHWP and targeted partnerships to implement recommendations of the study, which might include changing stormwater controls and upper watershed behaviours; otherwise Pidcock Creek stabilization measures will fail. The park should look to watershed groups, the Delaware Riverkeeper, Delaware River Greenway Partnership, and other like-minded water resource organizations to develop a management program which uses environmentally and aesthetically appropriate measures to protect the onsite Creek resource.

Wooded/ Tree Canopy/ Buffer:

As with all individual trees, tree groves and buffers should be under a long-term tree care plan developed with a certified arborist. These important park features buffer surrounding properties and protect internal park viewsheds, make park character and provide climate control for park users. The management plan should refer to the historic park records for more formal planted areas and look to the best arbor science for restoration plantings. Serving interpretive as well as sustainable objectives, the tree management program would incorporate both new plantings and selective clearing/ exposure and maintenance of overgrown vistas. Early planning for a tree campaign would attract a range of partners over time to invest in growing and endowment of trees- to restore the formal arrangement at the Soldiers Graves, the allee along Embarkation Walk, groves around the Valley of Concentration, the storm-swept pine grove on Bowman's Hill and other plantations.

Ultimately the riverside woods should have a comprehensive restoration plan that takes into account exposure to the river and canal, and the inability to exclude browsing deer and riverborne seeds. In the near future a certified arborist can evaluate for hazard repair/removal, care and replacement. The high canopy of this important riverine forest creates a wonderful ambience for camping, but minimal understory vegetation makes it vulnerable to undirected foot traffic and soil compaction. The plan recommends no understory plantings in this setting subject to adverse impact of deer and seed dispersal.

Pruning and Viewshed Maintenance:

To avoid obscuring views of the river, especially at the Lower Park during the annual re-enactment, the master plan recommends planting and management of appropriate riparian restoration species with careful selection for species height and a selective pruning plan at important views and vistas. River views need not be continuous, but should be targeted through species selection with smaller shrubs at view openings and larger to make enclosures within a framework of riparian trees. The plan should conform to the river management requirements of the Delaware River Keeper and general environmental riverside best practices. These areas can be used for education and the park might look to current efforts along the Schuylkill River within the City of Philadelphia. Select river viewing spots should be installed within the zone of restoration to allow visitors closer viewing of the river.

Managed Forest:

The master plan calls for the entire Bowman's Hill Forest to be included within a new deer fence and managed under a preservation/restoration plan like that used at Bowman's Hill Wildflower Preserve. This not only brings the natural history component of PHMC's mission to the fore, but also it represents a unique partnership opportunity with one of the country's premiere scientific research organizations in land management, Bowman's Hill Wildflower Preserve. Together with the adjacent BHWP land, managed forest will be doubled and diversified by addition of steep slope ecosystems to the lower slopes, creek banks and wetland forest currently managed by BHWP.

At a minimum, the Bowman's Hill Forest should be managed with a simple forestry plan developed in conjunction with DCNR, the Bureau of Forestry, or a reputable USDA or university forest management program.

Pond/ Wetland:

To manage edge conditions for water quality and wildlife use, re-vegetate pond edges with limited water access at designated viewing points. A watershed analysis should be undertaken to determine pond water sources and water quality issues and a plan made to partner with upstream land users to improve water quality for this excellent resource

guidelines

The analysis would also address extent to which the pond can and should function as a pro-active stormwater management facility, in conjunction with the DCNR woodland immediately to the south, across Route 532, and the adjacent development. Incremental introduction of sustainable wetland management practices will provide partnership opportunities and outdoor laboratories for hands-on environmental programs that dovetail with BHWP offerings.

Meadow:

In predevelopment times, the Eastern US was 99% forested from the Atlantic to the Pacific. When forest cover was broken by fire, flooding or other environmental factors, meadows developed. Native Americans created and maintained meadows through controlled burning for the purpose of hunting and small crop farming.

Today meadows play an important role in contemporary landscapes as an ecologically restorative, cost-effective and aesthetic alternative to lawn. Pennsylvania meadows consist of a mix of grasses and forbs. Aside from requiring little outside energy and resources to maintain, meadows help restore the natural hydrologic cycle, improve the health of the soil and provide wildlife habitat. Unlike lawn, meadows change with the seasons bringing landscape interest reminding us of the cyclical nature of our temperate climate. Meadow management during years one to three after seeding requires growing season mowing to 10", but not less than 6", invasive species monitoring and removal, and potential over-seeding in areas of low or limited establishment. Once established the meadow ecotype requires no watering and needs to be mowed only on an annual or biannual basis. At this time, in a lawn to meadow scenario, from meadow preparation, to planting to a three year establishment is estimated at \$3000- \$5000/ acre. Seed mixes should be designed for initial simplicity and desired meadow heights.

Meadow Paths: Pedestrian path types in meadow areas would be a mix of low-mowed grass; mulch to limit weeds and sogginess; graded and prepared gravel-paved. Asphalt-paved paths would double as vehicle access routes. Land management planning should identify low-slope locations where ADA-compliant paths will make representative portions of the park accessible to visitors with mobility difficulties. Providing a paved or other smooth surface will be appropriate to eliminate tripping hazards.

Riverbank Management:

In order to restore and maintain the deteriorated riverbank of the Delaware River due to flooding, tree loss, ice scraping and invasive species along the river edge, the master plan recommends the development of a Riverbank Management Plan. This plan should be produced in cooperation with the Delaware River Keeper as they are the major river monitors protecting and restoring the river. In keeping with the historic nature of the

be kept as natural as possible. Vegetation is an excellent bank stabilizer. Existing trees should remain in place along with all other shrubs, grasses. Even when vegetation is lost due to flooding, the remaining root systems help keep the soils together and healthy while planting restoration is planned or encouraged naturally.

Riverbank management balances stabilization of the flood-prone zone with historic landscape interpretation and vista maintenance. With the exception of the Crossing event, group activities should not be permitted at the banks as they will compact the soil as would parking or building structures on the bank. Riverbanks during Washington's time were probably far more wild than the present banks. For true reenactment, that condition would be mimicked. At Lower Park, as a compromise to avoid obscuring views of the river and the annual re-enactment, the master plan recommends selective pruning and planting and management of appropriate riparian restoration species. The denser vegetation along Upper Park's riverbank should be maintained to protect the steeper slopes there.

River Access:

Maintenance of planned trails and boat portage/ launch routes will support riverbank management along most of the riverfront. Materials for access paths should be selected with consideration to long-term path maintenance.

Sustainable Operations

- Ensure that grounds maintenance activities incorporate green practices.
- Continue to reduce the use of pesticides.
- Support efficient watering practices, including an evaluation of the potential for gray water reuse
- Test and evaluate innovative technologies that will reduce green house gas emissions and other environmental impacts and better inform purchasing decisions.
- Manage equipment to reduce environmental impacts
 - o Develop or use purchasing guidelines with PHMC and other state agencies that include noise and emission standards for landscaping and maintenance.
 - o Evaluate equipment needs and priority levels to support long-term energy efficiency and reduce green house gas emissions.
 - o Village Square will be the location for new artwork or memorials. Guidelines and procedures should be established during park management planning.

7 recommendations wayfinding/signage

Wayfinding:

A simple, elegant park wayfinding signage system should be developed, addressing both Lower and Upper Parks together as an integrated whole. Signs would be both directional and interpretive in content. Directional signage would fill in driver decision points between I-95 and both Parks, necessitating coordination with PennDOT and local municipalities.

- Add road signs with distances to Upper Park: at Route 532 intersection, at intersections of River Road with Taylorsville Road and Brownsburg Road, and at appropriate locations in New Hope and en route from New Hope to Upper Park.
- Add road signs approximately 1/4 mile in advance of arrival alerting drivers about side of the road and distance to all three arrival points in Upper Park.
- Visual cues are needed for two entrances with poor sightlines.

Signage would inform cyclists and other towpath users of directions and distances to points in and beyond both parks, including river bridges and New Jersey towpath destinations. For pedestrians, all destinations and facilities would have identifying signage and adequate directional guidance. North and south towpath entries into both Lower and Upper Parks should have new directional and interpretive signage. Directional signage in the parking lots would indicate the trailheads in each park, and signage along the towpath would direct to park restrooms, which are a recognized need in the Taylorsville portion of the D&L Corridor.

While additional strategically located signs in PHMC colors would be useful in the short term, the Master Plan recommends signaling a new welcoming message through a comprehensive signage program representing PHMC and its partners in a unified system, coordinated in content and graphics. Existing templates offer a starting point for a comprehensive way-finding program involving roadway signage and stakeholders outside the park. Signposts in Philadelphia developed by the Foundation for Architecture use a simple unified format and follow strict guidelines which prioritize public access, avoid excess information, and set forth maintenance responsibilities. Clutter is minimized in high-traffic locations by shared use of existing poles with traffic signs and signals. The complementary Walk Philadelphia system provides a pedestrian wayfinding counterpart.

Existing interpretive map and signage systems in the park are graphically uncoordinated and thus provide a poor starting point for a comprehensive system: PHMC brown and white, BHWP incised cursive on green, and detailed Delaware & Lehigh Corridor display kiosks. However, within the context of a comprehensive wayfinding system, there would be leeway for variety in identifying signage for entities in the park.

Dense Content Signage

Trailhead signage prototypes shown on the next page incorporate helpful maps and information about points of interest along the trail. At trailheads, where users enter the trail, they provide overall orientation in locations where users can predictably find them. In the context of a graphically organized format, as proposed, rules of use are part of the visitor's welcome to join in enjoying and protecting the values of the park. This would improve on the existing clutter and unwelcoming messages of separate prohibitions of unleashed dog and skating.

Interpretive signage should also be organized based on locations where visitors might expect it, or even be directed by maps to look for it. In addition to identifying resources, interpretive signage would enrich visitors' understanding.

Interpretive sign boards should augment, rather than simply show photographs of things that visitors can see for themselves. Examples might include diagrams identifying landmarks visible from the tower, seasonal identifiers of types of vegetation within a specific area, construction phases of an altered building, movement diagram of troops or grain through the grist mill. The interpretive example on the next page includes historic images of a much altered mill, consisting of an atlas map and contemporary promotional drawing.

Joint promotion & wayfinding with partners

Self-guided tour pamphlets and smart phone tours would be useful formats for wayfinding maps and illustrated interpretive narratives to introduce the full offerings of WCHP and park partners. Digital media use would minimize site 'clutter' and open the format to varied and changing interpretation, joint news updates and event promotion that could build cross-over traffic for concurrent events and expectations of frequent and diverse happenings for the park as a whole. For example, the 2014 outreach phase of the Trail Towns program, and the central position of Washington Crossing within that project area, offer a unique opportunity to build linkages for park users with services of local businesses.

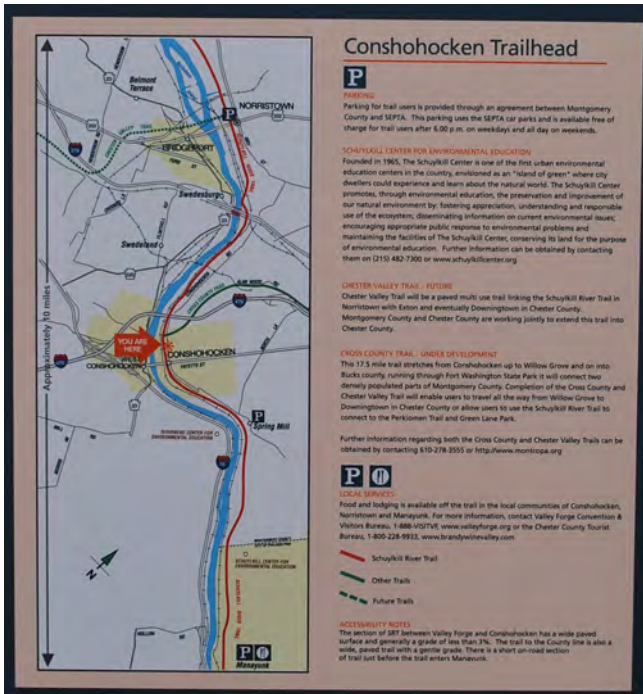
In conjunction with the signage program, a program of subtle solar-powered nighttime glow would raise awareness of the park, for example indirect illumination of park entry signs, monuments and building porch ceilings, spots of light in windows of darkened buildings, pathway lights low to the ground in selected locations.



Left: top and bottom: Schuylkill River Trailhead: trail maps, trail rules, brief description of destinations along trail.
Upper Right: Philadelphia bicycle signage
Lower right : Trail blaze/distance sign post



Cynwyd Heritage Trail, Lower Merion Township
Upper right: Interpretive sign with historic plan and view
Lower right: Trailhead sign: introduction, credits, trail regulations



Top: Fairmount Park directional signage preceding driver decision point incorporates highway sign. Center: juxtaposition of Park and facility identifiers. Bottom: Walk Philadelphia directional signage shares traffic pole.



7 recommendations cultural resources

archaeological resources

Since none of the archaeological investigations to date was comprehensive, it cannot be concluded that previous archaeological work satisfies the investigation requirements for future ground-disturbing projects. Any such project should be preceded by design and implementation of an appropriate investigation program, in compliance with requirements of the Bureau of Historic Preservation (BHP).

architectural resources

General: All renovations shall comply with the Secretary of the Interior's Standards for Treatment of Historic Properties. To promote sustainability install high efficiency fixtures in all facilities. Evaluate all installed mechanical equipment against lowest life-cycle cost methodology. Test and evaluate innovative technologies that will reduce green house gas emissions and other environmental impacts and better inform purchasing decisions. See Wayfinding/Signage section for recommendations to reinforce interpretive use of architectural and landscape resources.

1. Lower Park Historic Core***

- McConkey's Ferry Inn
- Outbuildings: Ice House, Root Cellar
- Monuments: Bucks Co. Historical Society monument, Washington monument (Patriotic Order of Sons of America)
- Hibbs House
- Frye House
- Blacksmith Shop
- Visitor Center
- Durham Boat Barn and boats

***See page 55 for Memorial Park facilities which are located within the geographic areas shown as Historic Cores on maps. Those include the Gateways and the Point of Embarkation in Lower Park, and the Soldiers Graves memorial landscape in Upper Park.

The Master Plan recommends consolidation of PHMC interpretive activities and cultural resource display/storage in open space and buildings north of Route 532. Visitor reception, exhibits, formal presentations, meetings, will be centered in the Visitor Center, which will also be the base for operational, managerial, administrative, and curatorial activities. Its entrance plaza will be furnished as a gathering place. As the basis for exhibits to be designed for the Visitor Center, the interpretive narratives should be expanded to address the Memorial Park landscape and the existing 19th century village along with the 1776 Crossing military history.

While interpretive programming occupies first floors of the historic buildings, vacant upper floors could provide small meeting spaces or resident scholar offices. Public access to upper floors is limited by absence of code compliant circulation and doors, and by the extent of disfiguring alterations that would be involved to provide needed structural reinforcement, exitways and disabled access. Combining apartment use of upper floors with interpretive use of lower floors would also be difficult due to building code requirements for egress and fire separation, and PHMC security requirements.

McConkey's Ferry Inn, the Hibbs and Frye houses could be used for collections storage, at least short-term while long-range storage is planned. Inefficiencies of climate control, security, fire protection and management of multiple small repositories argue against collections storage as a long term strategy in those historic buildings.

In order to make Taylorsville buildings available for sustainable adaptive reuse, it will be necessary to relocate collections currently stored in several buildings, including Mahlon Taylor, Elmer Buckman, and Oliver Taylor. Additionally, an alternative location would be needed for the program materials, tables, chairs and food service equipment stored at Oliver Taylor House. Current collections clearly exceed combined spaces available in the Visitors Center, McConkey's Ferry Inn, Hibbs and Frye Houses. A review of the collection is underway with a goal of retaining collections that fall within the site mission and consolidating them in the collections storage area of the Visitor Center.

Clockwise:
Lower Park view from the west showing
Hibbs House, Blacksmith shop, Frye House
& Boat Barn

Group instruction in Boat Barn

Rendering of Visitor Center Entrance Plaza
enlivened as a Memorable Place



2. Upper Park Historic Core***

- Thompson-Neely House
- Thompson-Neely Barn
- Farm Outbuildings: Ice House, Smokehouse, Privy
- Monument: John Pidcock
- Soldiers Graves

Buildings in the historic core of Upper Park continue to be used for interpretation, with a shift in theme from homestead to wartime services as a field hospital for Continental soldiers during the War for Independence. That will involve some changes in the period residential furnishings on the first and second floors, and possibly some changes to interpretation of the farm outbuildings. The broadened interpretation links both Lower Park and the Soldiers' Graves thematically with Thompson-Neely Farmstead.

Partial disabled accessibility to Thompson-Neely House might be achieved with a carefully designed ramp or porch lift for the oldest center section, from within which rooms to either side can be viewed.



Historic Thompson-Neely Farmstead

For the Soldiers Graves, recommendations would reinforce its sense of place as a sacred 1776 military burial site. Restoration to the original memorial design, as described in Site Recommendations section., would achieve this goal.

New wayfinding signage and disabled-accessible improvement of the footpath under the River Road Bridge (See Upper Park and Signage Recommendations sections.)



Thompson's Mill, exterior with Bowman's Hill in background and interior view of grinding stones

The Mill is stabilized and interpreted from the outside for the first years of master plan implementation, while planning proceeds for reuse. In order to avoid the cost of repairing and maintaining the warped water wheel, the mill could be displayed with modifications. With electric powering of the main drive shaft, production of historically appropriate flour and cornmeal varieties could be revived. Stationary interpretation would be the most sustainable approach, appealing to the visitor's imagination instead of his ears and nose.

Containing the largest spaces of any historic building in the Park, Thompson's Mill is alternatively an adaptive reuse opportunity. It has potential grade level access for two of its three floors: from the creek-side trail to the lower level and from the Moore Pavilion parking lot to the middle level. In order to make the mill floors available for adaptive reuse, it would be necessary to remove the equipment, which occupies all levels, and floor over some of the penetrations which accommodate the machinery. With that scenario, the complete set of equipment should be de-accessioned to another historic mill for interpretive use.

Zoning: BHWP and Thompson-Neely Farmstead, including the Mill, are located in an Outdoor Recreation (OR) zoning district in Solebury Township. In addition to the principal permitted uses (passive recreation, conservation, agriculture and forestry) the OR classification provides for conditional uses, including accessory uses, cultural, educational, environmental education, and "no-impact home-based business." Other non-accessory commercial uses, including commercial educational use, are not permitted.

Bowman's Hill Tower is located in Upper Makefield Township. (UMT) See next page for Park and Open Space (POS) zoning requirements in UMT.

7 recommendations cultural resources

3. Taylorsville Buildings

- Mahlon Taylor House
- Taylorsville Store
- Oliver Taylor House
- Frederick Taylor House
- Amos Taylor House
- Elmer Buckman House
- Eliza Taylor House



Rendering of proposed Taylorsville Promenade

Small-scale commercial seems the most natural reuse for the cluster of five Taylorsville buildings lining the south side of Route 532, with home-office or home-workshop use as an alternative. This approach has enlivening advantages of opening a critical mass of park facilities to the public as much-needed eating establishments and shops under existing state enabling regulations, with tax incentives to the tenant. The roadside frontage, set back only a few feet, offers beneficial exposure for commercial tenants, which residential tenants might find too noisy and lacking in privacy. Small rear additions opening onto a common Promenade would offer opportunities of outdoor gathering space and a unified strategy for disabled accessibility to the historic interiors. Occupancy would bring the further advantage of nighttime illumination from within the houses and porches, and a glow of evening use of the Promenade. The interiors offer variety: a range from handsome historic to significantly altered rooms, from small intimate rooms to the open space of the Taylorsville Store. Acceptable uses would include professional offices, small inn or bed & breakfast, small eating establishments, and shops. Limiting factors include acceptable uses under zoning, floor areas of existing historic structures, and building code issues.

To protect the main street context of Taylorsville from road widening, it would be advisable to investigate again the possibility of historic designation of the river bridge.

Current state regulations permit long-term lease to private commercial investor/tenant(s), up to 20 years for certified rehabilitation of eligible historic properties. The long-term lease would enable a tenant to amortize the cost of adaptive reuse renovation and would include tenant responsibility for regular maintenance. A tenant who meets the requirements for Certified Rehabilitation of an investment property listed or eligible to be listed on the National Register of Historic Places would be able to apply for a 20% tax credit on renovation work under the program established by the National Park Service. The tenant would document compliance with the Secretary of the Interior's Standards for the Treatment of Historic Properties before and after renovation.

While the Taylorsville streetfront buildings are well located for commercial reuse, residential occupancy would be appropriate for the more isolated houses. Use as

staff housing would serve the occupancy objective, but with the disadvantage of leaving PHMC responsible for renovation. The format of "resident curator" would offer opportunities for private investment in residential occupancy. Under a long-term lease with PHMC, a residential tenant would undertake building renovation, complying with PHMC guidelines and the Secretary of the Interior's Standards for Treatment of Historic Properties, and maintain the property. Successful resident curator programs in Maryland and Connecticut provide models for the needed state enabling legislation. Pennsylvania legislation already pending may make available state tax credits for historically appropriate rehabilitation of non-investment residential properties.

The one grand house, Mahlon Taylor House, commands a prominent site, facing McConkey's Ferry Inn and overlooking the Delaware River. It could serve as a stand-alone commercial use, such as a bed-and-breakfast lodging or restaurant. Abutting the historic core, it could alternatively return to park use for revenue-generating programs, conferences, workshops and other rentals. Its public use is enhanced by the possibility of grade-level entrance to the basement and a ramp or porch lift to the first floor. Set apart from the "main street" group, the Eliza Taylor House is significantly altered, having served as a bath house and tea house before becoming staff housing. With waterfront vistas and proximity to other homes, it is also well suited for continued residential use or a home office under a resident curator lease.

Zoning: Like the rest of Lower Park and the portion of Upper Park containing the Bowman's Hill Tower, Taylorsville is zoned POS (Park and Open Space) under the Zoning chapter of Upper Makefield Municipal Ordinance. The POS classification is primarily for agriculture, horticulture, forestry, recreation and accessory uses, but also includes no-impact home-based business. A case could be made for treating Taylorsville buildings similar to the adjacent properties between WCHP and Taylorsville Road, which are classified as Village Commercial 1 (VC1). VC1 designation allows for a variety of small-scale commercial uses, either as sole use or as mixed use in combination with residential occupancy. Some of the VC1 uses permitted by right, including retail shop, eating place, office, and "commercial school," would complement park activities and help connect the park with businesses in the village center. Additionally there are provisions for the zoning board to permit a bed and breakfast by conditional approval, or tavern by special exception. Small additions to the building rears would be permitted under the 35 foot height limit and the massing requirements of VC1, which are defined in relation to average nearby building size. Non-compliance with minimum lot size (1 acre), minimum lot width (150 feet) and side and rear setback requirements for additions (30 and 50 feet respectively) could be resolved by consolidating the closely spaced groups along Route 532 into two single properties, one on either side of Route 32. Variances would be needed for VC1 use, in lieu of POS, and non-conforming front yard setbacks. The existing parking lots behind Taylorsville buildings can be reconfigured as needed to support residential or commercial use with rear yards and parking.

4. Memorial Park Facilities

- Bowman's Hill Tower
- Landscape structures: Gateways, Point of Embarkation, Gazebo, Pidcock Creek Bridge
- Thompson's Mill
- Dam and Mill Race
- Bowman's Hill Tower Visitor Center**
- Andrassy House
- Victorian Neely House
- Log Cabin
- Picnic Pavilions: Moore, Washington
- Picnic Pavilions*: Glover, Greene, Sullivan
- Restrooms: Moore, Glover
- Restrooms*: Greene
- Restrooms**: Washington, Valley of Concentration, Thompson-Neely
- Maintenance buildings
- Sewer Treatment plants*

Although this section touches on site interpretation in Lower and Upper Parks, recommended site improvements are described in the following discussion of the proposed site plans. An interpretive plan should be developed for the Memorial Park. Documentation of their meanings and preservation of the landscape features are critical ingredients in the historic interpretive mission of the park. With little surviving physical fabric from the 1776 landscape, and with the memorial park a significant landmark in its own right, the embodied 1920s symbolic vision is an important milestone in interpreting an event of great significance to the nation.

Bowman's Hill Tower and its immediate landscape context should be improved consistent with its iconic role as a destination attraction, as discussed with recommended site improvements for Upper Park. It should be jointly promoted with historical, environmental conservation and recreation programs at the park. Improvements would include selective tree removals for vista restoration; creation of a sense of place, with seating; and grading of a barrier-free path from the parking area to the tower and its visitor center. The power lines to the Tower and service building should be buried to protect from weather damage and reinforce the rustic setting. Sustainable operation of the Tower must take into account not only admission fees but also other revenue generation to meet the significant costs of maintaining the building and its access road.

Andrassy and Victorian Neely houses are candidates for residential adaptive reuse. Both have direct access from River Road. Whereas the latter is isolated from park facilities

and thus suitable for unrelated occupancy, the former is close to the south entry into Upper Park and better sized and located at the foot of Bowman's Hill, to serve ancillary park uses, including staff housing. It also shares the driveway with The Upper Park maintenance shop.

Pavilions should be upgraded and promoted to expand park visitation and generate increased rental revenue. Upgrades should include restoring fireplaces to working order, and the addition of cooking grilles, rustic countertops, improved lighting and electric receptacles. Restroom improvements would include ADA renovation or expansion of Glover restrooms or provision of other functioning rest rooms for the Upper Park riverfront pavilions and campground. Small ADA-compliant restrooms already serve some of the pavilions (Washington, Moore, and at a greater distance, Greene). The existing array of multiple-facility restrooms in the Visitor Center and dispersed small restrooms, including renewed Glover restrooms, serves current visitation levels and additional users, but not large crowd events, for which portable toilets will still be used. Possibly the future BHWP Visitor Center can be planned in such a way that multiple-facility restrooms there become available during large events in Upper Park. Self-composting restroom facilities might offer a needed amenity for Bowman's Hill Tower without a disproportionate investment in plumbing.

Both gateways at Lower Park, and the large stone signposts at Upper Park continue to perform a functional role, as arrival markers to the park and its recreational areas. While their rustic construction is appropriate to the mission and design vocabulary of the park, indirect illumination and selected plantings would improve their visibility and thus their functional role.



8 next steps

looking ahead to implementation

criteria for prioritizing

The Master Plan team has based its phasing recommendations on several parameters, with highest priority given to recommendations which meet several or all of the following criteria.

- **Consistency with Mission:** To what extent does the recommendation preserve, steward and advocate for natural and cultural heritage and nurture partnerships to promote PHMC mission, on behalf of the people of Pennsylvania and the nation?
- **Relative urgency:** Does the recommendation take advantage of a present opportunity, which will be unavailable in the future? Does the recommendation improve public safety? Does the recommendation protect against potential damage or eliminate/minimize a source of ongoing damage to park resources?
- **Achievable Projects:** Can the recommendation be implemented with available resources of staff and volunteer labor, materials, equipment? Is it feasible and reasonable to muster additional resources, if needed for the objectives, and can sources be identified in advance for such additional support? Rather than risk an overreaching failure, the Master Plan team recommends starting with small initiatives that can establish expandable protocols and build partnerships as a foundation for larger undertakings thereafter.
- **Relative impact:** Just as the continental generals strategized based on comparing potential gains with expected losses, recommendations are evaluated for measures of success for a given investment of resources. The calculation is complicated by the need to take into account both quantifiable tangible factors (hours, cost, attendance) and intangible values (educational, community-building, quality of life.)
- **Build upon successes:** Success already attracts visitors to the renovated Visitor Center, annual events (the Crossing and other re-enactments, Brewfest, Bowman's Hill Wildflower Preserve plant sale), repeat-attendance activities (BHWP programs, soccer club games) and trail connections. Those successes are points of departure for expanded activities and attendance.
- **Appeal to partners:** Collaborative initiatives, which meet objectives of both PHMC and its partners, can muster greater contribution of ideas, personnel and other resources.

- **Promotional appeal:** Although arbitrary and superficial in comparison with the other criteria, anniversary milestones offer one construct that highlights potential promotional appeal of park history. The 100th anniversary of the park's creation occurs in 2017, followed by milestones for park opening, addition of Upper Park, through construction of the tower in 2030 and dedication of BHWP in 2034. Each milestone offers an opportunity to focus attention on the relevant park component and organize an appropriate celebration.

preparatory accomplishments 2013

Concurrent with the master planning process, PHMC has been laying groundwork for implementation of master plan recommendations. In the realm of physical improvements, the renovated Visitor Center opened in March 2013, thanks to joint funding by the state and partner Lockheed Martin. The lawn across from Taylorsville has been returned to open space following removal of the temporary park facilities. Evaluation of buildings and infrastructure proceeded in preparation for a project of prioritized park-wide capital improvements under a state capital allocation of \$7.8 million. In conjunction with the implementing agency, the Pennsylvania Department of General Services (DGS), PHMC worked to coordinate those site improvements with evolving Master Plan recommendations.

PHMC has also laid groundwork for improved management and promotion. Through the master plan process, outreach to potential partners, stakeholders and park users has engaged over 700 people representing a wide range of non-profit groups, elected officials, municipal staff, public agencies, volunteers and users. Preliminary discussions with key partners were propelled forward by state legislation enacted in July, 2013, mandating cooperation between PHMC and DCNR on management of WCHP.

Construction completion of the capital improvements project is scheduled for 2016. Several components of that project prepare the way for master plan recommendations, including exterior envelope restoration of the Historic Core and Taylorsville buildings, upgraded water distribution in Lower Park, repairs to gates, the river wall and the Washington Pavilion, and repaving of the Tower road and parking lot. Occurring concurrent with park-wide capital improvements construction, the modest physical measures in short-range master plan recommendations will have amplified impact

8 next steps implementation

phasing overview

Short-range recommendations for the first 3 years all focus on strengthening partnerships to set the framework for using the 500 acres of parkland and the historic resources within the park in an optimal way for visitors, whether they are local or international, and in a manner that is consistent with the state's role as steward and educator. In conjunction with the construction work through the separate DGS Capital Improvements Project, physical improvements suggested in the Master Plan set the stage for collaborative programming in the park. Signage and way-finding would be short-range achievable successes with large payback in terms of extending a welcoming invitation to potential visitors. Interpretive planning and program development would similarly provide foundations for expanded programming and events. One educational goal is to build partnerships for upstream management of the stormwater that damages the park. A new sustainable land management plan would be adopted and practices initiated on a small scale. Physical improvements recommended for the mid-range, years 4–7, include revising circulation infrastructure, revitalizing underutilized facilities (consolidated PHMC programs, adaptive reuse of Taylorsville) and developing new civic spaces associated with those areas (Taylorsville Promenade and Village Square.) As sustainable land management practices incrementally cover more of the property, results of the initial prototypes will become observable. Development of a strategic plan related to operations will augment the physical improvements and will address revenue generation, events and programming.

In the long-range recommendations, years 8 – 15+, the Master Plan anticipates on-going expansion of collaborations, programming, revenue generation, and land management practices. At this point, the master plan envisions reaching out to develop new special places (Point of Embarkation, Tower Forecourt.) Repair of Pidcock Creek stormwater damage caused by upstream development is considered a long-range improvement in the hope for strengthened municipal regulation by then.

The recommendations in the Master Plan range from reallocation of existing resources to significant investments in programming and capital improvements. This section of the report offers a suggested implementation schedule, based on the prioritization criteria set forth. It thus offers a starting point among the plethora of simple and ambitious possibilities. Actual implementation can proceed in various strategic configurations and will be influenced by the interests and contributions of partners and audience. Similar to building by building progress at Eastern State Penitentiary in Philadelphia, small initial projects within each core can be based on prioritized fund raising for specific buildings, outdoor spaces or uses. The PHMC Master Plan Steering Committee anticipates that important land use and land management decisions will be shaped by agreements with key partners in the Upper Park, including BHWP and DCNR. Accordingly, the Master Plan implementation recommendations in this chapter are more general in character for Upper Park than for Lower Park.

for further study

The following suggestions anticipate management and strategic planning for implementation of the Master Plan recommendations for the site.

1. Develop a Management and Operations Plan for WCHP
2. Develop a Land Management Plan
3. Develop a Strategic Plan for the Visitor Center
4. Develop an updated interpretive plan for WCHP, expanding the interpretation to include storylines of Taylorsville and the Memorial Park, which will add further linkages between 1776 and the landscapes and historic resources encountered by visitors.
5. Plan and install exhibits in Visitor Center
6. Perform feasibility analysis for proposed Point of Embarkation
7. Review "Resident Curatorship" programs in Maryland and Connecticut and work with state legislators on enabling legislation for Pennsylvania.
8. Undertake a stream study of Pidcock Creek to determine actual patterns of flow, flooding, erosion and other damage. Recommendations should target those documented patterns, rather than general assumptions
9. Analyze stormwater management options for Pidcock Creek, the Lagoon and areas of Lower Park which have high a water table.
10. Develop guidelines and procedures for review, approval, funding and endowing proposed artwork, to be located in Village Square. Develop comparable guidelines for proposed plantings and environmentally appropriate gifts for other locations in the WCHP.

8 next steps action plan

Strategy 1: Implement sustainable long-term land management practices

- Prepare a land management/ maintenance plan for meadows, lawns, canopy trees, woodland, creek, riverbank, wetlands. Earlier sections of this report address appropriate professional disciplines to prepare plan(s), as the first short-range implementation step for those separate land types.
- Convert lawn to meadow, proceeding in small increments. Start at extreme north and south ends of Lower Park and lawn between Lurgan Road and Andrassy House in Upper Park. During the 3 years needed for the first meadows to become established, significant areas would be in transition. Gradually through short- and mid-range years expand meadows outside the History Core zones and surrounding the soccer fields.
- Convert the parking lot to west of the Visitor Center to meadow, which can be mowed for occasional overflow parking for large events.
- Implement sustainable riverbank management practices which satisfy dual goals of environmental protection and visitor enjoyment. The plan will accommodate access paths in Upper Park, year-round river viewpoints, and long stretches of winter viewing of the Re-enactment.
- Implement tree planting and tree maintenance, tailored based on recommendations for each environment, within Historic Core zones, the campground and unmanaged forest areas.
- Implement wetland restoration, water quality improvements, and management of the Lagoon.
- Toward long-term goal of Pidcock Creek stabilization, build support for upstream stormwater management through interpretive and educational programming.

Strategy 2: Preserve and maximize use of park buildings

- Consolidating PHMC interpretive programming and collections in buildings north of Route 532 involves several steps. The immediate curatorial task includes review of collections currently housed in various buildings on site, selective relocations to the Visitor Center storage area, or de-accessioning to locations outside the Park. Buildings might be vacated in phases, with Mahlon Taylor House and Oliver Taylor House following others that contain fewer artifacts. PHMC relocation of collections displayed or stored in Taylorsville is a critical precondition for adaptive reuse of those buildings.
- Adaptive re-use of Taylorsville houses for small-scale commercial occupancy. A short-range implementation step is PHMC selection of tenant (s) through an open Request for Proposals process. The selected tenant(s) will complete multiple

- preparatory steps and start interior renovation work to follow completion of the exterior restoration under the DGS capital improvement project. Those mid-range steps include design and permitting of proposed renovation/ alteration, subject to PHMC review for compliance with the Secretary of the Interior's Standards for Treatment of Historic Properties. Long-range maintenance will be performed by the tenant throughout duration of the lease.
- Adaptive residential re-use of other houses. PHMC collaborates short-range with elected officials, and other potentially participating agencies, on introduction of state enabling legislation for a Resident Curator program. Upon successful creation of such a program, PHMC initiates an RFP process for residential tenants for Eliza Taylor, Victorian Neely and Andrassy houses, similar to that outlined above for commercial adaptive re-use.
- De-accession houses without use for PHMC and not leased to Resident Curators or commercial tenants.

Strategy 3: Improve vehicular and pedestrian arrival and circulation in WCHP.

- Clarify vehicular arrival sequence and parking.
- Consolidate Lower Park parking in the large lot adjacent to Valley of Concentration. This includes improvement of that lot, and elimination of the existing Route 532 pull-off parking and lot to west of Visitor Center. Removal of the parking lot across from the Visitor Center can be phased, leaving the accessible parking in place until completion of the south extension of the main lot.
- Improve pedestrian safety:
 - o Define and clarify River Road crossing.
 - o Separate vehicular from pedestrian circulation.
 - o Convert Memorial Gateway to pedestrian plaza and realign River Road crosswalk on axis with new Point of Embarkation.
 - o Terminate General Mercer Road in a cul-de-sac north of Memorial Gateway.
 - o Overcome physical barriers (River Road) and distance between Lower Park and Upper Park.
- Field testing of concepts using temporary short-term changes, such as signage, planters or other temporary barriers, would be useful planning tools for the proposed cul-de-sac at General Mercer Road.
- Distribute Upper Park parking in small lots at trailhead, at Bowman's Hill Tower, and at Thompson-Neely Farmstead, with overflow parking in the lot and meadow near Moore Pavilion for large events.

Strategy 4: Enrich visitor experiences and improve recreational opportunities.

- Through overlapping experiences draw single purpose visitors into new areas.
- Develop a plan for a comprehensive park network of trails that incorporates existing trails, converts roads to trails, completes gaps, and connects with all destinations in WCHP and others beyond.
- Create different types of trails: canal towpath, steep mountain hikes, paved walkways, mowed meadow paths
- Create trailheads at the Delaware Canal Towpath in Lower and Upper Parks.
- Develop infrastructure for multiple activities: kayaking, canoeing, biking, hiking, jogging, dog walking.
- Upgrade picnic pavilions and associated restrooms.
- ADA renovation of General Glover restroom as part of trailhead and picnic upgrades.
- Expand managed forest to encompass Bowman's Hill—multiple ecosystems to foster diversity and interpretation.
- BHWP plans and builds its new visitor center, following coordination and review with and approval by the Commonwealth.

Strategy 5: Improve way-finding and interpretation through a comprehensive communication system

- Immediately add new way-finding signage at arrival points along Delaware Canal Towpath and River Road.
- Expand interpretive narratives to encompass additional and interconnected themes, based on all aspects of PHMC's mission for cultural and natural heritage and preservation.
- Prepare an interpretive plan, incorporating new and interconnected narratives, and clarify tour routes which may involve physical changes to path alignments, travel sequence, and abutting land management, along with training volunteers to present new storylines.
- Prepare a professional plan for and implement a comprehensive way-finding program including resource identification, directional and distance information. Directions to destinations and visitor amenities in both Lower and Upper Parks shall be available within each park, along with related opportunities beyond the park.
- Reinforce way-finding with proposed visual landscape cues at arrival points and interpretive hubs.
- Develop materials for self-directed tours, including brochures, audio cell-phone programs, and website revisions.

Strategy 6: Create memorable places

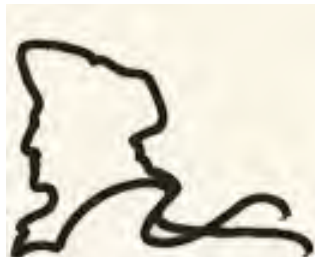
- The master plan recommends several locations for the creation of special places. The initial implementation step is further evaluation of the potential and design of those locations and possibly others.
- o Visitor Center Entrance Plaza, a short-range low-cost project to enliven the renovated Visitor Center.
- o New Activities Zone in the Valley of Concentration, a short-range project to be developed with infrastructure improvements of the DGS capital project and during early years of meadow naturalization.
- o Memorial Gateway, to be developed with revisions to Visitor Center parking and pedestrian arrival.
- o Taylorsville Promenade, mid-range project, to be developed in conjunction with adaptive-reuse planning for Taylorsville buildings.
- o Point of Embarkation and stepped slope along river side of Visitor Center, mid- or long-range.
- o Village Square, mid-range design and dedication of the square and installation of arrival focal point; with additional long-range walkway and planting improvements.
- o Tower Forecourt, mid- or long-range, to be developed following DGS capital improvements to Tower road and parking lot, in conjunction with planning for managed forest on Bowman's Hill.

8 next steps phasing plan

Strategy	Recommendation	Short-range Yrs 1-3	Medium-range Yrs 4-7	Long-range Yrs 8-15+	Responsible Parties Lead// Partners/
1 Implement sustainable long-term land management practices					
1a	Hire Land Manager to supervise land management practices	X			WCHP/ FWCP/PHMC
1b	Adopt a land management plan	X	X	X	PHMC/ DCNR/BHWP/ FWCP/Consultant
1c	Convert abandoned garden across from Hibbs House to lawn	X	X	X	WCHP/FWCP/BHWP/ Consultant/UMT
1d	Convert lawn to meadow	X	X	X	WCHP/FWCP/BHWP/ Consultant/UMT
1e	Expand managed forest to include all of Bowman's Hill	X	X	X	PHMC/ DCNR/BHWP
1f	Implement riverbank management practices	X	X	X	WCHP/DCNR/Riverkeeper/DRGP
1g	Develop river access paths & cleared river vistas				WCHP/DCNR/FWCP/Riverkeeper/DRGP
1h	Implement tree management practices	X	X	X	WCHP/ Consultant
1i	Implement wetland restoration		X	X	WCHP/ Consultant
1j	Stabilize Pidcock Creek			X	WCHP/BCPC/BHWP/WCSP
2 Preserve and maximize use of park buildings					
2a	Implement recommendations of DGS Capital Improvements Project	X			DGS//PHMC
2b	Relocate collections from Taylorsville buildings to Historic Core	X			WCHP
2c	RFP/leases for commercial adaptive reuse (Taylorsville buildings)	X			PHMC/FWCP/Commercial tenant(s)
2d	Planning/renovation/move-in for commercial adaptive reuse		X		Commercial tenant(s)
2e	Enabling legislation for Resident Curator program	X			PHMC/elected state officials
2f	RFP/leases for resident curator adaptive reuse and/or start deaccessioning		X		PHMC/FWCP/Resident curator(s)
2g	Planning/renovation/move-in for resident curator adaptive reuse		X		Resident curator(s)
3 Improve vehicular/pedestrian arrival & circulation in WCHP		X			
3a	Planning/permitting for clarified Lower Park arrival sequence	X			PHMC/ Consultant
3b	Eliminate Route 532 pull-off parking	X			PHMC/FWCP
3c	Upgrade Valley of Concentration (VofC) parking lot & its access roads	X			PHMC/FWCP/ Consultant
3d	South extension of VofC parking lot, with new ADA spaces		X		PHMC/FWCP/ Consultant
3e	Provide ADA parking in Visitor Center service lot and path to entrance		X		PHMC/FWCP/ Consultant
3f	Convert parking lot west of Visitor Center to meadow		X		PHMC/FWCP/ Consultant/UMT
3g	Convert Memorial Gateway (MG) to pedestrian plaza		X		PHMC/FWCP/WC2026
3h	Relocate River Rd. crosswalk on axis with MG & new PofE; move bus dropoff		X		PHMC/FWCP/WC2026
3i	Terminate General Mercer Road in cul-de-sac		X		PHMC/FWCP/ Consultant
3j	Retain River Road parking lot in Upper Park for overflow crowds	X			WCHP/FWCP/BHWP

8 next steps phasing plan

Strategy	Recommendation	Short-range Yrs 1-3	Medium-range Yrs 4-7	Long-range Yrs 8-15+	Responsible Parties Lead// Partners/
4 Enrich visitor experiences and improve recreational opportunities					
4a	Plan for comprehensive network of varied trails & linkages	X			PHMC/WCHP/DCNR/BHWP/WCSP
4b	Plan for connections between Lower and Upper Parks through programming, trails, waterways	X			PHMC /WCHP/BCPC/BHWP/WCSP
4c	Convert roads to trails in Lower Park	X			PHMC/DCNR
4d	Create trailheads in Lower and Upper Parks	X			PHMC/DCNR/D&L
4d	Develop river access & canoe/kayack portage paths in Upper Park		X		PHMC/DCNR/FWCP/Riverkeeper/DRGP
4e	Develop infrastructure for multiple activities--equipment rental, drinking fountains, use guidelines		X		PHMC/WCHP/DCNR/FWCP/D&L
4f	Upgrade picnic pavilions & associated restrooms		X		PHMC/WCHP/DCNR
4g	ADA renovation/expansion of Glover restroom		X		PHMC/DCNR
4h	BHWP develops new visitor center & associated facilities		X		BHWP
4i	Stormwater management educational programs	X	X	X	WCHP/BCPC/BHWP/WCSP
5 Comprehensive communication system to improve wayfinding & interpretation					
5a	Add wayfinding signage at towpath arrival points in Upper & Lower Parks	X			PHMC/DCNR /WCHP/D&L
5b	Prepare a new interpretive plan expanding on natural & cultural heritage	X			PHMC/FWCP/DCNR/Consultant
5c	Modify trails/ paths based on updated tour routes & storylines		X		PHMC/FWCP/BHWP/DCNR
5d	Plan a comprehensive way-finding system	X			PHMC/DCNR/D&L/WCSP/Consultant
5e	Provide landscape cues at arrival points & interpretive hubs	X			PHMC/DCNR/FWCP
5f	Develop materials for self-directed tours		X		PHMC/BHWP/FWCP
5g	Develop vehicular wayfinding to WCHP	X			PHMC/DCNR/PennDOT/PA Tourism
6 Create memorable places					
6a	Planning/design of special places	X			PHMC/DCNR/FWCP/BHWP
6b	Convert the Visitor Center entrance plaza into a gathering place	X			WCHP/FWCP/commercial vendors
6c	Develop new Activities Zone in Valley of Concentration	X			PHMC/DCNR/FWCP/UMT
6d	Develop Memorial Gateway as a pedestrian plaza		X		PHMC/DCNR/FWCP/UMT
6e	Develop Taylorsville Promenade, in conjunction with the adaptive reuse		X		WCHP/FWCP/Commercial tenant(s)/UMT
6f	Develop Point of Embarkation and stepped slope abutting Visitor Center			X	PHMC/DCNR/FWCP/Corps of Engineers/UMT
6g	Develop Village Square and arrival focal point		X		PHMC/DCNR/FWCP/UMT
6h	Develop Bowman's Hill Tower Forecourt			X	PHMC/DCNR/FWCP/BHWP



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appendix 1: organizing for sustainability

visitation and vision

Visitor Experiences, Opportunities, Programs, and Services

The Pennsylvania Historical & Museum Commission's Strategic Plan 2012 – 2017 identifies improving branding, cross marketing and aggressive programming to build a much larger membership base for PHMC and its operating partners as part of its vision for 2020. While the focus of this park master plan is on the physical aspects of Washington Crossing Historic Park, it is important to note that a basic principle of planning and design is that form should follow function and accordingly consideration of the historic and nature based programming and recreational opportunities in the park is integral to a park master plan. Research has found that programming is the most important correlate of park use. Meeting the needs of customers through effective programs is imperative for organizations such as historic sites, parks, museums and tourism destinations to survive and prosper in the 21st century.

Park Visitation

Washington Crossing Historic Park has three focus areas for park visitation: cultural heritage (history), natural heritage, and recreation. Interviews and research on the use of the park revealed dramatic changes in visitation over the history of the park.

Early Days of Park Use

Washington Crossing Historic Park has been a destination for people from around the world who have visited the park as a “once in a lifetime” experience as well as a close-to-home resource for people to enjoy daily, weekly or seasonally. Between 1917 and the early 1950s, the park grew from 100 acres to nearly 500 acres, increasing the recreational opportunities at the Park. In interviews for this park master plan, senior citizens and baby boomers fondly remembered the days when thousands of people flocked to the park to picnic, swim, enjoy nature, camp, and reflect upon the important historic revolutionary war events that occurred here. Use of the park by scouts was particularly important to both scouts and those who remember the park as an important venue for scouting.

Remarkable Park Visitation

Peter Osborne conducted extensive research for his book, [No Spot in this Far Land is More Immortalized: A History of Pennsylvania's Washington Crossing Historic Park](#). In it, he describes park visitation as being remarkable. From 1950 to 1970, over a million people visited the park annually. In the mid-1950's, the park was experiencing close to two million visitors annually. The highest counts reported in the biennial 1968-1970

years at 4,202,000. For special events such as Memorial Day, visitation could have been as high as 25,000 people in a single day .

In addition to activities that people enjoyed at their own discretion such as swimming, picnicking and ice skating, the park offered a host of activities including dances, concerts, egg hunts, historical society events, sports events, dog shows, family reunions, church gatherings, and school educational programs as well as natural and horticultural programs in Bowman's Hill Wildflower Preserve.

Declining Park Visitation in the 1970's

Park use and visitation at Washington Crossing Historic Park has dramatically declined since the 1970's. National trends, including those shown by the National Park Service, indicate increasing visitation in parks close to where people live with decreasing visitation in more rural or remote areas far removed from population centers. Although the Commonwealth carried out plans to accommodate millions of visitors anticipated for the celebration of America's Bicentennial in 1976, the expectation of millions of visitors to the park was never realized. In 2009, state budget cuts resulted in very limited park operations resulting in an incorrect public perception that the park was closed.

Present Usage

The park is in the process of re-building its visitation. The formation of the Friends of Washington Crossing Park in 2009 and the grand re-opening of the Visitor Center in 2013 were significant and highly symbolic, demonstrating deep public support and love of Washington Crossing Historic Park as well as a state commitment to the restoration of park facilities.

Park visitation centers on three core elements:

1. Historic and educational programs, events, activities, and tours in the historic buildings and Bowman's Hill Tower;
2. Self-directed recreational use of the park for cycling, walking, dog walking, picnicking, special events, enjoyment of the scenic beauty, soccer league play, painting, reading, photography, bird watching, fishing and other activities; and
3. Natural and horticultural programs and trail use at Bowman's Hill Wild-flower Preserve.

Historic and Educational Programs, Events, and Services – The Washington Crossing Historic Park Site Administrator develops a monthly Park Visitation and Revenues Report. This includes park admissions for Bowman's Hill Tower, the Lower Park, Thompson Neely House, school groups, complementary visitors, commercial tours and rentals of the

pavilions, campground, and special park uses such as photography. In 2012-2013, park visitation for organized programs, events, tours etc. was about 41,000. By far the biggest event is the re-enactment of the Christmas Day Crossing and its dress rehearsal in early December. Other signature events include Washington's Birthday Party and the sheep-shearing event in the spring. The Friends of Washington Crossing Park have developed the annual Brewfest as a major fund-raiser for the park. Widely regarded as one of the finest in the nation, the Brewfest regularly sells out with an attendance of about 2,700. Visitor experiences in the Visitor Center are limited by the current exhibition area, which is being revamped for the newly renovated facility. Park staff also facilitates programs offered by other organizations by providing special use permits and the facility support needed for a successful event.

- **Recreational Usage of the Park** – Typically an anecdotal formula on estimating the recreational use of parks without direct counts equates to a ratio of 72 percent general, self-directed use to 28 percent scheduled, organized use. If applied here, visitation of 18,000 would equate to about 64,285 annual estimated visitation. However, other numbers are available to help estimating park visitation. According to the Rail Trail Conservancy's **2012 User Survey & Economic Analysis** report, the section of the D&L trail from New Hope to Morrisville through Washington Crossing Historic Park had 112,942 visits in 2012, second only to the Jim Thorpe area along the entire 165-mile corridor. The Upper Makefield Newtown Soccer Club/ Patriots FC, has an annual registration of 700 players on 65 teams, 300 adult volunteers and an e-mail list of 1,278. The D&L Marathon had 1,000 participants, which were counted in the **Park Visitation and Revenues Report** as a park rental. Requests to the Friends of Washington Crossing Park and the Visitors Center from visitors and callers who ask for the following:

- To see all of the historic buildings,
- For more exhibits to be located in the Visitors Center,
- More recreational activities and things for children and families,
- Rent kayaks and bicycles,
- Food and beverages, and
- Information on what to do here.

Economic Benefit of the Trail

The annual economic benefit of the D&L Heritage Corridor trail from New Hope to Washington Crossing, traversing Washington Crossing Historic Park, is \$5,914,711. This includes the purchase of soft goods such as food and beverages by trail visitors, as well as overnight stays.

Source: Trip Umbach, The Economic Impact of National Heritage Areas, 2003

- **Bowman's Hill Wildflower Preserve** – The Preserve is a membership-based organization that has several thousand people participating in its programs annually. The programs range from a gala and the annual environmental symposium that attracts professionals from far and wide to nature-based reading programs, the arts, school groups, environmental education, stewardship, and plant sales. Programs are for all ages. Between 100 and 200 people per month participate in the daily trail walks provided by volunteers. About 150 people volunteer for various programs and events. The Preserve aims to improve visitor amenities and has proposed replacing its dysfunctional Visitor Center. The new center would enable the Preserve to provide more public service.

Future Vision

Programming has become largely a function of the Friends of Washington Crossing Park due to the limited state budget for the park. Two of the four PHMC park staff are dedicated to park administration and curatorship of historic objects. The other two staff are dedicated to park maintenance. Hence the Friends have largely assumed responsibility for programs, events and tours. The planning process for this park master plan found widespread support for the need to build a constituency for Washington Crossing Historic Park. Through excellent visitor experiences, programs and services, PHMC staff and the Friends of Washington Crossing Park along with many other partners, can foster present and future generations of park stewards. With a cadre of park supporters borne of memories of positive visitor experiences enjoyed in this park, Washington Crossing Historic Park can achieve the status as a world class, internationally significant destination and a crown jewel of Pennsylvania. Addressing programs and services ties directly to the [PHMC Strategic Plan](#) and should be an important part of the park master plan. The PHMC Strategic Plan includes the following actions related to visitor experiences, customer service, and programs:

- Action 5.1: Evaluate program needs to enable efficient operations and communication.
- Action 5.2: Identify PHMC programming that overlaps with the goals and objectives of this Plan.
- Action 5.3: Develop a mechanism to evaluate BHP customer service and respond to feedback.
- Action 5.4: Conduct ongoing external evaluation of BHP programs.



Left: Crossing
Re-enactment
right:
Brewfest
(TRP)



appendix 1: organizing for sustainability

sustainable operation

A Leap Forward

The Friends of Washington Crossing Park recently secured a new Director with the credentials, expertise, and vision to help the Friends and PHMC collaboratively develop a comprehensive approach to programming and partnerships in the area of historic, cultural and natural resources, and recreation. The vision that the Friends Group has had about using programs to increase park visitation and support is underway. While the signature event of this park will remain the Re-Enactment of General Washington's Christmas Day Crossing, the Friends are committed to a full-year round slate of programs, events, and activities designed to provide positive memorable visitor experiences. Ideas rising to the top include an interpretive plan featuring a variety of tour experiences, information on what to do in the area, a farmers' market, the performing arts, studio arts including painting and exhibits, an artists-in-residence- program, health and fitness using the great outdoors, family events, outdoor film series, and comfort services such as food and beverages in collaboration with the business sector and local private enterprises.

Summary and Implications

Washington Crossing Historic Park is unusual in the PHMC system as it is one of only three parks among the agency's 23 properties and the second largest at 500 acres. It is also unusual in that it not only serves visitors who come here on a single visit to learn about the ten-day campaign and Washington's Crossing of the Delaware, but it also serves many people who use the park on a daily, weekly, and seasonal basis. Building support for Washington Crossing Historic Park through programs and services that would provide excellent experiences for all types of visitors requires the development and implementation of:

- An interpretive plan for the park.
- An exhibit plan for the Visitor Center.
- A program and event plan for the park as a whole.
- An advertising and promotional program to increase awareness about the park and what people can do here.
- A formal evaluation program to document visitor experiences and how to enhance them in the future.

The development of these plans need to be visionary. Researching successful initiatives in other realms such as leading museums, customer service programs, parks of different types including urban, historic and nature-based can help to spark creative ideas. Achieving the status of a world-class park is possible here and that idea should

be a guiding principle in planning visitor services for tourists as well as for regular users of the park. Not everything can be accomplished at once. This will require a sustained effort over time and as a mix of public and private resources can be tapped.

Organization

The organization of Washington Crossing Historic Park has undergone numerous changes since the park's inception. The park has been under the jurisdiction of the following agencies:

Pennsylvania Forests and Waters,
Pennsylvania Bureau of State Parks, and
Pennsylvania Historical and Museum Commission.

Created in 1945, PHMC is the official agency of the Commonwealth for the conservation of Pennsylvania's historic and natural heritage. The powers and duties of the Commission fall into these principal fields: care of historical manuscripts, public records, and objects of historic interest; museums; archaeology; publications; historic sites and properties; historic preservation; geographic names; and the promotion of public interest in Pennsylvania history.

In July 2013, legislation was passed initiating another organizational change. It calls for two state agencies, the Pennsylvania Historical and Museum Commission and the Pennsylvania Department of Conservation and Natural Resources to work out an agreement about how to manage Washington Crossing Historic Park. DCNR's mission is to conserve and sustain Pennsylvania's natural resources for present and future generations' enjoyment.

In addition to the state organizations that were charged with the responsibility for the park, the park also had the Washington Crossing Park Commission that evolved over the years from 1917 until 1988, when it was abolished by the Pennsylvania legislature. Other support organizations that were formed to support the park included the Washington Crossing Association, the Washington Crossing Foundation and currently the Friends of Washington Crossing Park and Washington Crossing 2026. The formation of additional groups in support of the park continues to this day, as team members learned during the outreach interviews.

While the history of the park's organizational structure and the formation of various support groups is fascinating, for the purposes of this park master plan, the salient actions regarding the park's organization and the park master plan require looking forward toward creating long-term financial sustainability for Washington Crossing Historic Park include the following:

- Working out an agreement about managing Washington Crossing Historic Park collaboratively between PHMC and PA DCNR.
- Developing Strategic Plans for the Park and for Friends of Washington Crossing Park. This would include the relationship of the Friends to park administration and management. Clear delineation of roles and responsibilities is needed.
- Consideration of innovative approaches to the organizational structure, planning, operating, managing, and funding the park.
- An assessment of policies and procedures to determine how the policies can be structured to ensure optimal effectiveness and efficiency in park operations.
- As groups continue to emerge to support Washington Crossing Historic Park, policies should be put into place to determine if these organizations are appropriate and consistent with the park mission and goals, the relationship of the group to the park and other park support organizations and the sanctioning of the organization as a partner of Washington Crossing Historic Park.
- The park master plan should provide direction for site improvements, projects, and programs being suggested or advocated by park support groups. The strategic plan to follow this master plan should provide direction for educational and recreational programs and projects.

Collaboration: A PHMC Goal

PHMC's **Strategic Plan 2012 – 2017** contains a goal with recommendations to collaborate with other state agencies as follows:

Identify opportunities for collaboration with state and federal agency programs to achieve common goals and objectives.

- Action 2.1: Compile a database of all state and federal agency programs, policies, and funding streams related to historic and cultural resource management in Pennsylvania.
- Action 2.2: Collaborate to implement Pennsylvania's **Statewide Historic Preservation Plan, 2012–2017** and the long-range plans of other state agencies.
- Action 2.3: Identify mutual benefits to state and federal agency programs and budgets that can be achieved by cooperating and coordinating on preservation-related issues.
- Action 2.4: Develop a template for use by state agencies to identify significant cultural and historic resources in state ownership.

financial sustainability

Financing

Washington Crossing Historic Park has had its struggles. In 2009, severe budget cuts resulted in staff furloughs and extremely limited park operations. Getting by with a lot of help from their Friends, the Park now operates with four PHMC staff, down from 26 at peak operations years ago. In response to the severe budget cuts in 2009, a group of committed citizens formed the Friends of Washington Crossing Park to keep the park open and operating with respect to its important heritage and resources. The Friends of Washington Crossing Park employs nine people, including a professional director and tour guides.

Washington Crossing Historic Park State Budget

The park has a one-time capital budget of \$7.8 million. These funds are crucial to the restoration of important historic structures.

It is important to note that it is relatively easier to secure capital funding than it is to obtain funds for the ongoing operation and maintenance of public facilities. While bricks and mortar projects are exciting, the real challenge is the continued maintenance after the ribbon cuttings.

The **Washington Crossing Historic Park General Government Actual Spending** report for 2008, the last year before the park experienced major cuts, was \$793,701. In July 2012 to July 2013 the budget was \$525,325. This represents a 34 percent reduction in five years.

At the height of park operations in 1970, the biennial budget for park operations was \$511,938. Estimating that about one half of this was spent in each year would equal \$255,969. The dollar value of \$255,969 in 1970 adjusted for inflation in 2013 would be \$1,582,316 in 2013 more than three times today's park budget.

Friends of Washington Crossing Park

The Friends raise funds to support the park. In 2012, the net liabilities and assets of the group were \$274, 635 and in 2013, they were \$337, 235. Combined with the PHMC budget, the total park budget in 2012/13 was \$862,650 which was more than in 2008 but less in actual purchasing power. The funds are generated through grants, contributions, admissions and tours, fundraising, special events, members, and program revenue. All funds go back into the park for staff, programs and park improvements. No funds go to

appendix 1 organizing for sustainability

maintenance directly, although the Friends provide lunches to support the use of Bucks County Corrections prisoners, who perform community service in the park in the area of park maintenance. The community service prisoners are important sources of labor to maintain the park. As a 501(c) 3 organization under the code of the Internal Revenue Service, the Friends of Washington Crossing are a private non-profit organization. They comply with IRS regulations and conduct an annual audit by a private accounting firm to ensure that they comply with all regulations and acceptable accounting practices. The audit is available for review.

Summary and Implications

When the park was operating at its peak, there was a staff of 26. Today, the PHMC staff numbers four. That includes an administrator, a curator, and two maintenance workers. Fortunately, the Friends of Washington Crossing Park have assumed the financial responsibility for programming, advertising and promotion. They do not provide general maintenance funding.

Over the lifetime of a park, about 75 percent of its cost is in maintenance. Concern about park maintenance emerged as a theme throughout the planning process. Plans for maintaining the improvements need to be undertaken as part of the process of implementing these improvements..

Costs for park maintenance vary among park and facility types. In southeastern Pennsylvania, park maintenance costs for community parks range from \$1,500 to \$3,000 per acre annually. This would translate into \$549,00 to \$1,098,000 for the 366 acres of the park not including the 134 in Bowman's Hill Wildflower Preserve. The ratio of park maintenance workers in high functioning park systems is about one worker for every 20 acres, which would be about 18 workers in Washington Crossing Historic Park. If the park were sectioned off into passive, nature-based areas vs. developed areas, benchmarks could include \$500 per acre annually for the passive areas and \$3,000 on up into the tens of thousands of dollars for showcase features such as the Visitor Center with its plaza area and historic hub in the Lower Park.

Even without these comparisons, it is clear that the park needs more maintenance support than two professionals plus community service workers.



Above: cyclists

Middle left and bottom right: Brewfest in Upper Park campground (TRP)

Lower left: hospitality at Visitor Center grand opening (TRP)

appendix 2: civil engineering considerations

introduction

Appendix 2 presents civil engineering reviews undertaken by Stantec to support the Master plan. Stantec reviewed the regulatory context for existing domestic water and sewer systems, and stormwater management and provided a synopsis of current permits. Stantec also outlined preliminary civil engineering issues raised by recommendations in this Master Plan and listed relevant regulatory reviews, particularly for the proposed relocation of the Point of Embarkation.

The primary infrastructure issue is a potential role of the excess capacity of PHMC's sewage treatment plants in compliance by Upper Makefield (UMT) under its PA Act 537 Sewage Facilities Plan. [The plant in Lower Park was re-rated by engineers Spots Stephens McCoy to reduce its current capacity.] With the exception of a few recently developed subdivisions, properties in the township rely on on-lot sewage treatment systems. As the Master Plan process was underway, UMT was investigating some of those which might be inadequate or malfunctioning. Newspaper articles included in this section summarize UMT's interim findings that systems which they had reviewed were performing adequately, but that some still remained to be evaluated. In Stantec's experience, recent developments (since 1990s) with on-site septic systems usually are required to designate a secondary area where a redundant system can be installed in the event that the first one fails, but the study seems not to have addressed that issue. Historically, a failed system is typically a sign of bigger issues. A pump and haul approach may be needed until a permanent solution is found.

For stormwater management and flooding, Stantec cites general approach measures from the Army Corps report¹ related to the flooding along the Delaware River basin.

Due diligence performed to date by Stantec is summarized in the format of 2 memoranda, with cited documents attached. The memo dated 5/10/2013 is a summary report on Stantec findings. The memo dated 7/9/2013 is an annotated list of files reviewed at the Pennsylvania Department of Environmental Protection (DEP).

The following summary report was provided by Stantec, citing the Army Corps report related to the flooding along the Delaware River basin. Along both the Delaware River and Pidcock Creek, upstream water management practices and land use outside the park, particularly ongoing suburbanization, are major factors contributing to flooding and riparian erosion within WCHP. Recommendations to work in collaboration with other parties toward long-term improvement are therefore the underlying framework for any suggestions that address symptomatic relief within WCHP.

Editor's Note: information shown in [brackets] is added based on updates from PHMC

¹ U.S. Army Corps of Engineers, Delaware River Basin Comprehensive New York, New Jersey, Pennsylvania, Maryland and Delaware Interim Feasibility Study for the Delaware River Watershed Flood Management Plan, Volume I, 09/2010.

Report Section Relating to Engineering Back-Up of Recommendations

Stantec summarized the following pieces of information in support of the master planning recommendations:

- o Upper Park:
Mitigating Erosion of Pidcock Creek: Due to the fact that the Pidcock Creek in the Upper Park is located at the lower end of the Pidcock Creek watershed, and along the middle section of the Delaware River, the Corps. (See attached report) concluded that the region should focus on natural and non-structural solutions to mitigate flood damage, but use traditional structural approaches where appropriate. In the case of Pidcock Creek this would mean that the focus should be on upstream stormwater control measures (preferably starting at the headwaters of the creek) and also provide additional stabilization below the canal dam. There may be an education opportunity near where the creek enters the river to explain the watershed and what is being done to preserve the integrity of the creek and the river. The park might be able to apply for a grant (i.e. Growing Greener) to install stormwater measures within the upper watershed of the creek.
- o Lower Park:
Stormwater Management: Through the removal of pavement surfaces and conversion of paved driveways to pedestrian trails the park's stormwater run off will lessen, reducing in turn the burdens on inlets and piping on site. Additionally, this effort might be used as a stormwater "credit" for future development projects in the park. Furthermore, converting the paved parking lot across the street from the Visitor Center to an overflow meadow-surfaced parking area, will also result in a more sustainable landscape.

Park Infrastructure

The other items researched by Stantec related mainly to the park's infrastructure. The DEP research helped shed light on the wastewater treatment and well water infrastructure conditions. This infrastructure (especially the wastewater treatment) should be evaluated as well to potentially save on costs and contribute to the overall master plan.

For example, [while the Visitor Center was undergoing renovation], the treatment plant in the Lower Park was converted [temporarily] to a "pump and haul" program, meaning it did not actually treat the sewage since the flows are lower than designed and it was determined that it is not worth the cost to operate the plant given the low flow volumes. The sewage was hauled offsite to a Township's treatment plant for treatment. [Although the Lower Park Wastewater Treatment system is back on line, WCHP still relies on pump and haul due to infiltration and inflow issues in the Upper Park.]

appendix 2: civil engineering considerations

Memo

To: Marianna Thomas, MTArchitects
From: Michael J. Connor, Stantec
File: 174811000
Date: May 10, 2013, updated 7/16/13



Reference: Washington Crossing Master Plan

Below is a summary of our current research for the Master Planning effort:

SEWAGE

Regarding Long-term Plans for On-lot Sewage Disposal

As a rural, residential community, Upper Makefield's residents are served mostly by on-lot sewage disposal systems and wells. Public sewer and public water serve the 3 residential developments of Heritage Hills, Traditions, and Lakeside. Dutchess Farm is also served by a centralized sewer system. The Township maintains these public facilities. The adequacy of both the public and private sewage disposal systems within the township must be periodically reviewed. To do that requires formal, comprehensive updates to the township's PA Act 537 Sewage Facilities Plan, first adopted by Upper Makefield officials in 1978. By 2010, an increasing number of on-lot treatment systems were malfunctioning, creating potential public health concerns.

To comply with Pennsylvania's laws regarding sewage facilities, Upper Makefield must address malfunctions of a number of on-lot sewage systems as identified by the Bucks County Health Department.

Residents from the Dolington and Taylorsville areas were invited to informational meetings in early 2013 to discuss on-lot sewage disposal system problems and possible solutions in their area.

Although Upper Makefield is responsible to the state to review and update its ACT 537 Sewage Facilities Plan, the Bucks County Health Department has the regulatory authority for management of on-lot sewage systems within Upper Makefield. Act 537 is the short name for the state law, administered through the PA Department of Environmental Protection (DEP) that requires municipalities to assure that the township can address its long-term sewage disposal needs.

Early reports from the Bucks County Health Department indicated that the Dolington and Taylorsville areas of the township had a significant number of on-lot sewage system problems which would require the evaluation and implementation of alternatives to address the long term sewage disposal needs of these areas.

Upon direct review of the Health Department records, there are a significant number of inconsistencies between the Health Department's initial summary information provided to the township and actual records found at the Health Department. The inconsistencies have been resolved for the Dolington area; however, there are still issues regarding the Taylorsville area. To resolve the inconsistencies in the Taylorsville area records, Upper Makefield's Board of Supervisors has authorized a township-sponsored on-lot sewage system survey be conducted in the Taylorsville area during 2013 to assure an accurate assessment of the systems.

Stantec has spoken both with Tom Zarko, PE, the Township engineer for Upper Makefield Township, as well as Don Meadows of the Bucks County Health Department.

Regarding Lessening of sewage treatment costs

Option 1 - Make PHMC's sewer system and treatment a public utility and treat UMT sewage from nearby developments.

1. **Issues:** UMT does not wish to take on management of facilities. Treatment plants would need to expand (most likely). One or more new pump stations would likely be needed to convey sewage under the canal and tie into existing sanitary conveyance systems within the Lower Park.

Option 2 – Coordinate with PA DEP and Design consultant to upgrade plan to make more efficient and sustainable.

6/10/2013 Update: Tom Zarko confirmed that the septic survey did not involve park areas. Taylorsville however, was included in the survey.

7/16/2013 Update:

The township sewer engineer Tom Zarko and consultant John Dudish presented their conclusion that there are no major sewage problems in Taylorsville section at a special Upper Makefield supervisors meeting in October 2013. Dudish, of Penn's Trail Environmental, said his firm surveyed 21 of the 36 properties in the section and found no visible evidence of malfunctioning septic systems. The section, like all of Upper Makefield, does not have public sewer service. On-site solutions were expected for properties excluded from the survey due to lack of owner consent.

STORMWATER MANAGEMENT & FLOODING

Regarding Army Corps of Engineers Report (September 2010)

The purpose of the feasibility study is to consider problems associated with flooding and other allied water resources problems in the Delaware River Basin, and to formulate and evaluate potential solutions to these problems. Analytical tools will be developed which may aid in the recommendation of a series of actions. Overall the report

does not detail the park area specifically. Instead the report focusses on a more broad brush picture to identify major areas of flooding and possible broad based solutions-

Reservoir Measures: (1) Work with reservoir operators to develop “Spill Mitigation Programs” that would utilize the spilled water for beneficial uses. (2) Use the National Weather Service Advanced Hydrologic Prediction Service (NWS/AHPS) forecasts to estimate the quantities of spilled water that could be used downstream.

Non-Reservoir Measures: (1) Focus on natural and non-structural solutions to mitigate flood damage, but use traditional structural approaches where appropriate. (2) Improve and upgrade the flood warning system for the Basin. (3) Facilitate education and outreach programs for emergency management officials. (4) Create a “Riparian Corridor Integrity Trust Fund” to preserve and protect the floodplain. (5) Implement new and innovative techniques for storm water management. (6) Explore opportunities for additional multipurpose storage facilities. The Task Force developed six priority management areas which are intended to serve as guiding principles for the future: (1) Preserve and restore floodplains where possible. (2) Be prepared for floods. (3) Help people protect themselves from flood hazards. (4) Prevent adverse impacts from development and redevelopment. (5) Acknowledge the value of structural flood control measures. The Task Force, in cooperation with the other partners, will continue to promote these principles and specific recommendations for the Delaware River Basin.

At this time it is Stantec’s recommendation to evaluate areas of erosion near Pidcock Creek within the upper park area. Given that any erosion and flooding issues result from surcharging of the Delaware River, or from upstream areas within the Pidcock Creek Watershed, the lowest hanging fruit is to focus on Pidcock Creek.

[Three eroding creekside areas are of particular concern to PHMC :

1. From the stone arch bridge in BHWP to the mill dam, including the sharp bend in Pidcock Creek at the foot of the Bowman’s Hill.
2. From mill dam to River Road bridge, where stormwater overflows and undercuts the end of the undersized dam
3. From Delaware Canal to the river, where spillway overflow at the bend erodes the north creek bank]

Regarding Stormwater Management

Currently, the park is not required to install stormwater management systems unless they are proposing a development project. Internal renovations of buildings, minor ADA improvements, pavement resurfacings, landscaping or planting projects, etc. do

not trigger stormwater management. [A new stormwater management facility for the renovated Visitor Center was installed under the flagpole-lined entrance plaza in 2012.]

This being said, it may be helpful to identify areas of erosion or stormwater maintenance on the property. In this way we can eliminate long-term maintenance of ongoing problems in the park.

TRAFFIC & ROADS

General recommendations

1. Eliminate any unnecessary roadways to eliminate future maintenance. Convert to gravel paths or meadow areas
2. Re-evaluate River Road Crossings for Pedestrians, with sp2. Re-evaluate River Road Crossings for Pedestrians, with special consideration to the frontage along the Visitor Center in the Lower Park.

LIGHTING

General recommendations

1. Convert lamps to LED
2. Retrofit poles to fit with battery and solar panels
3. Develop a simplified maintenance plan for this alternative technology for ease of use and replacement of lighting.

Stantec Consulting Services Inc.

Michael J. Connor, PE, LEED AP
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Attachment: N/A

cc. George C. Cressman Jr., PE

appendix 2: civil engineering considerations

The following excerpts from the Courier Times webpage, are noted to have been updated 12/20/ 2013

Special meeting focuses on Taylorsville septic systems

By Chris English Staff Writer Chris English; 215-949-4193; e-mail: chenglish@phillyburbs.com; Twitter: [Twitter.com/couriertimes](https://twitter.com/couriertimes) | Updated 2 months ago

The first step in a long process for solving septic system problems in Upper Makefield's Taylorsville section unfolded during a special township supervisors meeting Wednesday night.

Because records from the Bucks County Health Department are unreliable, according to township water and sewer engineer Tom Zarko, he has recommended that Upper Makefield hire a professional firm to survey all 35 properties in the Taylorsville section.

Professionals would check the septic systems and wells on the properties for any problems, said Zarko. Upper Makefield has no public water or sewer system, so sewage disposal and water supply are handled individually by each property owner.

At Wednesday's meeting, Zarko, the supervisors and solicitor Mary Eberle laid out what they knew about problems in the Taylorsville section and urged residents of the section to consent to having their septic systems and wells checked.

"The more data we have, the more accurate assessment we can make of the problems in Taylorsville and I think that is in everyone's best interest," said Zarko.

He said health department records have shown seven properties in Taylorsville with septic system problems, but the professional survey will give a much more complete and accurate picture.

Howard Nenner, who owns a Taylorsville property where he operates an insurance agency, said he consented to the survey even though he just had his septic system and well checked and there are no problems.

"I think the supervisors have our best interests at heart," he said. "Of course, I'm concerned about what the eventual solution might cost me. Who wouldn't be? I don't want to end up having to pay to help fix a problem the property next to me might have."

The supervisors said they would do their best to prevent that kind of situation, but that it's much too early in the process to make statements about who will end up paying for whatever solutions are reached. Township officials said they would research grants that might be available and Hal Pitkow and Toni Donina, who jointly own a Taylorsville property, said they most likely would consent to having the septic system and well checked.

"We sure want to know if any problem one of our neighbors might be having is affecting our well," said Donina.

Faulty septic systems have the potential to leak sewage into groundwater and nearby wells, which makes the situation a matter of public health the township must deal with, said Supervisor Chairman Dan Rattigan.

The township must spell out how it's dealing with septic system problems in the Taylorsville and Dolington sections as part of the update of its Act 537 plan required by the state Department of Environmental Protection, said Zarko. The plan hasn't been updated for 35 years and the township is under pressure from the DEP to get it done, said Zarko and Rattigan.

"We have an obligation as a township to come up with a solution," said Rattigan. "If not, the DEP might come in and force a solution on us."

www.phillyburbs.com/news/local/courier_times_news/special-meeting-focuses-on-taylorsville-septic-systems/article_59e15990-c13c-50b0-b884-01004cf84d57.html 2/2

No major sewage problems in Taylorsville section

By Chris English Staff Writer Chris English; 215-949-4193; e-mail: chenglish@phillyburbs.com; Twitter: [Twitter.com/couriertimes](https://twitter.com/couriertimes) | Updated 2 months ago

There are no major sewage problems in Upper Makefield's Taylorsville section.

That was the conclusion of township sewer engineer Tom Zarko and consultant John Dudish during a presentation Monday night at a special Upper Makefield supervisors meeting.

Dudish, of Penn's Trail Environmental, said his firm surveyed 21 of the 36 properties in the section and found no visible evidence of malfunctioning septic systems. The section, like all of Upper Makefield, does not have public sewer service.

Dudish said his firm didn't receive permission to survey the other 14 properties, but Zarko said he didn't believe there were any major problems among them that would require a major expenditure on the part of the township.

Some issues with two of the properties whose owners didn't consent to the survey can probably be handled by on-site solutions, said Zarko. A third property whose owner didn't consent, a business, has a sewage holding tank that is very old but appears to be maintained properly, he added.

Zarko said one of his recommendations is to distribute educational materials to property owners in Taylorsville about water conservation and regular septic system maintenance. He said the state Department of Environmental Protection must approve any actions taken by the township, even if minor in nature.

A similar process of surveying septic systems in an attempt to pinpoint any problems is occurring in the township's Dolington section but that survey is not complete, said Zarko and Dudish. Any action there must also be approved by the DEP, they added.

"A very quick meeting and good news," said Supervisor Chairman Dan Rattigan at the end of the half-hour meeting.

m.phillyburbs.com/news/local/courier_times_news/no-major-sewage-problems-in-taylorsville-section/article_9d5f317e-af6b-56c0-b12f-80a25f1482be.html?mode=story 1/2

appendix 2: civil engineering considerations

Memo

To: File
From: Michael J. Connor
Stantec
File: 174811000
Date: July 9, 2013



Reference: Washington Crossing – Pennsylvania DEP Due Diligence

Below are the findings of the files for the Washington Crossing Upper & Lower Park areas. The general findings for the Upper & Lower Parks were: NPDES permits for Sewage Discharge, Sewage Plant Operations Records, Water Quality Permits for Pump Station and Waste Water Treatment Plant (WWTP) upgrades, and Public Water (Water Well) Records. No records or permits exist for stormwater management infrastructure.

File #0045009 (Relates to Lower Park WWTP NPDES Sewage Discharge Permit)

- Lower Park WWTP constructed in 1981.
- July 12, 2009: NPDES Permit renewal for discharge of treated sewage. Plant was designed for 36,000 gallons per day. Approximately 2,000 gallons per day (GPD) monthly flow has been the average. PHMC has been using “pump and haul” program because it has been difficult to maintain the treatment process with such little sewage flow. New Visitor’s Center project flows are 2,000 GPD. [Total project flows to treatment plant during Visitor Center renovation were 5,000 GPD so pump and haul continued then.] Design flow lowered to 9,000 GPD (Note: flows over 10,000 GPD require approval from the Delaware River Basin Commission)
- May 24, 2012: PHMC states in letter to DEP that it recommends using portable generator to run WWTP, if needed, to reduce operating costs.

File #0045013 (Relates to Lower Park WWTP Operations)

- Inspection Logs note low flows to WWTP and pump and haul in effect [while Visitor Center was off line.] Sewage pumped from wet well. [The Upper Park WWTP needed renovation.] Hauled sewage held for Wildflower Preserve pump station (PS), General Moore PS, Canal Bridge PS, and Washington Crossing Upper & Lower pump stations. Clemens was the contractor on record for this pump and haul service.
- Inspection Logs note the Upper Park was approved for WWTP and pump station upgrades on June 22, 2011.

File #0072091 (Relates to NPDES for WWTP in Upper Park)

- Renewal Permit which authorizes discharge from WWTP. Permit became effective February 1, 2009 and expires midnight on January 31, 2014. Permit allows the discharge of 25,000 GPD of treated sewage into the Delaware River.

- Notes treatment plant has not been in operation since 2005. Since then the wastewater has been pumped from the wet well at the site and hauled off-site for disposal. Plant is currently being upgraded to meet permit requirements.

File #0072107 (Relates to Operations for WWTP in Upper Park)

- January 13, 2006: Letter from Engineer from Spots, Stevens, and McCoy to Steven O’Neil at PA DEP states that on December 14, 2005 all wastewater from both treatment plants ceased to be discharged to the Delaware River, and was removed by George Allen and Son, Inc. and hauled to Hatfield Township Municipal Authority for treatment. Letter states that prior to December 14, 2005 wastewater had been removed from the upper system only.

File #0073521 (Relates to Water Quality Permits for Pump Station and WWTP upgrades in Upper Park)

- June 22, 2011 Water Quality Management Permit granted by DEP. This work included replacing 4 pump stations with new pump stations and upgrading the Washington Crossing Upper Park WWTP and Lower Park WWTP pump stations. File notes that modifications to the WWTP will result in an overall reduction in the treatment plant’s hydraulic capacity. Steel of treatment plant tanks cleaned, repaired, painted, and modified. A carbon addition system is incorporated into the plant design to help sustain biota during off-season and low flow periods. The WWTP pump station wet well will be upgraded with new wiring, pumps, pipe, and appurtenances. The control building will be upgraded with modern controls.
- Pump Stations being replaced: Wildflower Preserve, General Moore, Neely-House/Maintenance Building, [Victorian-Neely House] and Canal Bridge.

File #0109163 (Relates to Water Wells in Upper Park)

- Mapping included of approximate locations throughout park.
- June 24, 2009 report notes no violations. Report also notes the following:
 - o Visitor Center [Lower Park] – No treatment of water from this well located behind the building.
 - o Flagpole restroom [Lower Park, off-line pending repairs to distribution system]-- Has 2 UV lights. Newly drilled well is noted as “left” of building. Noted as new well. Particulate filter to be changed annually.
 - o McConkey’s Ferry Inn [Lower Park] – Serves approximately 6 old historic houses. Occasionally serves pavilion restrooms when pavilion is rented out. Well located in basement crawl space. Hypochlorinator plugged in off pressure switch to well/pump.

- o Hypochlorinator plugged in off pressure switch to well/pump.
- o Thompson Neely – East side of River Road. Serves restrooms. No treatment. Sign on restroom doors stating water is not safe for consumption.
- o Nature Center – Bowman’s Hill Wildflower Preserve. Located near top of hill (slightly off center, have to go through gates). 3 hydro pneumatic pressure tanks. Hypochlorinator. Using bleach and should change to NSF approved chlorine.
- o [Victorian-Neely House, Andrassy House: individual residential wells.]
- o [Abandoned well between Mahlon Taylor House and Eliza Taylor House, Lower Park]

Stormwater Management

- No files exist which are related to Stormwater Management for either park.

Flood Plain / River Development Permitting

- No files exist. Stantec has been directed to discuss with the DEP regulator for water body related permits pertaining to potential relocation of boat launch at Lower Park. Stantec has initiated this discussion and is awaiting feedback from DEP on permitting, potential snags for permitting, and permit scheduling..

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Attachment: N/A

cc. G. Cressman
T. Dockwiler
A. Toole
Z. Cebenka

Memo

To: File
From: Michael J. Connor, PE, LEED AP
Stantec
File: 174811000
Date: July11, 2013



Reference: Washington Crossing – Embarkation Relocation Permitting

Below is a summary of findings based upon discussions with a Pennsylvania DEP Coastal Regional Management (CRM) Conservation Specialist regarding potential improvements to relocate the existing point of embarkation along the Delaware River shore of the Lower Park:

Depending on the Pennsylvania Historical & Museum Commission (PHMC) records of this project area, the project will either qualify for a General Permit 2, or a Joint Permit which would require approvals by both the Department of Environmental Protection (DEP) and the Army Corps of Engineers.

If PHMC determines that no conflict exists, then the project would qualify for a less intensive General Permit 2. This permit generally requires the following:

1. General Permit Registration form
2. General Permit Registration Fee & Chapter 105 Fee Calculation Worksheet
3. General Permit Registration form sent to the Municipality & County
4. PASPGP-4 Cumulative Impact Project Screening Form
5. Location Map
6. Color Photographs
7. Stream Name and Chapter 93 Classification
8. Project Description
9. Site Specific and/or Standard Drawings
10. Site Plan
11. Erosion & Sediment Control Plan (E&S Plan)
12. Written Directions to Project Site
13. Pennsylvania Natural Diversity Inventory (PNDI) receipt

appendix 2: civil engineering considerations

14. Request for a Bog Turtle Habitat Screening Form

Stantec Consulting Services Inc.

15. Activities which impact wetlands:

- a. wetland delineation
- b. wetland replacement plan
- c. check (where required for compensatory mitigation)

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16. Registration of a GP-11:

- a. E&S Plan
- b. Project Inventory Worksheet
- c. Bridge and/or Culvert Replacement Projects or Projects That Change the Waterway Opening Worksheet

Attachment: N/A

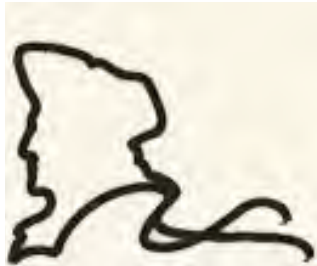
cc. G. Cressman
T. Dockwiller
A. Toole
Z. Cebenka

If PHMC determines that a conflict exists, then the project would qualify for a more intensive Joint Permit. This permit generally requires the following:

- 1. General Information Form (GIF):
- 2. Application Fee enclosed (see Section G):
- 3. Copies and proof of receipt - Acts 14/67/68/127 notification:
- 4. Cultural Resource Notice:
- 5. Pennsylvania State Programmatic General Permit -4 (PASPGP-4) Cumulative Impact Project Screening Form:
- 6. Bog Turtle Habitat Screening Form:
- 7. Pennsylvania Natural Diversity Inventory (PNDI) Search:
- 8. Plans:
 - a. Site Plan
 - b. Cross Sectional Drawings
 - c. Profiles
- 9. Location map
- 10. Project description narrative
- 11. Color photographs with map showing location taken
- 12. Environmental Assessment form

Note: We believe this project will qualify as a “Small Project” therefore not requiring erosion and sediment control plan approval, stormwater management approval, and a hydrologic and hydraulic analysis of the impacts of this project on the river. [The project may be ineligible for a GP-2 permit due to the Wild & Scenic River designation by the National Park Service of the portion of the Delaware River bordering the park.]

Schedule for Permits: The range of time for these permits can range from 3 months to 24 months typically, if the permit is granted.



appendix 3: building reuse analysis



Table of Contents

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Lower Park (McConkey's Ferry Section)

McConkey's Ferry Inn
Mahlon Taylor House
Taylorsville Store
Oliver Taylor House
Amos Taylor House
Frederick Taylor House
Elmer Buckman House
Abdon Hibbs House
John Frye House
Eliza Taylor House
Visitor Center

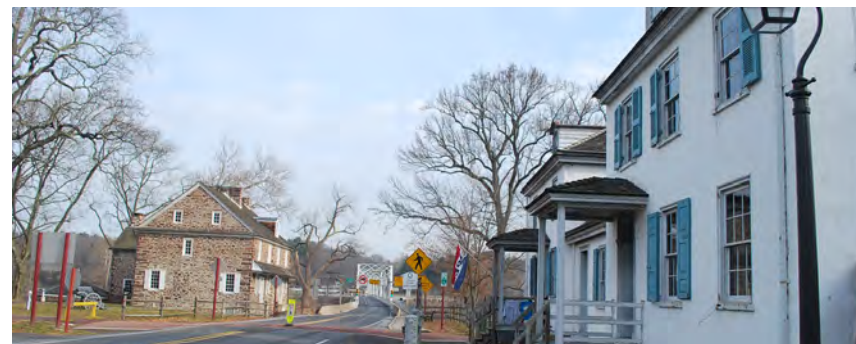
Durham Boat Barn, Root Cellar, Ice House, Blacksmith Shop

Upper Park (Thompson's Mill Section)

Thompson-Neely House
Thompson-Neely Barn & Outbuildings
Thompson's Mill
Bowman's Hill Tower & Visitor Center
Victorian Neely House
Andrassy House
Log Cabin, BHWP Headquarters

Visitor Amenities

Pavilions and Restrooms



Introduction

Of the 57 structures in Washington Crossing Historic Park, several serve directly to accommodate park programs and collections. Others offer opportunities for renovation and adaptive reuse by long-term tenants. This appendix addresses major issues for occupancy, focusing on available spaces within. It contains gross square foot floor areas and floor plans. Where known, it summarizes previous building uses. It highlights issues for reuse. It assumes that renovation of the historic buildings will comply with the Secretary of the Interior's Standards for Rehabilitation.

This appendix does not address exterior restoration and repair needed for occupancy, which were evaluated separately, in the Enhanced Programmatic Report (EPR-DGS), dated 3/18/2013, prepared as part of planning for the Capital Improvements project administered by the Department of General Services.

Circulation restrictions are common to many of the historic buildings. These include changes in floor level, narrow doors and stairs, in some cases with wind-er treads, and usually only a single stair to serve upper floors. Circulation is non-compliant with ADA and, in many cases, with the building code.

Most of the historic buildings have batt insulation on the underside of the roofs, where it now conceals the condition of the roof framing and sheathing. PHMC has been removing that insulation building by building at WCHP and other sites and installing rigid insulation at attic floor level. That involves the addition of new attic floor sheathing.

Lower Park buildings, except Frye House, are tied into the Lower Park Waste Water Treatment Plant (WWTP). Andrassy House and Victorian Neely House are tied into the Upper Park WWTP.

appendix 3: building reuse analysis



appendix 3: building reuse analysis

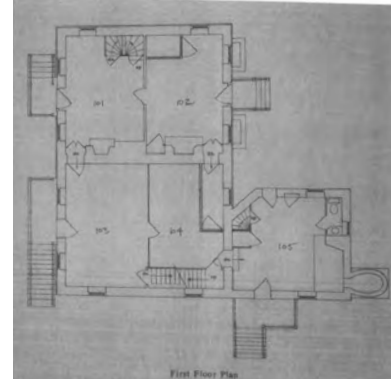
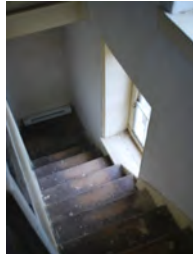
Lower Park (McConkey's Ferry section)





South Elevation

McConkey's Ferry Inn

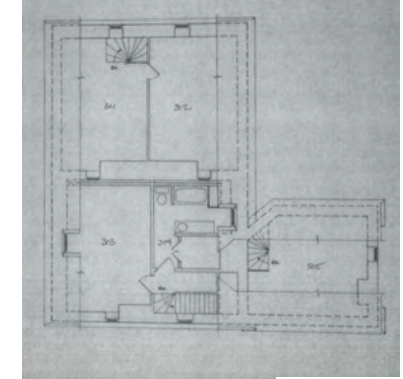


First Floor Plan

(basement floor plans not shown above)



Second Floor Plan



Third Floor Plan

Building Dimensions:

46'x50' (overall footprint), approximate total gross floor area 6860 SF (5160 SF finished/heated space on 1st, 2nd and 3rd floors, basement 1700 SF)

History of usage:

- West basement assumed to be remains of the demolished log building, which is assumed to have been McConkey's Inn.
- West section built by Benjamin Taylor ca. 1785 on site of demolished log building assumed to be McConkey's Ferry Inn
- Taylor family residence and store 1812-24
- East section built 1812-17; North wing added later
- 1824-1948 leased for tavern/restaurant use
- Structural repairs 1957 and first floor restoration under Edwin Brumbaugh, superseded by restoration to current appearance in 1970's and use as an interpretive museum facility
- Apartments on upper floors, second half of 20th century

Highlights for reuse:

- Primary historic significance in interpretation of Crossing event
- Adaptive reuse potential not analyzed because continued interpretive use assumed
- Rear entrance used due to tight front access facing bridge abutment
- Interior condition good at restored 1st floor and 2nd floor of Phase 1
- Scars of removed kitchen and bathroom at upper floor apartment: rehabilitation required
- Circulation challenges: west and east sections connected only at 1st floor
- Two stairs, one consisting entirely of steep winders
- Level changes within all stories
- Heating: electric baseboard heat at former apartment
- Refer to Enhanced Programmatic Report(EPR-DGS) for DGS Capital Improvements project for recommended treatment of chronic moisture due to stormwater drainage issues
- Tied into park fire alarm/security system



South Elevation



Mahlon Taylor House

Building Dimensions:

37'x46' (rough footprint), approximate total gross floor area 6300 SF (5400 SF finished/heated space on 1st, 2nd and 3rd floors, basement 1575 SF)

History of usage:

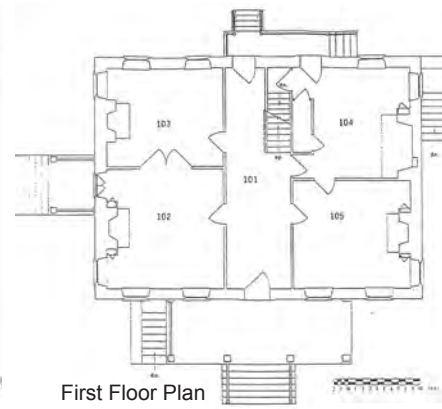
- Drainage system for building dry-out, 1990
- Built in 1816-17 as residence of merchant, ferry owner and Taylorsville co-founder Mahlon Taylor
- Renovated 1920s with basement restrooms and period furnishings.
- Served as a Museum 1929 - mid 1930's
- Restoration as house museum, park offices and staff apartment, 1970's
- Currently houses period furnishings and collections storage

Highlights of reuse:

- Interior condition good, requires rehabilitation of finishes especially on 3rd floor
- Foundations of former rear porch removed for new ADA-compliant ramp under DGS capital improvements project
- Bulkhead entry to Basement, which contains remains of former restrooms & mechanical equipment
- Low basement ceiling
- Zoned electric baseboard heating
- Tied into park fire alarm/security system



Basement Floor Plan



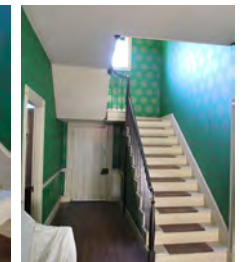
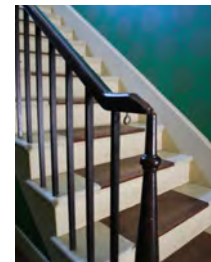
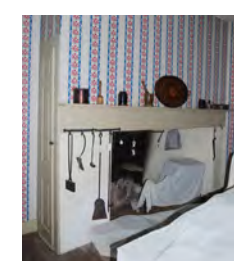
First Floor Plan



Second Floor Plan

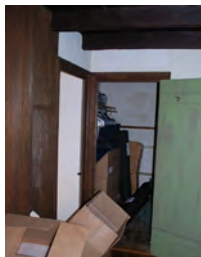
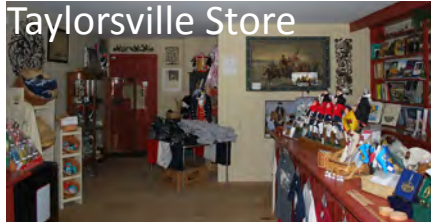


Third Floor Plan





Taylorsville Store



Building Dimensions:

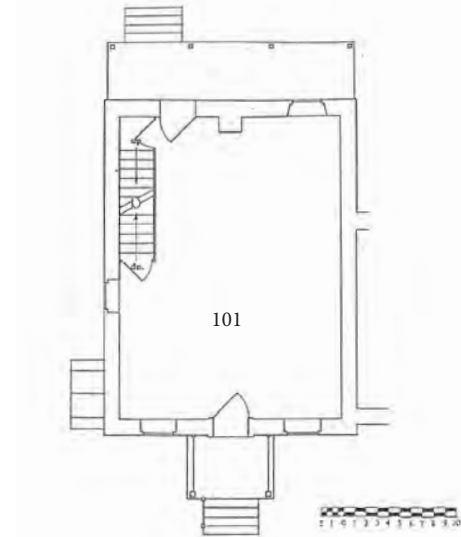
22'x30' (rough footprint), approximate total gross interior floor area 2660 (1330 SF finished/heated space on 1st floor, 2nd floor and basement 665 SF, garret space 665 SF)

History of usage:

- Built c. 1824 as a store by merchant Mahlon Taylor
- Vacant after 03/10/13.
- Basement: ice cream shop
- First floor: store and gift shop (at the time of the survey)
- Second floor: staff apartment

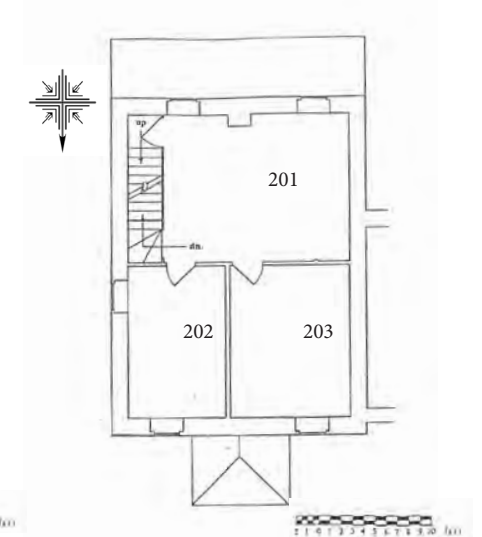
Highlights for reuse:

- Interior condition good with intact interior finishes
- Two kitchens (basement and 2nd floor), 2 restrooms on 1st, bathroom on 2nd
- Beams shored in basement and 2nd floor suspended from upturned steel beams on attic floor
- Two stairs to basement, including bulkhead entry, winder stair to 3rd floor
- Zoned electric baseboard heating
- Tied into park fire alarm/security system

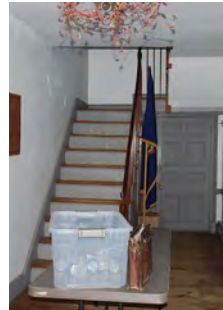


First Floor Plan

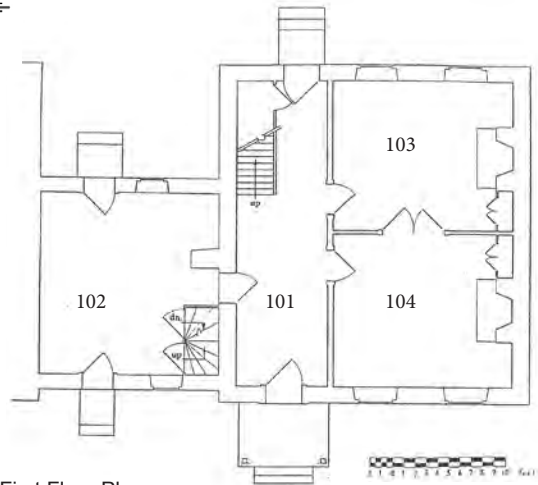
(basement and garret floor plans not shown above)



Second Floor Plan

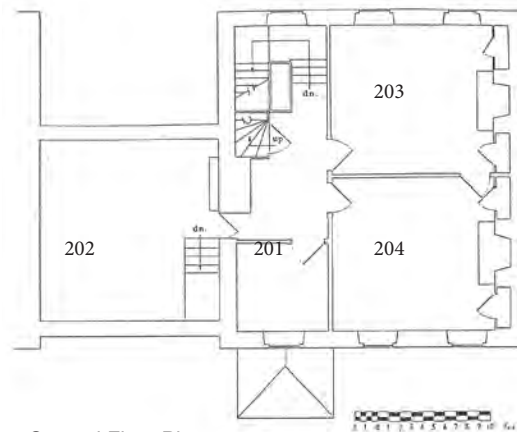


North Elevation



First Floor Plan

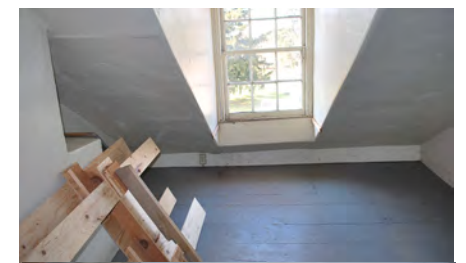
(basement and garret floor plans not shown above)



Second Floor Plan



Oliver Taylor House



Building Dimensions:

30'x44' (rough footprint), approximate total gross floor area 4300 SF
(2300 SF finished/heated space on 1st and 2nd floor, basement 1150 SF, garret space 850 SF)

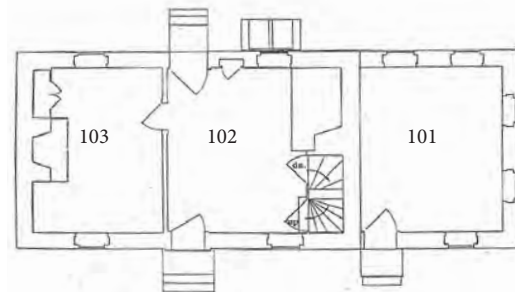
History of usage:

Highlights for reuse:

- Interior condition good with intact interior finishes
- Full kitchen (102) and bathroom (added in 20th century) in functional condition
- Shoring in basement and attic may indicate need for further stabilization
- Zoned electric baseboard heating

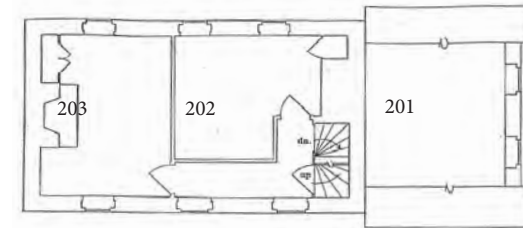


Amos Taylor House



First Floor Plan

(basement and garret floor plans not shown above)



Second Floor Plan



Building Dimensions:

20'x45' (rough footprint), approximate total gross interior floor area 3025 SF
(1660 SF finished/heated space on 1st and 2nd floor, basement 810 SF, garret space 555 SF)

History of usage:

- Most recent use 1st floor craft shop and upstairs staff apartment

Highlights for reuse:

- Interior condition poor, requires repair of leak damage and full rehabilitation
- Level changes within all stories and makeshift connections to west wing
- One winder stair only
- Baseboard fin tube heating
- Refer to EPR-DGSor recommended basement oil tank remediation



Building Dimensions:

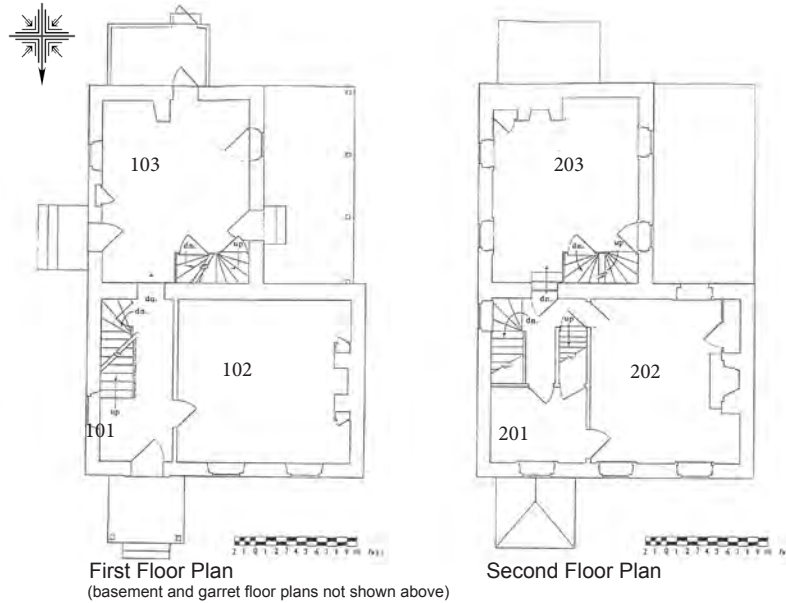
28'x45' (overall footprint), approximate total gross floor area 3412 SF (1706 SF finished/heated space on 1st and 2nd floor, basement 853 SF, garret space 600 SF)

Historic Use Notes:

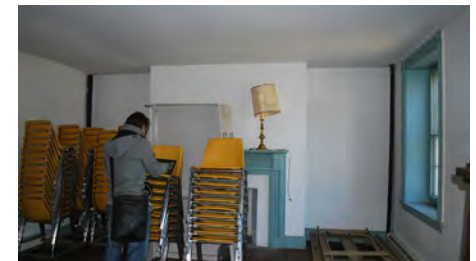
- Previously staff residence
- Current use WCHP storage

Highlights for reuse:

- Interior condition fair, requires rehabilitation of finishes
- Sagging 2nd floor ceiling to be stabilized if necessary
- Full bathroom in functional condition (added in Room 103)
- Level changes within all stories
- Two stairs, one consisting entirely of steep winders

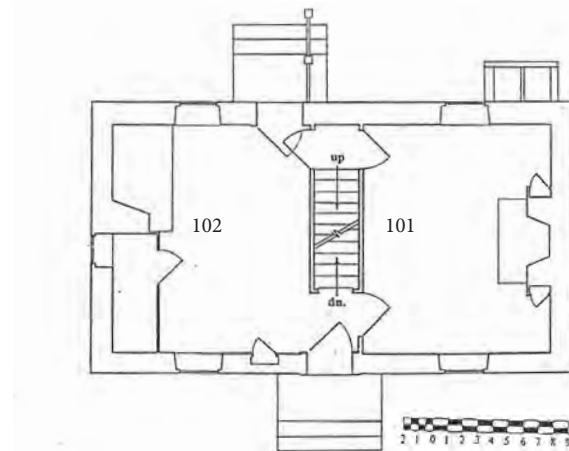
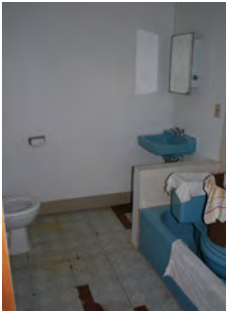
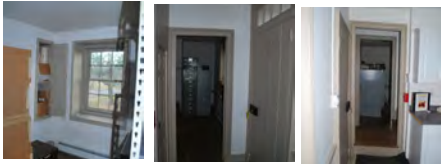


Frederick Taylor House

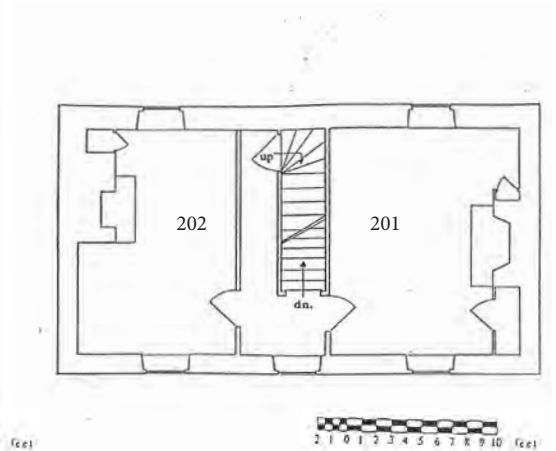




Elmer Buckman House



First Floor Plan



Second Floor Plan

Building Dimensions:

19'x28' (rough footprint), approximate total gross floor area 2360 SF
(1064 SF finished/heated space on 1st and 2nd floor, basement 532 SF, garret space 400 SF)

Historic use notes:

- Renovated as office and workspace for WCHP curator, late 20th century

Highlights of Reuse:

- Interior condition good with intact interior finishes
- Full kitchen (102) and bathroom in functional condition (added in 1990s)
- Joist ends shored in basement, possibly for superimposed office floor loads
- Boiler and hot water baseboard heating, 1999



Building Dimensions:

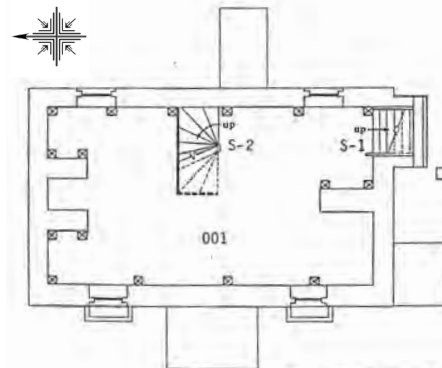
17'x30' (rough footprint), approximate total gross floor area including First Floor and Second Floor 1020 SF (1020 SF finished/heated space on 1st and 2nd floor, garret 470 SF, basement 490 SF)

History of Usage:

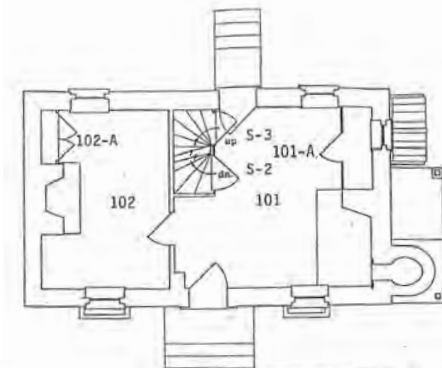
- Built 1828-29 an original Taylorsville house
- Probably a tenant house until 1970's
- Currently living history interpretive display

Highlights for reuse:

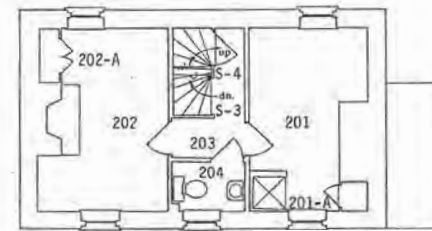
- Adaptive reuse potential not analyzed because continued interpretive use assumed
- First floor used by Park for interpretation and cooking demonstrations
- Upper floor not used or interpreted
- Interior condition fair, requires rehabilitation of finishes
- Exterior bake oven
- Plumbing fixtures for previous apartment removed and pipes capped
- One winder stair only; bulkhead basement stair
- Electric baseboard heating
- Tied into park fire alarm/security system



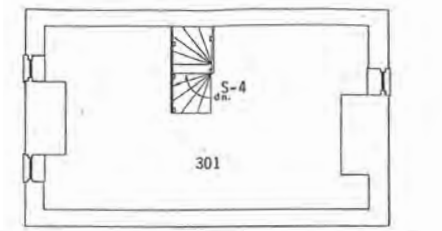
Basement Floor Plan



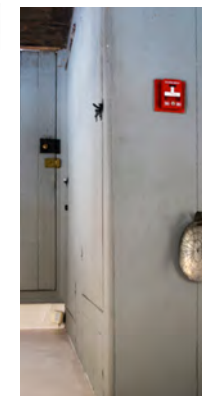
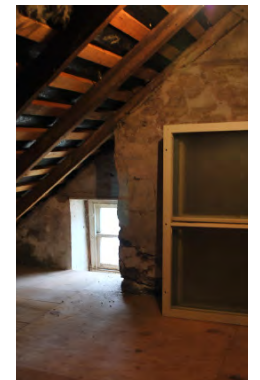
First Floor Plan



Second Floor Plan

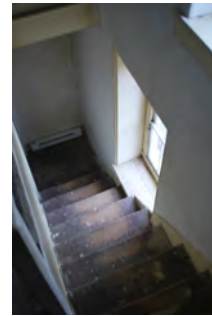


Garret Floor Plan





East Elevation



E



John Frye House

Building Dimensions:

17'x48' (rough footprint), approximate total gross floor area 2480 SF (1520 SF finished/heated space on 1st and 2nd floors, basement 510 SF, garret 300 SF)

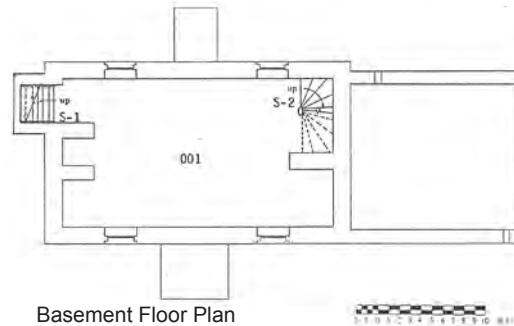
History of usage:

- Built 1828-29 an original Taylorsville house
- Tool house 1926, then Lower Shop
- Probably a tenant house until 1970's
- Roof repairs 1996
- Drainage system for building dry-out 1990
- UV protection 2007
- Currently interpretive display

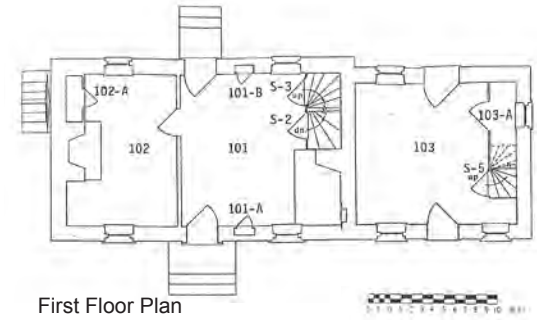


Highlights for reuse:

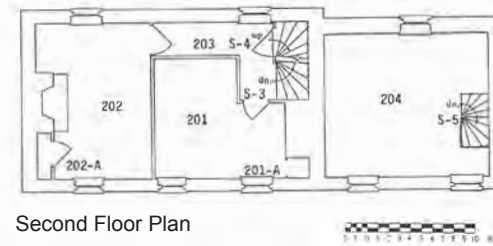
- Boiler and hot water baseboard heating, 1999
- Adaptive reuse potential not analyzed because continued interpretive use assumed
- Ultraviolet protection for collection storage



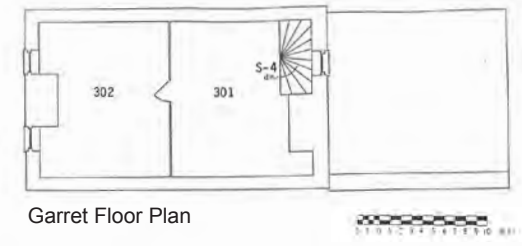
Basement Floor Plan



First Floor Plan



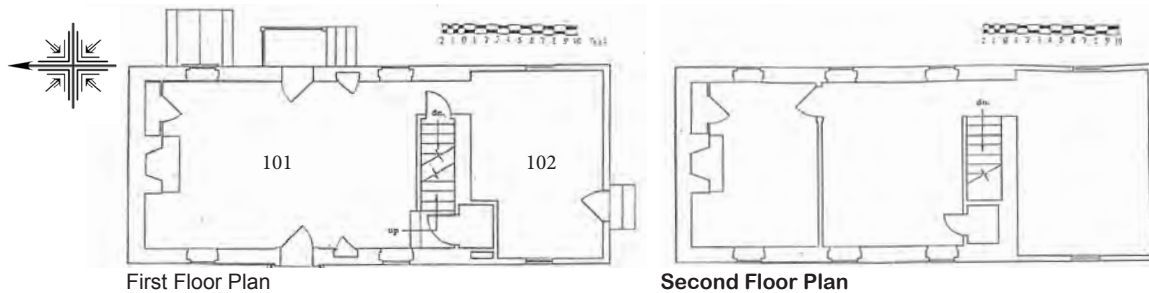
Second Floor Plan



Garret Floor Plan

- First floor used by Park for interpretation and as craft-person support space for events
- Upper floor not used or interpreted
- Interior condition fair, requires rehabilitation of finishes
- No connection between original house and north addition
- Two separate winder stairs

- Plumbing fixtures for previous maintenance shop removed and pipes capped.
- No existing heating
- Tied into park fire alarm/security system



Building Dimensions:

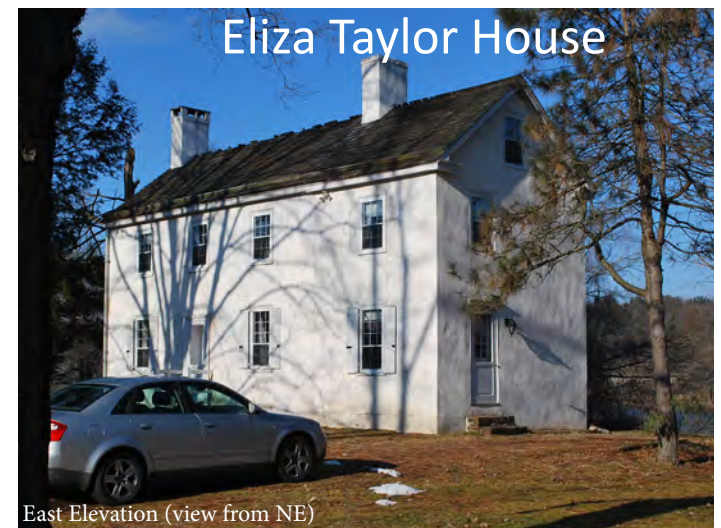
18'x42' (rough footprint), approximate total gross floor area
2877 SF (1412 SF finished/ heated space on 1st and 2nd
floor, basement 810 SF, garret space 555 SF)

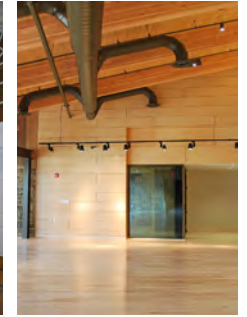
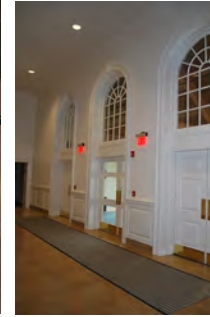
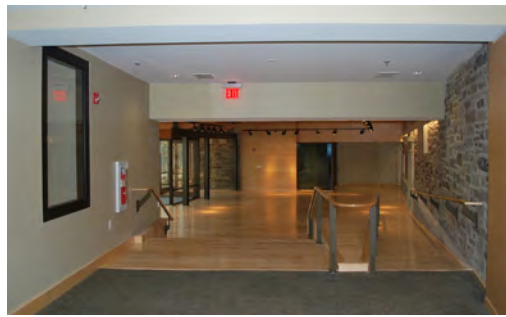
History of usage:

- Built c 1842 as a residence
- Altered to bathhouse 1924 , Oscar Martin Architect
- Altered to tea house after construction of "new bathhouse," 1928
- Renovated as staff residence 1970's and still serves as such
- New roof, 1990
- Exterior repairs, 2005
- Bathroom renovation, 2007

Highlights for reuse:

- Much altered interior
- 2 bedrooms, full kitchen and bathroom
- Part full basement, part crawlspace
- Single straight stair
- Bulkhead entry to basement





History of usage:

- 1959: Memorial Building, designed by Micklewright & Mountford
- 1976: Addition
- 2012: Additions and renovation

Highlights for reuse:

- Recently renovated building used for visitor reception (2,062 SF), education, meetings, staff offices, and gift shop
- 247 seat auditorium with copy of Emanuel Leutze painting as stage backdrop
- Exhibit space currently used for changing exhibits, 2,885 SF
- Entry terrace on axis with allee of flagpoles
- Fully ADA-compliant disabled accessibility
- All new, energy-conserving electrical, plumbing and HVAC systems
- Gift shop
- Collections storage, 826 SF with compact storage
- Museum storage, 196 SF



Durham Boat Barn

Durham Boat Barn

Building Dimensions:

57 x 40 (rough footprint), approximate gross floor area 2280 SF

History of Usage:

- Building constructed, 1970s
- Currently boat storage & living history interpretation
- Large interior space accommodates instruction groups

Highlights for reuse:

- Adaptive reuse potential not analyzed because continued interpretive use assumed
- Interior condition good with intact interior finishes
- Wood framed building with gravel/dirt floor and free-standing steel support system for boats
- No heating system

Root Cellar

Building Dimensions:

11 x 8 (rough footprint), approximate gross floor area 288 SF

History of Usage:

- Historic interpretive use

Highlights for reuse:

- Adaptive reuse potential not analyzed because continued interpretive use assumed
- Unfinished interior stone with wood roof framing
- No heating system
- Interior not accessed



Root Cellar

Black Smith Shop

Building Dimensions:

12'x20' (rough footprint), approximate gross floor area 200 SF

History of Usage:

- Building reconstructed, 1989
- Currently living history interpretation

Highlights for reuse:

- Adaptive reuse potential not analyzed because continued interpretive use assumed
- Interior condition good with intact interior finishes
- See EPR-DGS for recommendations to improve chimney draft
- No heating system



Black Smith Shop



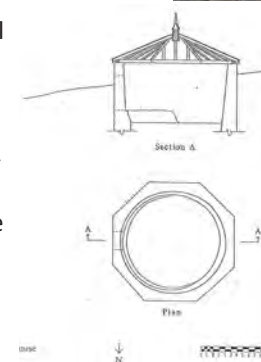
Ice House

Building Dimensions:

20'x20' (rough octagonal footprint), approximate total gross floor area 340 SF

Highlights for reuse:

- Adaptive reuse potential not analyzed because continued interpretive use assumed
- Unfinished interior stone with mortar loss along the lower wall
- Wood framing in good condition
- No heating system
- Tied into park fire alarm/security system



appendix 3: building reuse analysis

Upper Park (Thompson's Mill section)





East Elevation

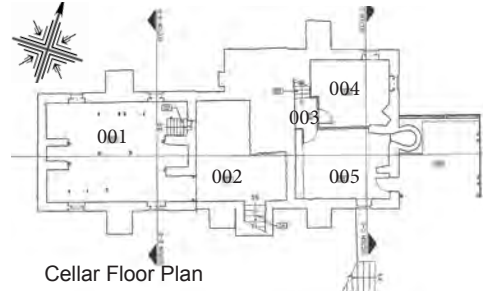


Thompson-Neely House

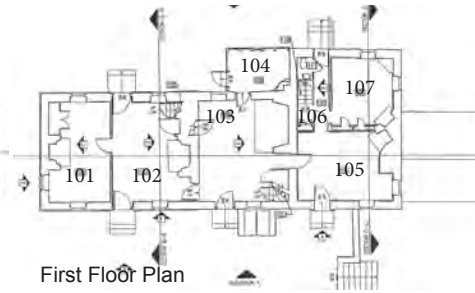


Building Dimensions:

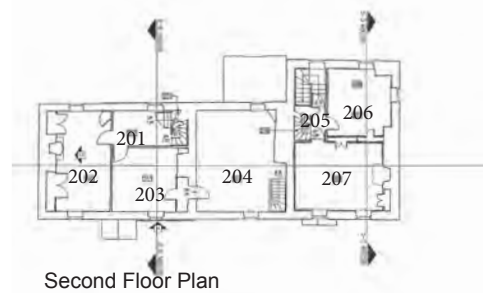
32'x69' (rough footprint), approximate
total gross floor area 6576 SF (3686
SF
finished/heated space on 1st & 2nd
floors, cellar 1690 SF, attic 1200 SF)



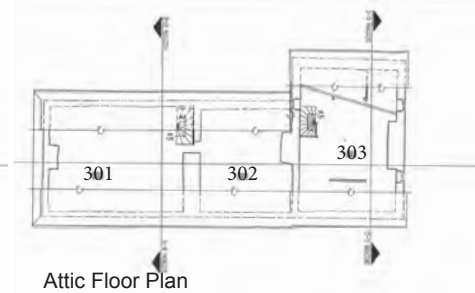
Cellar Floor Plan



First Floor Plan



Second Floor Plan



Attic Floor Plan

History of Usage:

- Phased house construction started 1740
- Successive private ownership of house & mill through 1926
- 1948-49 restoration Edwin Brumbaugh Architect
- 1957 plumbing, heating alterations, Micklewright
- 1969 barn restoration
- 1975 work on farm buildings
- 1991 restoration work and new roof
- 1997 gutter/spout repairs
- 1999 security system
- 2007 UV protection and duct cleaning

Highlights for reuse:

- Adaptive reuse potential not analyzed because continued interpretive use assumed
- Re-roofing required
- Interior condition good in interpreted spaces on 1st and 2nd floors, with plaster cracks and worn wood finishes retained
- Scars of removed partition & electrical at northeast

- room 206
- Three stairs to upper floors, two all winders and east stair with winders at landing
- Level changes within all stories
- Bulkhead entry to center basement 002
- Grade level door to finished basement room 005
- Insulation generally intact at 1st floor underside and much damaged at roof underside
- Refer to EPR-DGS or recommended structural repair of south wall moisture damage due to stormwater drainage issues
- Warm air furnace in northeast basement room 004 with ducts to all floors
- Small panel for fire alarm/security system



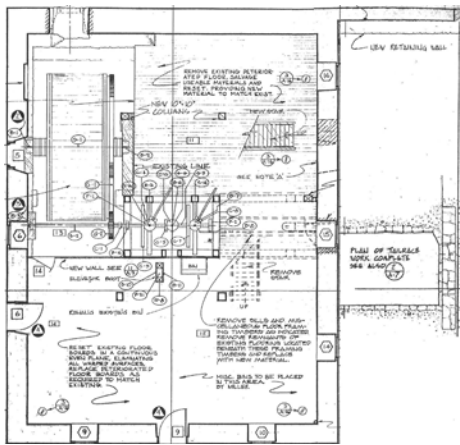
Thompson-Neely Barn...

...and Outbuildings

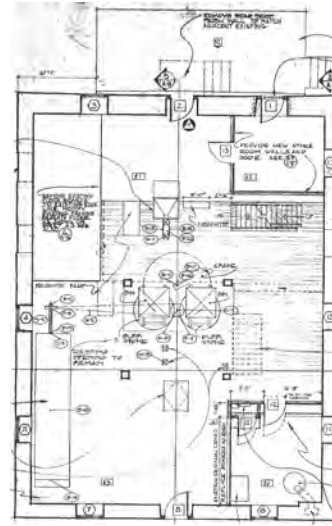
Highlights for reuse:

- Adaptive reuse potential not analyzed because continued interpretive use assumed
- Unfinished rubble interior stone and wood framing typical
- Outbuilding interiors not accessed for review

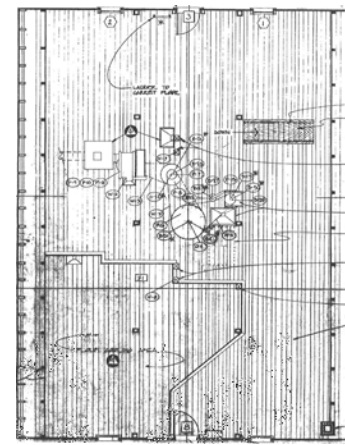




First Floor Plan



Second Floor Plan



Third Floor Plan

Building Dimensions:

38' x 50' (overall footprint), approximate total gross floor area 2924 SF (100 SF finished/heated space on 2nd floor, 1st & 2nd floor 2600 SF, 3rd 1000 SF)

History of Usage:

- c. 1830 built when introduction of Delaware Canal necessitated relocation upstream 100 yards
- 1873 rebuilt after fire damage & used as mill through 1915
- 1975 restoration
- 1992-1993 repairs, architect: National Heritage Corporation
- 1997 roof repairs
- 1999 security system 1999
- 2005 pest infestation

Highlights for reuse:

- Two entrances, @ 1st & 2nd levels, not ADA-compliant
- Unfinished interior stone in good condition
- Unfinished and painted/whitewashed interior wood framing in good condition, finish coat peeling
- Restored machinery (1976) set up for operating display on all 3 floor levels
- Water wheel warped and non-functional
- Open-riser stairs not code-compliant
- Lighting and electrical systems installed in 1976
- Unheated building, except pot-belly stove in office
- Large panel for fire alarm/security system





Bowman's Hill Tower Visitor Center & Elevator Machine Room

Highlights for reuse: Visitor Center

- Used for ticket sales
- Uninsulated unfinished wood interior
- Brick elevator machine room



Bowman's Hill Tower

Building Dimensions:

24' x 24' (rough footprint), approximate total gross area 332 SF

Highlights for reuse: Tower

- Adaptive reuse potential not analyzed because continued interpretive use assumed
- Unfinished rubble interior stone and concrete stair framing in serviceable condition
- Elevator in 1980s concrete masonry unit shaft--requires rehabilitation
- Aerial electric power is subject to frequent weather-related outages
- Refer to EPR-DGS for moisture damage to walls, parapet and roof slab associated with poor roof drainage, deteriorated roof slab and parapet, for recommended underground burial of electrical service, and for elevator rehabilitation requirements for elevator.



Building Dimensions:

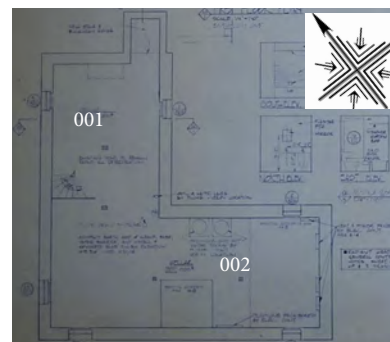
38 x 40 (rough footprint), approximate total gross floor area 4325 SF (2365 SF finished/ heated space on 1st and 2nd floor, basement 1142 SF, attic/3rd floor 820 SF)

History of Usage:

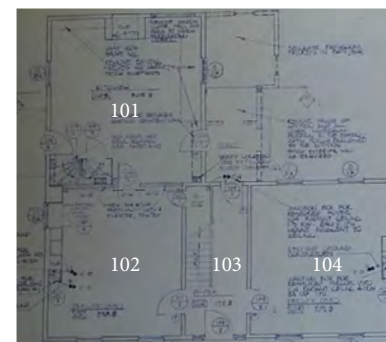
- Staff or tenant house, probably starting 1930s
- 1996 water damage
- 1998 survey to establish 2 acre lot
- 2000 exterior restoration
- 2007 bathroom repairs
- 2010 water damage repairs 2012

Highlights for reuse:

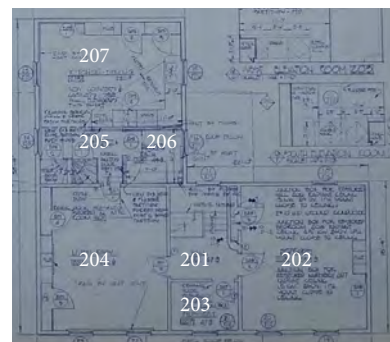
- Strong historic integrity, but deteriorated finishes require rehabilitation
- Six bedrooms, full kitchen and 3 bathrooms
- Minimal attics, full basement
- Straight main stair with winders at top and rear stair all winders
- Oil-fired fin tube heating; oil tank in basement
- Two electric meters, one for heat
- Pump for well water



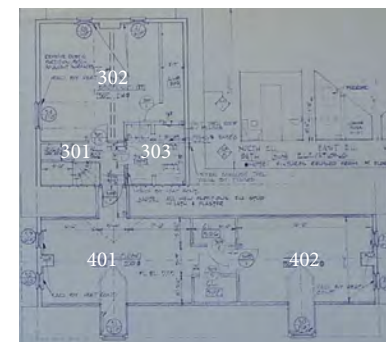
Basement Floor Plan



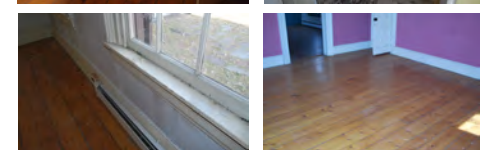
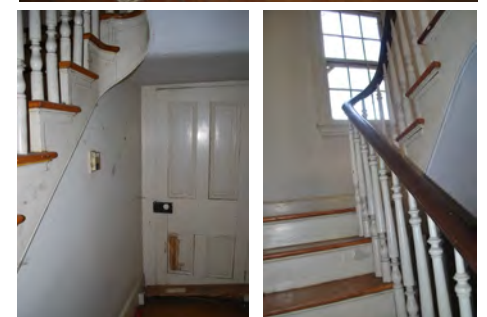
First Floor Plan



Second Floor Plan



Third Floor Plan

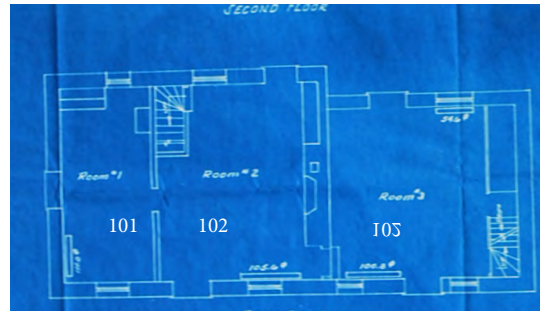




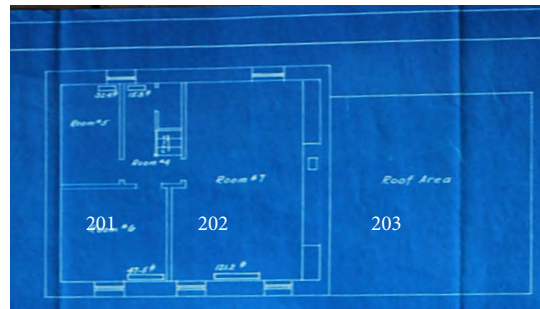
NE Elevation



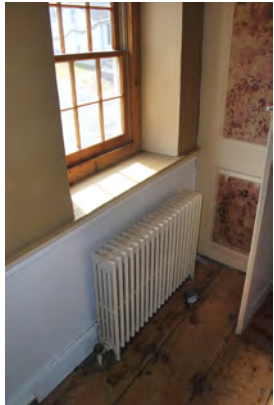
Andrassy House



First Floor Plan



Second Floor Plan



Building Dimensions:

22'x49' (overall footprint), approximate total gross floor area 2830 SF (1160 SF finished/heated space on 1st and 2nd floors, basement 1060 SF, attic 610SF)

History of Usage:

- Staff or tenant house, probably starting 1930s
- 1946 project DGS-862
- 1976 electrical upgrade
- Staff or tenant house probably starting 1930's
- 2006 new roof, exterior repairs and insulation

Highlight for reuse:

- Much altered interior
- 3 bedrooms, full kitchen and bathroom
- Finished third floor
- Two separate attics, full basement
- Single straight stair with winders at bottom
- Level changes within all stories
- Insulation generally intact at 1st floor underside
- See EPR-DGS for recommended removal of attic insulation and framing repairs at 1-story wing
- Oil-fired boiler and radiator heating; oil tank in basement?
- Water treatment system (for well water)
- Four electrical meters



BHWP Headquarters

History of Usage:

- Built 1971
- Currently used by BHWP

Highlights of reuse:

- Adaptive reuse potential not analyzed because continued BHWP use assumed



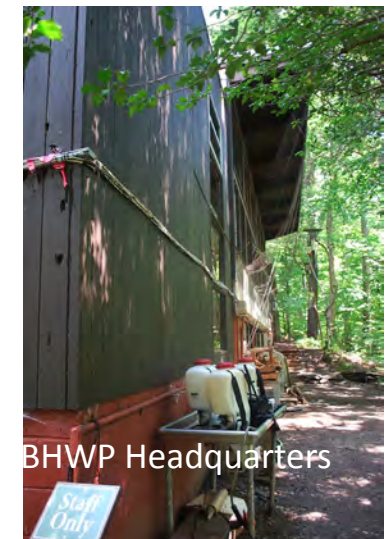
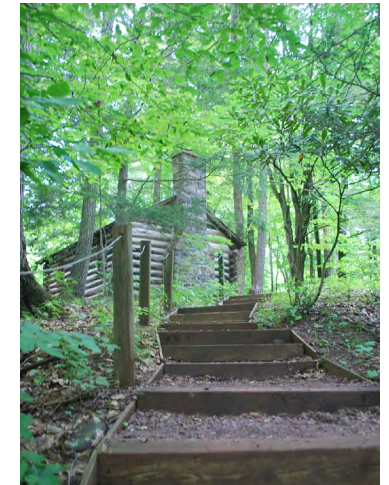
Log Cabin

History of Usage:

- 1934, Park ranger cabin, designed by Edward Pickering
- Currently used by BHWP for storage

Highlights for reuse:

- Adaptive reuse potential not analyzed because continued BHWP use assumed
- Exterior condition fair: end-grain decay of chestnut logs, intact chinking
- Wood roof shingles: condition fair
- Interior not accessed
- Adaptive reuse potential not analyzed because continued BHWP use assumed
- Stone chimney
- Partial basement shown in drawings
- Interior not accessed for review



appendix 3: building reuse analysis



General Sullivan Pavilion



General Washington Pavilion



George Washington Pavilion



General Greene Pavilion



Captain Moore Pavilion



Colonel Glover Pavilion

visitor amenities

Pavilions....

Building Dimensions:

- General Sullivan Pavilion 40' x 27' (1,080 SF)
- General Washington Pavilion 75' x 40' (2,926 SF)
- General Greene Pavilion 62' x 32' (1,984 SF) with small wing 17' x 10' (170 SF)
- Captain Moore Pavilion 62' x 32' (1,984 SF)
- Colonel Glover Pavilion 62' x 32' (1,984 SF)

Dimensions of the largest pavilion, the hipped-roof General Washington, were predetermined by the foundations of the 1920s bathhouse, which it replaced in 1949. Captain Moore Pavilion built in 1940 became the prototype for subsequent gable-roof pavilions. General Greene and Colonel Glover Pavilions match the Moore footprint, and General Sullivan is the smallest.

Highlight for reuse:

In the Lower Park, the General Washington Pavilion has river views and proximity to the historic core, while General Greene is positioned to serve users of the canal, towpath, Valley of Concentration and soccer fields. At the Upper Park, Colonel Glover and General Sullivan pavilions are close to both the river and the canal and towpath. The Captain Moore Pavilion is set in a meadow, close to Pidcock Creek, BHWP and Thompson-Neely farmstead.

Three pavilions have built-in fireplaces. A four-sided hearth with roof-penetrating flue is the central focus of the General Washington Pavilion, where it facilitates separate groupings in portions of the structure. The gable-end fireplace at Captain Moore Pavilion leaves open the entire interior space. The General Greene Pavilion has a fireplace wing at one end, which functions as an alcove off the main space. The other pavilions rely on external fire pits.

All have concrete or stone floors, field stone piers, wood sheathed gable ends, exposed wood roof framing, and utilitarian surface-mounted light fixtures under the roofs. Recommended upgrades include serving counters, functioning grilles and fireplaces.

See EPR-DGS for recommended repairs, including roof framing repairs at the Washington, Glover and Sullivan Pavilions.



General Greene Restrooms



General Moore Restrooms



Colonel Glover Restrooms

...and Restrooms

Two of the small stone restrooms are functional and accessible by ADA compliant ramps: Captain Moore (1930, renovated 2003) and Valley of Concentration, built after 1972 and modeled on Moore. General Greene and Colonel Glover restrooms are non-functional, vacant, and would require architectural alterations for disabled accessibility. Additions or alterations should comply with the Secretary of the Interior's Standards for Historic Rehabilitation.

The General Washington and Thompson-Neely restrooms, added in 1978, are constructed of concrete block, finished with exterior wood siding and roof shingles. The latter is operable year-round; the former requires remedial work for year-round use. Disabled accessibility may fall short of current regulatory requirements.



Thompson-Neely Restrooms



General Washington Restrooms



Valley of Concentration Restrooms

appendix 4: background history

Introduction

During the data assembly phase of the project, the professional team prepared a Powerpoint presentation summarizing our research on history of the site. The slides are incorporated in this Appendix 4 to support the text with additional illustrations, for which there was not enough space in the body of the report.



appendix 4: background history

Pre - settlement



" Pennsylvania under natural conditions," says Joseph T. Rothrock*, "was one of the very best wooded states, if not the very best, in the eastern half of the Union. Not only were her forests dense and her trees large and valuable, but they comprised a variety the were of greater commercial importance than could be found, probably, in any other state."

Fletcher, Stevenson Whitcomb Pennsylvania Agriculture and Country Life, 1640-1840. Harrisburg: Pennsylvania Historical and Museum Commission, 1971. (Second printing, first printing 1950)

*PA's first commissioner of Forestry

appendix 4: background history

Europeans: 1700's

" Had Palantines, Yankees or planters led the way, the US might have remained an Atlantic Littoral state, an eastern enclave like French Quebec." *

Secondary forest clearing was practiced

"When the land was fresh and new," said John Watson of Bucks County, " it produced from fifteen to twenty-five or thirty bushels of wheat per acre." **



* Jordan, Terry G. and Kaups, Matti. The American Backwoods Frontier: An Ethnic and Ecological Interpretation. Baltimore and London: Johns Hopkins University Press, 1989.

** Fletcher, Stevenson Whitcomb Pennsylvania Agriculture and Country Life. 1640-1840. Harrisburg: Pennsylvania Historical and Museum Commission, 1971. (Second printing, first printing 1950)

Europeans: 1700's

"For more than a century, from 1725 until 1840, Pennsylvania was foremost among the colonies and states in the production of food... Pennsylvania was 'the bread-basket of the nation' because much of her soil was fertile and because her farmers were traditionally wise in the lore of the land." **



Portion of the Thomas Holme map of Bucks County in 1686

** Fletcher, Stevenson Whitcomb Pennsylvania Agriculture and Country Life. 1640-1840. Harrisburg: Pennsylvania Historical and Museum Commission, 1971. (Second printing, first printing 1950)

appendix 4: background history

Settlement: 1800's

Landscape consisted of "gently rolling hills."

Less watered than most townships but a few creeks.

Fertile soil.

Population almost exclusively employed in agriculture.



* Jordan, Terry G. and Kaups, Matti. The American Backwoods Frontier: An Ethnic and Ecological Interpretation. Baltimore and London: Johns Hopkins University Press, 1989.

** Fletcher, Stevenson Whitcomb Pennsylvania Agriculture and Country Life, 1640-1840. Harrisburg: Pennsylvania Historical and Museum Commission, 1971. (Second printing, first printing 1950)



1900's



"The forests on the flatter areas-the plateaus and gentle slopes- are the youngest and have been cut down and allowed to regrow a number of times."



Aerial Survey 1938

appendix 4: background history

Present Day



Bowman's Hill



Washington's Crossing

Aerial Survey Bing Maps 2013

"Today, it is not farming but rapid suburbanization that threatens the remaining forest in the region. Even protected site like Bowman's Hill cannot escape the impacts of the building boom that has covered most of Bucks County's remaining open space – farmland, woodlots and forests – to residential and commercial development..."

Master Plan Report prepared by Andropogon Associates LTD. January 2006

Present Day



"...The results of this widespread and often careless and wasteful use of land has been extensive erosion and sedimentation due to watershed mismanagement, the spread of invasive exotic plants, excess nutrient loads in our soils and waters, climate changes due to atmospheric pollution, and overabundant deer."

Master Plan Report prepared by Andropogon Associates LTD, January 2006

appendix 4: background history

Historic significance -18th Century: the Crossing and McConkey's Ferry Inn

Washington Crossing the Delaware, 12/25/1776, a turning point in the War for Independence, Emanuel Leutze painting, 1851



Washington Crossing the Delaware. The oil on canvas scene (149" x 255") was painted by Emanuel Leutze (American, born Germany, 1816–68) in 1851. THE METROPOLITAN MUSEUM OF ART, GIFT OF JOHN STEWART KENNEDY, 1897 (97.34) PHOTOGRAPH ©1992 THE METROPOLITAN MUSEUM OF ART



Site of McConkey's Ferry Inn, where Gen. Washington conferred with commanders before the Crossing

Washington Crossing Master Plan

Historic significance -18th Century: Thompson-Neely Homestead

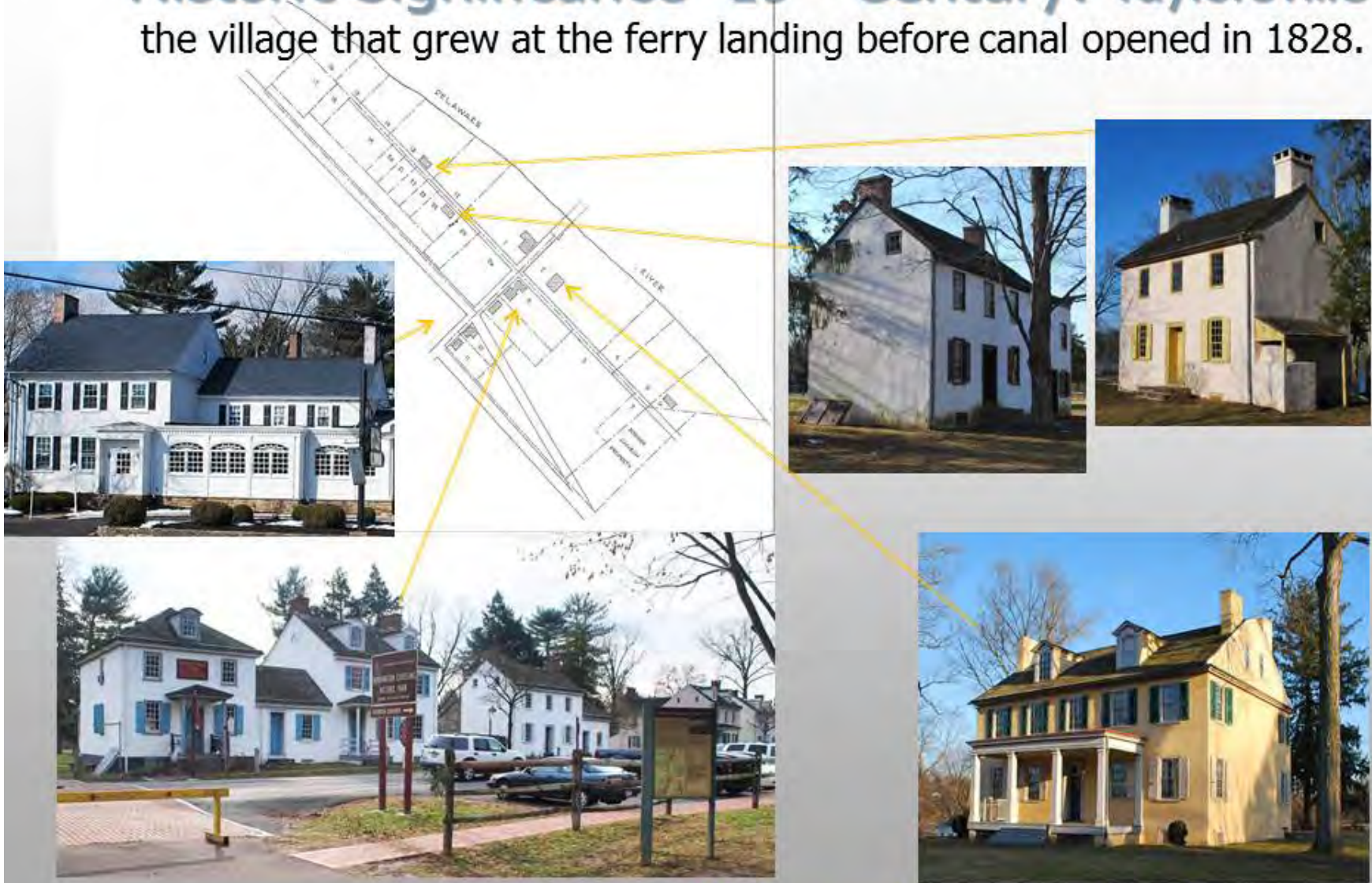
- Thompson Neely House (1764) served as hospital in 1776.
- Bucks County mills ground grain for troop encampment.
- Continental soldiers buried on property.



Washington Crossing Master Plan

appendix 4: background history

Historic Significance -19th Century: Taylorsville
the village that grew at the ferry landing before canal opened in 1828.



Washington Crossing Master Plan

Historic Significance - 20th Century: Memorial Parks in Pennsylvania and New Jersey



George Washington Memorial Bridge, from 1913 Leavitt Plan in collection of Washington Crossing State Park, published in Where Washington Once Led, Peter Osborne.

Parallel development and shared themes in PA and NJ:

- Memorial bridge vision (above, not built)
- Crossing re-enactment
- Historic building preservation
- Memorial landscapes
- Re-forestation
- Recreational facilities



Washington Crossing Master Plan

appendix 4: background history

Memorial Park: McConkey's Ferry Section

1917 Authorization to acquire 100 acres:
Riverfront properties near Ferry Inn
and adjoining area of likely troop
encampment (not shaded)

Available land not acquired
by 1921 (shaded yellow)



Plan of Washington Crossing as Platted from Property Deeds, Arther P. Townsend, undated (before 1921), collection of Washington Crossing Historic Park

Washington Crossing Master Plan

Memorial Park: McConkey's Ferry Section

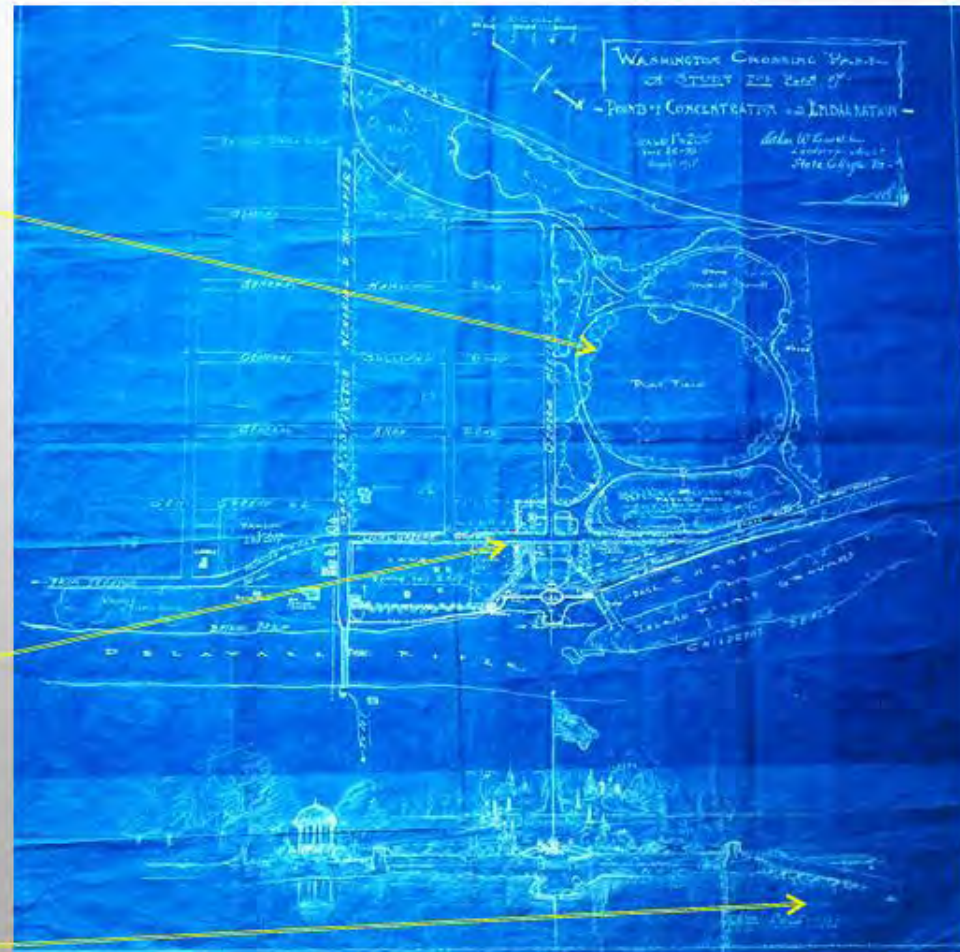
Commemoration and recreation: Arthur W. Cowell, plan for park, 1925

"Point of Concentration":

Free-form drives for recreational visitors serve Play Field & Tourist Camp, buffered by Woods & Lily Pool (now called Lagoon)

State Road rerouted for a cross-axial memorial landscape at "Point of Embarkation"

Pontoon bridge crosses to Island Picnic Grounds and Children's Beach



collection of Washington Crossing Historic Park

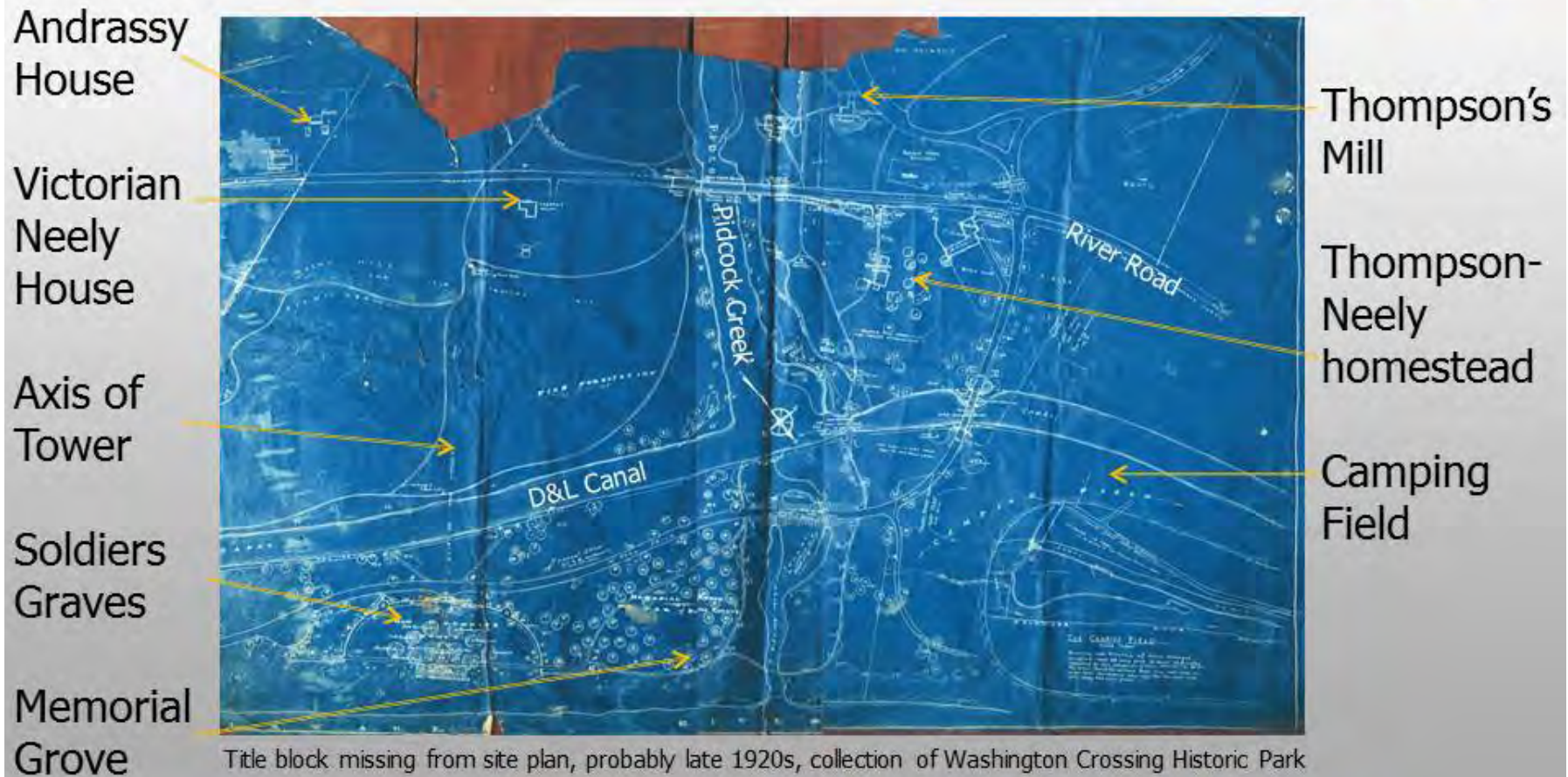
Washington Crossing Master Plan

appendix 4: background history

Memorial Park: Thompson's Mill Section

1921: State authorized acquisition of 400
additional acres-expansion to north:

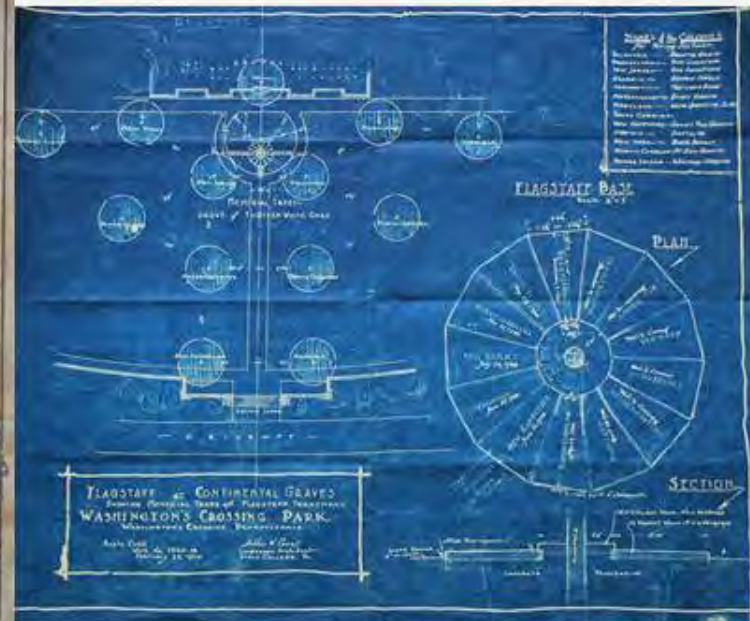
Commemoration, recreation and
natural conservation



Washington Crossing Master Plan

Memorial Park: Thompson's Mill Section

Cowell's proposals, 1928-30, a hilltop Observation Tower and a Flagstaff at Continental Graves



Washington Crossing Master Plan

appendix 4: background history

Historic Significance - 1930s-40s: Bowman's Hill Wildflower Preserve, WPA and CCC

"A living memorial to the
Soldiers who died during 1776
encampment at or near
McConkey's Ferry"



Washington Crossing Master Plan

Bowman's Hill Wildflower Preserve, 1934



Paths, Bridge, Dam, Camp Sites
built by WPA, CCC, 1930s
Penn's Woods memorial re-forestation, 1944
Deer excluded, 1991

Washington Crossing Master Plan



appendix 5: selected bibliography

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