



Arboretum Master Plan

The Master Plan creates a coherent and intuitive guest experience that demonstrates and promotes Bernheim’s mission. To strengthen the connection between Bernheim and visitors, a new Visitor Center will be located near the entrance.

Photo Credit: Studio Outside

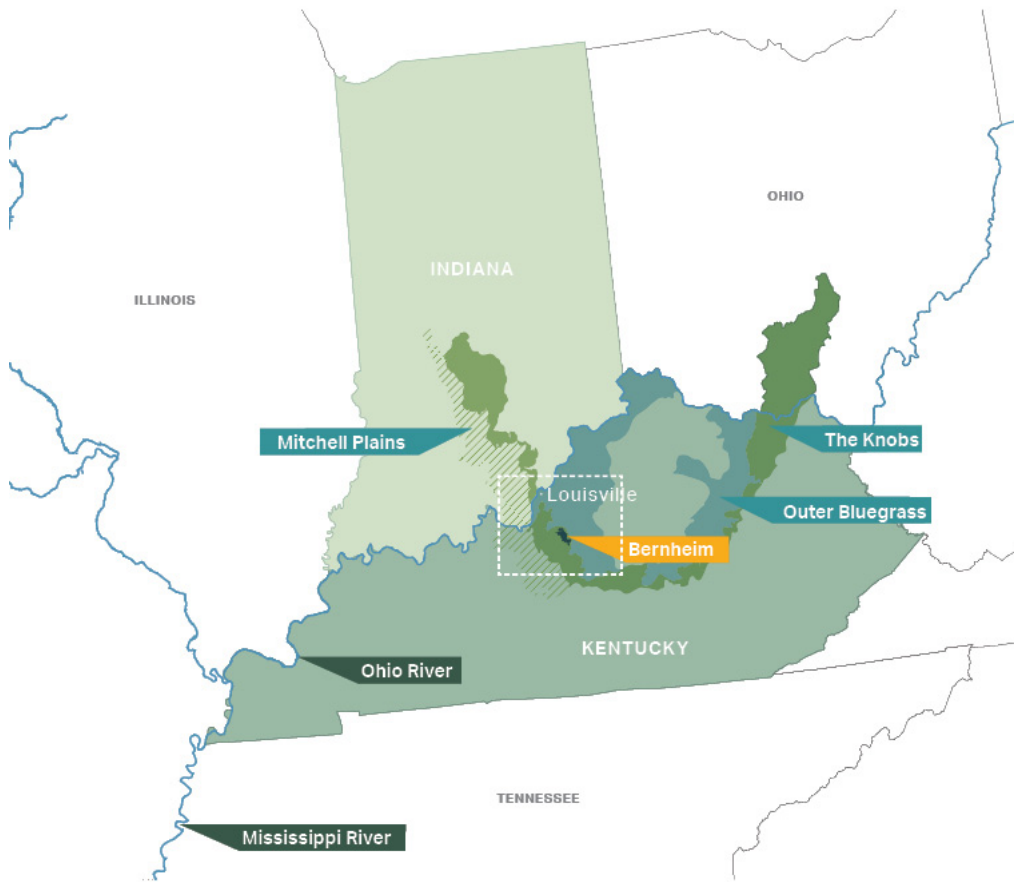
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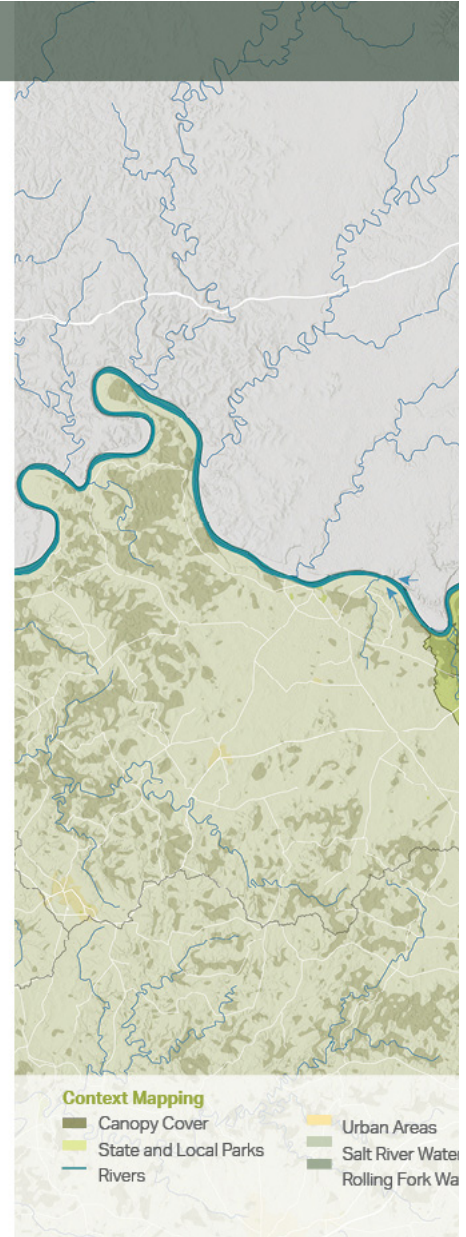
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REGIONAL CONTEXT



Ecoregion Mapping

- Knobs Region of Kentucky
- Mitchell Plains
- Outer Bluegrass



Context Mapping

- Canopy Cover
- State and Local Parks
- Rivers
- Urban Areas
- Salt River Waters
- Rolling Fork Waters

Regional Context

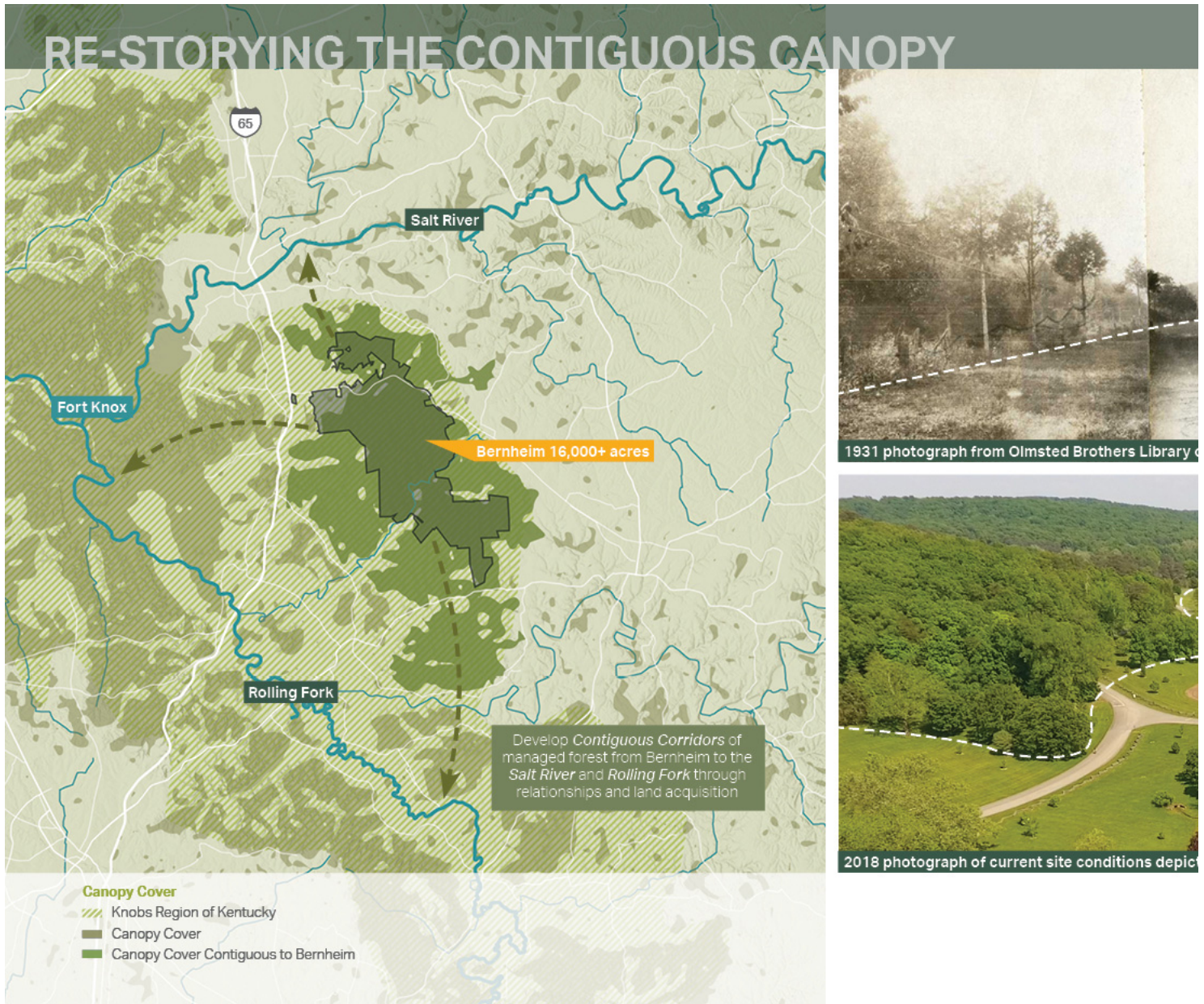
Bernheim Arboretum and Research Forest is the largest Arboretum in the United States. Located in the Knobs Region of Kentucky, 30 miles south of Louisville, Bernheim is situated in the transition between the Outer Bluegrass and the Mitchell Plain.

Photo Credit: Studio Outside

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Re-Storying the Contiguous Canopy

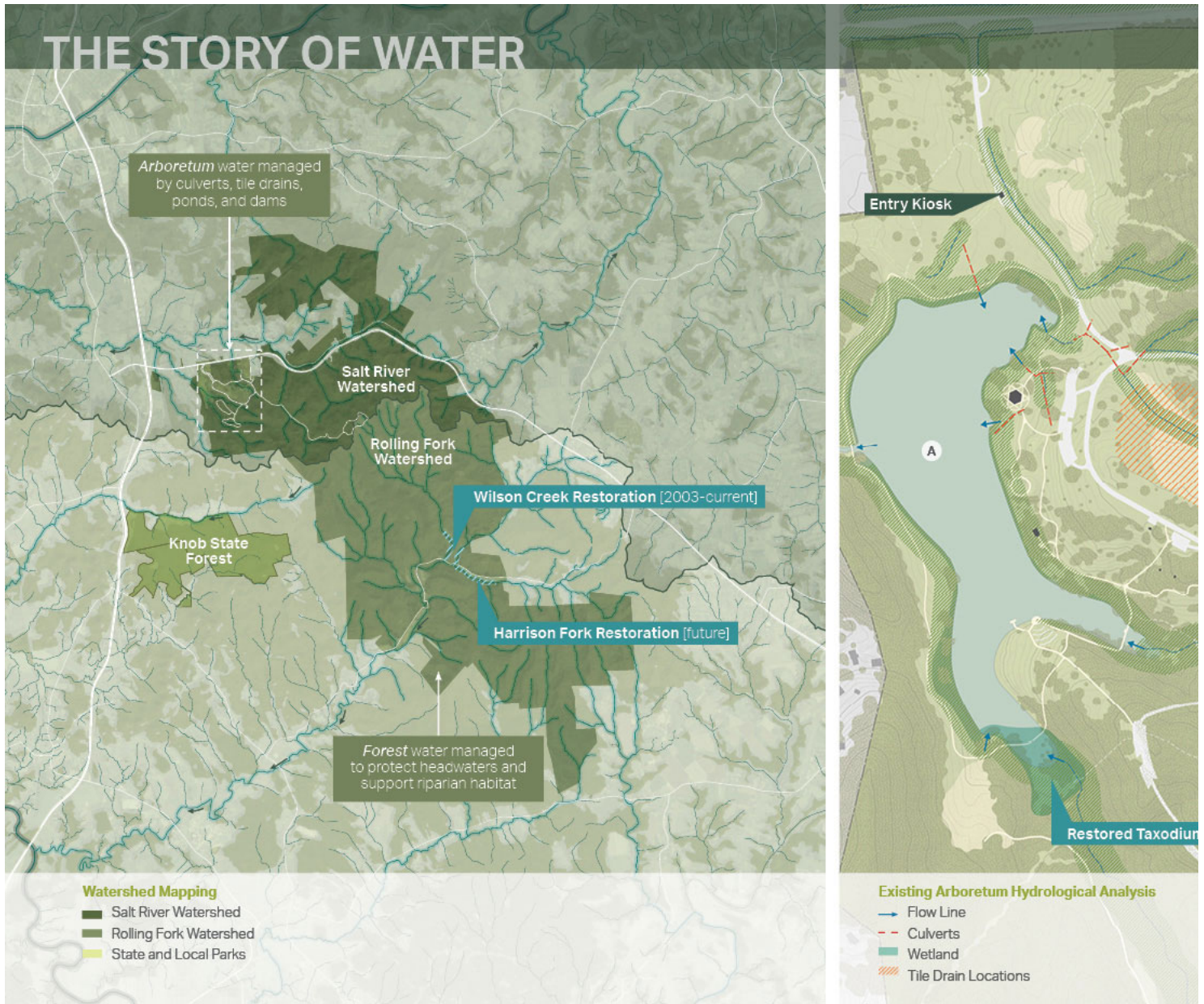
It is easy to imagine that Bernheim has always been a thriving forest, but it exists today because it has been intentionally restored over the last ninety years—beginning with a landscape plan by the Olmsted Brothers.

Photo Credit: Olmsted Brothers Library

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The Story of Water

Bernheim is committed to restoring the streams in its Research Forest to improve downstream water quality and riparian habitat. This approach is in stark contrast with the system of culverts and tile drains that currently manage water in the Arboretum.

Photo Credit: Studio Outside

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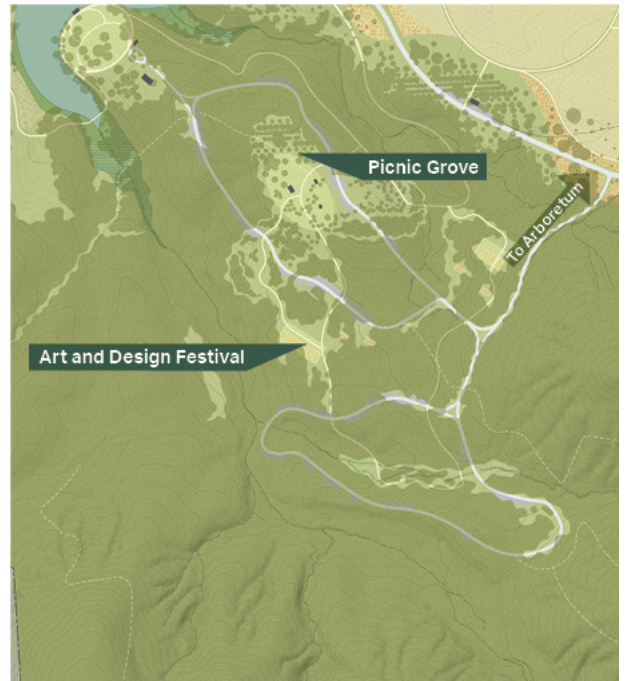


CREATING CONNECTIONS



THE ARBORETUM

provides thoughtful interpretation and experiences



THE WOODLAND

creates a connection with nature by inviting unprogrammed self-guided experiences

Creating Connections

People find deep connections to nature through diverse experiences. As a way of guiding visitors to different experiences, three “regions” within Bernheim are defined. Each region engages visitors with nature in a distinct way.

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ENTRY LANDSCAPE



Entry Landscape

The entry landscape will provide a chance to decompress after exiting Kentucky Route 245—a part of the Bourbon Trail—and before entering the arboretum. The entry drive presents an introduction to the different landscapes at Bernheim.

Photo Credit: Studio Outside

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Goals for the Shoreline of Lake Nevin

When Lake Nevin was selected as the site of Bernheim’s new Visitor Center, existing conditions were deeply analyzed, and goals were established to manage water quality, recreation, wildlife, aquatic vegetation, and exotic species.

Photo Credit: Andrew Berry of Bernheim

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Proposed Visitor Center on Lake Nevin

With exhibits, galleries, multi-purpose gathering space, restrooms and a café, the Visitor Center will introduce guests to their Bernheim experience and provide an opportunity for a variety of engaging uses.

Photo Credit: Studio Outside

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Entry to the Visitor Center

Guests enter the Visitor Center by following a boardwalk over a wet prairie. This diverse ecosystem filters stormwater captured from the parking lots, and existing runoff from the Big Prairie.

Photo Credit: Studio Outside

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Prairie Connection to the Visitor Center

Each of the three Visitor Center buildings relate to the landscape in different ways, creating unique perspectives of the lake, wetland, and prairie. From the east entry, the buildings appear to be embedded in the prairie.

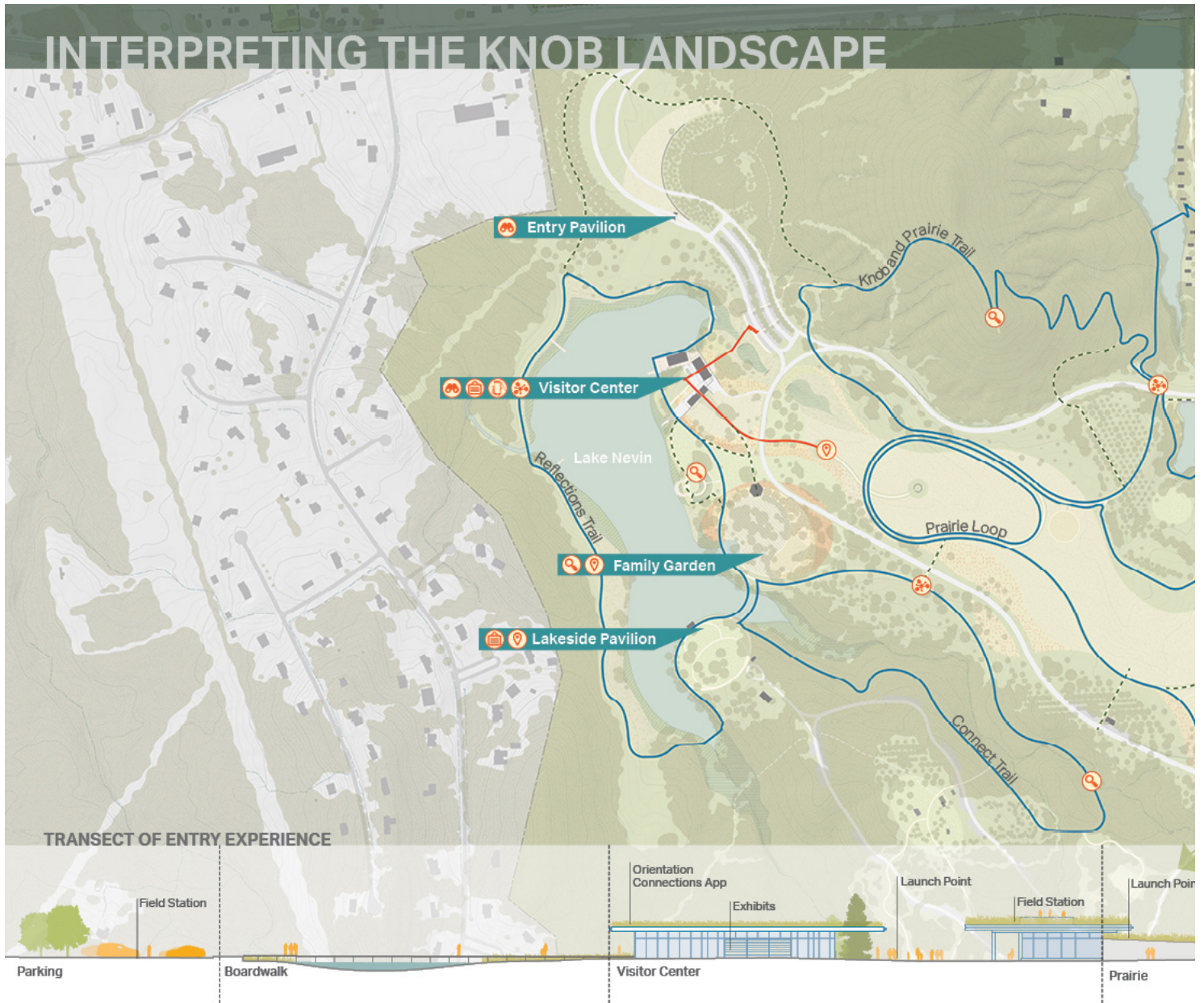
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Interpreting the Knob Landscape

Each trail in the arboretum will tell a distinct interpretive story. Trails will relay Bernheim’s history of “re-storying” the landscape through innovative restoration. A system of launch points, field stations, and destinations will provide a rhythm to the interpretive experience.

Photo Credit: Studio Outside

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Experiential Collections

The completion of this master plan will make the existing collections more accessible through trails and interpretation—new experiential collections will include playful plantings designed to create meaningful experiences and increase knowledge of tree species in unexpected ways.

Photo Credit: Studio Outside

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OLMSTED POND RESTORATIONS



Olmsted Pond Restorations

By altering the management of the Olmsted Ponds, the historically important and much-loved ponds will serve to demonstrate the importance of natural water systems in the built environment.

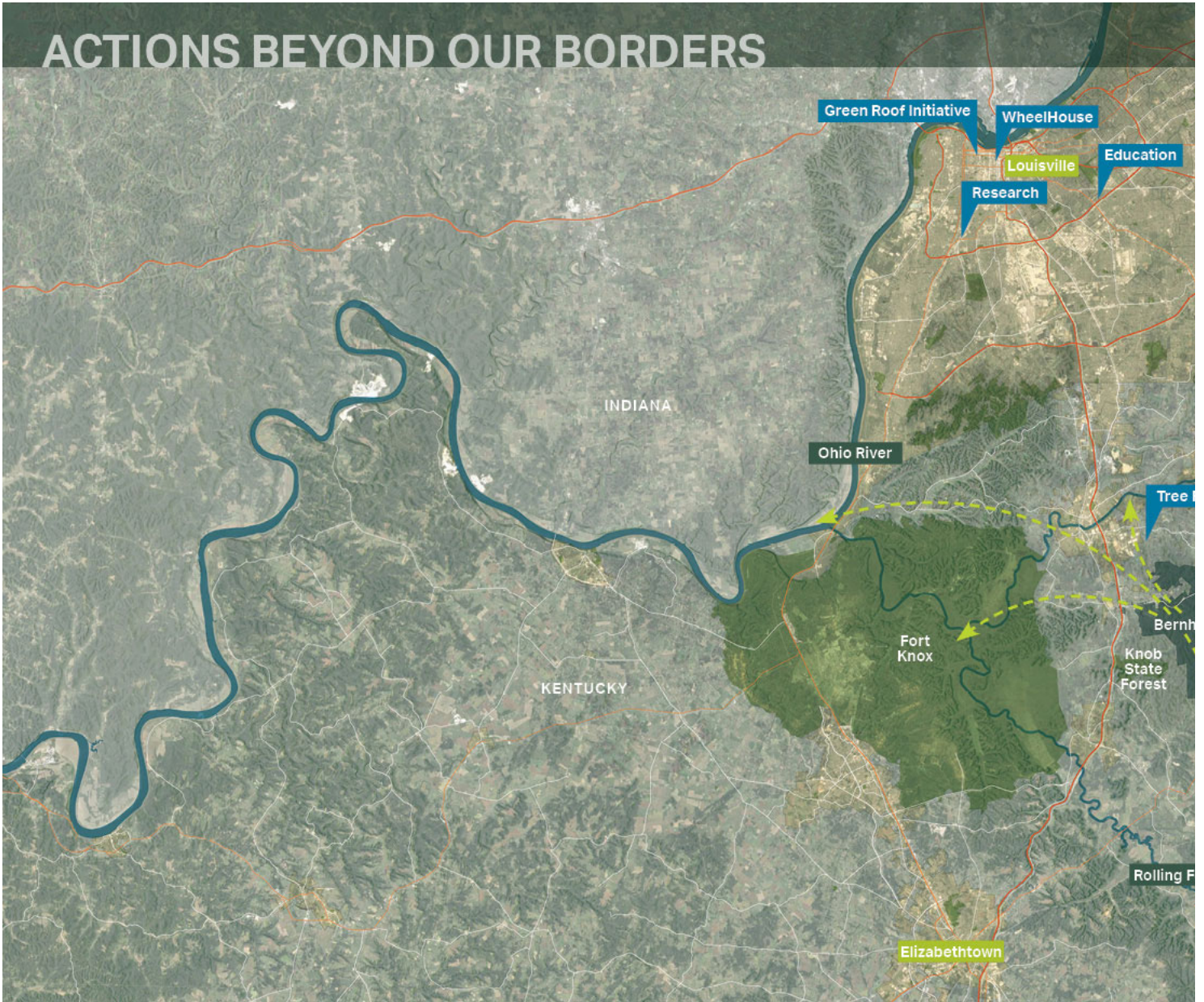
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Actions Beyond our Borders

Strategic partnerships with Bernheim have led to creative, nature-based learning initiatives, newly planted trees, and better amenities for enjoyment and exercise throughout the region. The Bernheim Master Plan seeks to positively affect Bernheim’s community well beyond their borders.

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2019 ASLA Honor Award | Re-Storying the
Knobs: A Master Plan for Bernheim Arboretu
Research Forest

ASLA

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"Since 1929, the privately owned Bernheim Arboretum and Research Forest has been one of Kentucky's most popular natural treasures. This creative master plan builds on the Bernheim's history and the original Olmsted Brothers concept, to help its 15,000 acres tell a fresh story that fulfills its long-standing mission of connecting people to nature. Led by the landscape architect, an interdisciplinary team has developed a plan that includes new and repurposed facilities, expanded and reinterpreted tree collections, walking trails, and green infrastructure practices that reinforce the "story of water" that is a central message of both the forest and its relevance in a changing world."

- 2019 Awards Jury

Project Credits

- Studio Outside – Project Lead
 - Tary Arterburn, FASLA - Principal Partner
 - Andrew Duggan, ASLA - Principal
 - Matt Nicolette, ASLA - Associate
 - Gwendolyn Cohen, ASLA - Associate
 - Seth Winkler, Associate ASLA - Designer
 - Taylor Fehmel - Intern
- Lake | Flato - Architecture
 - Bob Harris, FAIA, LEED FELLOW - Partner
 - Matt Wallace, AIA, LEED AP BD+C - Associate Partner
 - Heather Holdridge EIT, Associate AIA, LEED Fellow - Associate Sustainability Director
 - Koby Moreno – Designer
- Biohabitats
 - Suzanne Hoehne, CE - Environmental Engineer
- EMD Consulting
 - Rick Daley, Partner and Co-Founder
- HR&A Advisors
 - Candace Damon - Vice Chairman
 - Connie Chung - Managing Principal
 - Lindsey Harris - Director
 - Molly Harris, Analyst - Senior Analyst
- The PRD Group
 - Dan Murphy, Principal
 - Susan Petrucci, Graphic Designer
- Bernheim Arboretum and Research Forest
 - Ann Price Davis, President
 - Thomas Block, Past President
 - Susan Hamilton, Trustee
 - Mark K Wourms, PhD, Executive Director
 - Scott Turner, Chief Operating Officer

Project Statement

As Bernheim nears its centennial, the Landscape Architects were commissioned to develop a master plan to strengthen the impact of Bernheim's mission and to further their strategic plan while ensuring financial sustainability. The master plan for Bernheim Arboretum & Research Forest sets a vision of "re-storying" the site by immersing visitors in diverse natural systems and curated horticultural experiences. New programs and facilities improve ecological systems and interpret a layered landscape story for a new generation. Realization of this plan will allow Bernheim to further its mission of "connecting people to nature" by continuing to be an innovator in land stewardship and habitat restoration.

Project Narrative

Context

Located 30 miles south of Louisville, Kentucky, the Bernheim Arboretum and Research Forest was founded in 1929 to create deep connections between people and nature. The site was originally planned by the Olmsted Brothers and has been a successful long-term restoration of a landscape ravaged by the iron ore industry. Within Bernheim's 15,000 acres, the arboretum provides diverse programs that include hiking trails, educational programs, mature tree collections, and large-scale sculptures – as well as 14,000 acres of restored knob forest and creek ecosystem. Unfortunately, only 30% of Bernheim's visitors find the current Visitor Center—concealed in the forest a mile from the Arboretum entrance. This limits Bernheim's ability to further their mission of "Connecting People to Nature." The organization's identity is also misunderstood—as many assume that Bernheim is a publicly funded state park since only a per-car "environmental impact fee" is collected on the weekend and admission is otherwise free, per the founding bylaws. This misconception has compromised Bernheim's ability to fundraise operational revenue as costs have outpaced endowment.

Hierarchy of Immersion

The new Bernheim offers experiences for different levels of visitor comfort in nature across a spectrum of passive recreation options—but always with an emphasis on awareness of Bernheim's conservation mission. From a fully curated walk in the horticultural collections to a deep immersion in the restored forested knobs, multiple storylines engage visitors with the ecology of the site. Together, the Arboretum, the Woodland, and the Forest encourage return visits and a deeper exploration of nature:

- Arboretum – horticultural collections, Big Prairie, Lake Nevin, Family Garden, the Bernheim Visitor Center, the Nature Discovery Center, and the Hilltop Event Center.
- Woodland – passive recreation zone of trails and picnic facilities that also includes space for a biannual artist-designed garden festival.
- Forest – the acreage of restored knob ecosystems offers immersive hiking trails and significant areas for research in an evolving landscape.

Within this overall framework, a programming strategy, operational pro forma, and phasing plan for implementation were also developed.

Intuitive Visitor Experience

A new arrival sequence secures Bernheim as an anchor destination on the "Bourbon Trail" —directly across the street from the Jim Beam distillery. While Bernheim's mission is to put people outside in nature, three purposeful building destinations frame the experience:

- The new Bernheim Visitor Center welcomes visitors upon arrival and immediately engages them in the story of water and landscape that permeates all aspects of the Bernheim experience. Visitors arrive by crossing a restored wet prairie and are provided orientation to plan their visit while enjoying views of Lake Nevin. This new center is the gateway to the arboretum – providing tram service, bike rentals, and walkable access to a hierarchy of trail loops and several destinations.
- The existing Visitor Center will be repurposed as the Nature Discovery Center to provide a place for hands-on educational programs that include interactions with nearby ponds, forest, and nature play.
- The existing education building will become the Hilltop Event Center, which will for the first time provide a multi-use space for meetings, symposiums, weddings, and other celebrations at Bernheim.
- Importantly, the primary vehicular loop road reverses direction and is converted to a one-way drive for clarity and builds upon the series of viewsheds as the vast site is revealed to the visitor.

This shifting of programs and infrastructure provides a more intuitive visitor experience, fosters staff connections with visitors, and reduces further ecological impact by repurposing the existing cluster of buildings.

The Story of Water

Although much of Bernheim's Research Forest is not accessible to the public, the land serves an important ecological function—protecting the headwaters of 7 creeks and providing a large contiguous forest in a regional landscape that is fragmented by farming and industry.

Bernheim has actively restored the streams in its Research Forest to improve downstream water quality and support riparian habitat. During the planning process, the team identified a disconnect between the restoration of streams in the Research Forest and the way water is managed in the Arboretum. Telling "the story of water" throughout Bernheim became the primary framework for organizing and interpreting the site.

In the Arboretum, lake edges will be diversified, tile drains will be removed, and green infrastructure practices will be implemented as ways of demonstrating healthy site hydrology. Visitors will be able to follow the story of a drop of water from the tallest knob in Bernheim, through the forest to the restored Olmsted Ponds. Similar stories will be told of water that drops in the Visitor Center parking lot, is filtered through a series of bioswales that remove contaminants, filter into the wet prairie, and eventually flow into Lake Nevin.

Each walking trail in the arboretum will provide a distinct interpretive story. Together the trails will tell Bernheim's history of "re-storying" the landscape through innovative restoration.

Experiential Collections

The Collections, including over 8,000 different species and cultivars of trees, are an integral part of Bernheim's rich legacy. The master plan proposes extensive revisioning beyond simply a "collection" of species and proposes refinements and expansion to ensure year-round interest and new program opportunities. An experiential approach, rather than simply a cataloging of species, will re-awaken this treasured asset. The Collections provide an important resource that serves as the basis for long-term evaluation and research aimed at identifying the best plants for this region's landscapes. The completion of this master plan will make the existing collections more accessible through trails and interpretation. As collections age, areas of the arboretum will be rethought. New collections will be designed to create meaningful aesthetic experiences and increase visitor knowledge of tree species in unexpected ways. The planting of new collections also allows Bernheim to experiment with more resilient species that are better equipped to handle changes in Kentucky's climate.

Experiential Forest

Landscape interventions and habitat management seek to blur the line between "arboretum" and "forest" by meandering the forest and prairie edge across the historic loop road – adding depth of experience for cars, cyclists, and pedestrians.

Beyond this broad framework, an array of further destinations build the Bernheim Experience:

- Family Garden
- Edible Garden
- Lodging
- Concert Venue
- Garden Festival
- Canopy Walk

Realizing the Plan

The Landscape Architect was the prime consultant—leading an architectural, environmental, interpretive, horticultural, financial, and operational consultant team through a collaborative process of assessments, programming, site strategies, and master planning.

Realization of this plan will allow Bernheim to further its mission by continuing to be an innovator in land stewardship and habitat restoration while better revealing these stories to visitors. These strategies restore and "re-story" the site and welcome a more diverse audience – all ensuring that the sense of place that Kentuckians have treasured for generations will endure for those to come.

Products

Product Sources:

- N/A

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