

DOAN BROOK RESTORATION

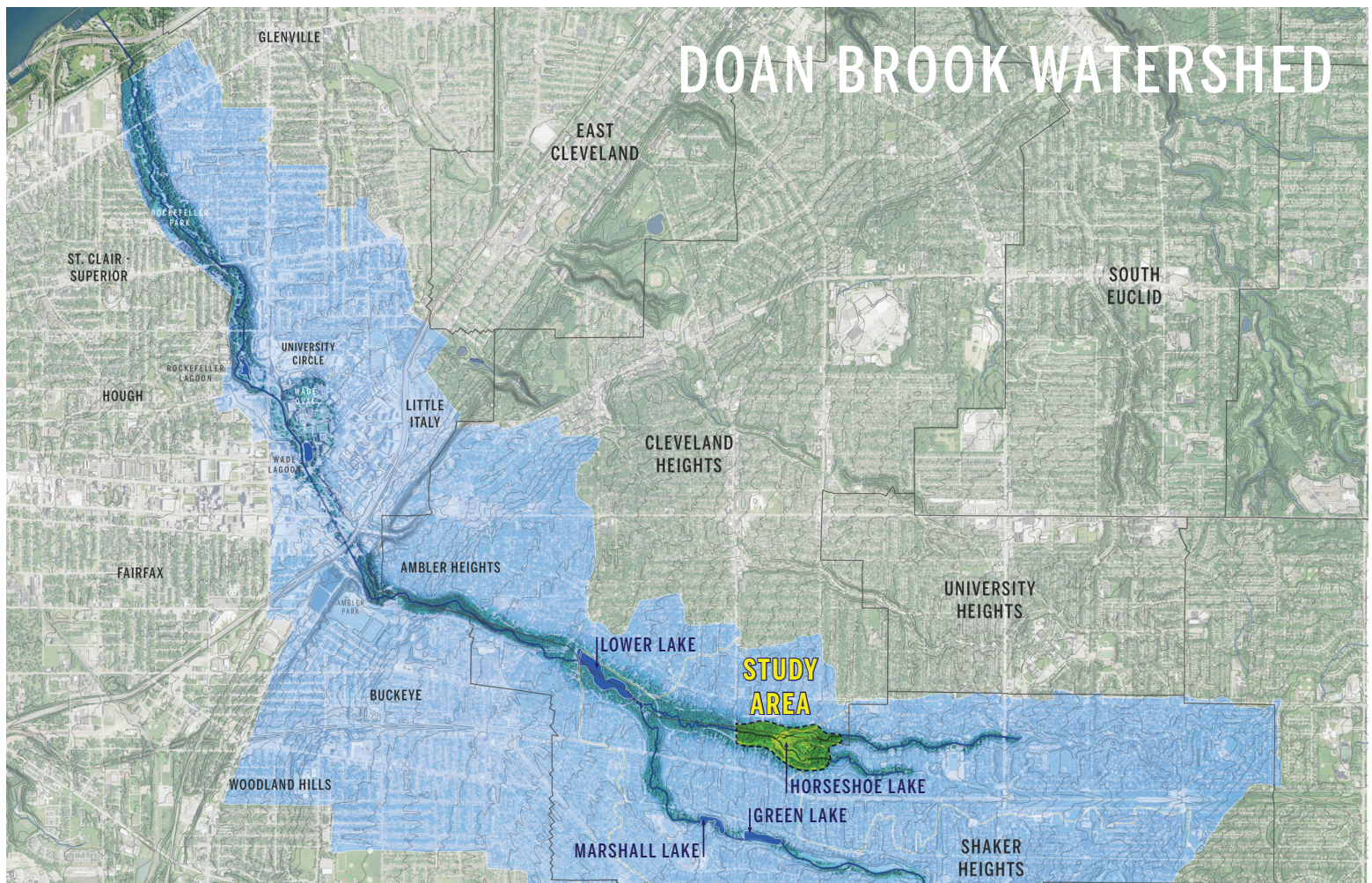
PUBLIC FORUM #1: VIRTUAL MEETING
THE DOAN BROOK RESTORATION NEAR HORSESHOE LAKE PARK

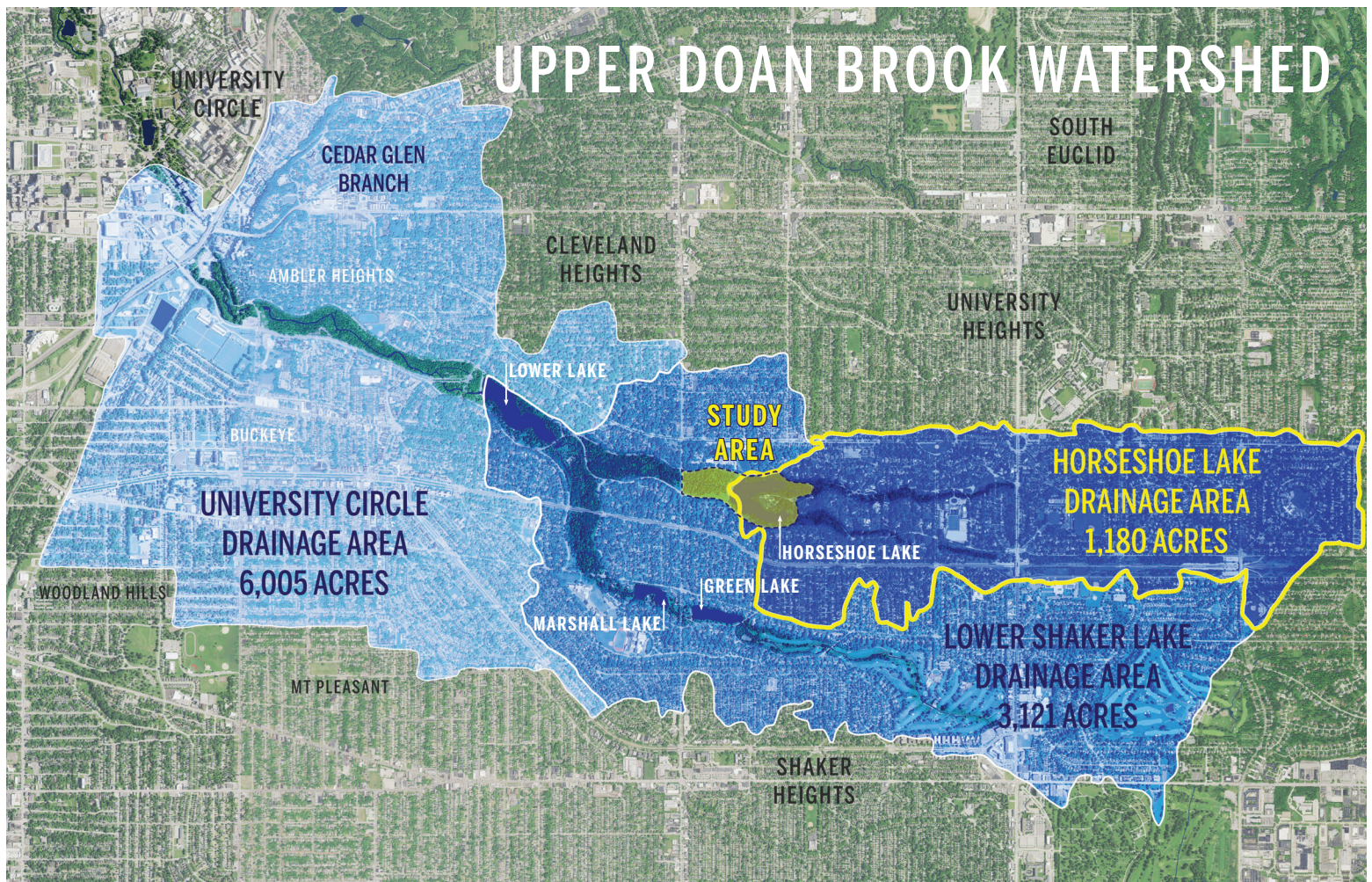
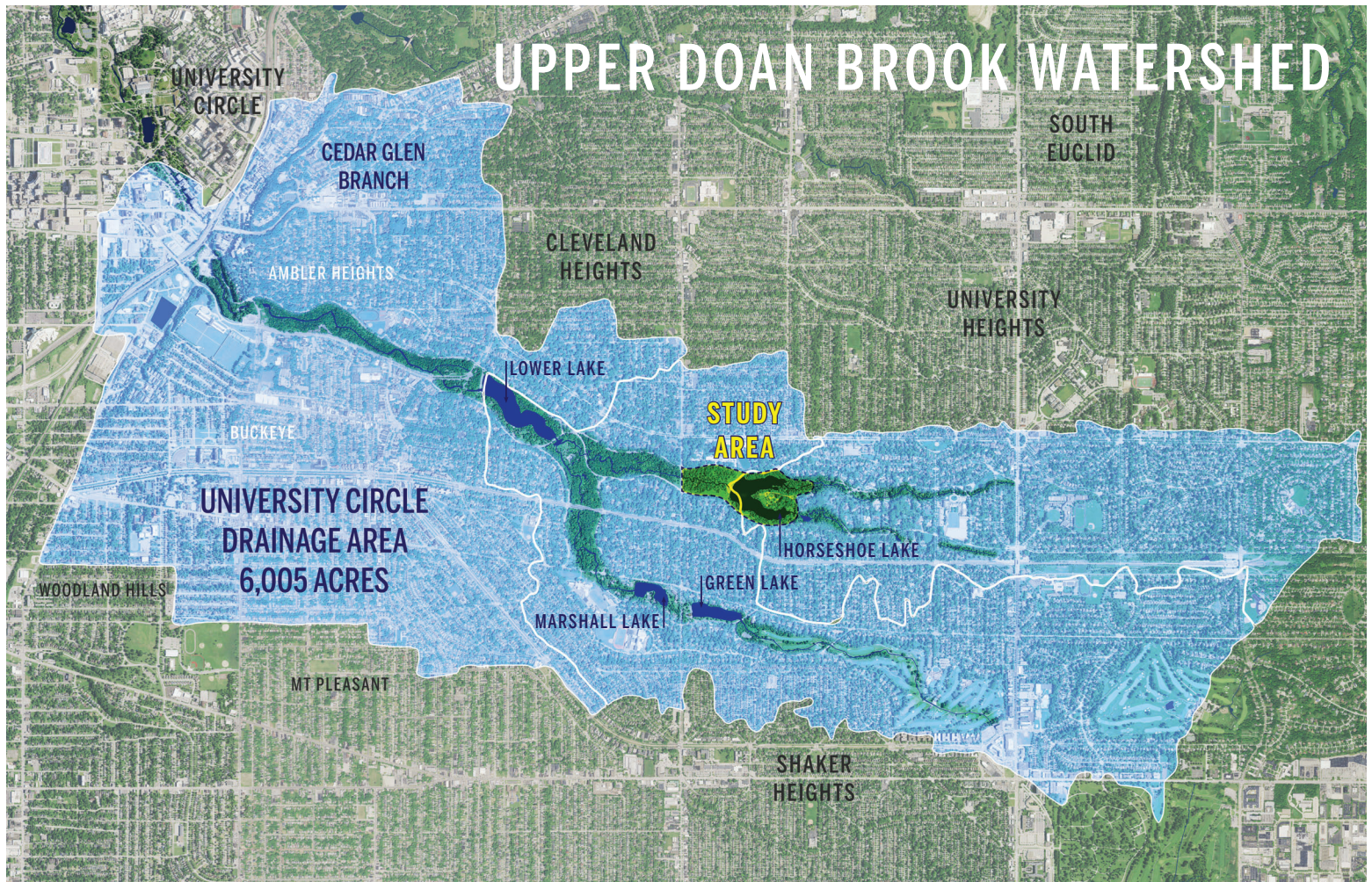
AUGUST 25, 2022



STIMSON

AECOM



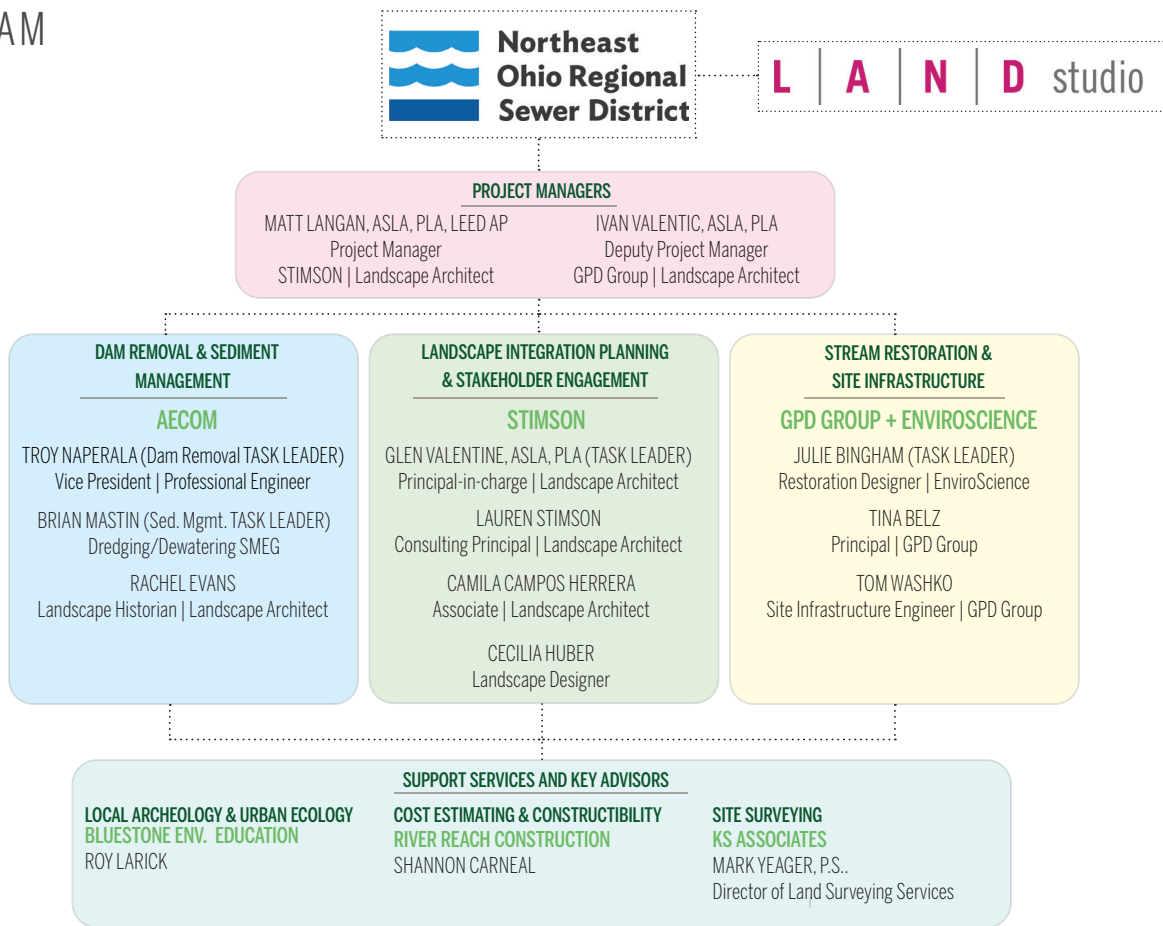




Saw cut and removal of concrete walkway over Horseshoe Lake spillway to investigate detected voids within the dam and spillway structure, July 2021

- 
- An aerial photograph showing a large, muddy river or spillway. The water is very turbid and brown, indicating a high concentration of sediment. The flow appears to be quite fast and turbulent. The surrounding area is mostly dry, brown vegetation.
- Regional Stormwater Management Program Goals
 - ODNR Dam Safety Regulatory Requirements
 - Risk and Maintenance of a High Hazard Dam
 - Management of Sediment

DESIGN TEAM



IN THE MEETING WITH YOU TONIGHT

STIMSON

Landscape Architecture & Stakeholder Engagement



GLEN VALENTINE, ASLA, PLA
PRINCIPAL
LANDSCAPE INTEGRATION LEADER



MATT LANGAN
TECHNICAL DIRECTOR
PROJECT MANAGER



CAMILA CAMPOS HERRERA
ASSOCIATE LANDSCAPE ARCHITECT



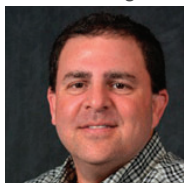
CECILIA HUBER
LANDSCAPE DESIGNER

AECOM

Dam Removal and Sediment Management



TROY NAPERALA, PE
VICE PRESIDENT OF US WEST WATER
DAM REMOVAL LEADER



BRIAN MASTIN
SEDIMENT PRACTICE LEADER
SEDIMENT MANAGEMENT LEADER

GPD Group + EnviroScience

Stream Restoration

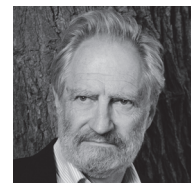


IVAN VALENTIC
SENIOR PROJECT MANAGER
DEPUTY PROJECT MANAGER



JULIE BINGHAM, CERP
RESTORATION GROUP MANAGER
STREAM RESTORATION LEADER

Key Advisor



ROY LARICK
ARCHEOLOGY, NATURAL HISTORY, AND
STAKEHOLDER ENGAGEMENT ADVISOR

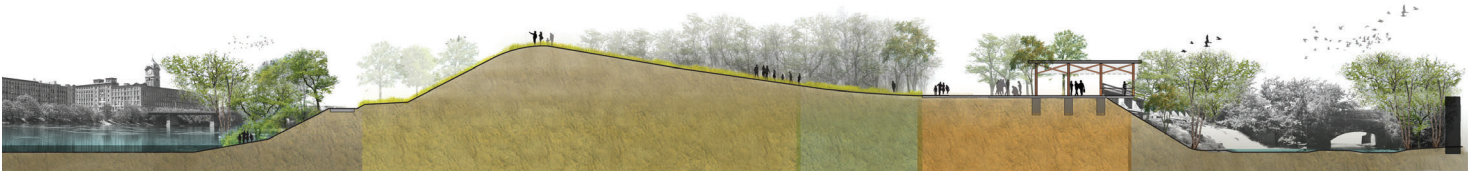
HARDBERGER PARK | San Antonio, TX



FLORENCE GRISWOLD MUSEUM | Old Lyme, CT



FERROUS FOUNDRY PARK | LAWRENCE, MA



COONAMESSETT RIVER GATEWAY PARK | Falmouth, MA



2022 2023 2024 2025 2026

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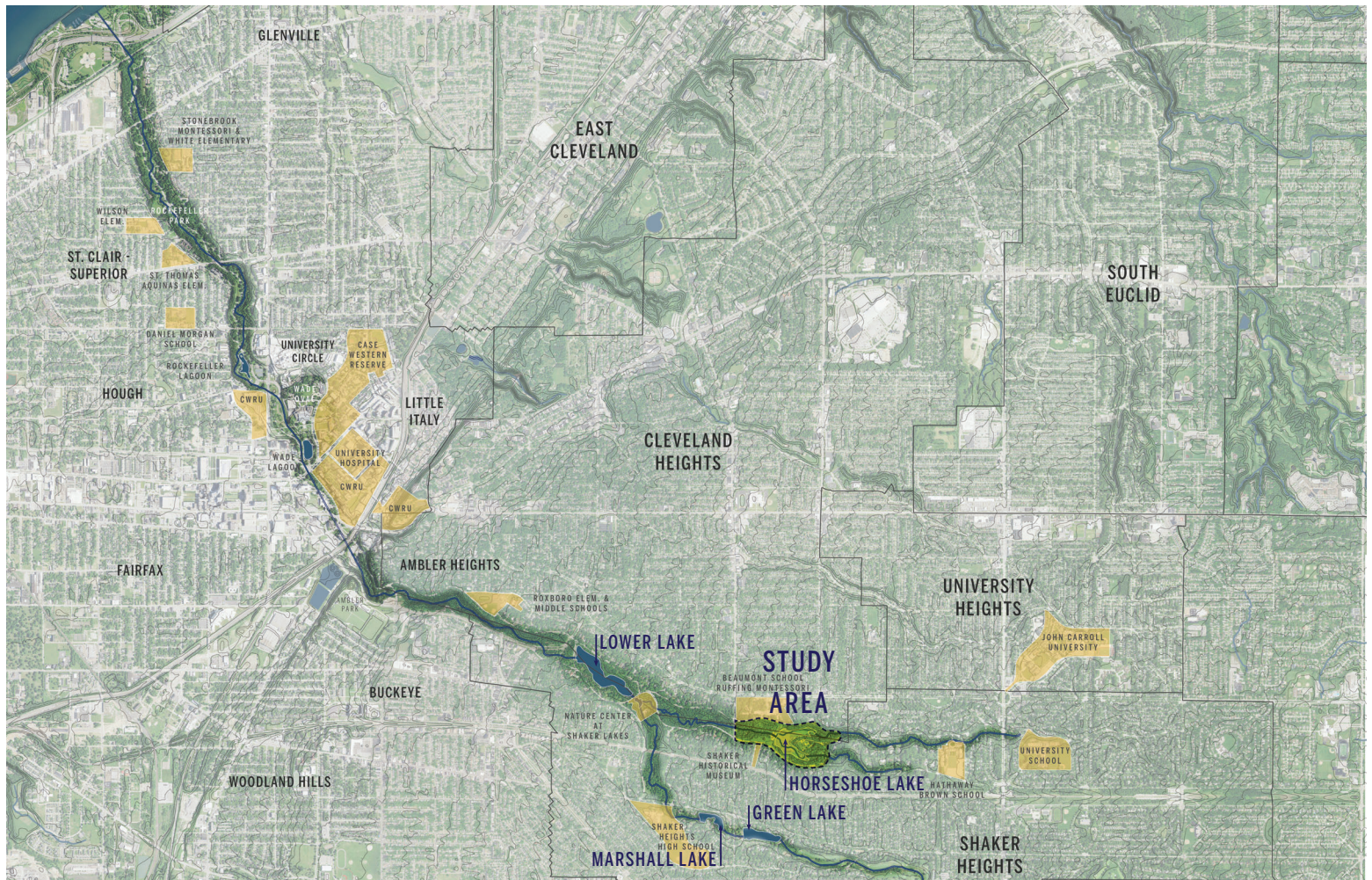
PRE-DESIGN DETAILED DESIGN BIDS NTP CONSTRUCTION PROJECT CLOSE OUT

WE ARE HERE



AGENDA

- 1 Project Goals & Objectives
- 2 Site Analysis Summary
- 3 Opportunities
- 4 Upcoming Engagement Events





GOALS & OBJECTIVES

PROJECT GOALS & OBJECTIVES

Develop a landscape plan that integrates ecological, cultural, & recreational amenities

Restore the stream corridors and enhance ecological sustainability

Manage waterway sediment to accommodate the project program in a way that is cost effective

Remove the dam to mitigate risk during and after construction

PROJECT GOALS & OBJECTIVES

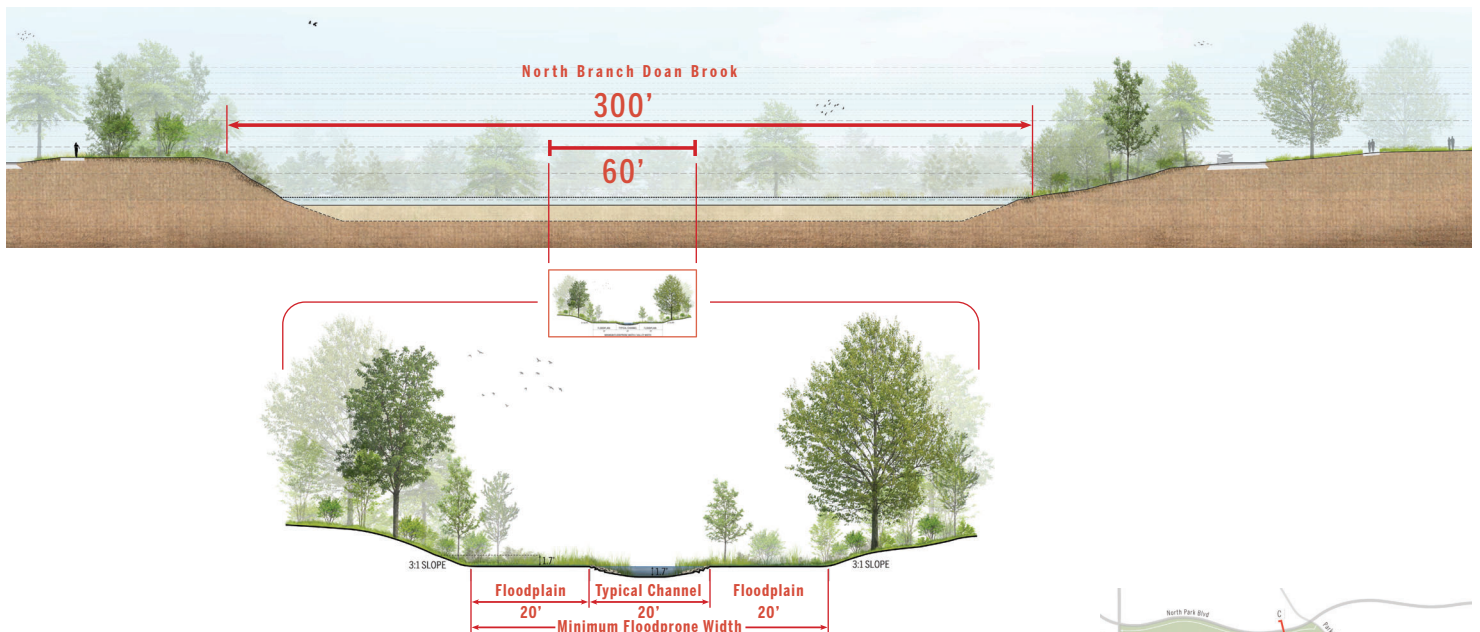
Develop a landscape plan that integrates ecological, cultural, & recreational amenities



- Interpret the multifaceted historical, natural, and cultural legacies impacting ecology and use of the site
- Recommend park design elements informed by community needs and interest
- Repair and expand physical connections to amenities and through the site
- Ground the landscape vision with an achievable management plan

PROJECT GOALS & OBJECTIVES

Restore the stream corridors and enhance ecological sustainability



- Re-naturalize the Doan Brook channels & riparian features to improve ecological function
- Make data-driven recommendations to manage storm events, erosion, and flow in an environmentally responsible way
- Make decisions for restoring this portion of Doan Brook that consider the watershed as a whole



PROJECT GOALS & OBJECTIVES

Restore the stream corridors and enhance ecological sustainability



Patroon Creek in Albany, New York



Beecher's Brook in Mayfield, Ohio



Doan Brook at the Cleveland Museum of Art



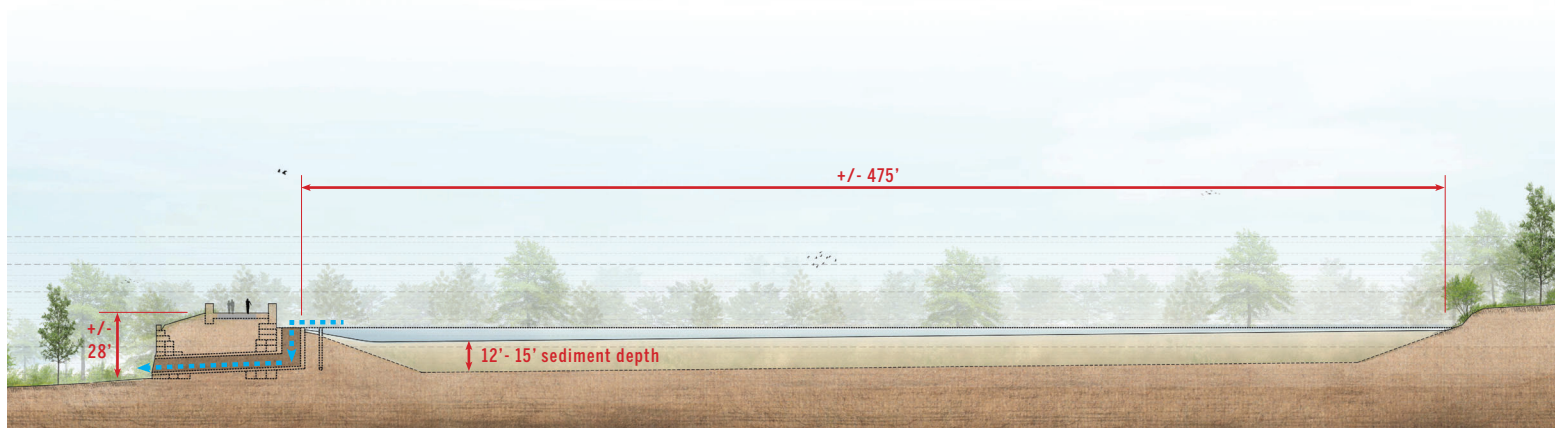
Mill River Park in Stamford, Connecticut



Mill Creek in Highland Hills, Ohio

PROJECT GOALS & OBJECTIVES

Manage waterway sediment to support the project program in a way that is cost effective



- Provide a data-driven cost/benefit analysis for the best ways to reuse, repurpose, and/or dispose of stream sediment
- Make sediment management decisions that consider the watershed as a whole



PROJECT GOALS & OBJECTIVES

Manage *waterway sediment* to support the project program in a way that is cost effective



Ferrous Foundry Park in Lawrence, Massachusetts | Stimson



Ferrous Foundry Park in Lawrence, Massachusetts | Stimson



Long Dock Park in Beacon, New York | Reed Hilderbrand

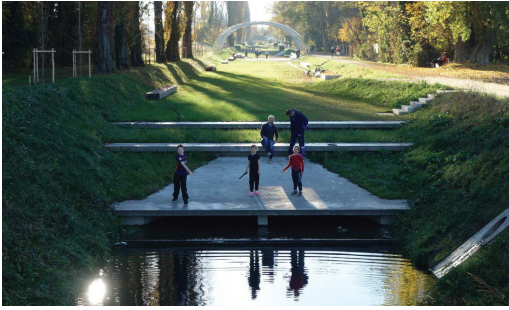
PROJECT GOALS & OBJECTIVES

Remove *the dam* to mitigate risk during and after construction



- Communicate the regulatory, public safety, and environmental challenges associated with dams
- Demonstrate deficiencies of the existing structure
- Develop an approach for removal that minimizes safety risks while managing variable stream flows during construction
- Integrate dam removal with stream restoration and sediment management

GRADE CONTROL



River Aire, Switzerland | Georges Descombes



Doan Brook @ Smith Family Gateway | CH2M Hill



Seabrook, New Hampshire Residence | Reed Hilderbrand



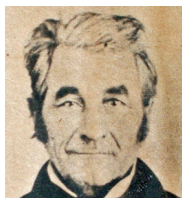
River Aire, Switzerland | Georges Descombes



Hamilton College Arts Neighborhood, Clinton, NY | Reed Hilderbrand

SITE ANALYSIS SUMMARY

SITE HISTORY



Ralph Russell

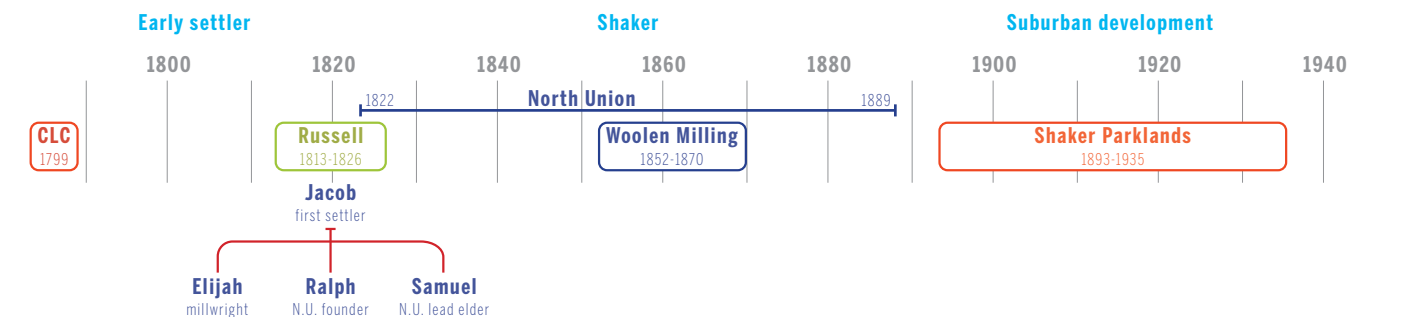


Deforestation c. 1900

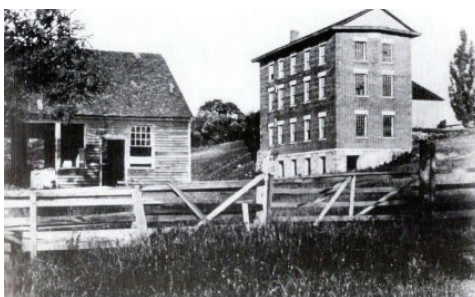


Upper Lake spillway outfall c. 1900

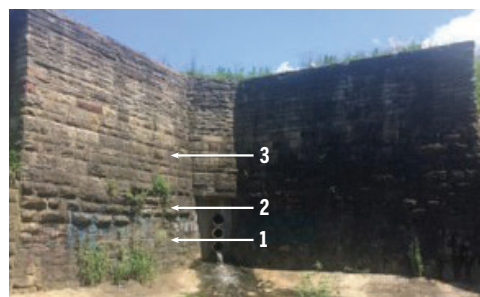
Historical resources timeline



Elijah Russell sawmill millpond, 1820s (Hopkins 1858)

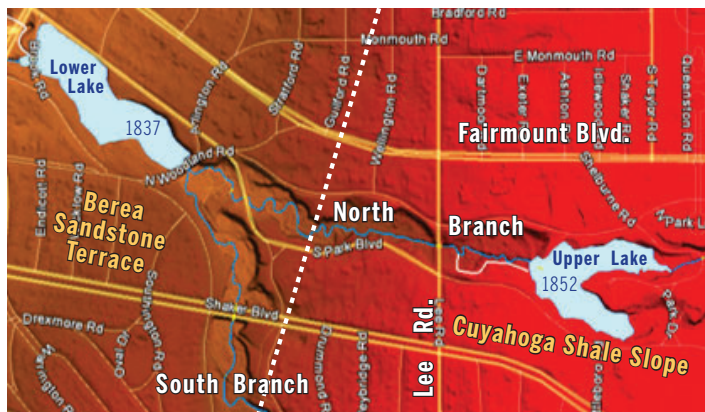


Woolen Mill & blacksmith shop c. 1895



Civil Works Administration (CWA) masonry, 1934

SITE HISTORY



Surface Bedrock

373

22

Shaker Society

22 Middle Family

23 Woolen Fac.

Church School 155

Honey & Prescott (Trustees)

R1

Phc

7

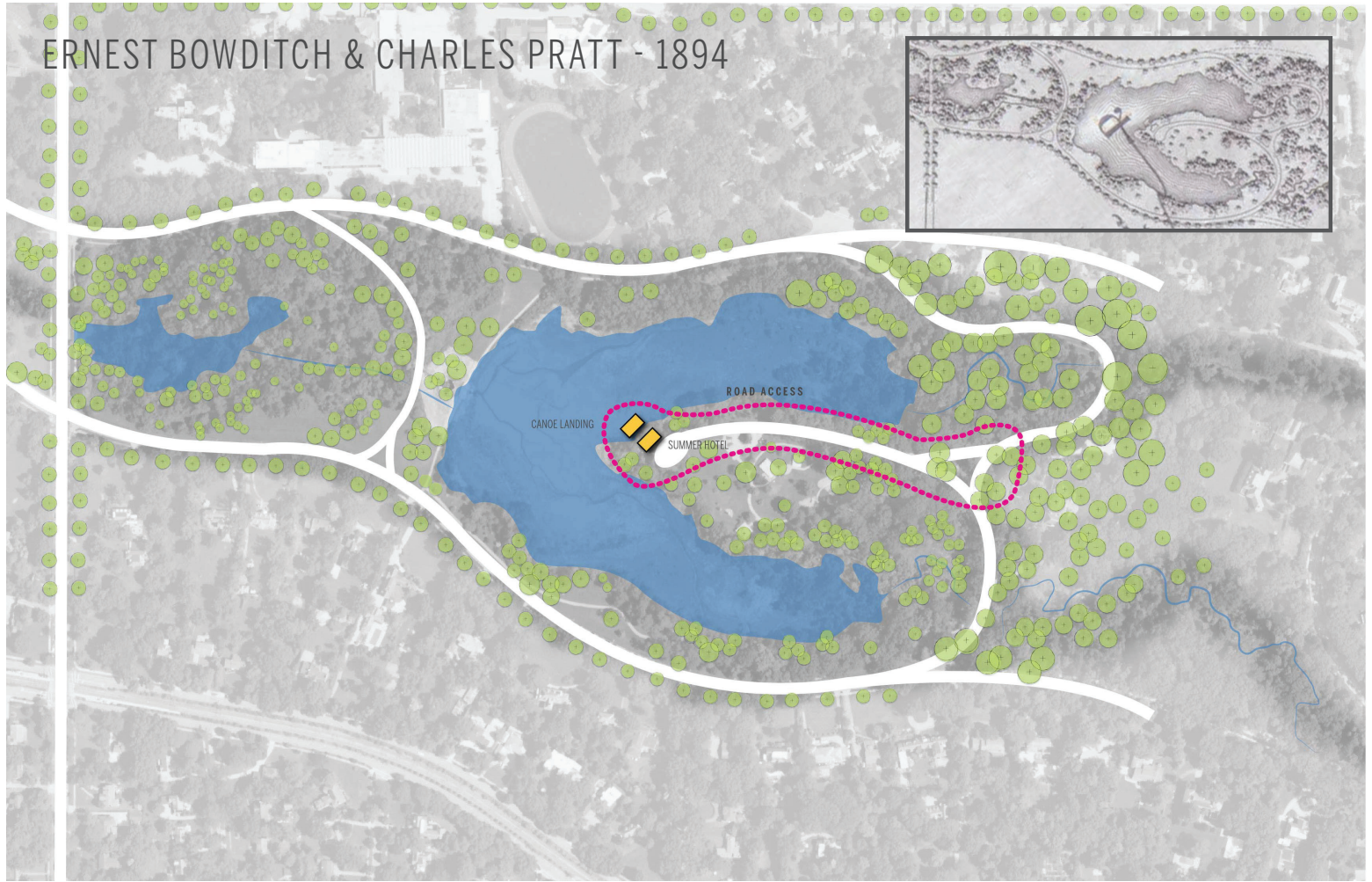
13

The map shows the Cuyahoga River flowing through the area, with the 'Lower Lake' (1837) and 'Upper Lake' (1852) areas highlighted. Key roads shown include Lee Rd., North Branch, and South Branch. The map also indicates the 'Berea Sandstone Terrace' and 'Cuyahoga Shale Slope'.

An aerial photograph of a park area. The image is framed by a thick blue border. Overlaid on the photograph are four labels in a light blue, sans-serif font. 'Lee Road' is written vertically on the left side. 'North Park Boulevard' is written diagonally across the top. 'Parkway Crossing' is written diagonally across the right side. 'South Park Boulevard' is written diagonally across the bottom. The photograph shows a large, irregularly shaped green space with many trees and some open areas. There are some circular features, possibly ponds or large trees, visible in the top left and bottom right corners.

A topographic map of the Woolen Mill area. The map shows a headrace (blue line) flowing from the upper right towards the lower left. North Park Boulevard is shown as a thick black line at the top. South Park Boulevard is shown as a thick black line at the bottom. Lee Road is shown as a thick black line on the left side. The map uses contour lines to indicate elevation, with higher elevations shown in brown and lower elevations in green. A dashed line represents the headrace's path. Labels with arrows point to North Park Boulevard, South Park Boulevard, Lee Road, and the Woolen mill headrace.

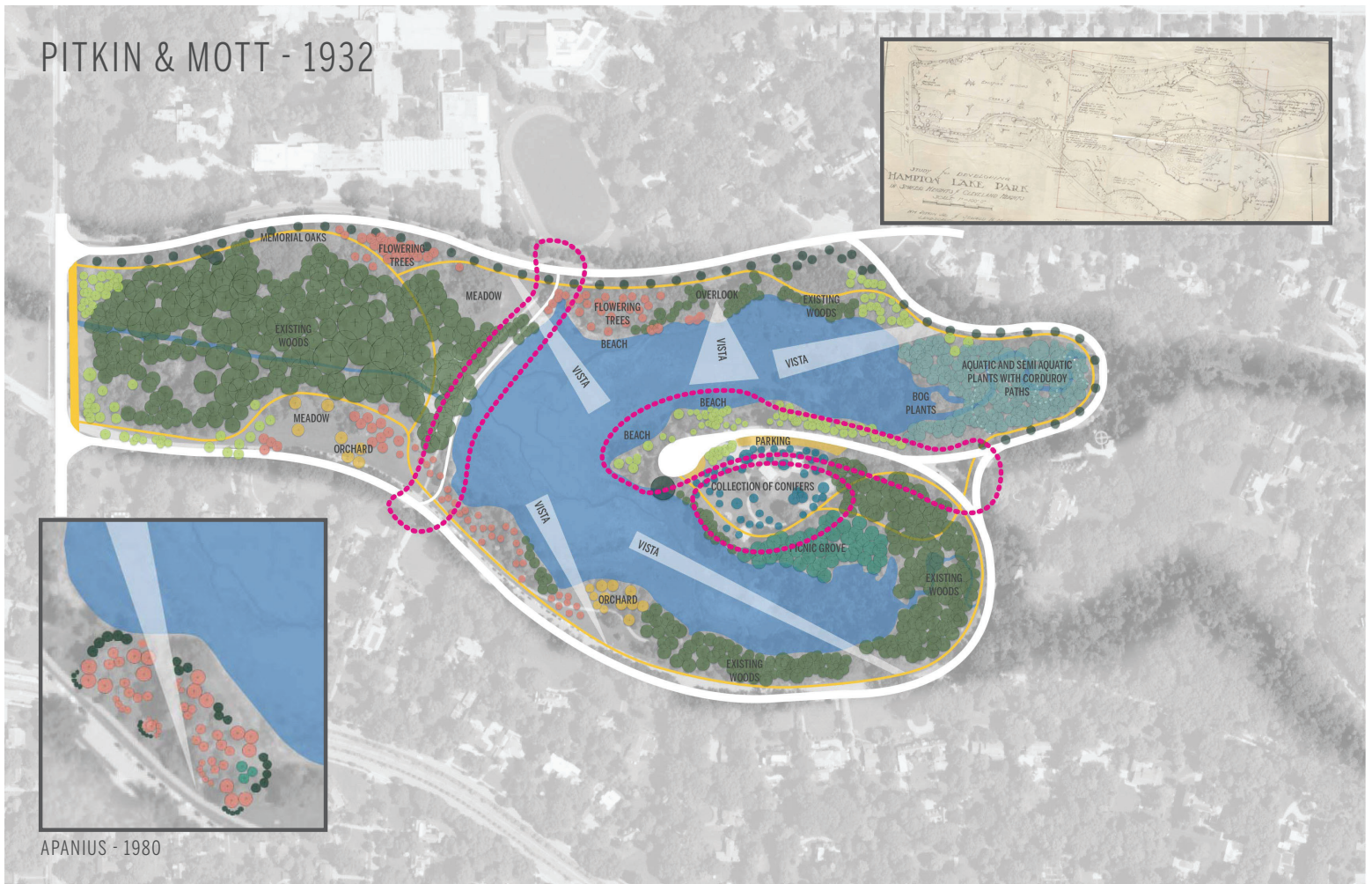
ERNEST BOWDITCH & CHARLES PRATT - 1894



ENTRY DRIVE



PITKIN & MOTT - 1932

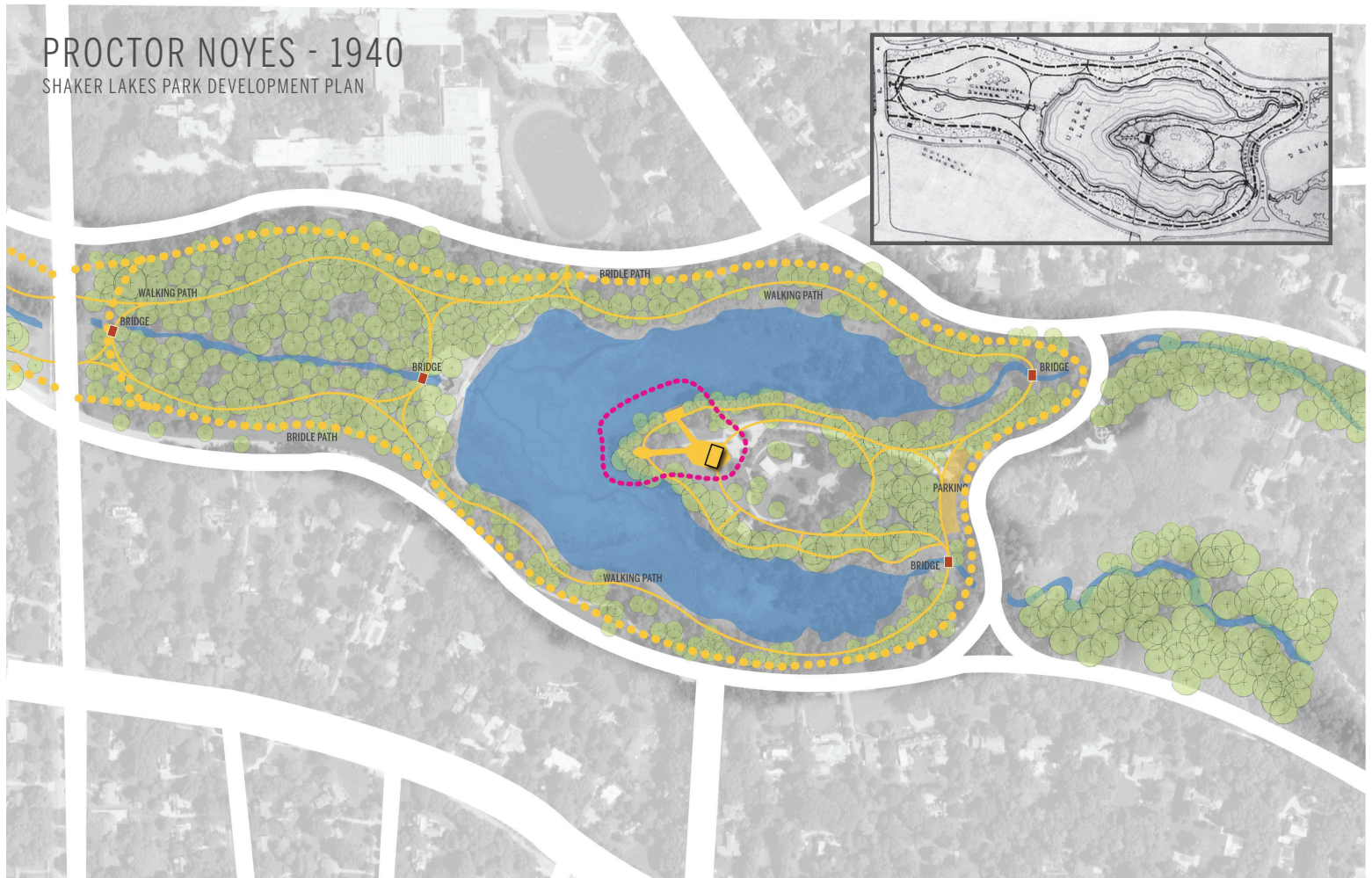


VILLAGE GARDEN CLUB



PROCTOR NOYES - 1940

SHAKER LAKES PARK DEVELOPMENT PLAN



WATER'S EDGE



Apex "splash pad" Overlook



Stone walkway toward Apex "splash pad" Overlook



Stone Detail at Apex "splash pad" Overlook



The Beach

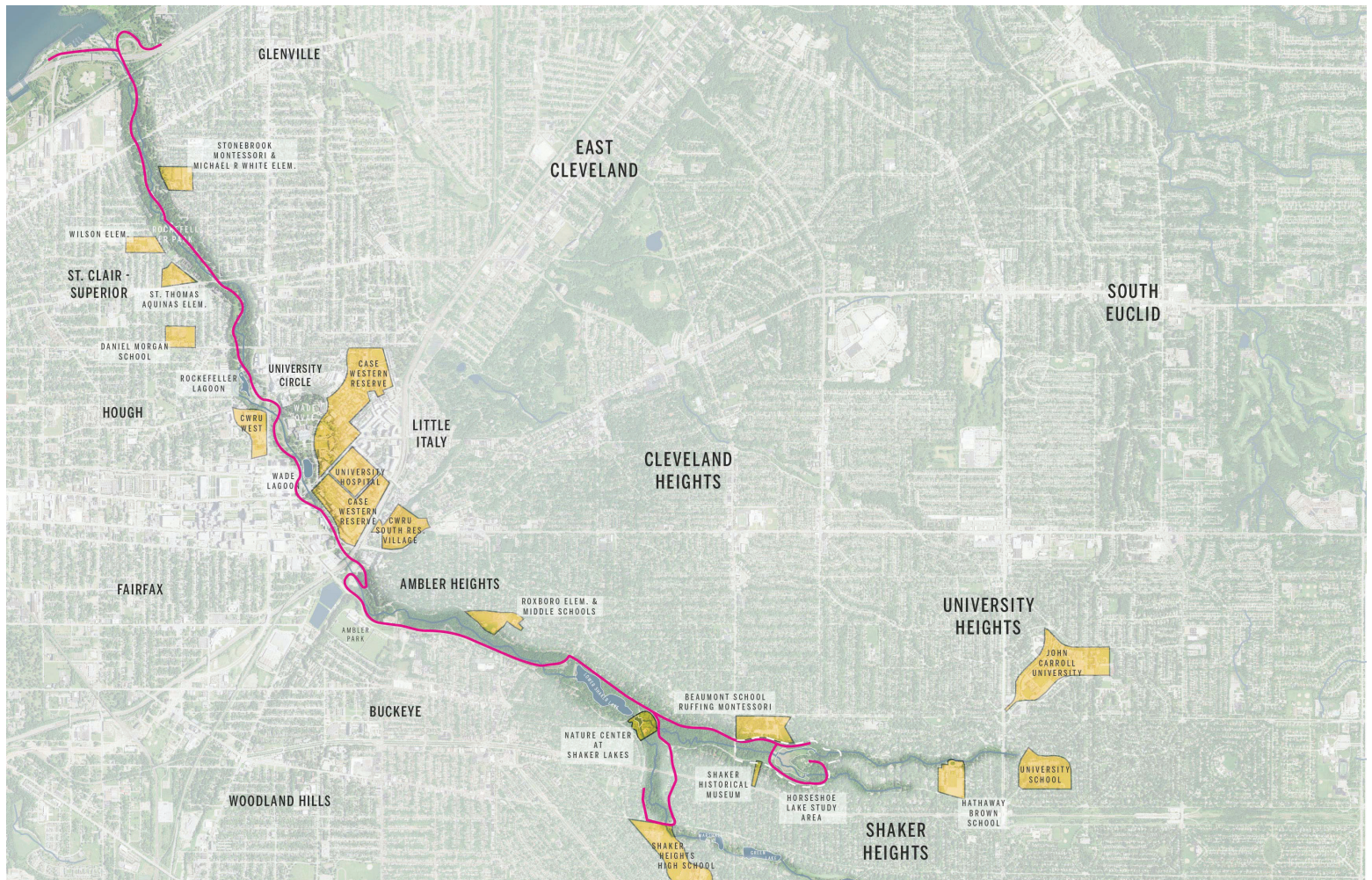


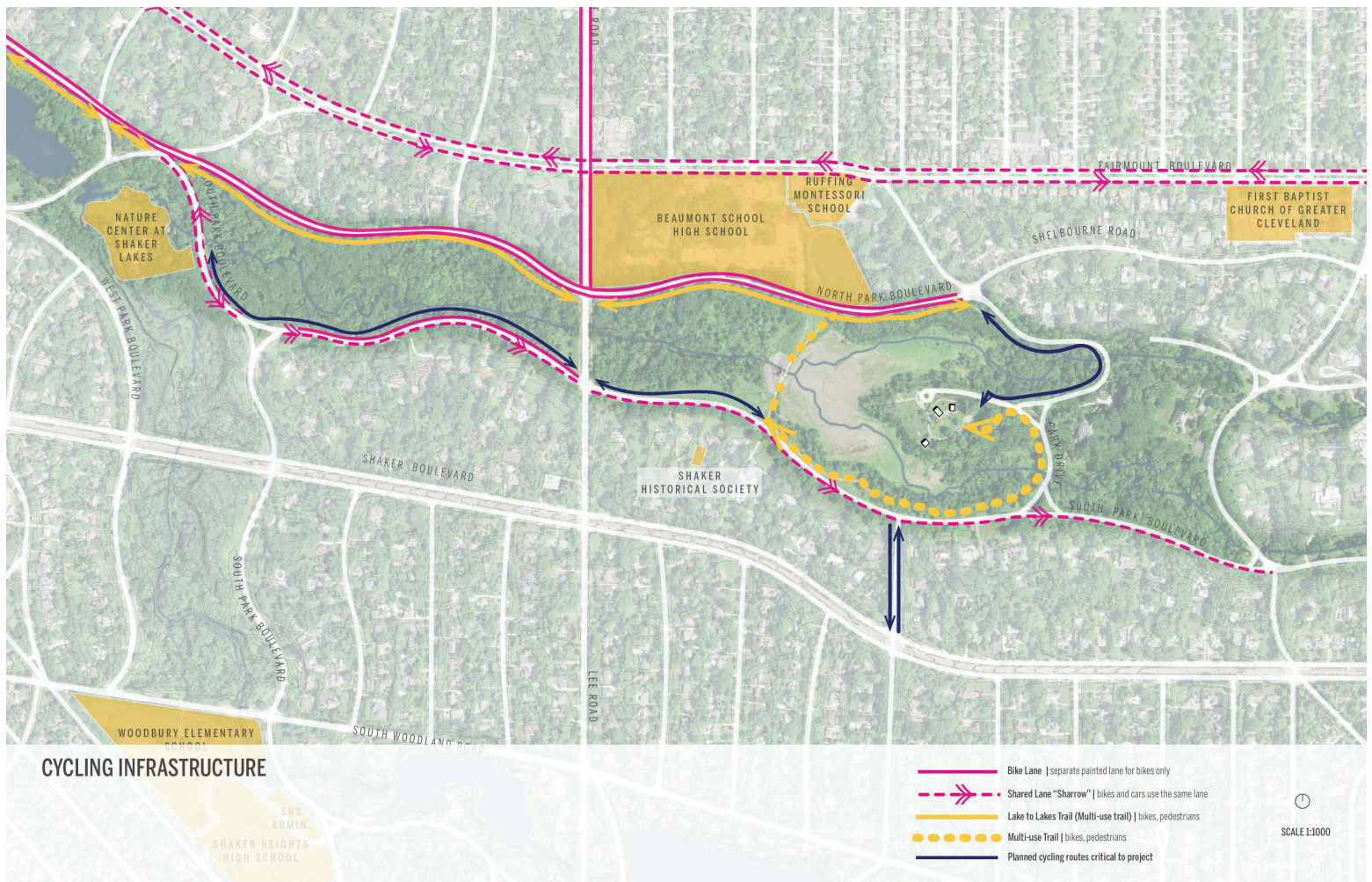
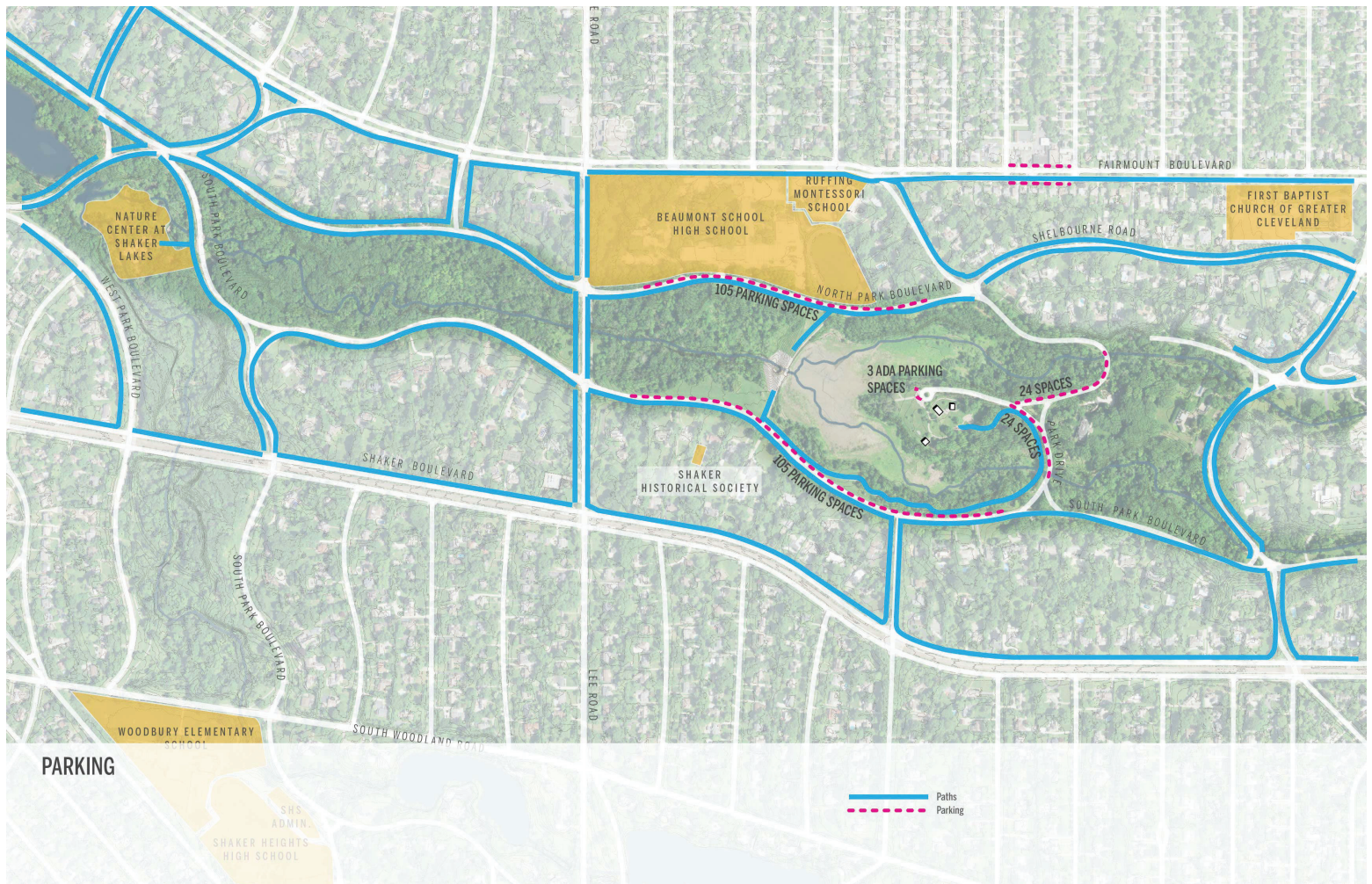
Stone stairway to the Beach

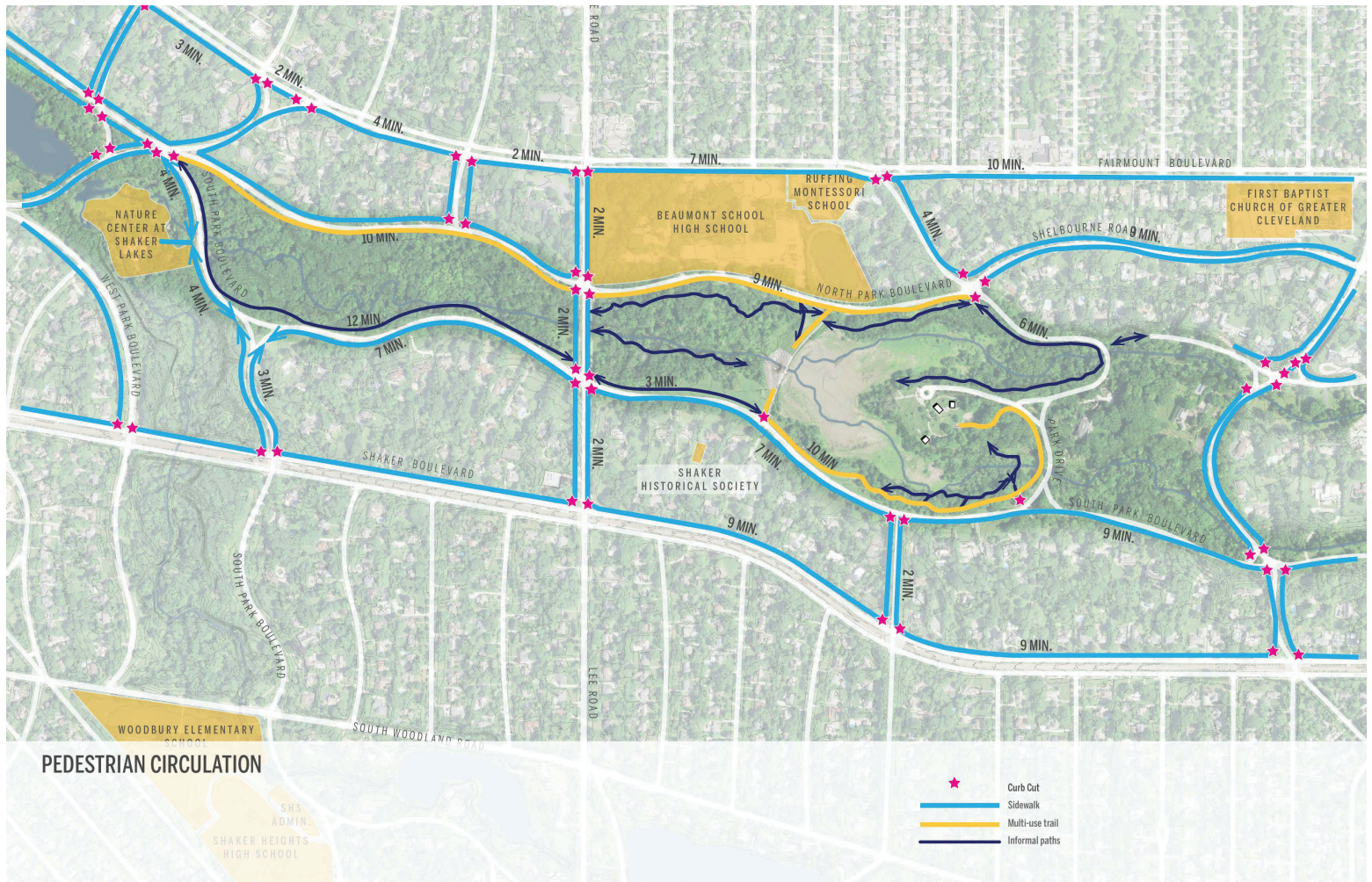


Beach Overlook

CONNECTIONS AND ACCESS







ENVIRONMENTAL INVESTIGATION





TREES OF HORSESHOE LAKE PARK



Oak grove



Eastern Cottonwood



Shagbark Hickory



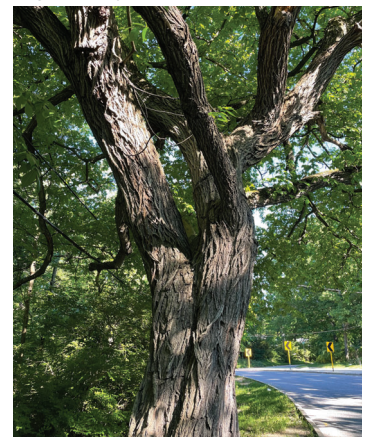
Northern Red Oak



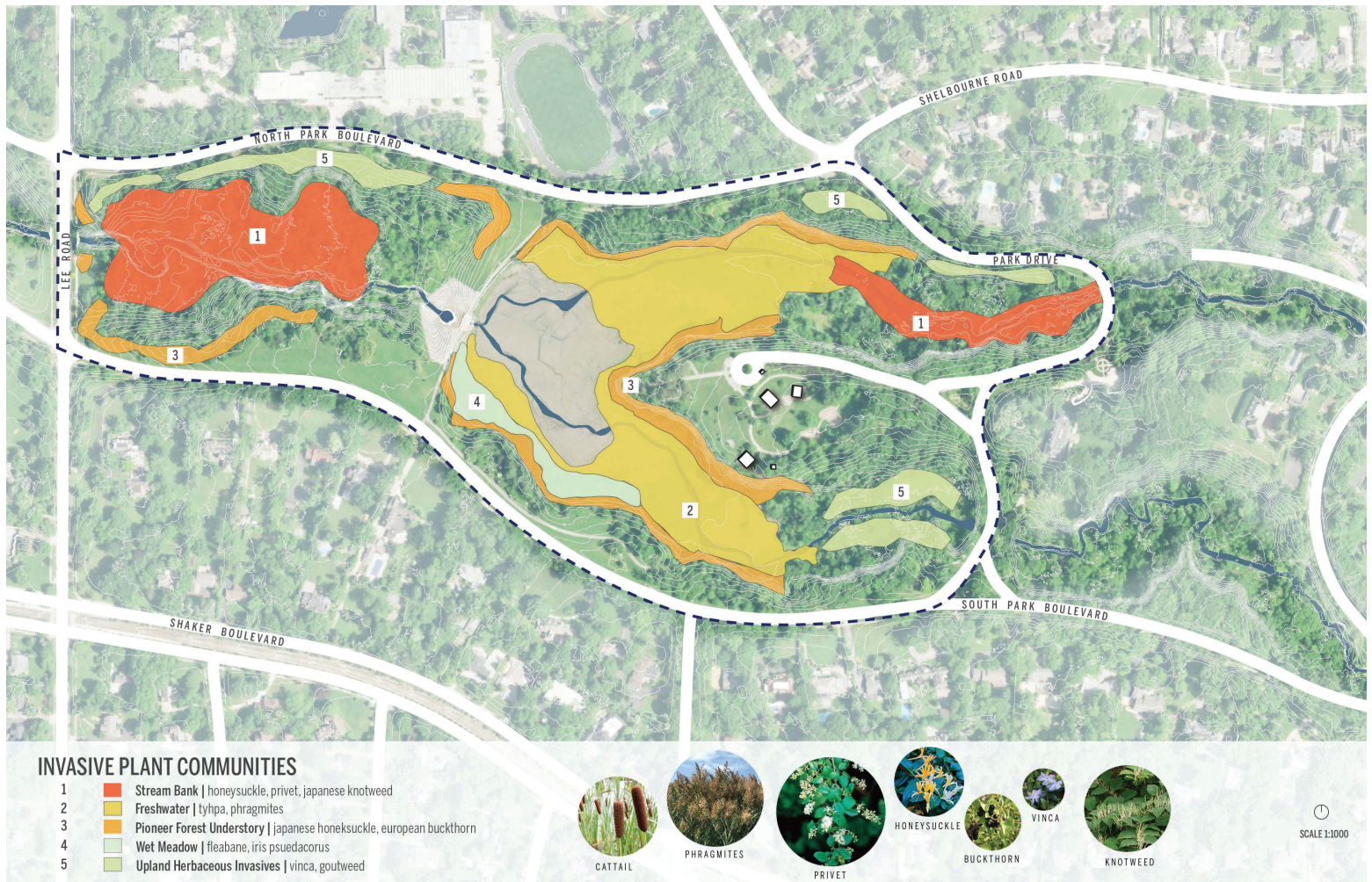
Tulip Tree



Sycamore



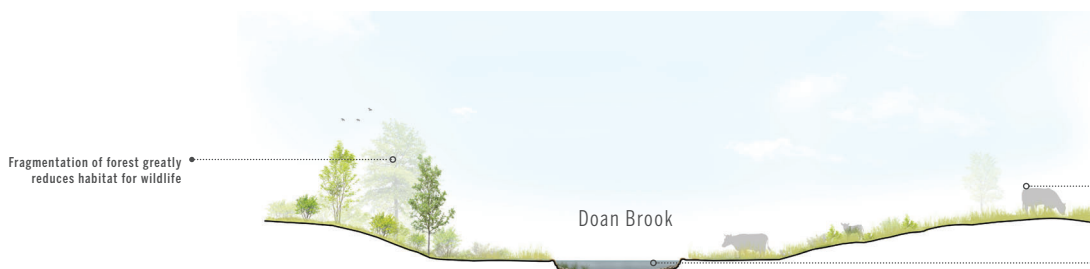
Black Locust



LANDSCAPE TRANSFORMATIONS



Pre 1790s Limited Human Occupation

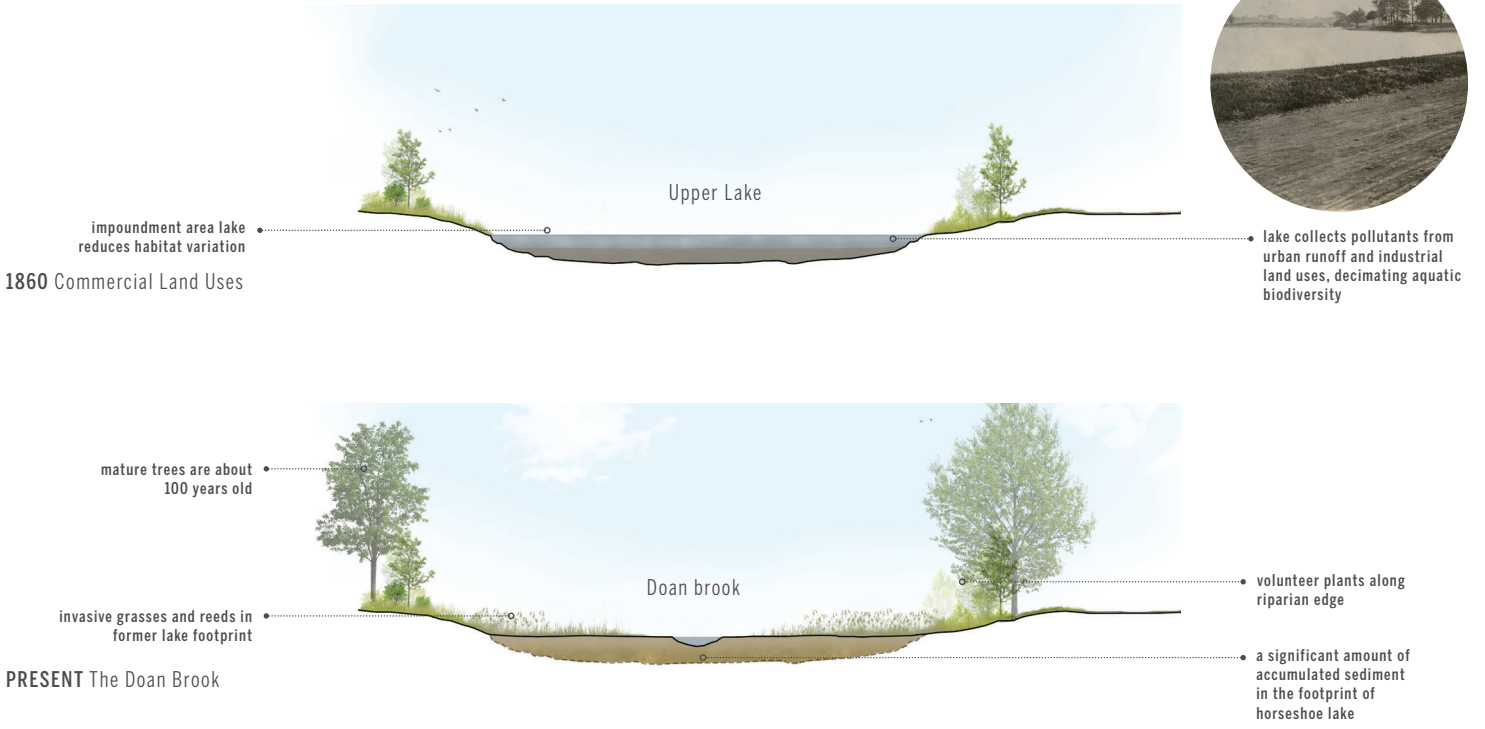


1830s Shaker Settlement



Significant deforestation from shaker agricultural practice

LANDSCAPE TRANSFORMATIONS



BIG MARSH



KEY PLAN



SPILLWAY



SHRUB SCRUB



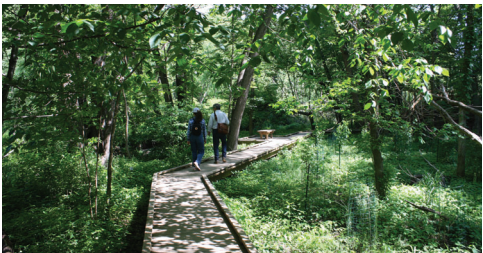
BIG MARSH



FLOODPLAIN FOREST



LOW IMPACT RIPARIAN



FLOODPLAIN FOREST

OPPORTUNITIES: PARK CHARACTER

NATURE PARK



NATURE PARK



STORMWATER GARDENS | CONSTRUCTED WETLANDS



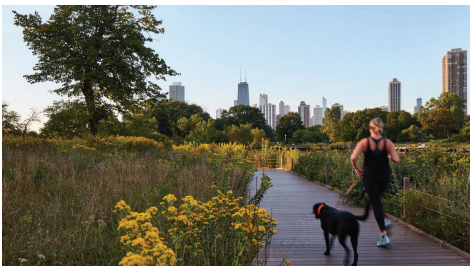
STORMWATER GARDENS | CONSTRUCTED WETLANDS



PASSIVE RECREATION



PASSIVE RECREATION



IN SUMMARY

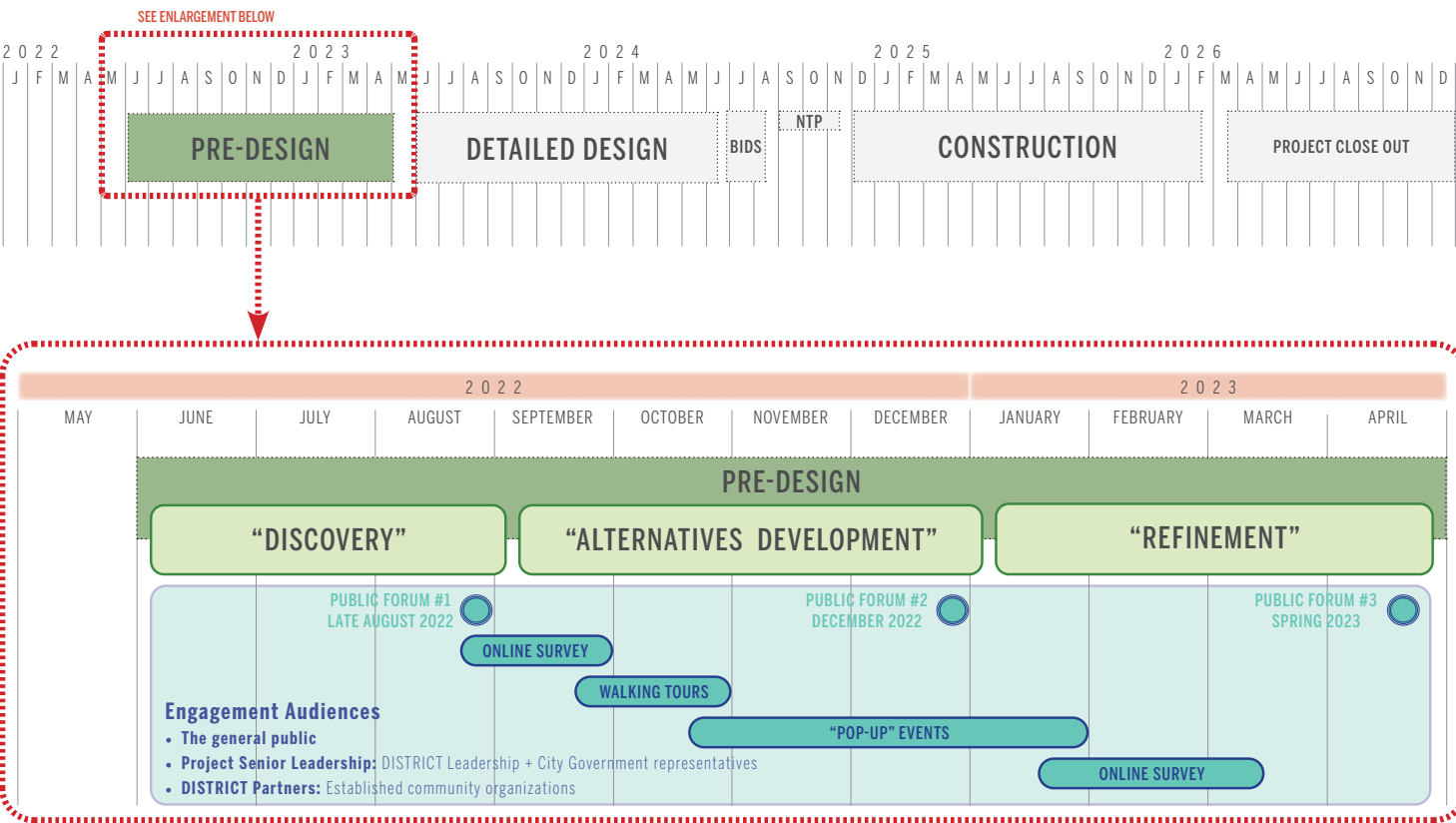
Develop a landscape plan that integrates ecological, cultural, & recreational amenities and embodies the visions and aspirations of the community through meetings like this one

Restore the stream corridors and enhance ecological sustainability to restore species diversity to doan Brook cooridor and increase community access & education opportunities working on collaboration with area Institutions

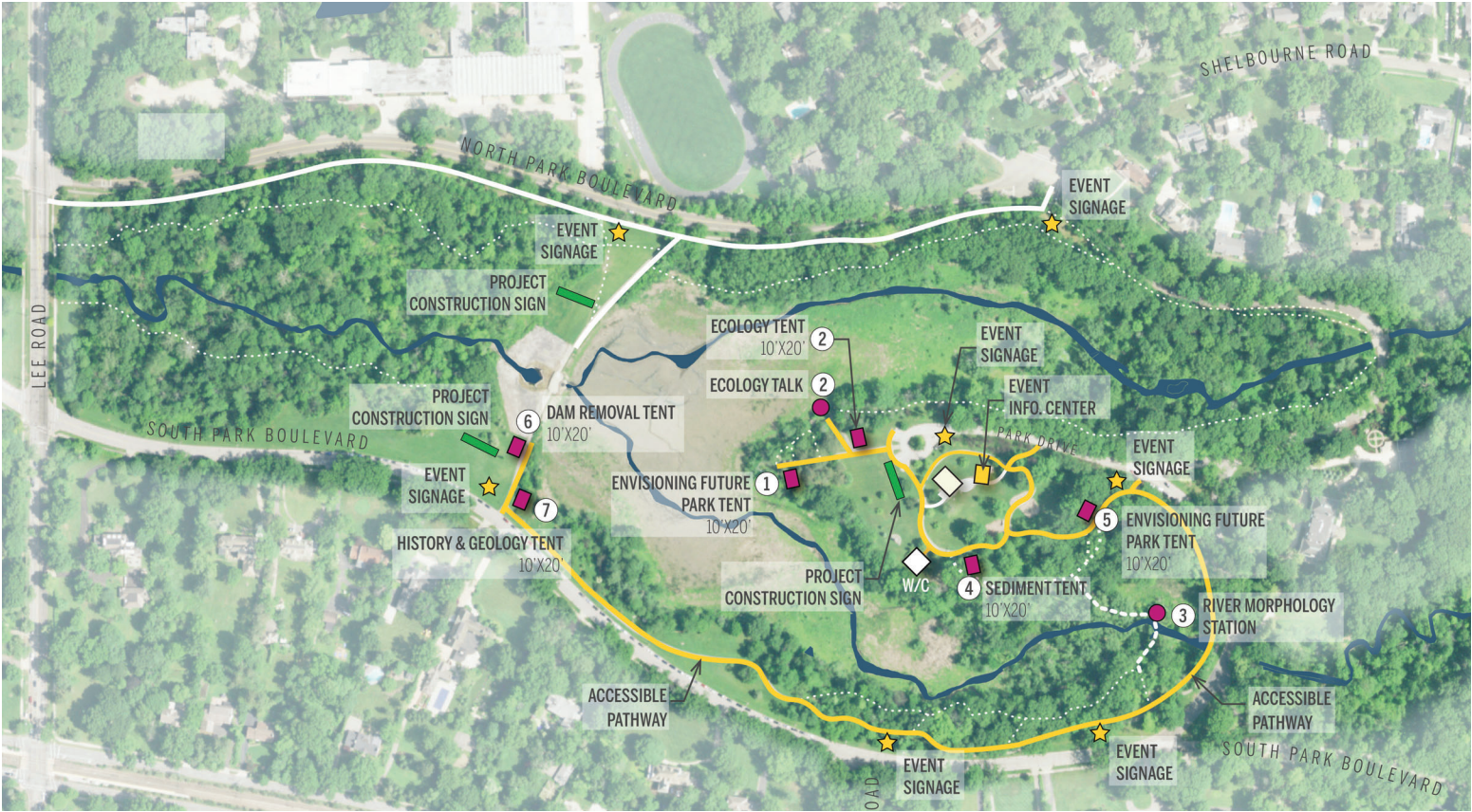
Manage waterway sediment to accommodate the project program in a way that is cost effective and captures the potential to re-use this material to support unique and vibrant parkland elements

Remove the dam to mitigate risk during and after construction and create new grade control elements that celebrate Doan Brook without impounding water

PROJECT SCHEDULE & ENGAGEMENT PLAN



OPEN HOUSE: **Saturday, August 27th** 10:30am - 1:00pm



WE WANT TO HEAR FROM YOU ON SATURDAY!

Station 1

Envisioning the Future Park



GLEN VALENTINE, ASLA, PLA
STIMSON | PRINCIPAL
LANDSCAPE INTEGRATION LEADER



CECILIA HUBER
STIMSON | LANDSCAPE DESIGNER

Station 2

Watershed Ecology



LAURA GOOCH
OLE MUSEUM OF NATURAL HISTORY
ORNITHOLOGY RESEARCH ASSOCIATE



JOHN RHOADES
NEORS | MANAGER OF WQIS



SETH HOTHM
NEORS | SUPERVISOR OF ENV. ASSESSMENT

Station 3

Stream Morphology



JULIE BINGHAM, CERP
ENVIROSCIENCE | RESTORATION MGR.
STREAM RESTORATION LEADER



JOE LANNI
GPD GROUP | CIVIL ENGINEER

Station 4

Landform & Sediment



CAMILA CAMPOS HERRERA
STIMSON | ASSOCIATE LA



BRIAN MASTIN
AECOM | SEDIMENT PRACTICE LEADER
SEDIMENT MANAGEMENT LEADER

Station 5

Envisioning the Future Park



MATT LANGAN
STIMSON | TECHNICAL DIRECTOR
PROJECT MANAGER



IVAN VALENTIC
GPD GROUP | SENIOR PROJECT MANAGER
DEPUTY PROJECT MANAGER

Station 6

Dam Removal



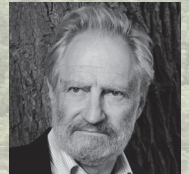
TROY NAPERALLA, PE
AECOM | VP OF US WEST WATER
DAM REMOVAL LEADER



SHANNON CARNEAL
RIVER REACH CONSTRUCTION
COST & CONSTRUCTIBILITY ADVISOR

Station 7

History & Geology



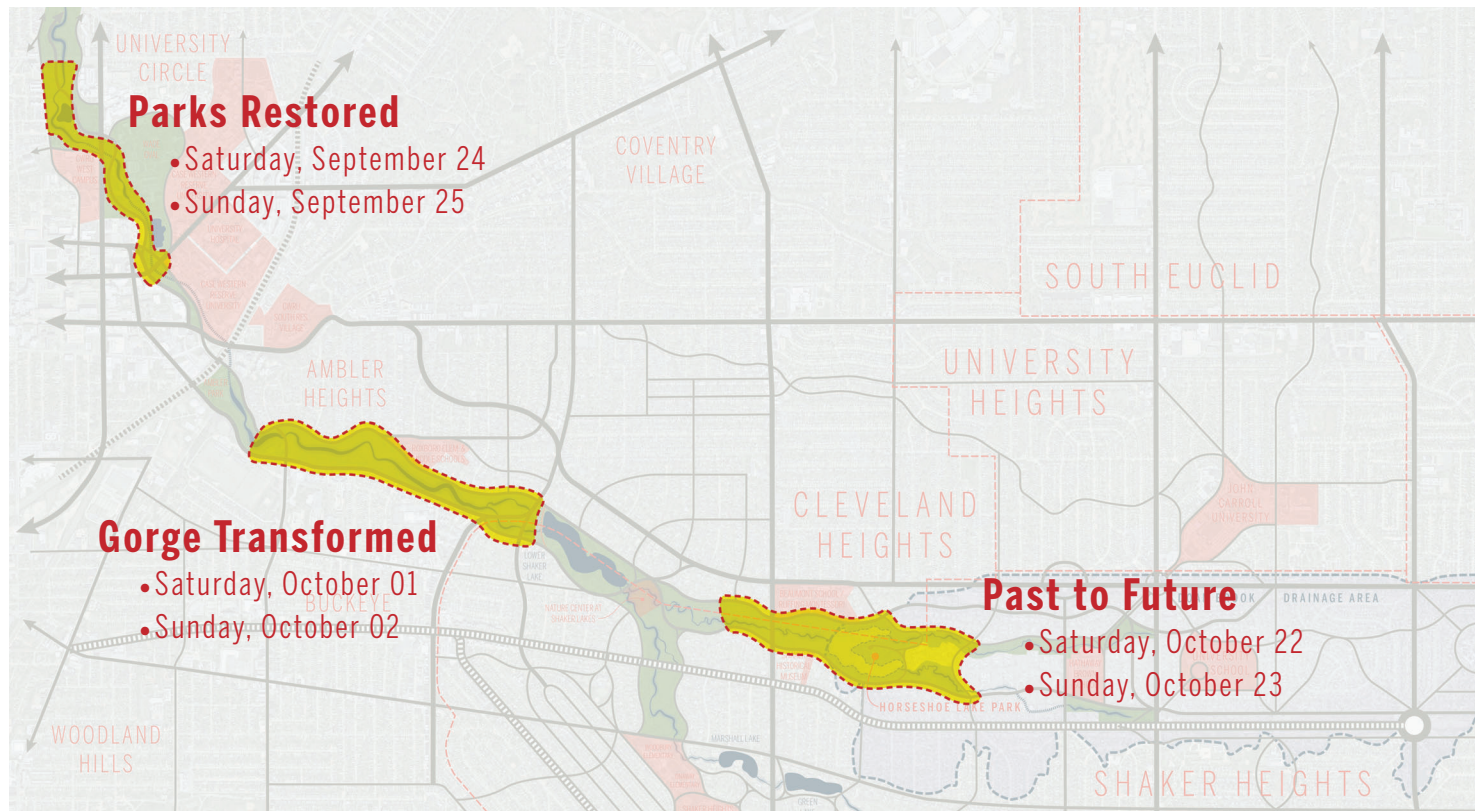
ROY LARICK
ARCHEOLOGY, NATURAL HISTORY, &
LOCAL ENGAGEMENT ADVISOR

STIMSON

AECOM



WEEKEND WALKING TOURS



Reserve your spot at www.neorsd.org/DoanBrook

WE WANT TO HEAR FROM YOU



Take our simple project survey.
neorsd.org/DoanBrook

**Doan Brook
Restoration**

Northeast
Ohio Regional
Sewer District

Please participate at www.neorsd.org/DoanBrook

WE WANT TO HEAR FROM YOU



Detailed answers to “Frequently Asked Questions” are available at www.neorsd.org/DoanBrook