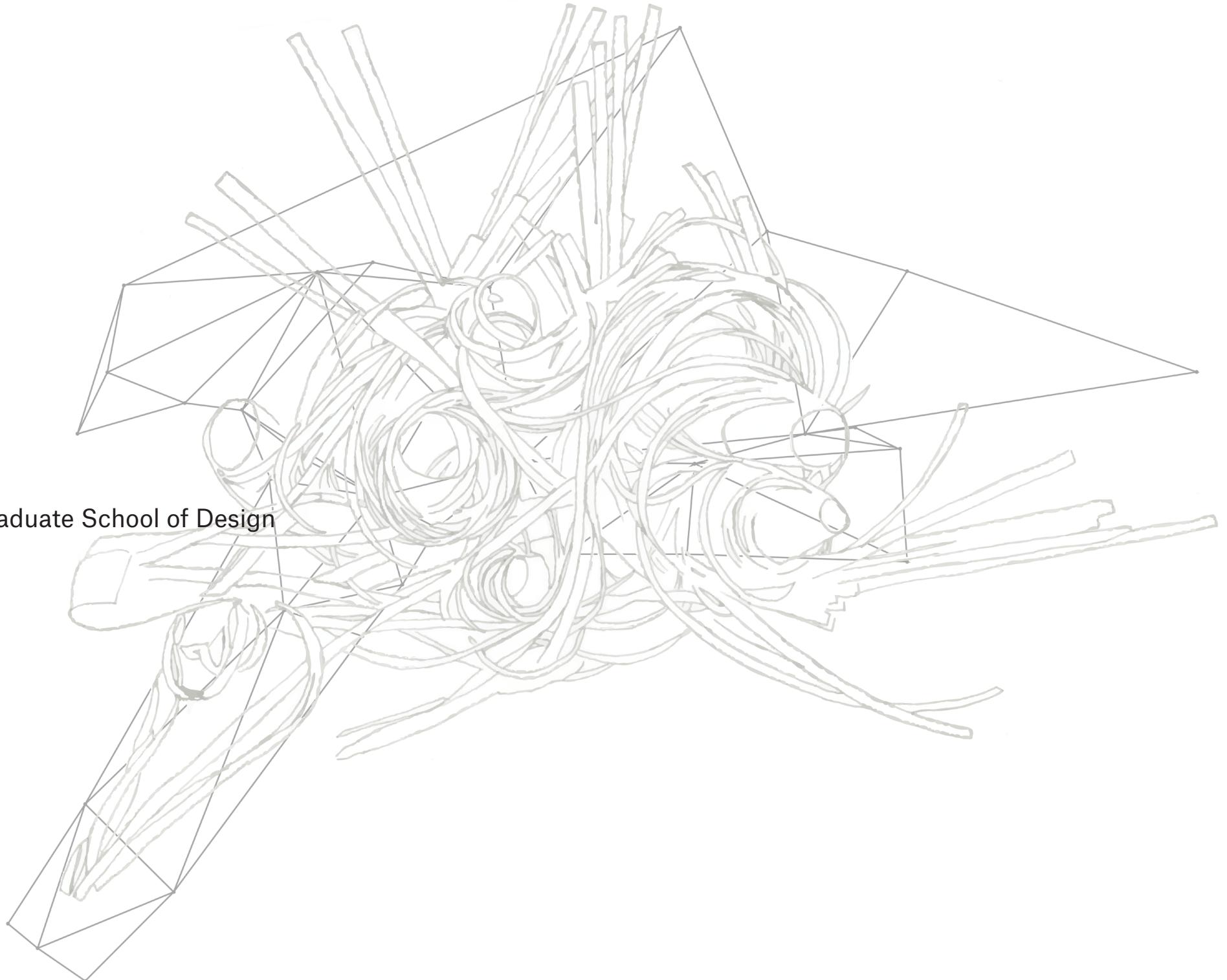


JULIA HELEN RICE | PORTFOLIO

Candidate for Master of Landscape Architecture | Harvard Graduate School of Design



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CURRICULUM VITAE

Education

- 2019-2023 Graduate School of Design, Harvard University, Cambridge, MA
Candidate for Master of Landscape Architecture
- Summer 2018 UC Berkeley, CED Summer Institute: [IN]LAND, Berkeley, CA
- 2003-2007 B.A. Art and Visual Culture, *Cum Laude*
Bates College, Lewiston, ME
- 2005-2006 Sarah Lawrence College in Florence, Florence, Italy
Nine-month study abroad program.

Research

Perspectivist Agriculture: Reimagining Modern Food Systems through Indigenous Knowledge

Penny White Project Fund, Harvard University, Cambridge, MA, 2022

The project focuses on a farm in central Minnesota and will study the intersecting challenges of design in a rural setting, industrial food systems, and Indigenous sovereignty. The goal of the project is to develop diverse methods through which landscape architecture can be an ally and advocate for the creation of more just and Native food systems. Advised by Gareth Doherty, Associate Professor of Landscape Architecture, Harvard University Graduate School of Design; and Philip Honzay, Agricultural Lead, SMSC Wozupi Tribal Gardens, Shakopee Mdewakanton Sioux Community, Prior Lake, Minnesota.

“before the earth was made there was water everywhere”

An Atlas of the Falls Called Owámni or St. Anthony

Summer Research Grant, Harvard University, Cambridge, MA, 2020

Studied the history and potential futures of the Upper St. Anthony Falls Lock and Dam on the Mississippi River in Minneapolis, MN with a focus on the Dakota and their displacement by Euro-American settlers. Produced an atlas of maps, drawings, and text. Advised by Craig Douglas, Assistant Professor of Landscape Architecture, Harvard University Graduate School of Design.

Landscape Architecture and Related Experience

- 2021-2022 Internship
Bryum: Büro für urbane Interventionen und Landschaftsarchitektur
Basel, Switzerland
- 2021 Research Assistant
The Oasis Loop: Comparative Analysis of Agricultural Landscape Patterns in the Maghreb Region
Pablo Pérez-Ramos, Assistant Professor of Landscape Architecture
Harvard University Graduate School of Design, Cambridge, MA
- 2019-2020 CNC Router Technical Assistant,
Harvard University Graduate School of Design, Cambridge, MA
- 2010-2011 Gardner
Landscape Dimensions,
Minnetonka, MN
- 2007-2008 Green Apple Corps,
New York City Dept. of Parks & Recreation,
New York, NY
- 2004 SCA Intern,
U.S. Forest Service, Mt. Hood National Forest, Estacada, OR

QUINOBÉQUIN PARK

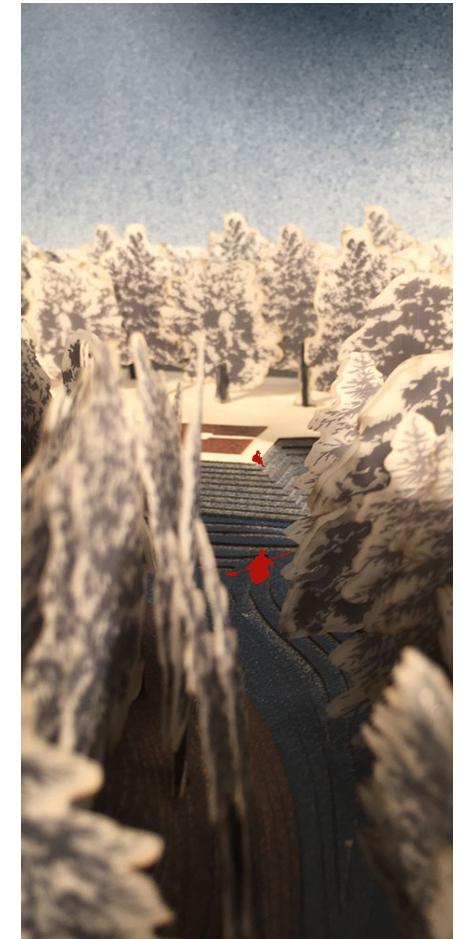
A proposed design for Christian Herter Park in Allston, MA, a 55 acre site. The design reimagines Christian Herter Park as Quinobequin Park. Quinobequin was the Massachusetts' word for the Charles River and means "meandering". Inspired by an existing island designed by Shurcliff & Merrill, the design proposes a series of channels through the park that create new, multiple islands. The channels diversify the movement of the river as well as create new spaces of aquatic habitat. The removed soil is used to build raised islands on the land, which are densely planted with hardy, successional species and offer even more varieties of habitat. Six hardscape platforms provide space for parking, the Northeastern boathouse, and the Community Kayaking buildings. All platforms provide access to the water, either through ramps or a series of wide steps. Three of the platforms are planted with perennial, pollinator-friendly gardens that offer opportunities for human users to sit and view the landscape. A paved bike/pedestrian path following Soldier's Field Road gives efficient access to and through the park. A gravel path and foot bridges wind through edge of the park and give visitors access to the water as well as a way to experience the diverse habitats.



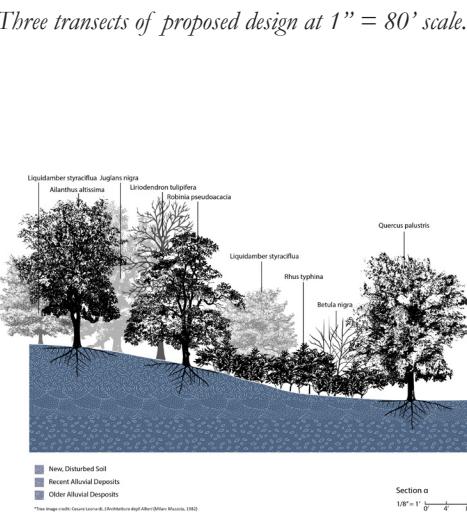
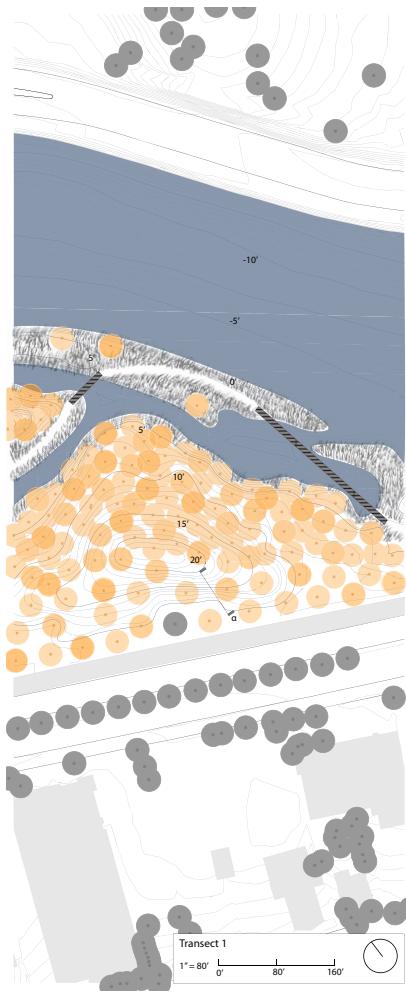
Plan of proposed design at 1" = 200' scale.



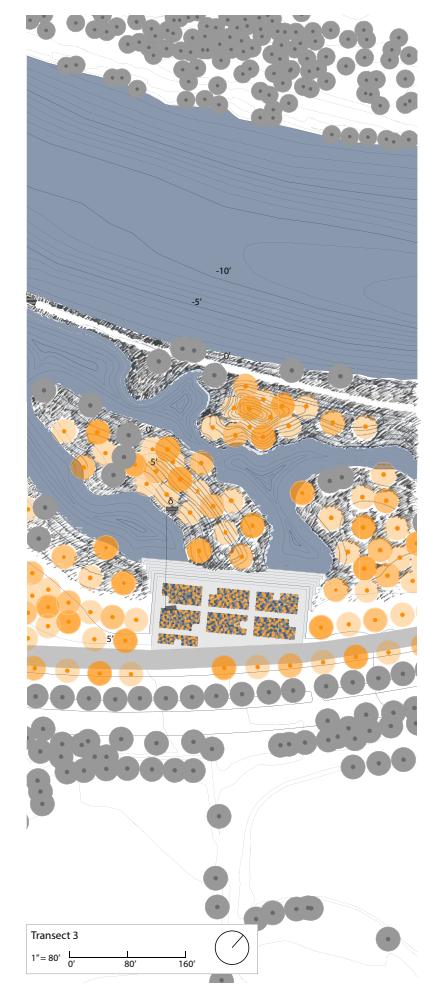
Perspective views of proposed design.



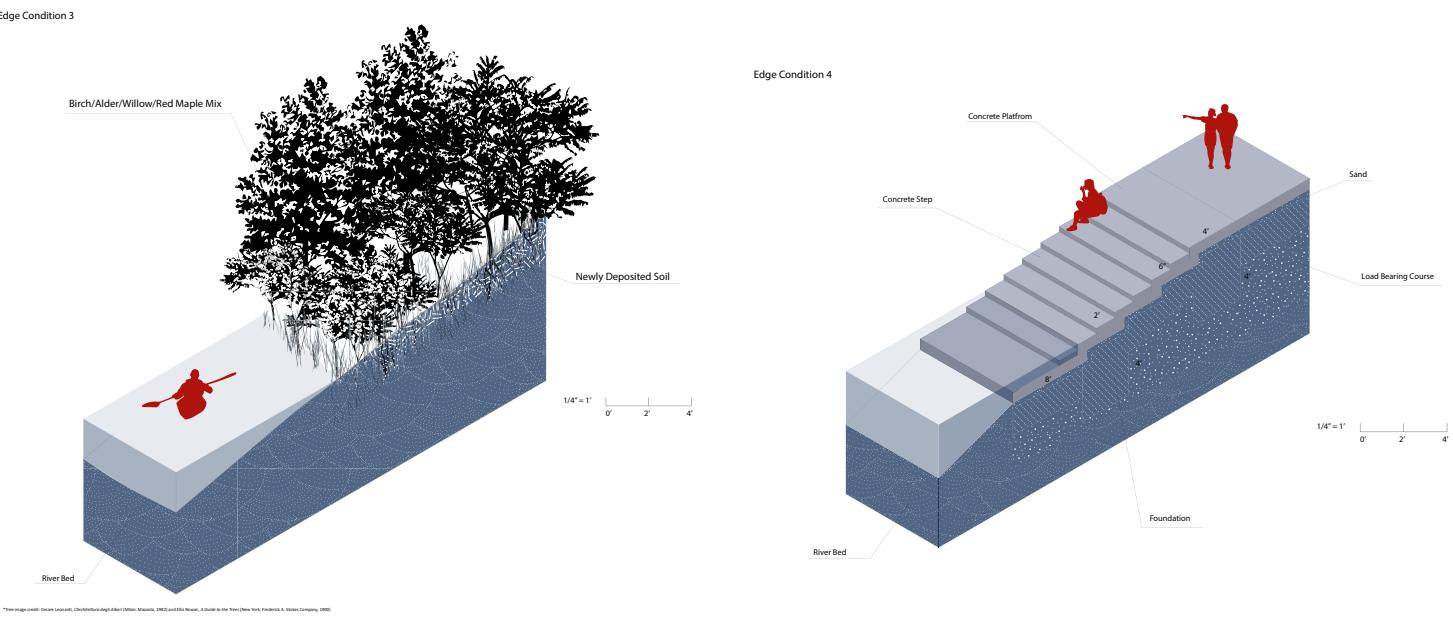
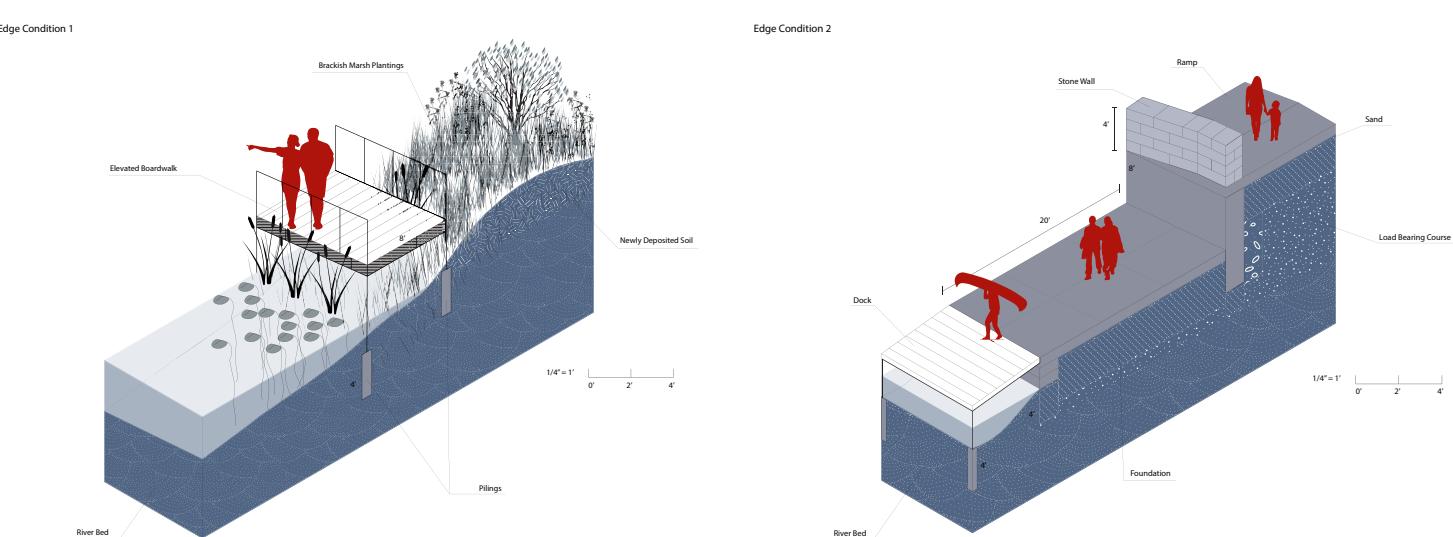
Section A of proposed design at 1" = 16' scale.



Sections from each of the three transects at 1" = 8' scale.



Julia Helen Rice



Isometric drawings of four different edge conditions that occur throughout the proposed design.

LISTENING AS INTELLIGENCE

Designing New Sonic Horizons for Franklin Park

Large parks, in the words of Robert Smithson, “are never finished; they remain carriers of the unexpected and of contradiction on all levels of human activity, be it social, political, or natural.” Franklin Park is a contradiction; originally designed as a rural retreat it is now surrounded by dense urbanization, its picturesque scenery has been sliced by a road, and yet, despite decades of economic neglect, it is still an important gathering place for the local community.

Often overlooked in the designs of large urban parks is the role sound plays in visitors’ experience. Roland Barthes, in his essay “Listening”, defines listening as an act of selection. Hearing is a physiological process while listening utilizes intelligence to choose what stimuli to perceive. Barthes argues that if the auditive background is too overwhelming, listening cannot occur, i.e. intelligence.

This project utilizes movement, space, and ecology to design new sonic horizons for Franklin Park. In sites where the auditive background is overwhelming, the design strategies focus on noise mitigation and leading visitors away from the sources of the overwhelming noise. In sites where the auditive background is already attenuated (because of topography or general location in relation to sources of anthropogenic noise), the design strategies focus on amplifying and diversifying existing vegetal, wildlife, and climatic sound.

The landscape design strategies make audible the contradiction that is Franklin Park. By amplifying the difference between the soundscape of the park and that of the surrounding urban environment, visitors will be immersed in the park’s environment, offered a more complex auditive experience, and, like Olmsted’s original intention, given some respite from the urban environment.



Isobel of Franklin Park

The Zoo Entrance: Movement



Existing Conditions

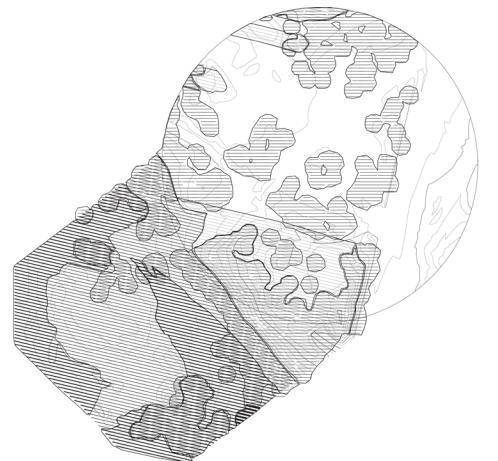
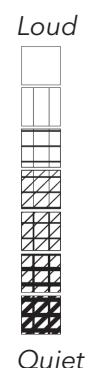
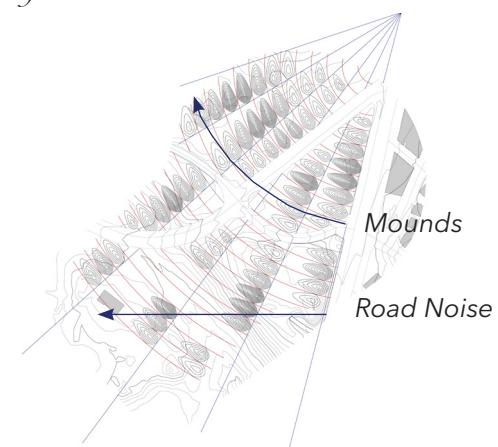
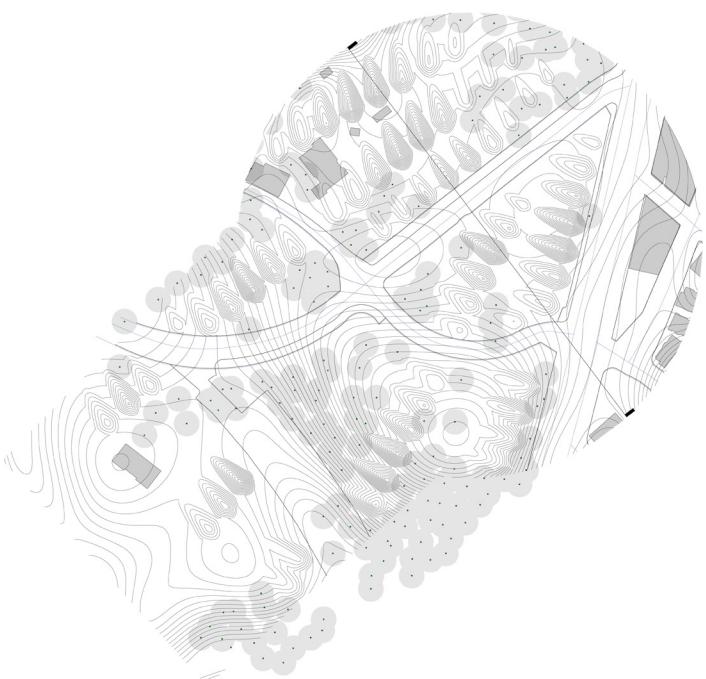


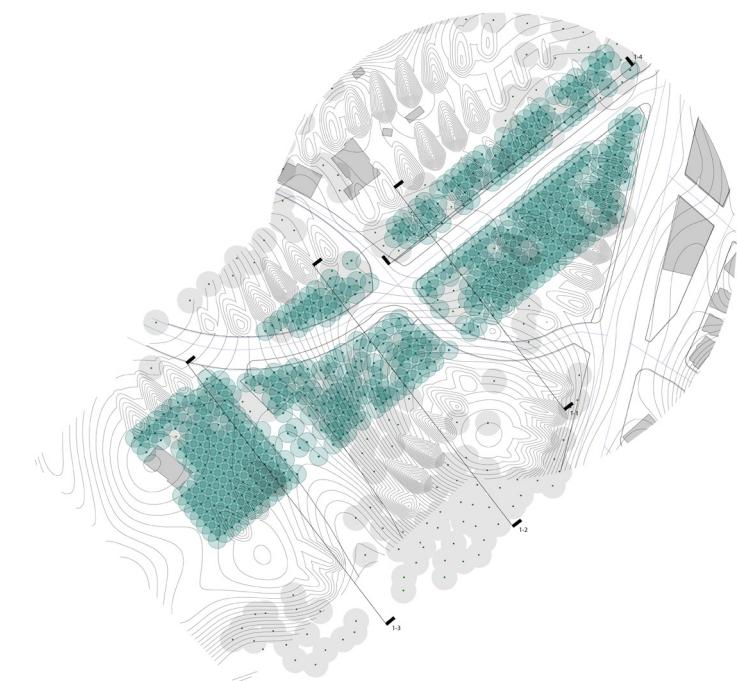
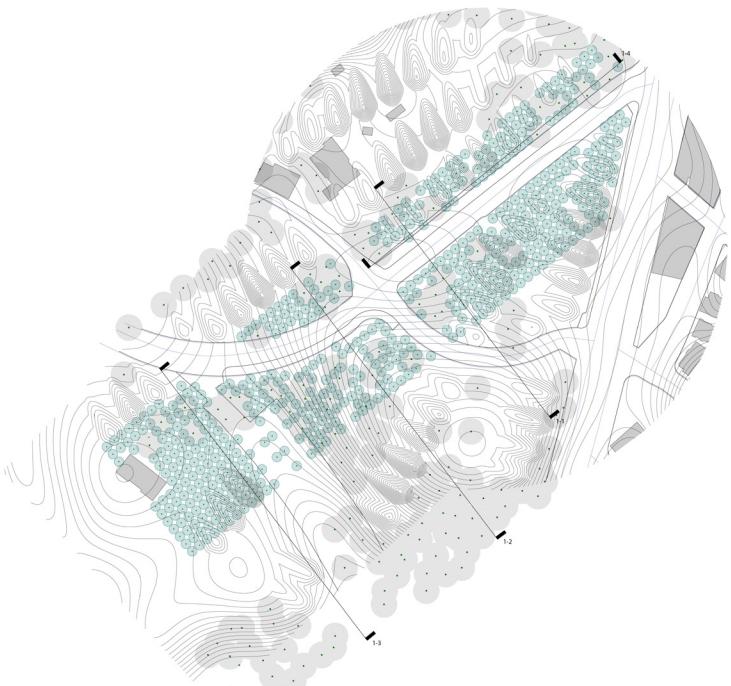
Diagram of the Auditory Zones



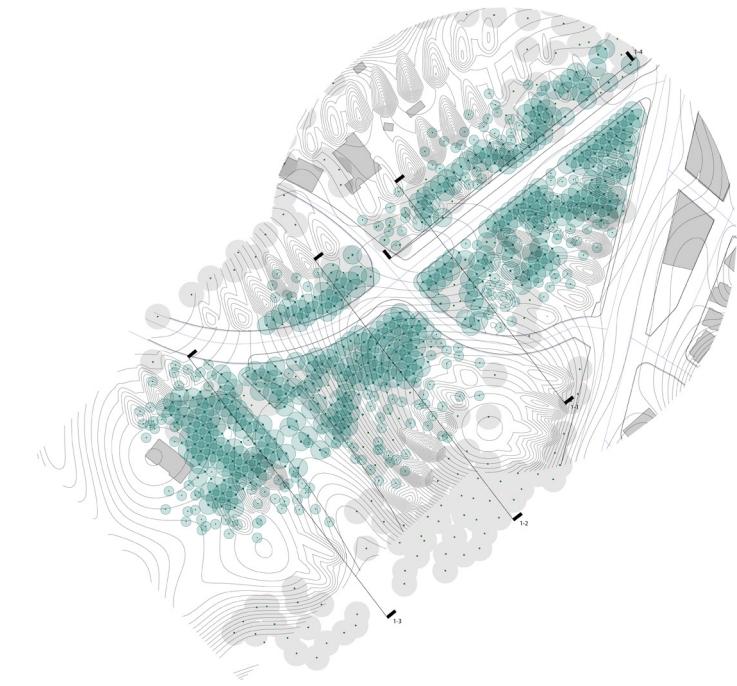
Distorted Grid to Establish Mounds



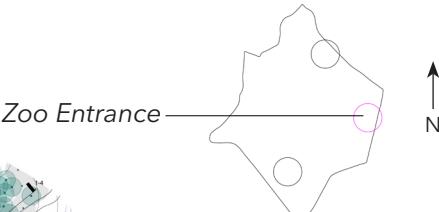
Mounds to mitigate noise pollution from Blue Hill Avenue.



Rows of White Pines: 8 - 25 Years



Rows of White Pines: 25 + Years

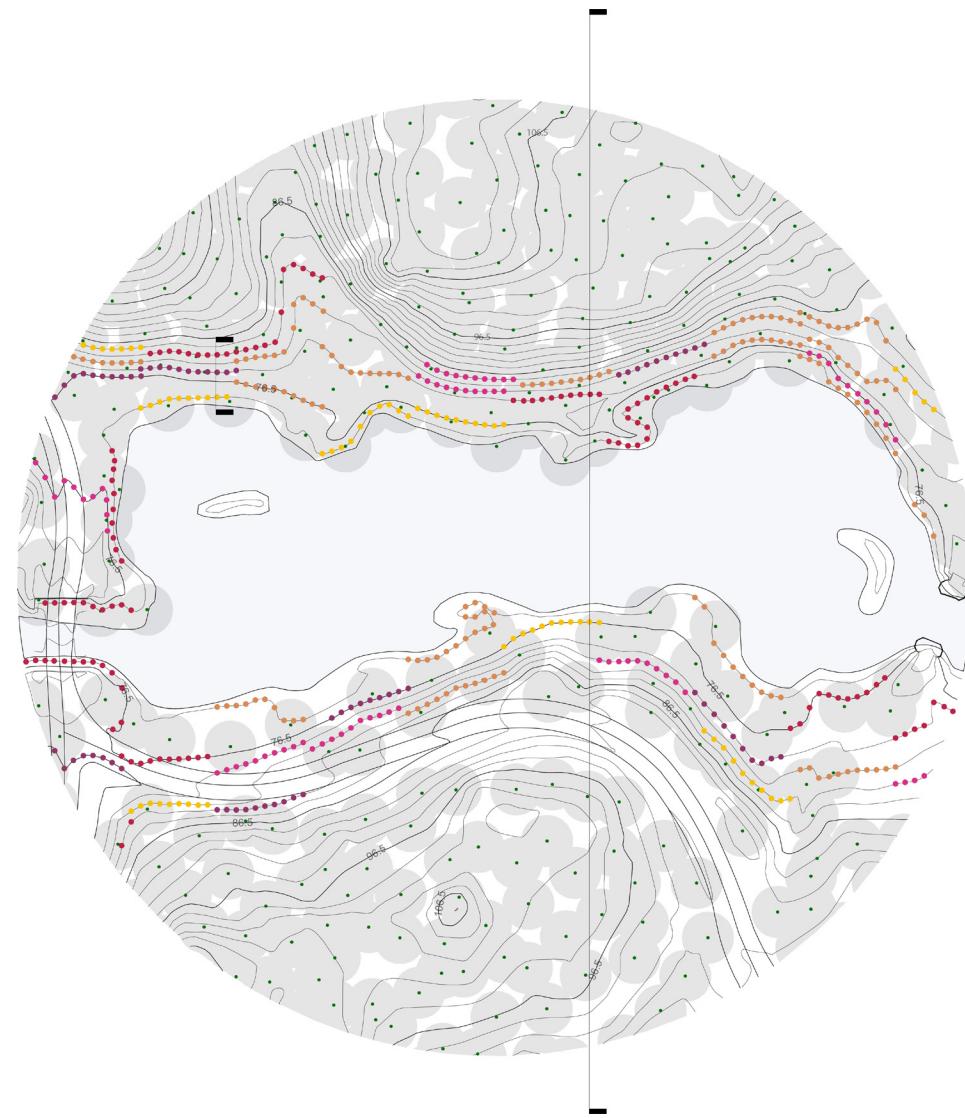
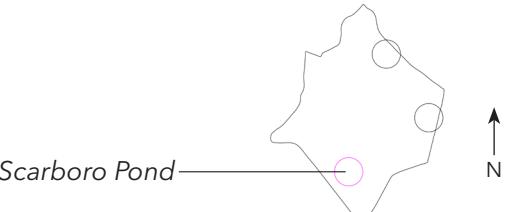


Scale: 1" = 350' 0'

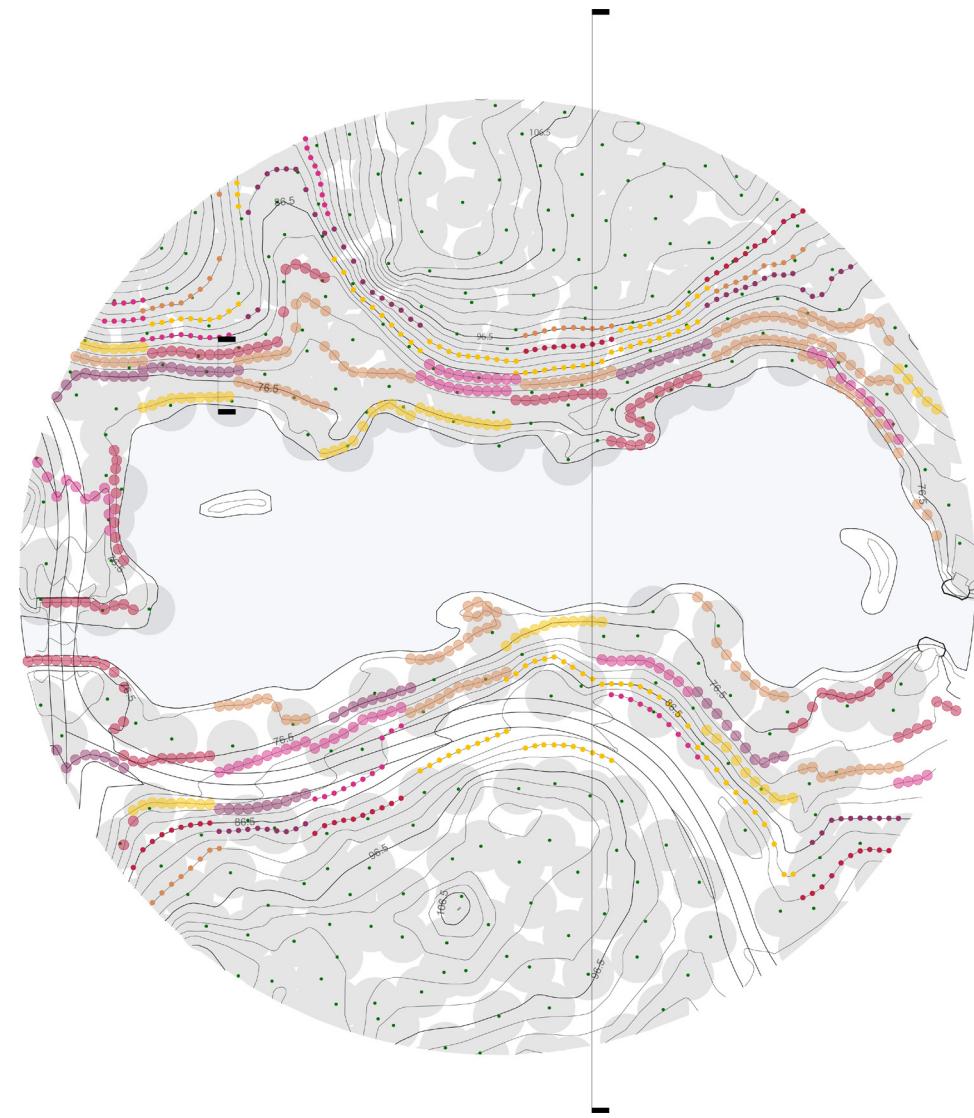
350'

Scarboro Pond: Ecology

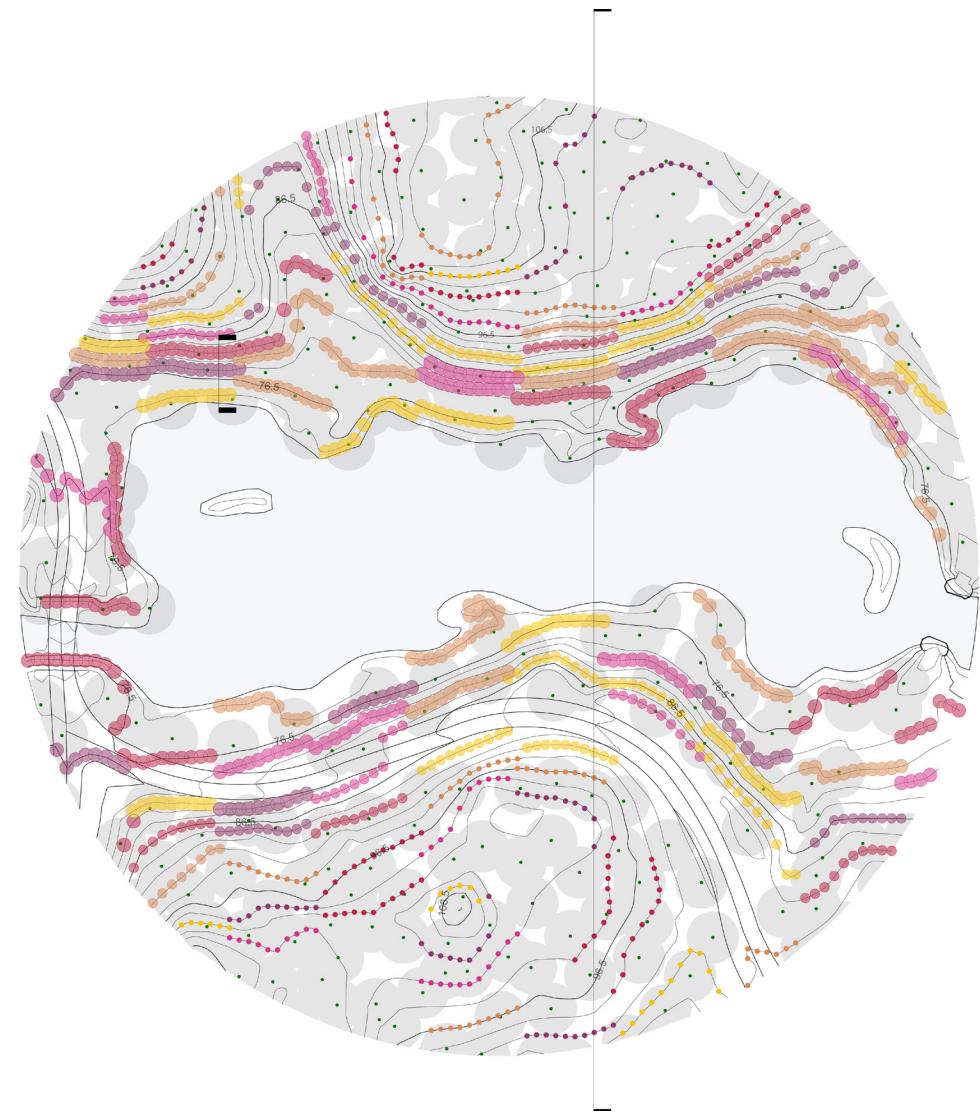
Hedgerows for Songbirds



Phase 1: 0 - 5 Years



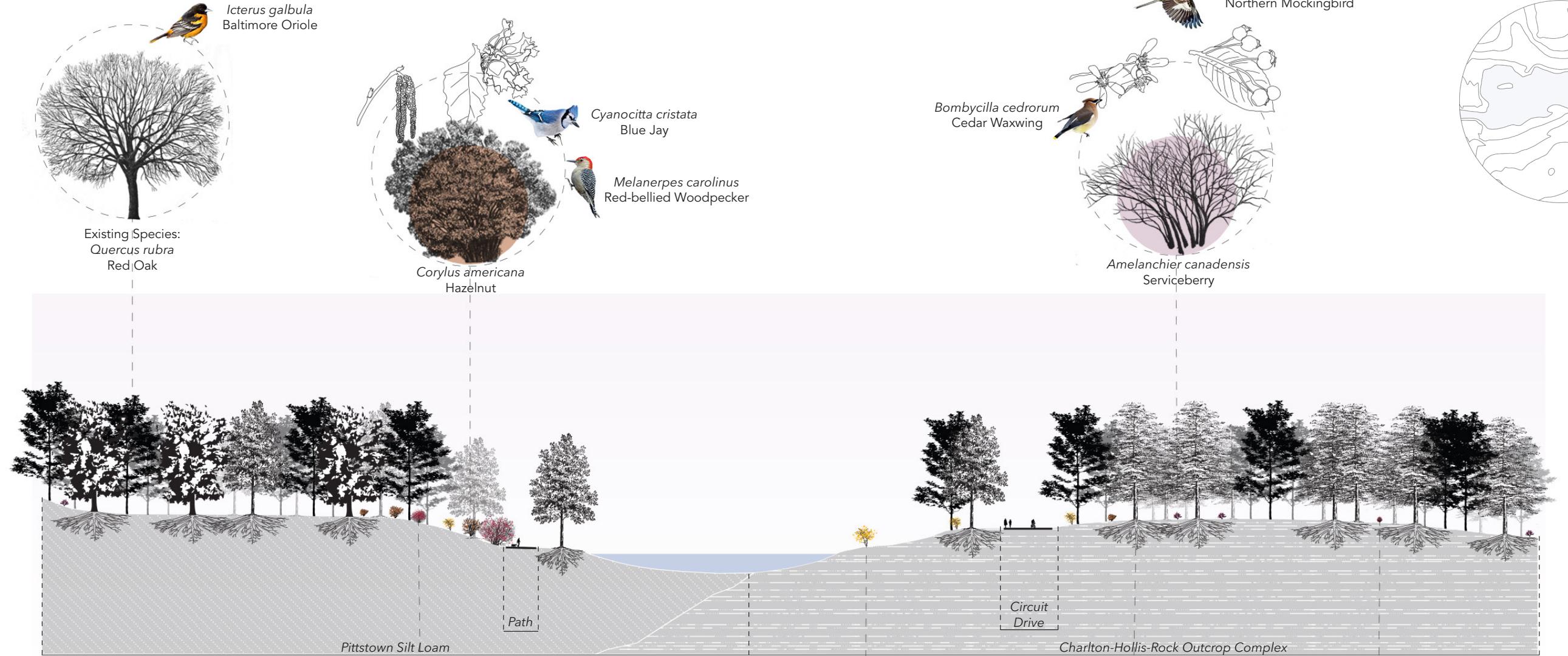
Phase 2: 5 - 10 Years



Phase 3: 10 + Years

Scale: 1" = 200' 0' 200'

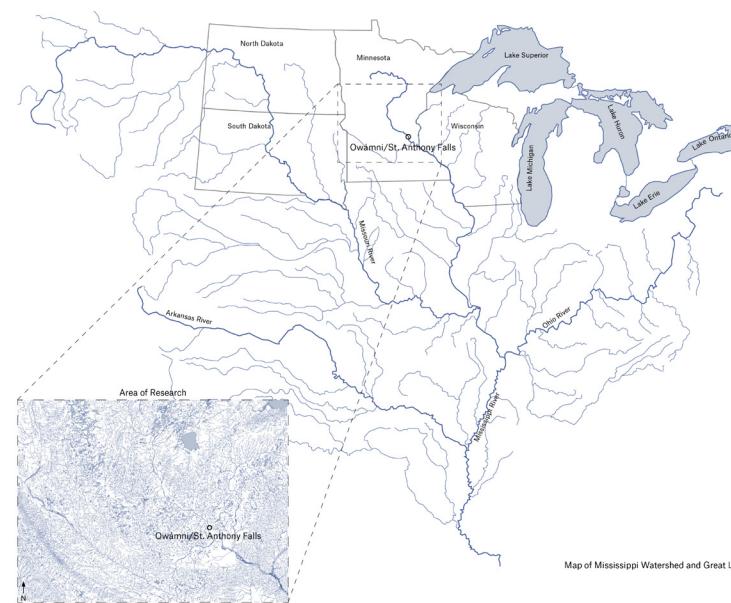
- Corylus americana
- Amelanchier canadensis
- Rhododendron maximum
- Lindera benzoin
- Prunus virginiana



Scale: 1" = 80'
0' 80'

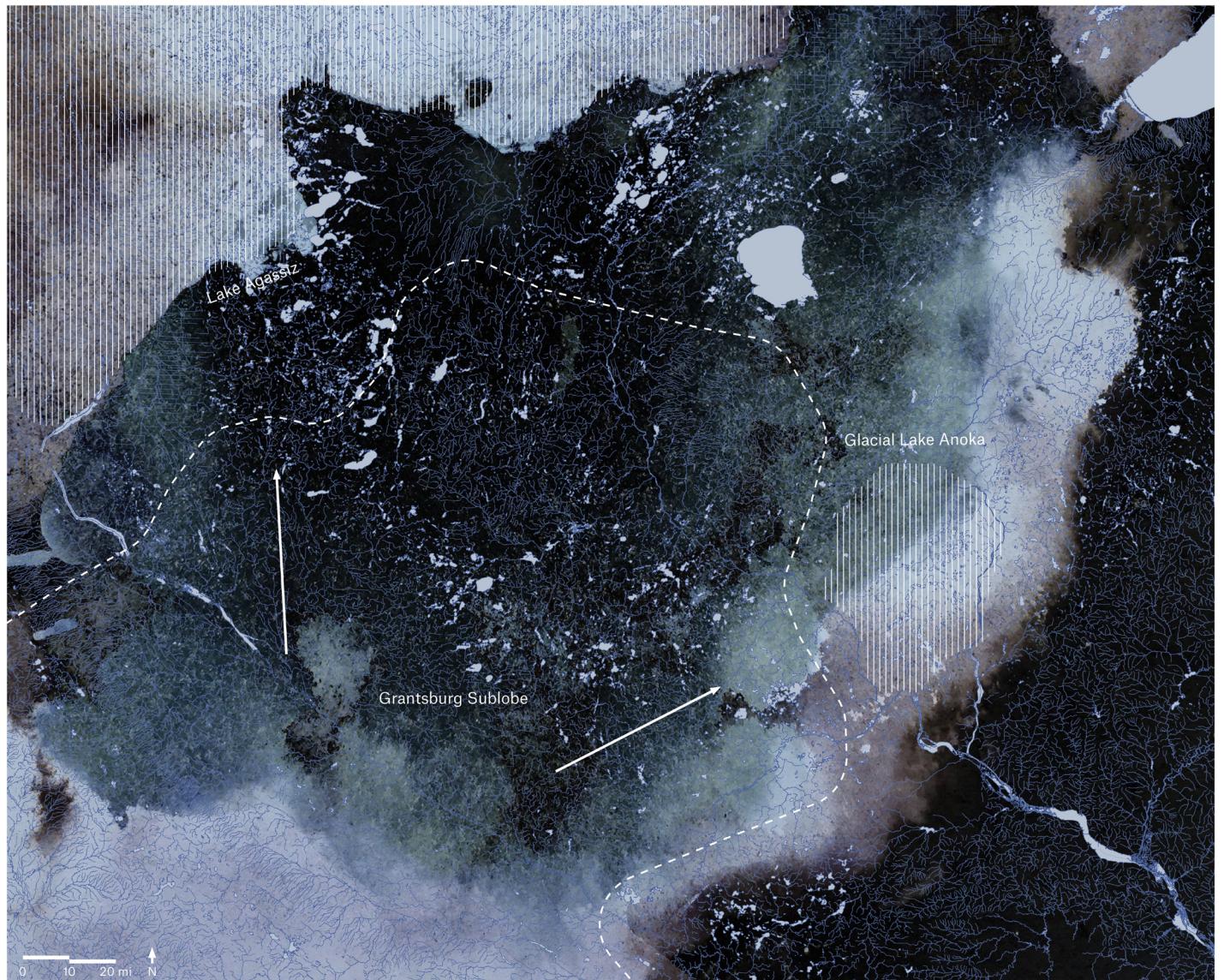
AN ATLAS OF THE FALLS CALLED OWÁMNI OR ST. ANTHONY

After 52 years of service, Minneapolis' Upper St. Anthony Falls Lock and Dam was permanently closed to riverine traffic in 2015. St. Anthony Falls, the only major waterfall on the Mississippi, has long been central to the history, culture, economy, and ecology of the river, the city, and the region. This research project, using St. Anthony Falls as a focal point, investigated questions of ownership and agency along the falls, the Mississippi, and across the traditional Dakota homeland in the state that is now called Minnesota. The debate over who should own the USAF lock site has been centered on current recognized property owners along the river and at St. Anthony Falls, but the question of ownership runs much deeper than post-industrial developers, governmental partnerships, and private enterprise. The City of Minneapolis and St. Anthony Falls are in the heart of the traditional homeland of the Dakota people. For the Dakota, St. Anthony Falls is known as Owámni and the Mississippi is Haháwakpa. The Dakota view the river as a living relative with agency to determine its future. The research aim was to center the debate about ownership within the river itself. What future does the river desire for the falls and for the people living along it?



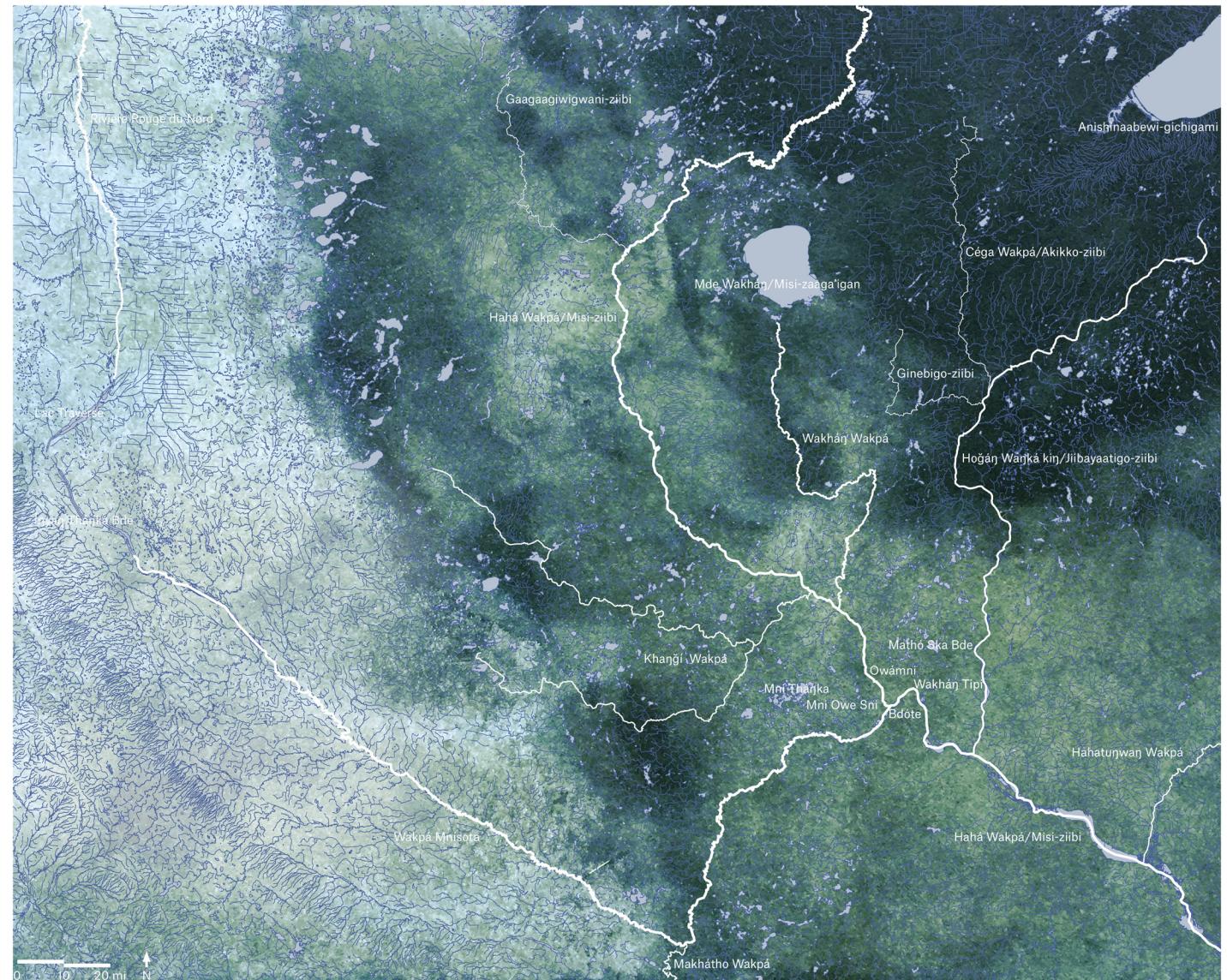
Map of the Recession of the Falls from Its Starting Point to Its Current Location Over 12,000 Years

Source: Hennepin County GIS Open Data: 2-foot Elevation Contours. Ramsey County GIS Open Data: 2-foot Elevation Contours. Dakota County GIS Open Data: 1-foot Elevation Contours



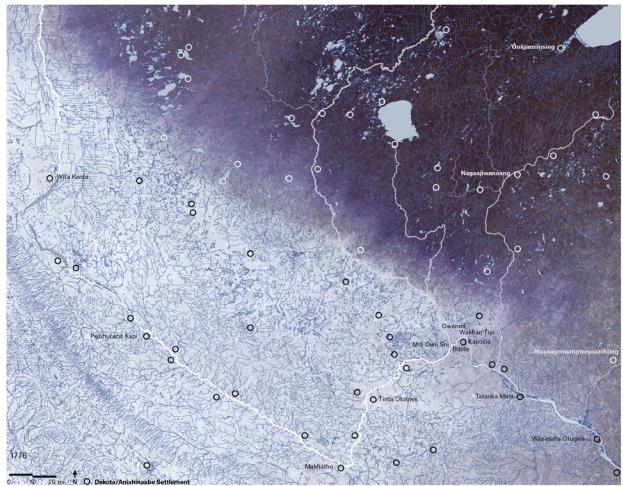
Map of the Movement of the Grantsburg Sublobe During the Last Wisconsin Glaciation

Source: Environmental Systems Research Institute, Inc.: *ESRI Data & Maps 2005: U.S. Rivers and Streams: Minnesota, Wisconsin, South Dakota, and North Dakota*. U.S. Department of Commerce, Bureau of the Census, Geography Division, 2002: *UA Census Water Bodies, 2000 – Minnesota, North Dakota, South Dakota, and Wisconsin*. Minnesota Geological Survey 2018: “Plate 3- Surficial Geology”, *C45 Geologic Atlas of Hennepin County*.

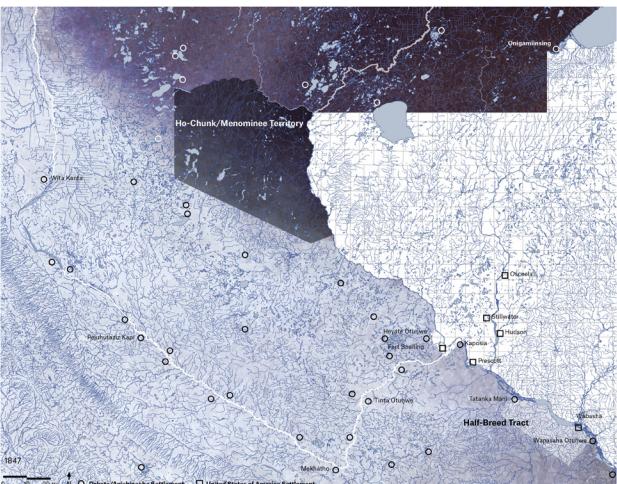


Map of the Major Rivers and Lakes in Mni Sóta Makoce with their Dakota and Anishinaabe Names

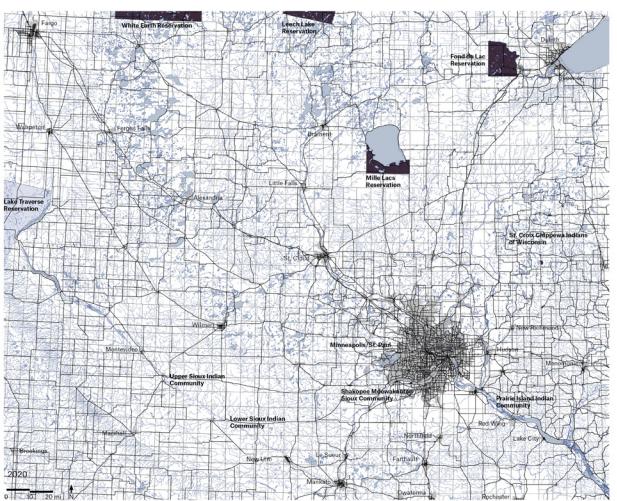
Source: Environmental Systems Research Institute, Inc.: *ESRI Data & Maps 2005: U.S. Rivers and Streams: Minnesota, Wisconsin, South Dakota, and North Dakota*. U.S. Department of Commerce, Bureau of the Census, Geography Division, 2002: *UA Census Water Bodies, 2000 – Minnesota, North Dakota, South Dakota, and Wisconsin*. Decolonial Atlas: “Minneapolis-St. Paul in Dakota and Ojibwe”.



Mni Sota Makoce circa 1776

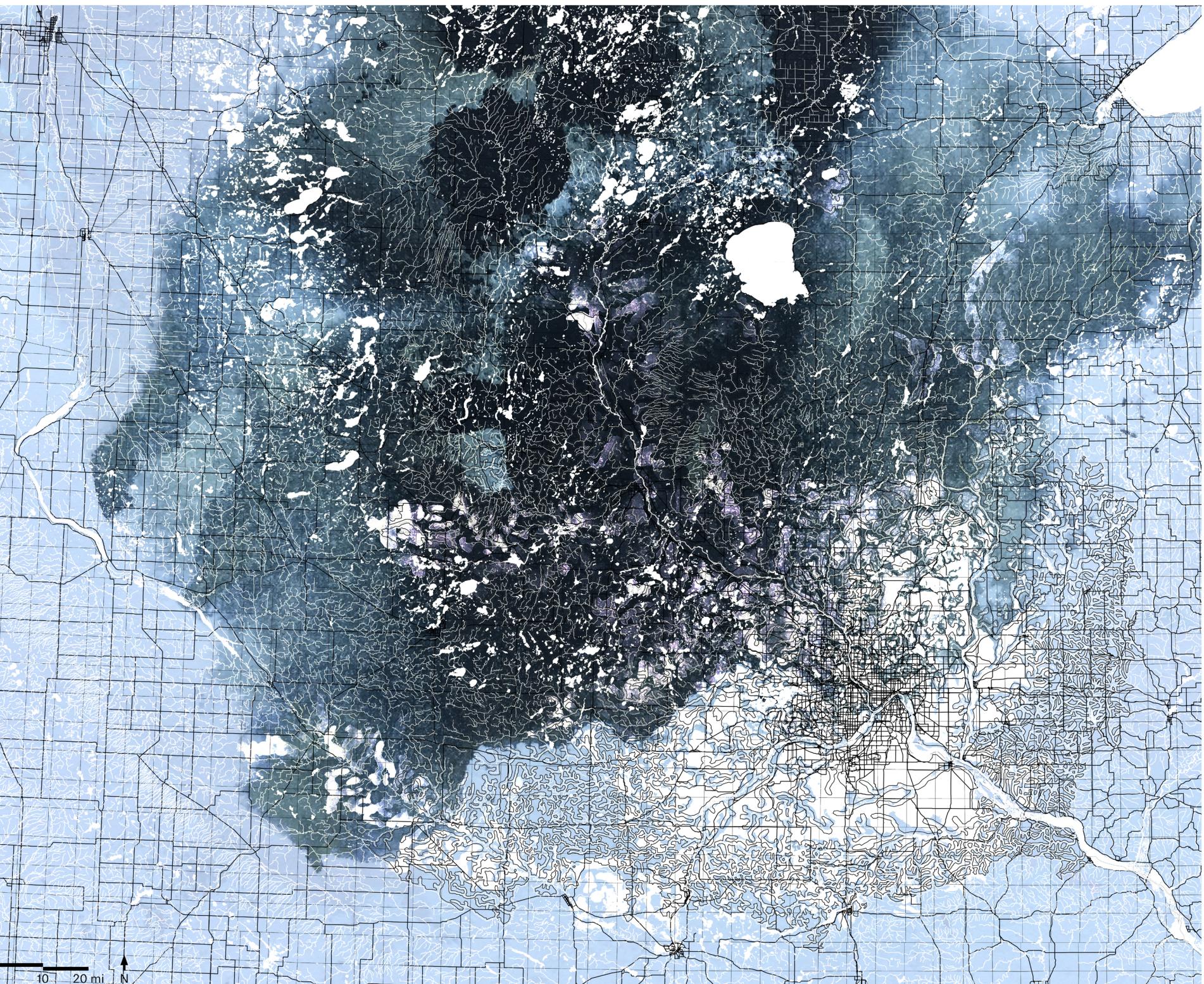


Mni Sota Makoce circa 1847



Mni Sota Makoce Present Day

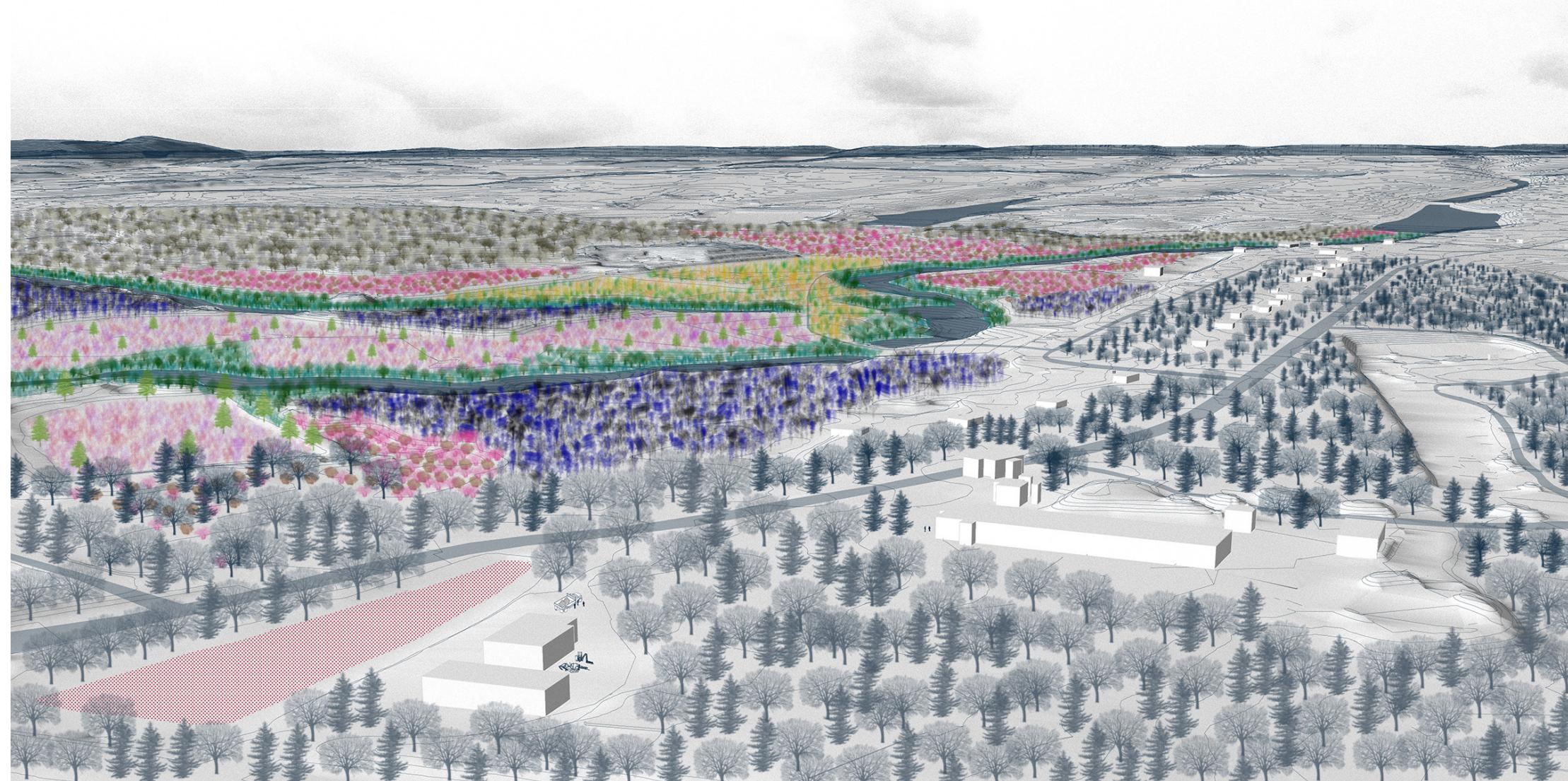
Dakota Territory
Anishinaabe Territory
United States Territory

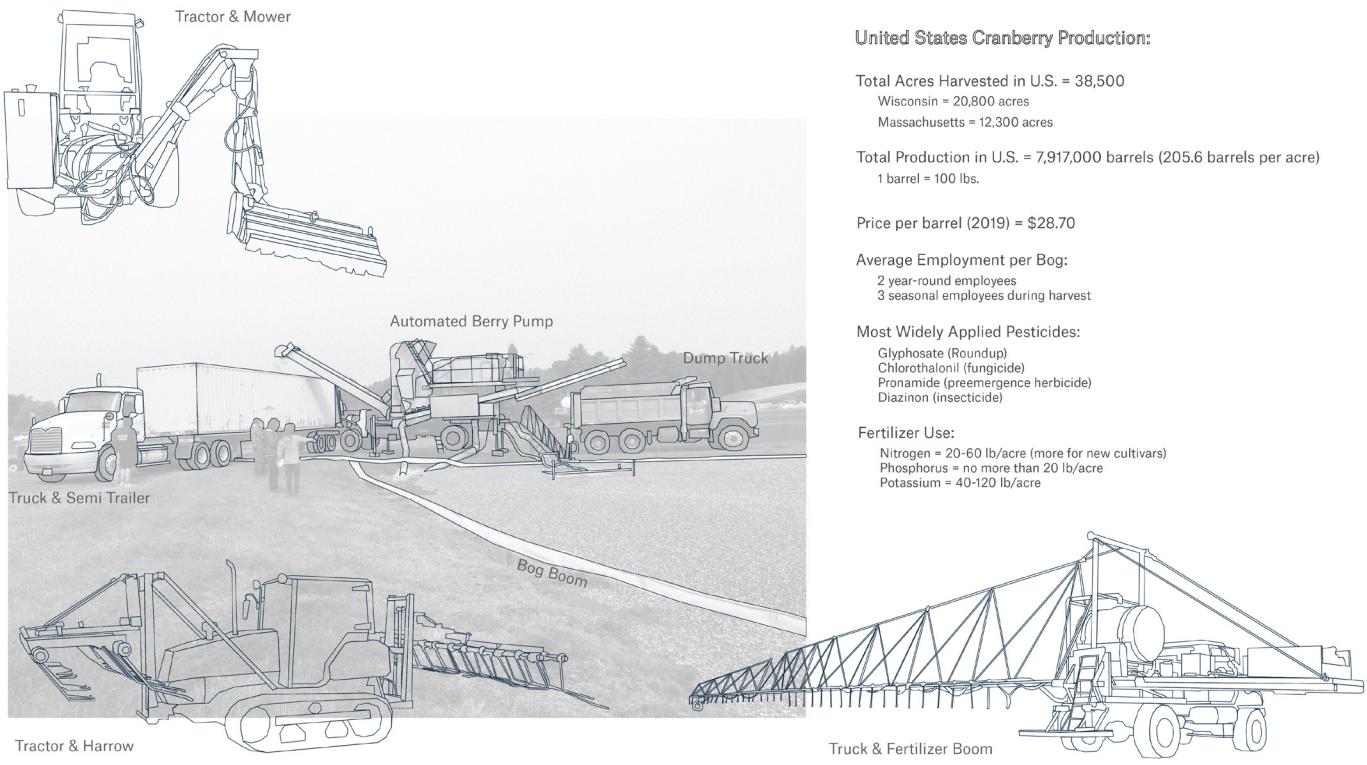


Speculative Map for New Systems of Territory and Property in Mni Sota Makoce

NEW AGRICULTURE FOR A POST-CRANBERRY FUTURE

Modern agriculture, founded on a system of private properties and monocultures, creates landscapes that are fragmented and mostly unadaptable. What if agricultural systems were instead indistinguishable from their surrounding ecosystems? What if, when gazing across fields of rice, corn, or other crops it was impossible to tell where the fields ended and the wetland or forest began? What kind of production system is necessary to create such an agriculture? What new forms of labor are required? This project takes on these questions by reimagining the cranberry bogs of Wareham, MA. Stressed by competition, low prices, and warming temperatures, cranberry farmers in Massachusetts are being forced out of the industry. This retreat challenges the current industrial system and creates an opportunity to establish new forms of agriculture that are biodiverse, interconnected with local ecologies, and foster a food culture based on uniquely local ingredients. These ideas are not radically new, they are based in the ethnobotanical knowledge of Indigenous people across the United States. The Wampanoag, whose land Wareham was founded on, farmed and sustained themselves for centuries in eastern Massachusetts. Their ancient knowledge provides the framework for this project. The design proposes a new system of agriculture that produces a variety of crops and materials to create a diverse system of labor and harvest that remains interconnected with the surrounding landscape.





United States Cranberry Production:

Total Acres Harvested in U.S. = 38,500
Wisconsin = 20,800 acres
Massachusetts = 12,300 acres

Total Production in U.S. = 7,917,000 barrels (205.6 barrels per acre)
1 barrel = 100 lbs.

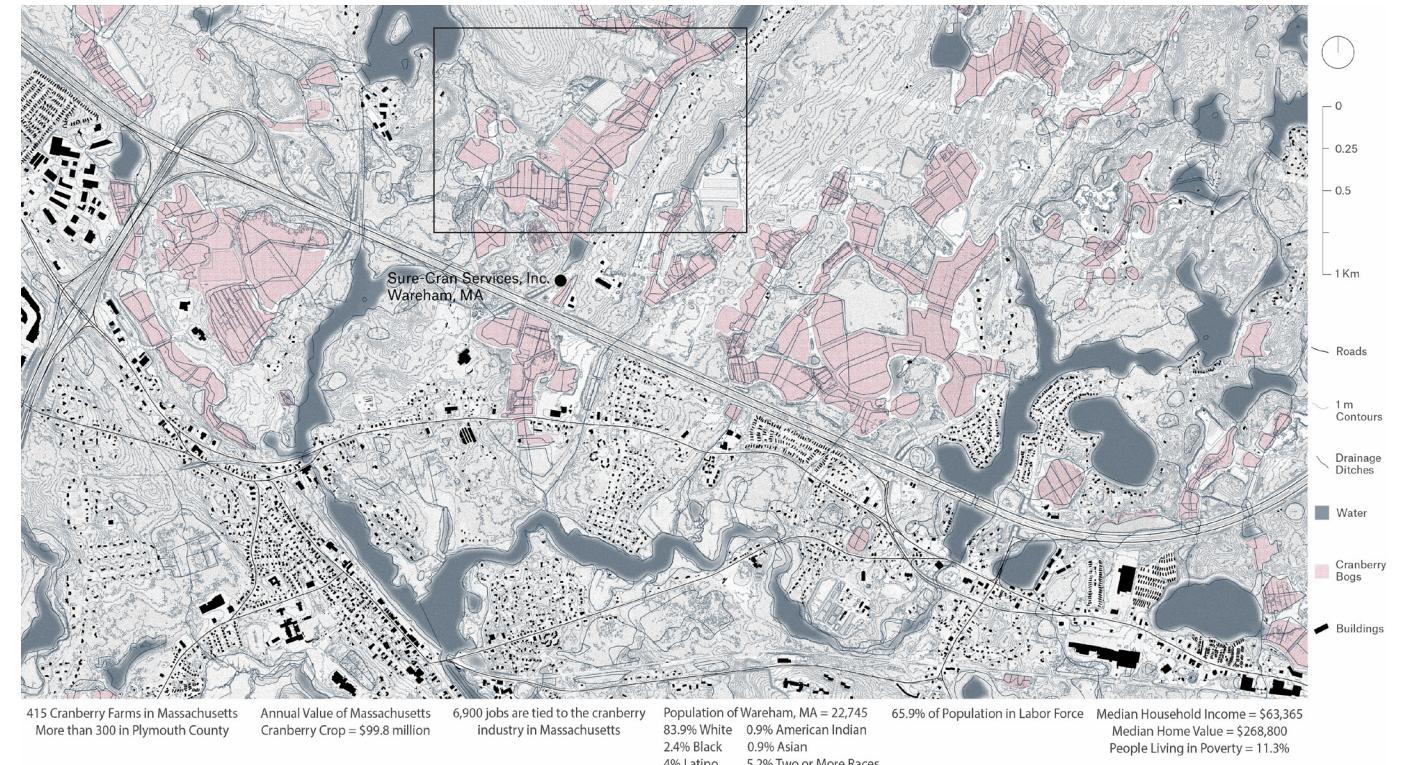
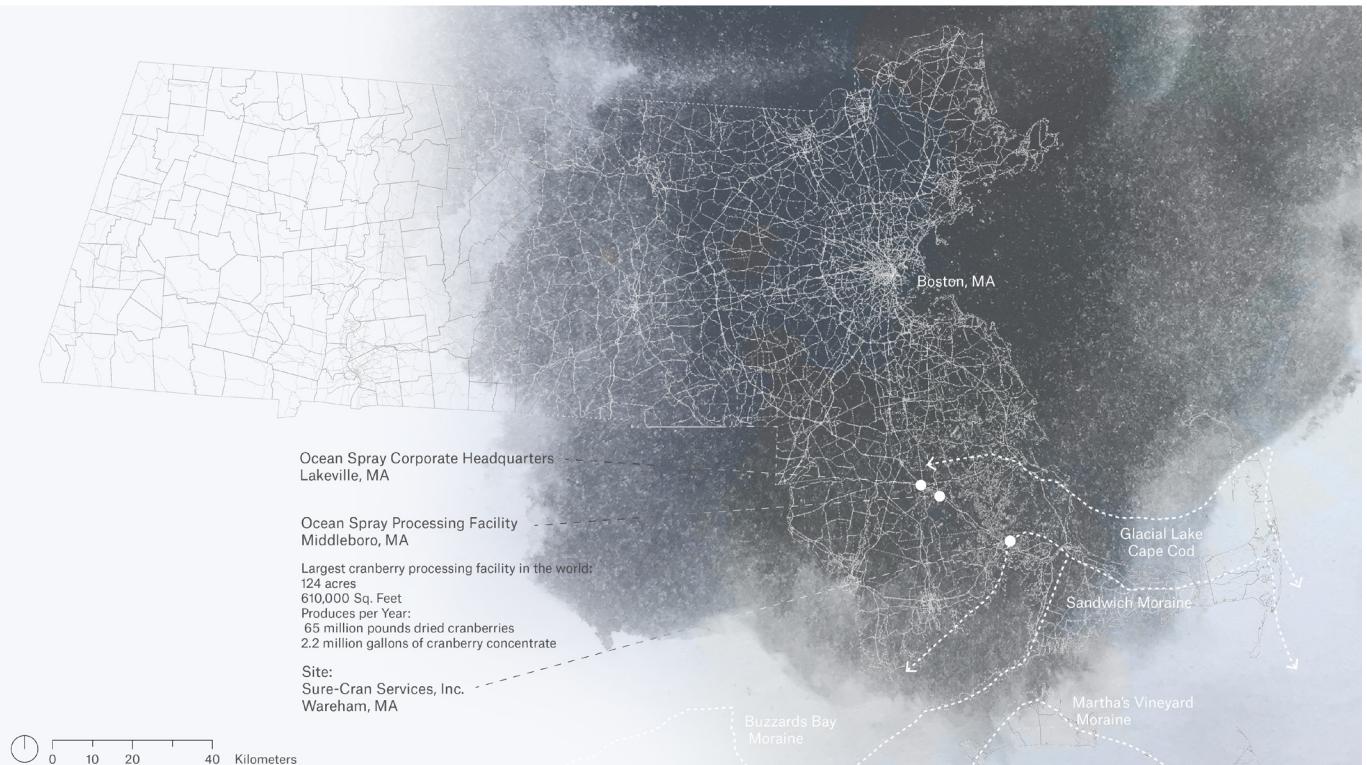
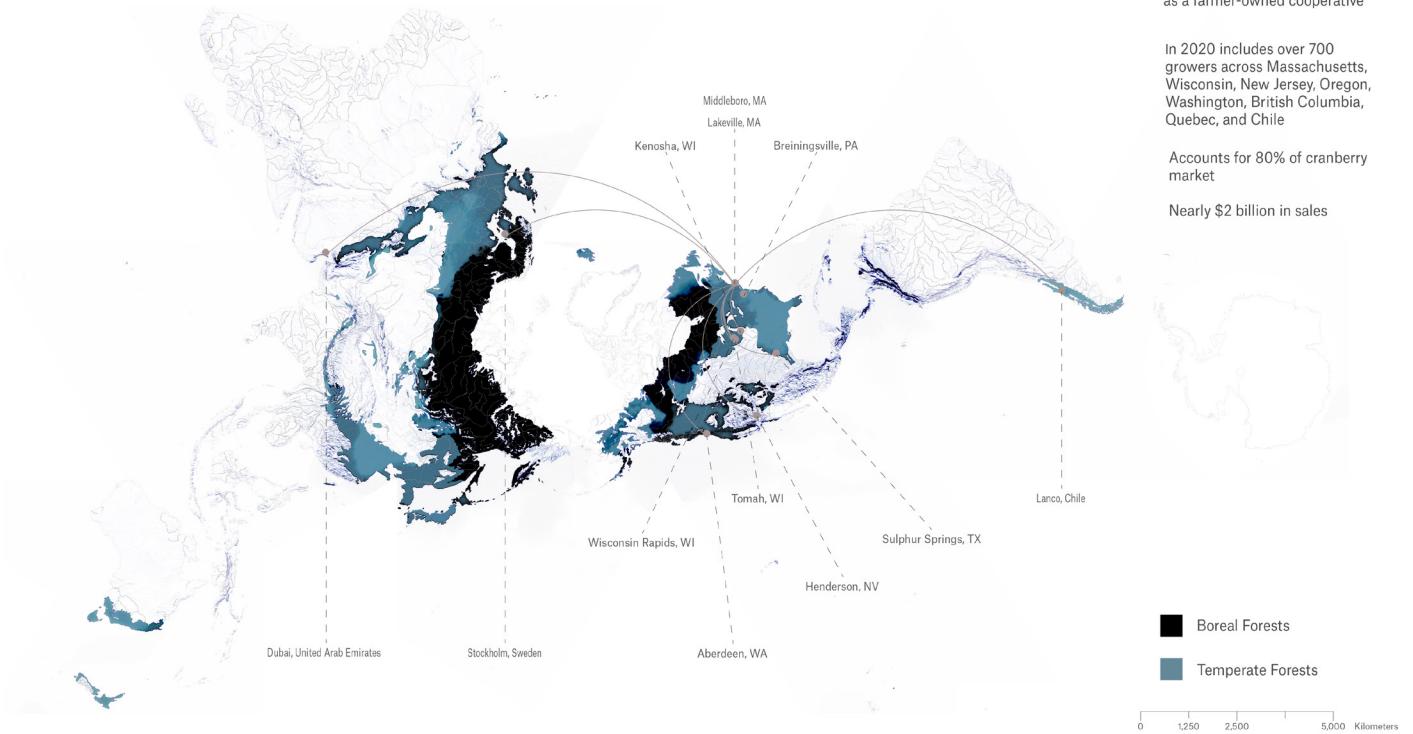
Price per barrel (2019) = \$28.70

Average Employment per Bog:
2 year-round employees
3 seasonal employees during harvest

Most Widely Applied Pesticides:
Glyphosate (Roundup)
Chlorothalonil (fungicide)
Pronamide (preemergence herbicide)
Diazinon (insecticide)

Fertilizer Use:
Nitrogen = 20-60 lb/acre (more for new cultivars)
Phosphorus = no more than 20 lb/acre
Potassium = 40-120 lb/acre

Ocean Spray, Inc. Distribution and Processing Centers

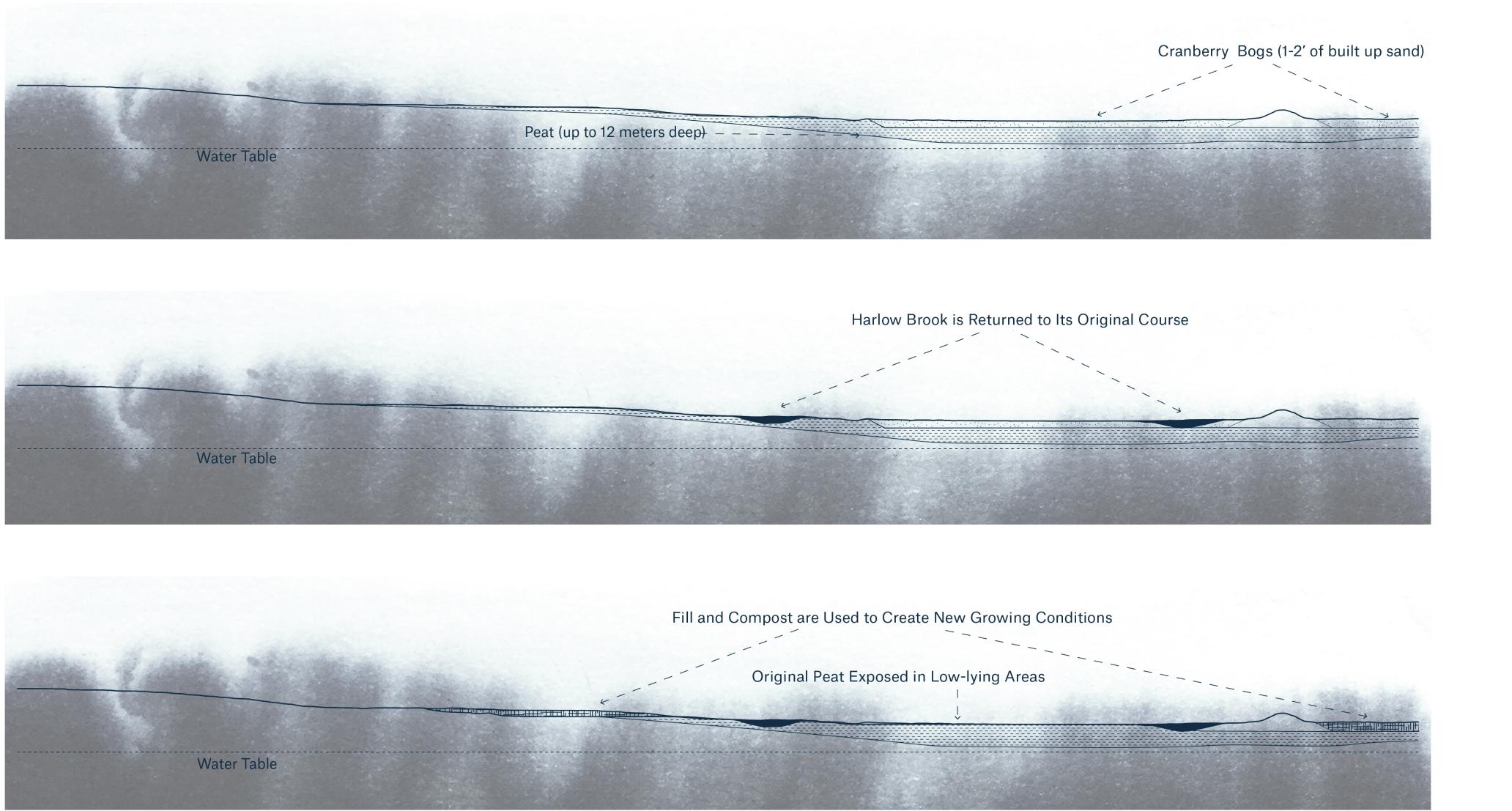
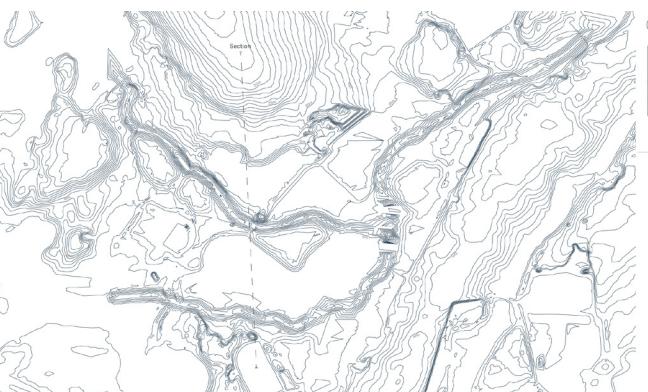
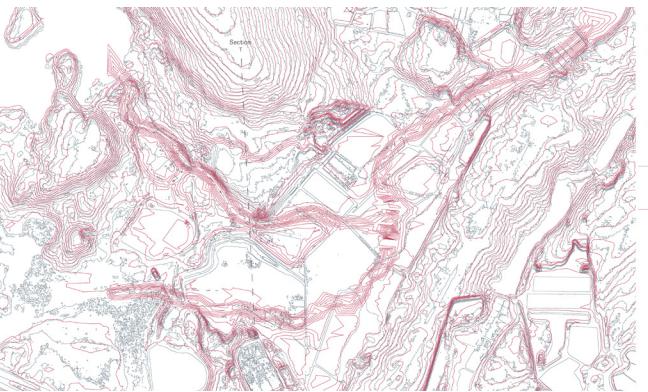
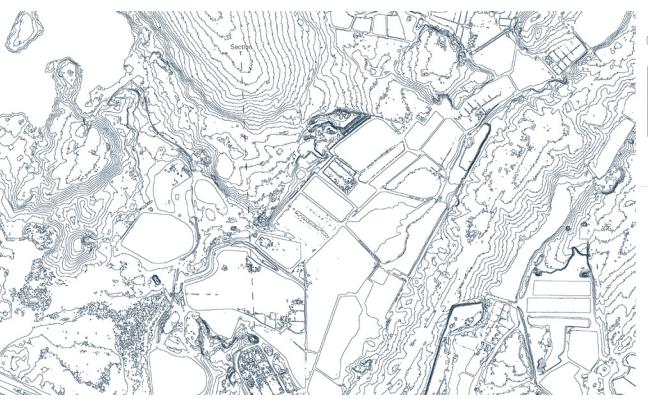


Founded in 1930 in Massachusetts as a farmer-owned cooperative

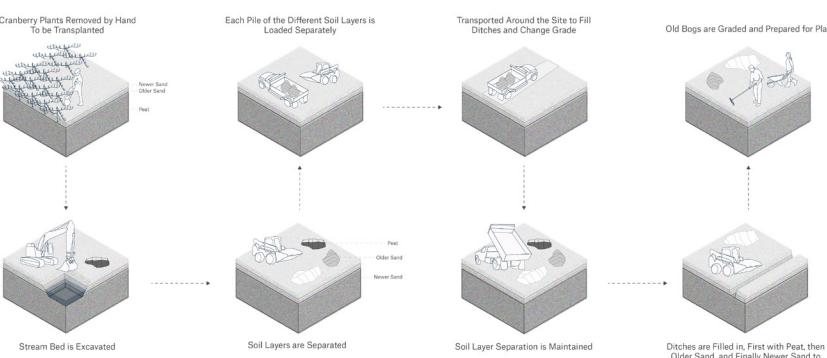
In 2020 includes over 700 growers across Massachusetts, Wisconsin, New Jersey, Oregon, Washington, British Columbia, Quebec, and Chile

Accounts for 80% of cranberry market

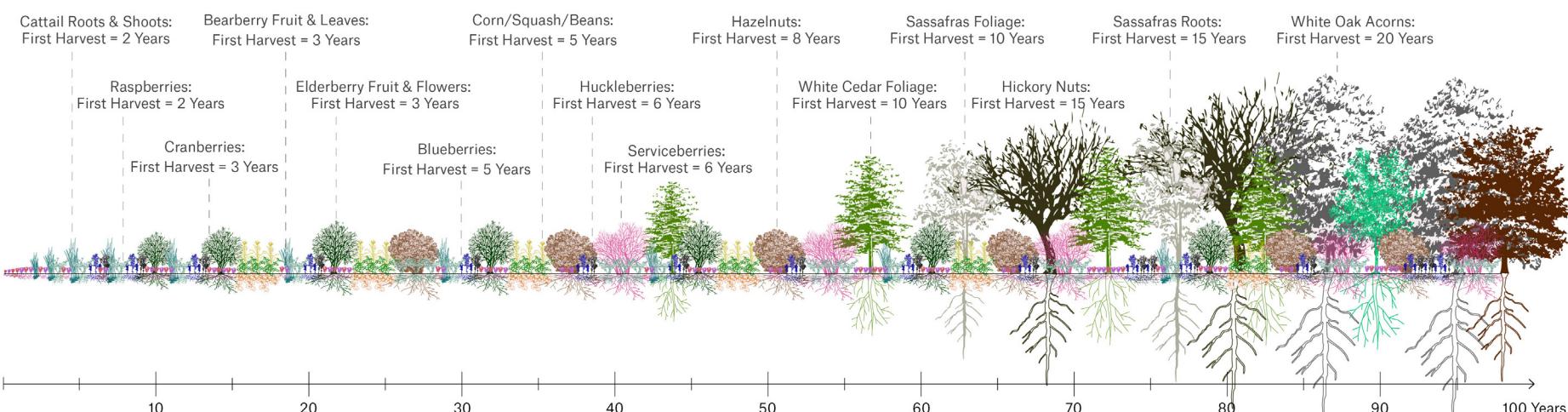
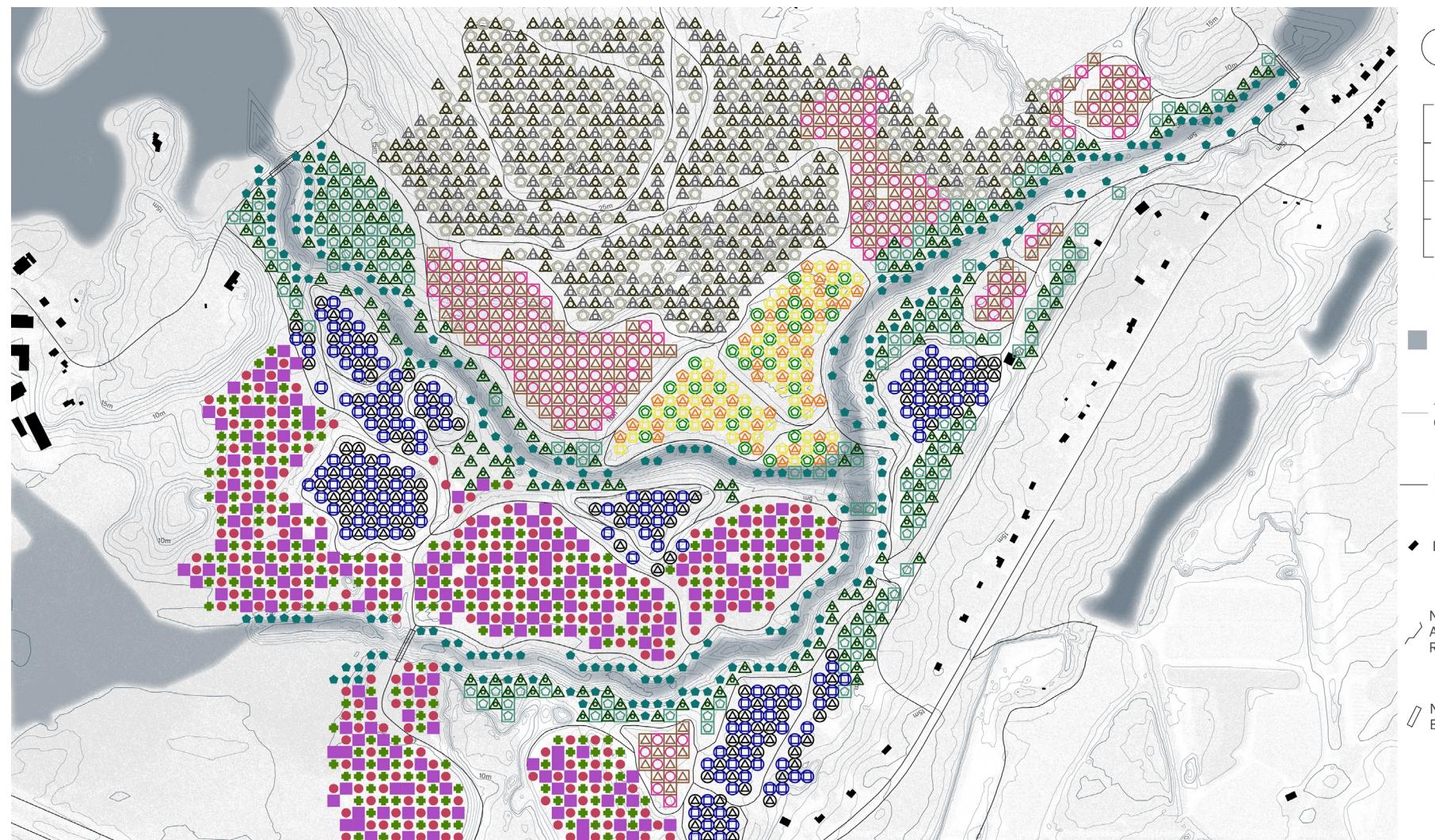
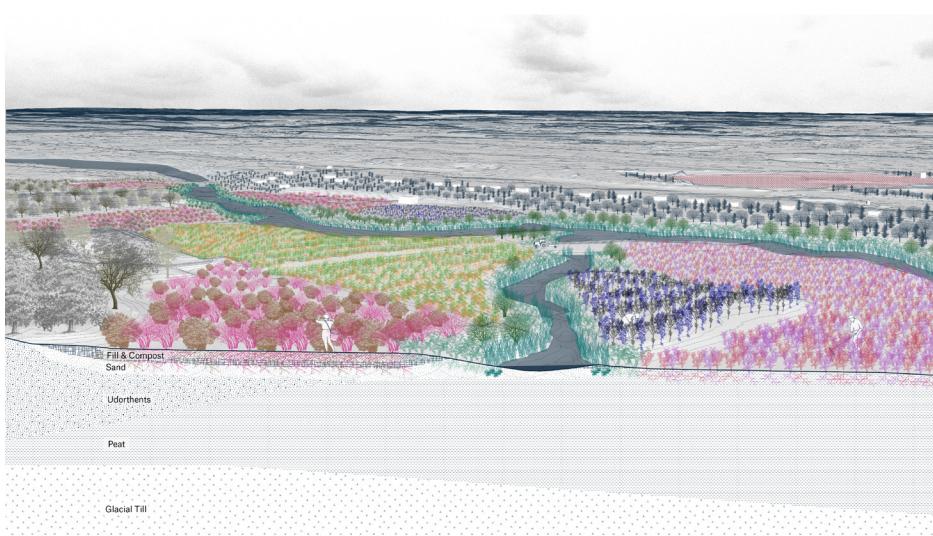
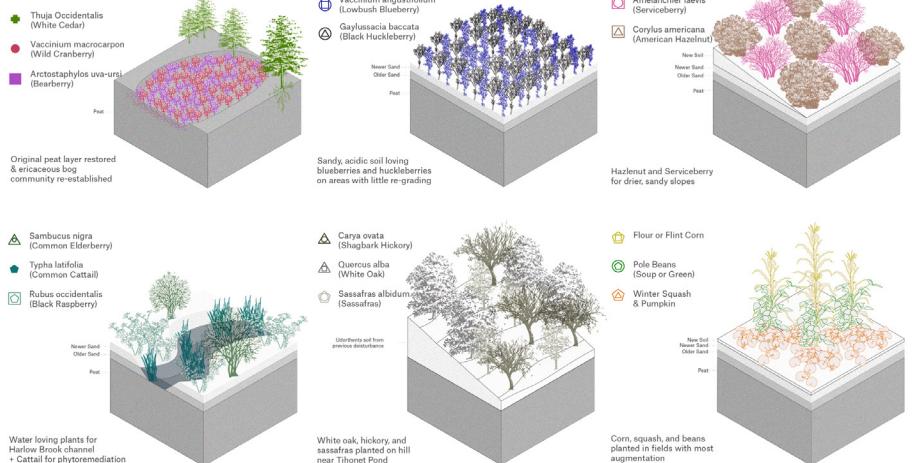
Nearly \$2 billion in sales



Creating and Preparing the New Fields:



Six Plant Typologies:

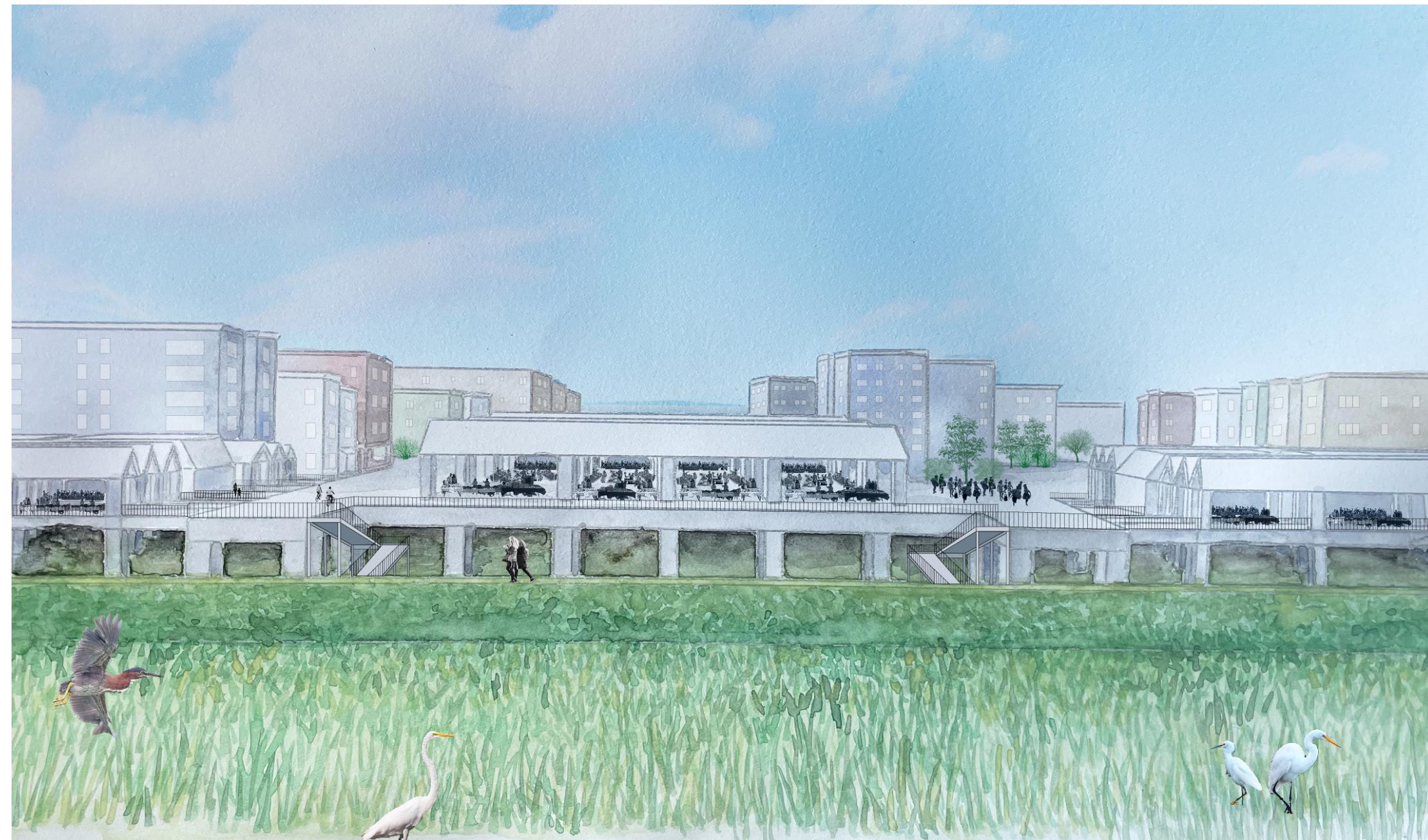


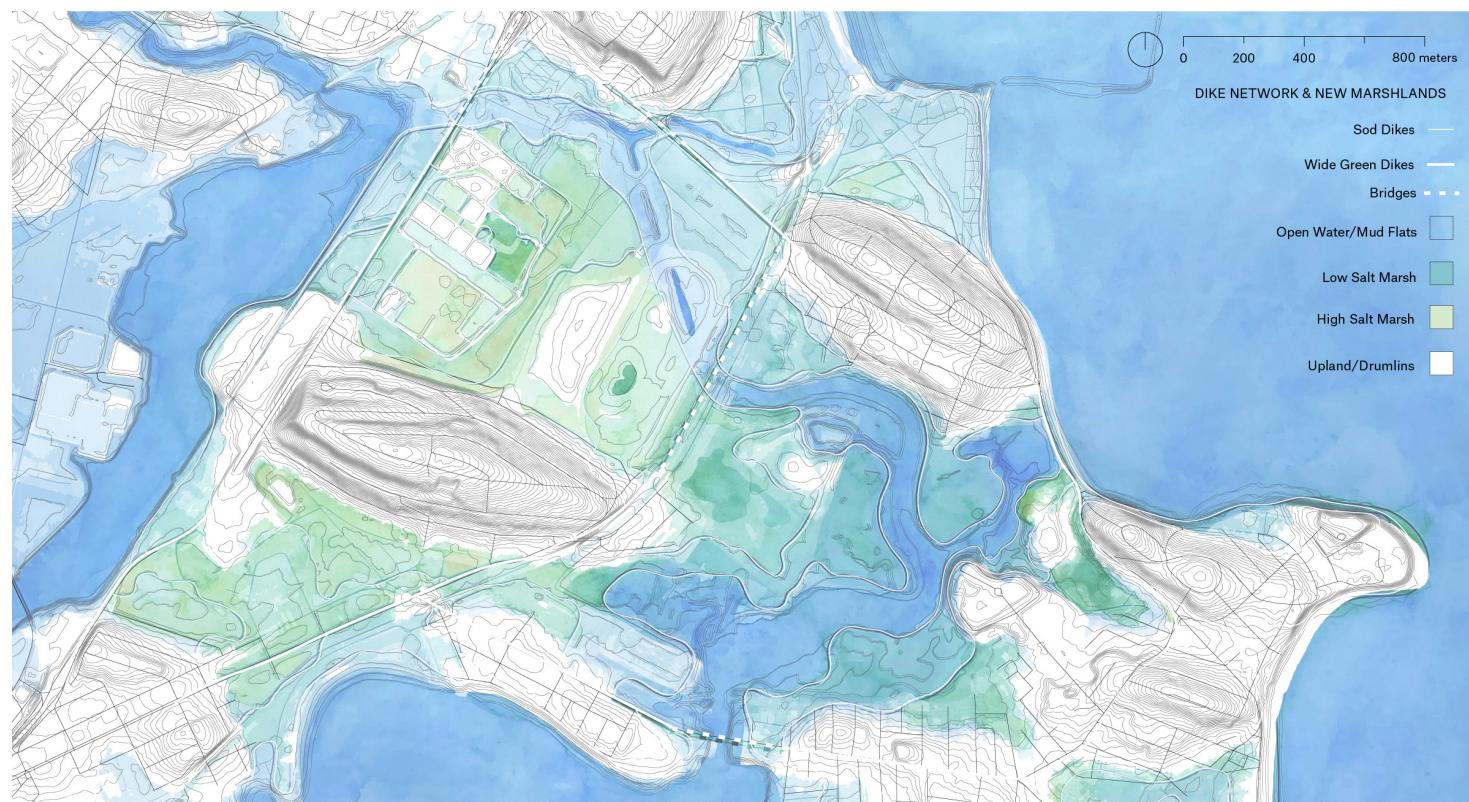
SODS, DIKES, AND PIERS: ESTRAURINE ASSEMBLAGES FOR EAST BOSTON

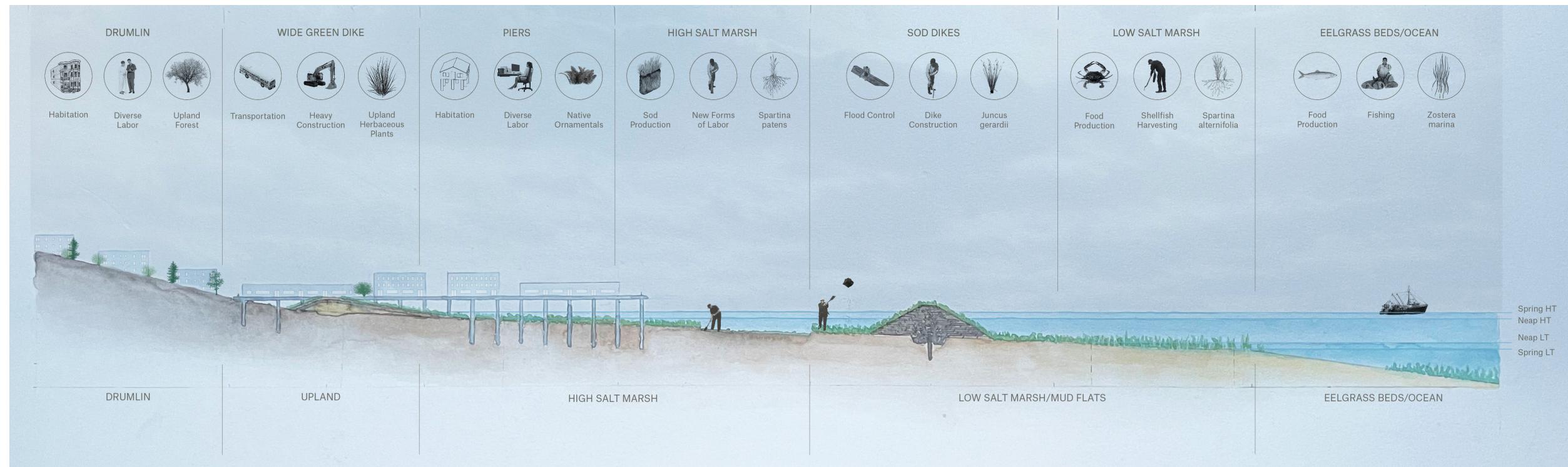
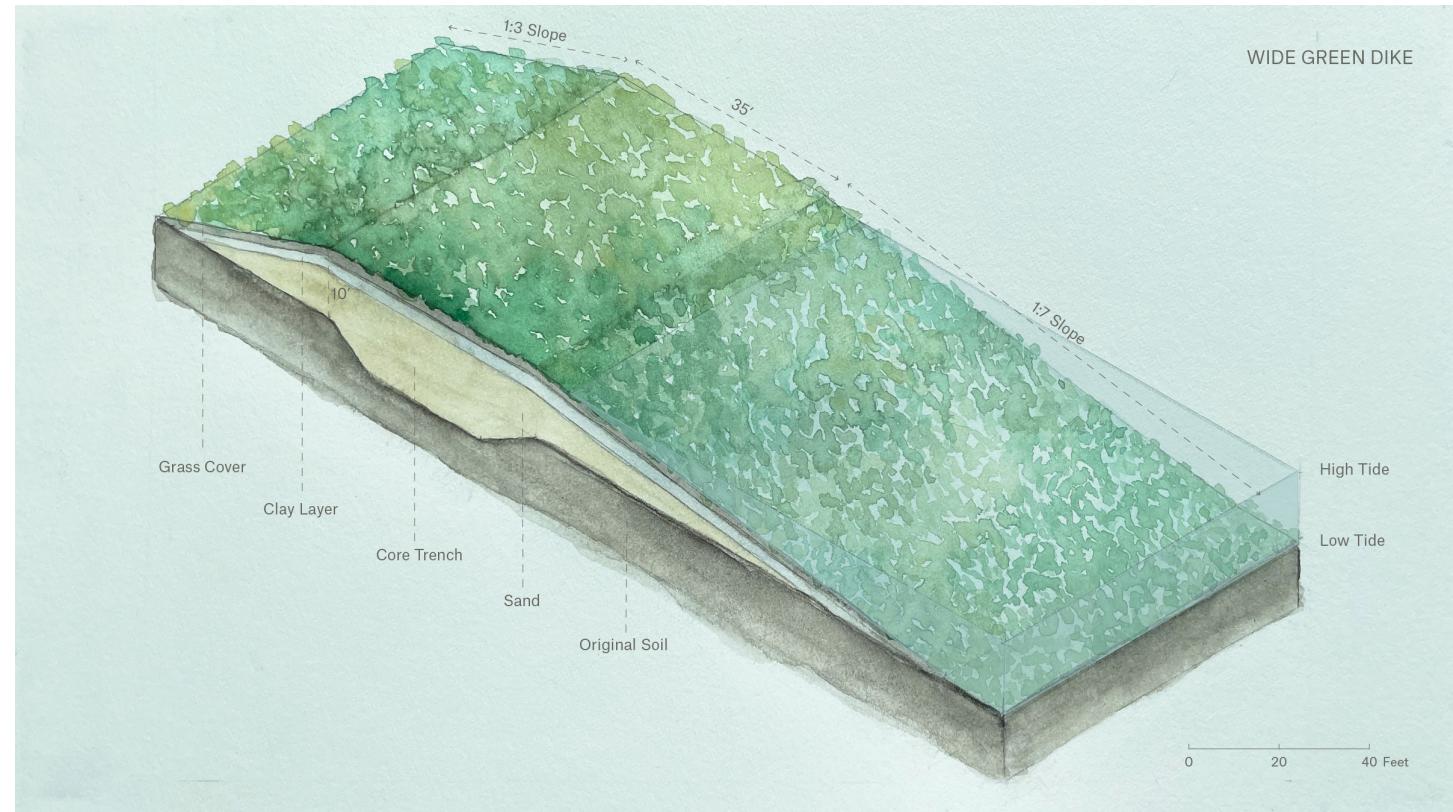
Belle Isle Marsh marks the southeastern boundary of East Boston. It is one of the few remnants of the extensive salt marshes that used to line the Massachusetts shore. These coastal wetlands are unique environments that thrive in the cyclical flooding of the tides. They are also some of the most productive ecosystems on the planet and are capable of growing land as sediment, flowing in with the tides and downstream from freshwater sources, gets trapped in the dense vegetative structures of the dominant grass and reed species. These generative ecosystems help sustain complex food webs of shellfish, birds, fish and other wildlife.

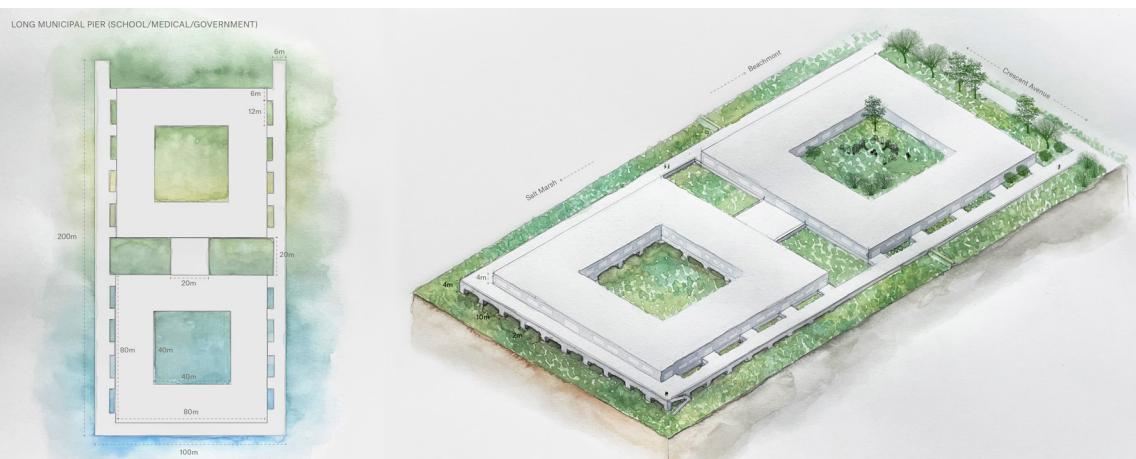
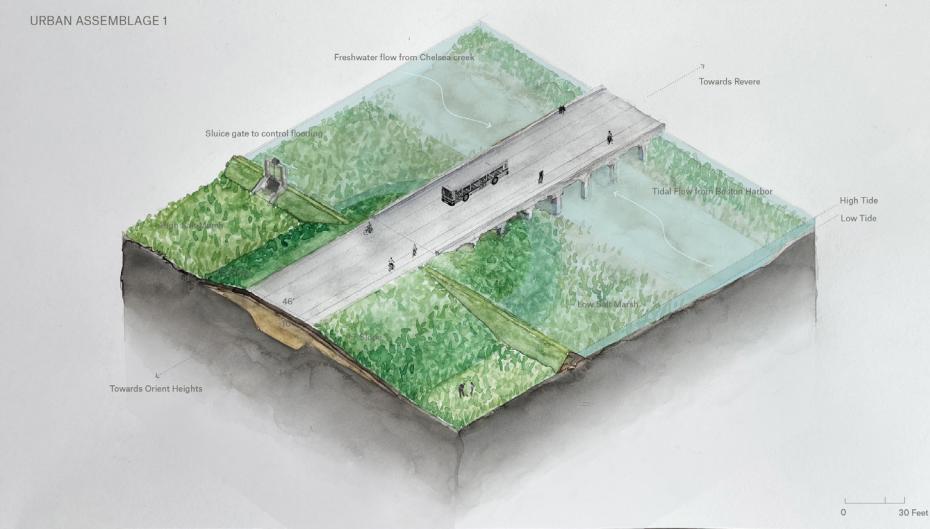
Both East Boston and Belle Isle marsh are at risk of sea level rise. Neither can survive the increased inundation and salinity of the rising sea water. In the face of these challenges, this project proposes a system of dikes, gates, and piers to help East Boston and Belle Isle Marsh adapt to and withstand sea level rise.

The goal of this project is to propose a new way of living with sea level rise. Instead of retreating, the residents of East Boston will have the ability to build a new future city that uses established techniques to protect the salt marsh, allow for tidal flows, and reap the benefits of the salt marsh from cleaner water to increased fish stocks to growing land in the face of rising seas.









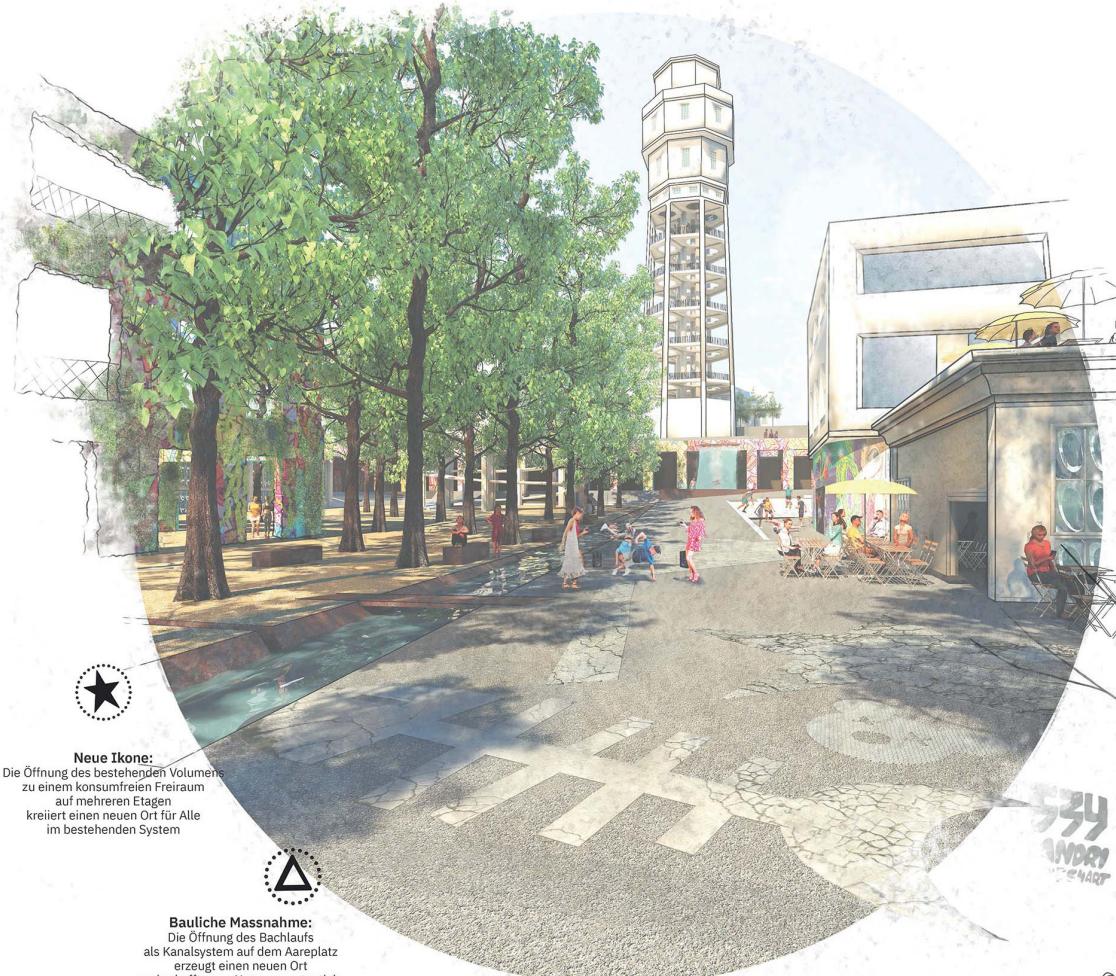
ATTISHOLZ AREAL

Attisholz Areal is a former cellulose factory on the River Aare upstream from Solothurn, Switzerland. Bryum Landschaftsarchitektur was one of six landscape architecture firms invited to participate in a competition to reimagine the future of the former factory buildings and surrounding landscape. Bryum worked in consultation with Hosoya Schaeffer Architects and Denkstatt Sàrl, an urban planning firm, to develop our proposal. The proposal centered on the daylighting of a buried creek to connect the unique Jura Forest ecosystem with the Aare River while maintaining many of the former factory buildings to be used as artist and cultural event spaces.

As part of Bryum's team on the Attisholz Areal competition, I played a key role in the development of the design by modeling our ideas in 3D using Vectorworks and Rhino. To understand how daylighting the creek would impact the steep slopes of the northern portion of the site, it was necessary to make digital models of multiple scenarios to test the feasibility of our design. Through the use of 3D modeling, we were able to determine the best course for the creek through the former factory site while still creating accessible public spaces for art and cultural events.



1:500 Scale Overview Plan. Drawn by Theresa Friedrich, Project Lead; Daniel Wolf, Landscape Architect; Valentin Keller, Landscape Architect; Carla Ferrari, Intern; and Julia Rice, Intern.



PRIMARY SCHOOL NEAR ZÜRICH, SWITZERLAND

Bryum Landschaftsarchitektur partnered with Gut & Schoep Architekten on a competition to redesign a primary school in a suburb of Zürich, Switzerland. The biggest challenge of the competition was to increase the amount of indoor and outdoor facilities for sports while still maintaining the historic garden city design of the school property and surrounding neighborhoods. Of particular importance to the town was the preservation of a number of healthy, mature Plane and Hornbeam trees. In collaboration with Gut & Schoep, Bryum designed new outdoor sport fields while preserving the school's beloved garden on the western side of the site and connecting an open, meadow landscape to the neighborhood greenway with new tree plantings.

As part of the competition team, I worked closely with Daniel Wolf, Project Lead, and Gut & Schoep Architekten to draw a 1:500 plan, 1:200 plan, relevant sections, and develop the graphics of our competition proposal.



Das Schulareal wird unter weitgehender Integration des Bestands zu einer orthogonalen campusartigen Anlage verdichtet. Die neuen Volumen bilden zusammen mit den vorhergehenden Etappen einen durchgrünten Campus. Infolge Konzentration der Neubauten auf einen klar begrenzten Teilbereich besteht grosser Spielraum für die langfristige Entwicklung des Areals. Das Dach der leicht verdeckten Dreifachturnhalle wird als Erweiterung der Außenfläche genutzt. Der kompakte Schulhausneubau ist darauf ausgelegt, langfristige Flexibilität zu gewährleisten, um nachhaltig auf zukünftige pädagogische Entwicklungen reagieren zu können.



Städtebauliche Ausprägung

Das Quartier Schwamendingen wurde auf Basis des Steinprojekts aus dem Jahr 1948 als Gartenvorstadt entworfen und realisiert. Aktuell findet an diesen Orten Verdichtungsprozesse statt. Der Charakter als lockere und durchgrünte Siedlung im Sinne der Gartenstadtkonzeption soll dabei erhalten bleiben. Wichtige Elemente der Quartier sind die dichten Grünanlagen.

Das Schulareal Luchsweisen grenzt an das Grüngut Glattwiesen und wird hauptsächlich über diesen eingeschlossen. Das Gebäude ist jedoch so geplant, dass es am Ende über diesen eingeschlossen auf. Die 1. Bauphase von 1957 (R. Kullmann) besteht aus drei schmalen zweigeschossigen Schulhäusern, welche sich um einen leicht erhöhten Pausenhof gruppieren und so als Gesamtfigur die Mitte des Areals besetzen. Die 2. Etappe von 2001 (Covas Hunkeler Wyss) besetzt mittels linearer Anordnung zweier Gebäude die Längsseite des östlichen Rand des Areals. Dies mit der Intention, zusammen mit dem Bestand ein schweizerisches System am Gebäudefront bzw. Pausenhof zu kreieren.

Horizont 2020

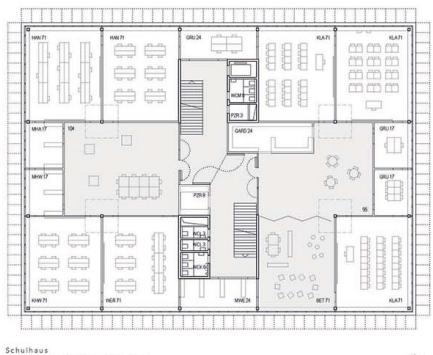
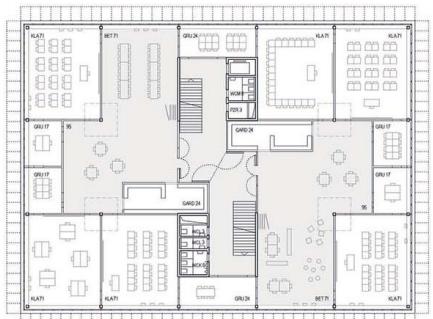
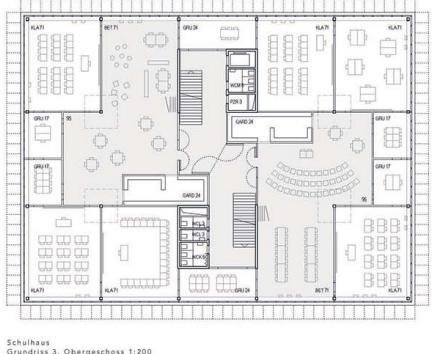
Infolge der Konzentration der Neubauten im Norden besteht grosser Spielraum für die langfristige Entwicklung des Areals. Dies ist ein zentraler Punkt für die in vielerlei Hinsicht nachhaltige Projektidee. Das Areal kann langfristig d. B. nach Ablauf des Lebenszyklus der ersten Etappe weiterentwickelt werden, dabei bleibt der ausgewogene und durchgrünte Charakter des Schulcampus erhalten. Siehe Diagramme Horizont 2020.

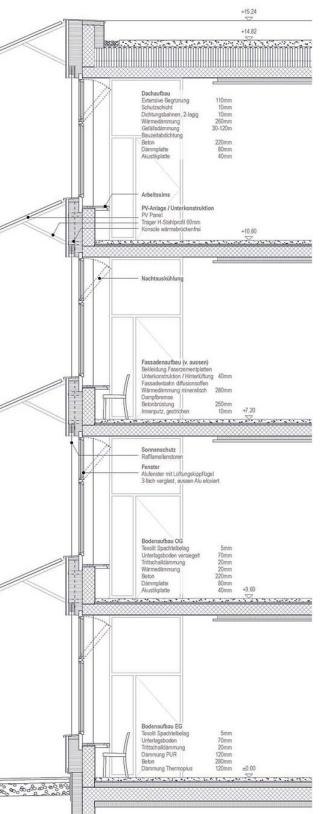
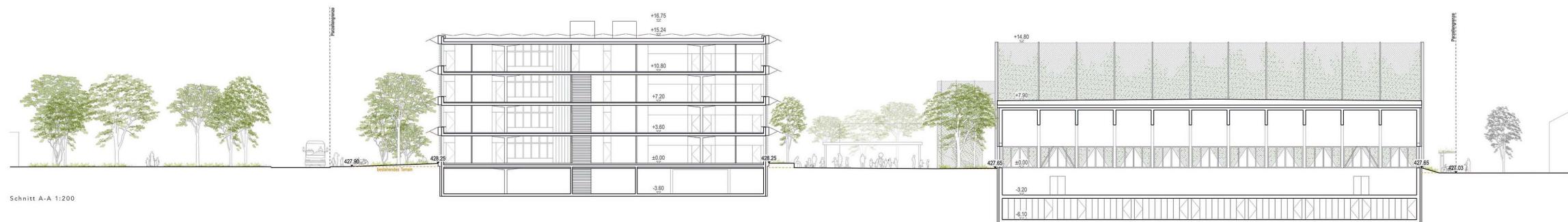
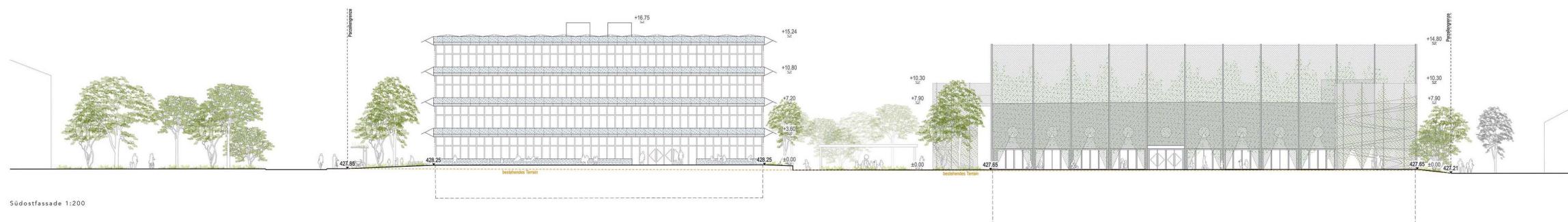
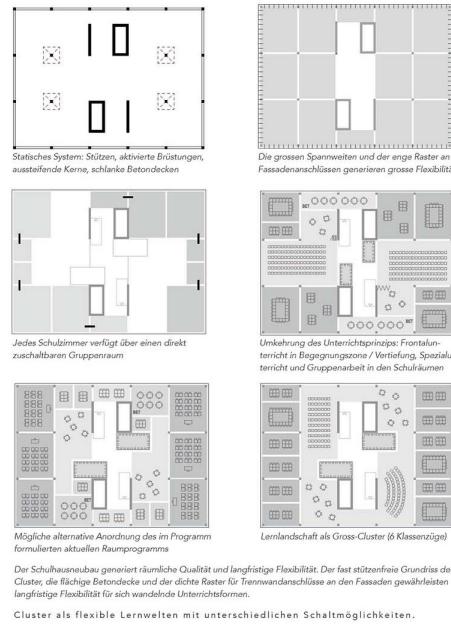
Ausblick / Erreichbarkeit

Das Thema der Verbindung und des Riesenden Grünes ist in Zürich Schwamendingen von grosser Bedeutung und wird auch bei der Neugestaltung der Umgebung zum Schulhaus Luchsweisen einbezogen und weiterentwickelt. Ein dichtes Wegennetz aus Wegen und Plätzen gewährleistet Verbindungen zur umliegenden Nachbarschaft und schafft auf diese Weise eine hohe Erreichbarkeit des Areals und seiner Schulgebäude.

Der Versiegungsgrad wird durch bepflanzte chausseeähnliche Flächen und Grünstreifen der Gebäudefassaden reduziert. Eine grosse Anzahl an Neupflanzungen ergänzt die bestehende Bebauung und sorgt für eine naturnahe Beschaffung. Zudem wird der bestehende Radweg entlang der Schule ausgebaut, um die Sicherheit in das Quartier und der Gedanken des fliessenden Grüns wird aufrechterhalten.

Die Grünflächen an den Fassaden werden durch Sitzmöglichkeiten, Spielbereiche und Pausenräume ergänzt. So kann ein ausgewogener und durchgrünter Spielbereich geschaffen werden. Es gibt einen ausgewogeneren Spielbereich im Grünen, während das Abstandgrün reduziert wird.



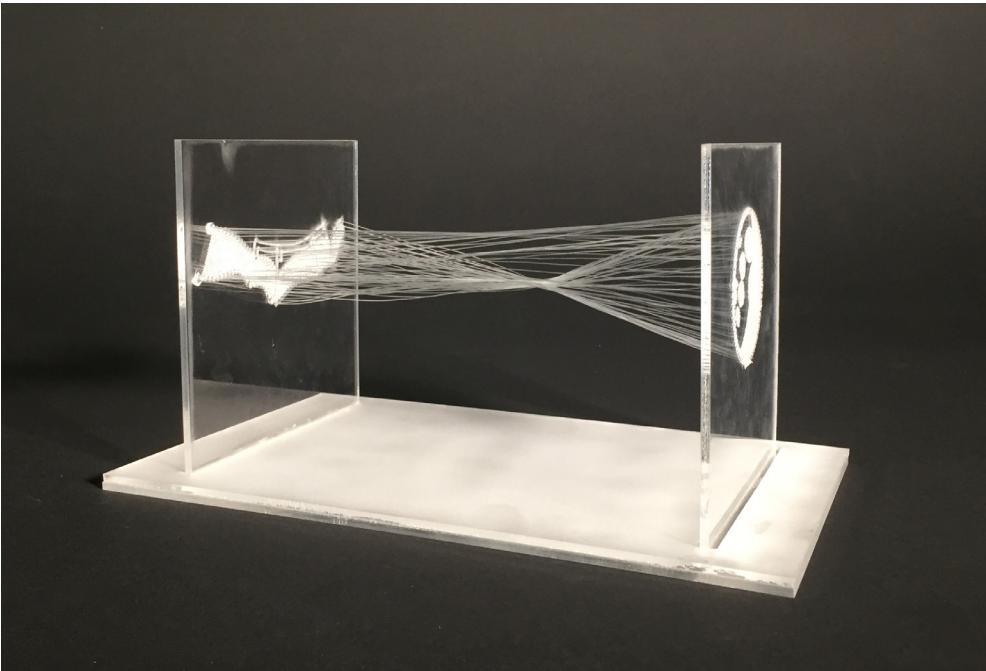


Sections drawn by Gut & Schoep Architekten and Julia Rice, Intern. Facade section, floor plans, and rendering drawn by Gut & Schoep Architekten.

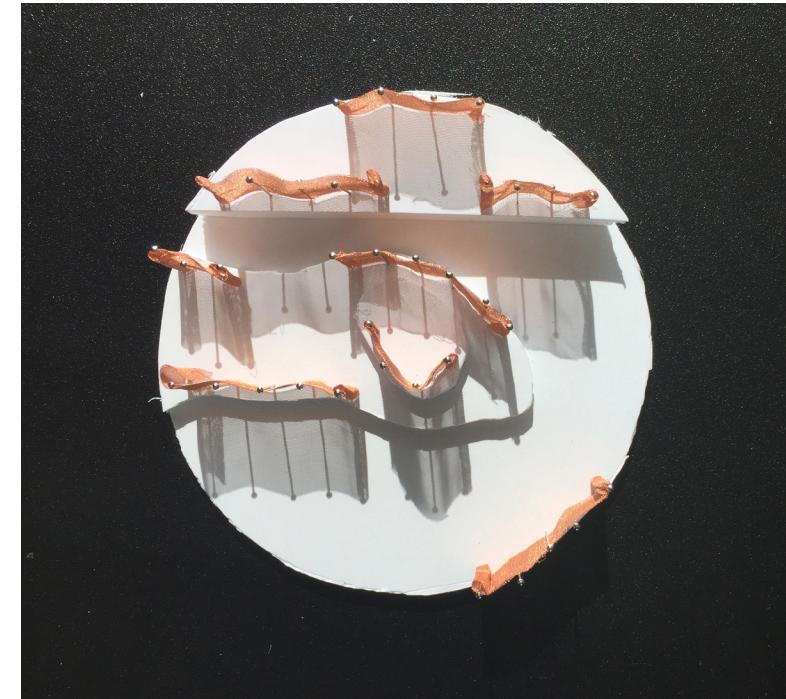
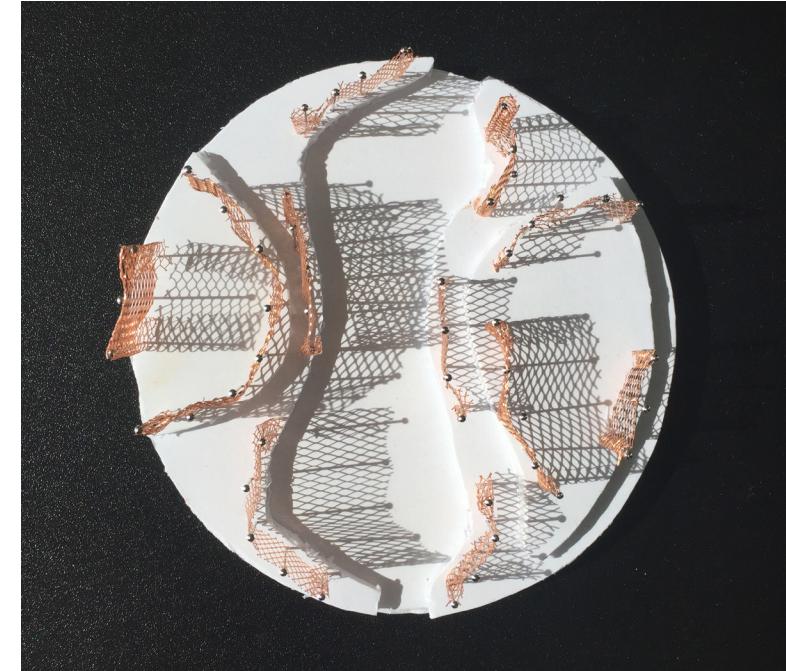
EXPERIMENTS



Topographic model of a folded paper piece.
Acrylic, 6 x 10 x 6 inches.



Model representing how the moon creates the movement of the tides at Curley Community Center (Boston, MA)
Acrylic and fishing line, 5 x 10 x 5 inches



Two models showing how hedgerows block sound using sunlight and different densities of mesh. Foamcore, copper mesh, steel pins, 5 x 5 x 3 inches.