START IT UP!
How the Seaholm Waterfront Can Get Back to Work for Austin

Studio Gang
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CONTENTS
Introduction 1
Start It Up 5
The Building 6
The Grounds 13
The Trail 30
Next Steps 41
Appendix 44

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Cover Image: South facade
Seaholm Intake Building 1950.

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Introduction
Awakening Potential
The Seaholm Waterfront

Momentum is building to bring new life to the Seaholm Waterfront in Austin, Texas. Citizens, civic leaders, philanthropic organizations, and stakeholder groups are working to align their ideas into a shared vision and plan for action that awakens this collection of dormant civic assets and makes a place that invites the entire city to engage with the waterfront and one another.

The three-acre Seaholm Waterfront comprises a park, trail, and buildings perched on the edge of Lady Bird Lake in downtown Austin. With the recent adaptive reuse of the nearby Seaholm Power Plant into commercial office space, the adjacent waterfront awaits a renewal that embraces fresh civic purpose and local desires for recreation and public life.

The Waterfront’s vacant Intake Building occupies an enviable position as the only building that touches both land and water along the Ann and Roy Butler Hike-and-Bike Trail, a system of parks and paths that serves 2.6 million visitors per year. The Intake Building was once used to pump water from the lake to cool turbines in the decommissioned Power Plant located just north of the site, serving as an engine that helped power an entire city. It is poised for a revival that values its attributes and puts the building back to work with a new civic ambition.

In 2017, The Trail Foundation, Austin Parks Foundation, and the Austin Parks and Recreation Department engaged Studio Gang to propose how to revitalize the Seaholm Waterfront. The result is this Conceptual Design Study that embraces the character of the buildings and site; promotes restoration of the landscape and waterscape; builds on local knowledge and experience; amplifies sustainability; and joins the city and its waterfront at a new confluence of inclusive community infrastructure.

The Study does not focus on one design solution; rather, it provides several options that respond to the ambitions expressed by Austinites and the latent opportunities inherent in the buildings, grounds, and trail in the hope of awakening the Seaholm Waterfront to a new and celebrated civic life.

How can dormant infrastructure be a celebrated part of civic life?
Listening and Learning
Research and Engagement

Specifically, to expand the nature and geography of outreach to Austinites, three online surveys were conducted over the course of the six-month study. Developed in partnership with Civic Collaboration and Go Collaborative, the surveys reached more than 800 respondents and provided an array of insights and suggestions to bring new life to the waterfront and especially to the Intake Building.

A critical aspect of the Seaholm Waterfront is its contribution to the story of Austin’s growth and change, captured visibly in the historic and utilitarian character of the Intake Building. With this in mind, the Study connects the building’s past functions to new possibilities, while honoring its historic features that serve as markers of the identity and legacy of the waterfront.

Due to these research and engagement efforts, the study responds to Austin’s aspirations for a waterfront that offers a variety of experiences; reflects local preferences that may change over time; provides the comforts of shade, food, and drink; negotiates activity and tranquility; supports creativity and culture; provides access to the water; and celebrates the city’s vitality and civic life.

2017 ENGAGEMENT DATES

MAY
Seaholm Waterfront Press Event at City Hall: Project is launched, APF/ITF partnership is announced, Major Adler voices support
Planning Partners Meeting #1
Seaholm Waterfront Open House #1: The community shares ideas about what they would like to do at the Seaholm Intake Building and surrounding parkland.
Survey conducted as a follow up to Open House #1 asks the community, ‘What do you want to do at the Seaholm Waterfront?’

AUGUST
Asian American Focus Group
African American Focus Group
Hispanic Community Focus Group
Planning Partners Meeting #2
Technical Advisory Group Meeting #2
Technical Advisory Group Meeting #3

SEPTEMBER
Asian American Focus Group
African American Focus Group
Hispanic Community Focus Group
Technical Advisory Group Meeting #1 & Design Community Salon

OCTOBER
Survey conducted as a follow up to Open House #2 asks community to provide feedback on activities and uses presented at the open house (September 23- October 31).

NOVEMBER
Planning Partners Meeting #3

DECEMBER
Seaholm Waterfront Open House #3: Three proposed design options are shared with the community to gather feedback to help refine the final design options.
Survey conducted as a follow up to Open House #3 asks community to provide feedback on designs and programming presented at the open house.
This Conceptual Design Study illustrates how the Seaholm Waterfront can become a celebrated part of civic life in Austin. It centers on three components of the waterfront: the Intake Building, the Grounds that surround it, and the Trail that traverses the site and connects it to the city along both shores of Lady Bird Lake.

Many of the Study’s proposed ideas, from water access and boardwalk overlooks to event infrastructure and cafe spaces, reflect suggestions that came directly from Austinites. Combined with research, building and site analysis, ecological studies, expert advice, historic preservation guidance, and urban design, the Study provides design options that work to preserve the character of the waterfront’s signature assets—the Intake Building, Lake Bird Lake, Butler Trail, and heritage landscapes—but also position the waterfront for a new future as a recreational, cultural, and community-oriented resource.

The need to both preserve and strengthen the waterfront, while also orienting it to civic life, requires design that can flexibly accommodate a wide range of uses, remain open and inviting throughout the year, and respond to the recreational and cultural life of Austin, which will continue to evolve as the city grows and changes over time. With this in mind, the design options consider what might occur ‘any day’ of the week, ‘now and then’ in a month, and ‘on occasion’ during a year to ensure balance across the demands for program and events that the waterfront will be challenged to address.

Six design principles guide the Study’s recommendations. Developed through research, engagement, analysis, and experience, they serve as touchstones to ensure that the Study achieves the ambitions that Austinites have for the Seaholm Waterfront.

Finally, the Study offers paths for phased investment, starting with urgent and simple moves and leading to more dynamic changes that breathe new life into the Seaholm Waterfront.
START IT UP!

The Building

The Grounds

The Trail

Study Area

Detail

PFLUGER BRIDGE

CEasar Chavez

SHOAL CREEK

WElST AVE.

STUDIO GANG
The Building
A Dormant Infrastructure

WHAT'S NEEDED

COMFORT: Cooling and ventilation for inhabitants, seating

SERVICES: Food and drink, interpretive exhibit, restrooms, storage, kitchen, office

OPENNESS: Transparent openings, indoor-outdoor experience, waterfront dock

CONNECTIVITY: Network site to adjacent assets, expand the trail, bring in new programs

The Seaholm Waterfront and the iconic Seaholm Intake Building have a story to tell. The Conceptual Design Study explores the idea of the building as a machine and this can be furthered through an exploration of interpretive strategies. The Seaholm Waterfront tells the story of the transition from industry to recreation. The major role of energy generation both past and present is also a leading theme. These stories can be told in a variety of ways ranging from exhibits, interpretive signage, programming and public art.

The Intake Building has remained relatively unchanged since an expansion in 1955, although the industrial machinery has since been removed. Its interior demands preservation yet can also be leveraged for new flexible uses. The main level, once called the Operating Floor, is a large rectangular volume with an abundance of natural light. Large openings make the floor difficult to use; however, if these opening were creatively covered, the space could be used for many different types of gatherings and activities. Formerly, a 5-ton gantry crane was used for moving and accessing the pumps in the lower level. Reinstalling a gantry crane could offer a unique artifact of the building’s past and also assist in moving partitions and furniture for flexible uses.

Currently the Intake Building is an empty shell. June 2017.
Open and Flexible

Over the course of a month, the Intake Building could accommodate a wide range of programs and events, from occasional to any day of the week.

**ANY DAY**
Day-to-day events would allow for casual gathering in large and small groups.

**NOW AND THEN**
The flexibility of the Intake Building would allow for multiple events to take place at one time.

**ON OCCASION**
The Intake Building would be able to accommodate one large event.
**ANY DAY**

ANY DAY events could happen each day of the week. The building and site can be designed to make the space easy and flexible.

**NOW AND THEN**

NOW AND THEN activities could take advantage of this new flexibility, allowing for periodic signature programs and events.

**ON OCCASION**

ON OCCASION events would be less common but could take advantage of the building’s ability to accommodate large gatherings.

*Building B is not inhabitable due to overhead power lines.*
The Intake Building will host meetups and gatherings, with free WiFi and a place to grab a snack and coffee.
ANY DAY
The Intake Building will be open for people to come in and work individually or collectively. Unique elements from the building’s past will be on display for people to experience.
The Intake Building will be able to accommodate larger events simultaneously, such as an art fair and youth art camp.
Large events can be held at the Intake Building, with support services located outside.
The Grounds
Extend the Intake to the Outside

WHAT’S NEEDED

COMFORT: Areas of shade, places to sit, gathering space, landscape microclimates, protect on-site heritage tree

AMENITIES: A place to get a coffee and a snack, restrooms, community room

ACTIVITIES: A multigenerational play space, water access, views of Lady Bird Lake

DESIGN OPTIONS

THE PORCH YARD adds a porch to the north side of the Intake Building and a softscape veil that blocks noise from Cesar Chavez.

THE COURT YARD places a new structure away from the Intake Building to create an interior courtyard along Cesar Chavez.

THE GARDEN YARD creates a lush outdoor plaza with a new pavilion that has service and program functions.

At the completion of the Intake Building’s second phase of construction in 1955, a “front yard” condition of nearly 150 linear feet was created between the building and Cesar Chavez. Since that time, the yard has been very seldom used. A collection of heritage oak trees occupy the yard, while the Ann and Roy Butler Hike-and-Bike Trail occupies the edge on Cesar Chavez. In an effort to take pressure off the Intake Building from housing amenity and service programs, a series of design options offer a range of ideas of how the “front yard” could take on some of this responsibility.
The Porch Yard

Service and amenity programs are placed in a porch that wraps the north face of the Intake Building. The Porch looks out onto the Porch Yard, which is protected from Cesar Chavez by a lushly planted Forest Veil. The Porch Yard can be used for large gatherings or smaller day-to-day group meetings.
Noise from Cesar Chavez is reduced with a dense planting of trees. The Porch Yard provides a large open space for gathering and events.
The Amenity Porch wraps around the Intake Building. In between, a perch leads people to views of the lake.
The Power Plaza links the pedestrian crossing at the new Central Library to the Intake Building. The existing power tower is clad in artwork, making it a focal point of the Eco-District.
The Court Yard

To take pressure off the Intake Building, all amenity and service programs are placed in the Shed. A safe and open Court Yard is created between the Shed and the Intake Building.
Between the Intake Building and the Front Deck, a public Court Yard can host a wide range of events and programs.
The Trail runs along the water’s edge to provide an up-close experience of Lady Bird Lake. The water’s edge becomes a tranquil space to sit and look out on the lake.
The Garden Yard

The service and amenity programs are located in the Pavilion, which can also be used as a stage for large events that spill out into the Garden Yard. A movable Earth Wall helps reduce noise from Cesar Chavez. The Earth Wall can be used as a public message and art board.
Welcome Cafe
Roof removed for clarity

Front Patio

Food Truck Pull-Up

Garden Yard

Movable Earth Wall

Pavilion

Storage

Studio Gang
Facing the Garden Yard, the open Front Patio allows people to sit and relax and look back on the city. The Garden Plaza hosts various civic events and programs with the support of the Pavilion.
The Trail runs along the edge of Lady Bird Lake where people can experience a diverse array of landscapes and ecology. There are various places, such as the Watering Hole, to pull up a kayak or paddleboard and to relax and enjoy the location on the water.
The Trail
The Heart of Austin

WHAT’S NEEDED

ACCOMMODATION: Bikers, runners, walkers, commuters, birders, nature lovers, and others

ENHANCEMENT: Unique moments to stop and rest along the trail

RESTORATION: Preserve and establish conditions for native landscapes and ecology

The Ann and Roy Butler Hike-and-Bike Trail is a lush urban recreation path that stretches nearly 10 miles and serves more than 2.6 million people per year. Passing directly to the north of the Intake Building, the Trail represents the best of what Austin has to offer—outdoor recreation, scenic views of Lady Bird Lake, natural landscapes, and a diverse mix of people—and has great potential for future use. Public input supports relocating the Trail to the south of the Intake Building.

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2.6 million visitors a year to the trail
66% of people use the trail for water sports and recreation
10 miles the length of the trail
Site Analysis

Careful inventory of existing conditions helps define opportunities and constraints across the Seaholm Waterfront. While select species of trees measuring 24 inches or greater in caliper size are deemed ‘heritage’ by city standards, there are many more trees that do not meet the protected criteria but are still worth preserving. Conversely, there are invasive species that should be removed. Following this analysis, opportunities to maximize views to the waterfront present themselves logically.
Currently the Trail pushes away from the lake up to Cesar Chavez and creates safety concerns. The Pfluger Bridge and Shoal Creek provide great north connections up into the city.
**Option A**

Taking cues from Seaholm Intake’s original purpose, one concept conceives of pulling lake water through the building and out into the landscape to create an amenity for the Trail by way of a bio-filtration water feature. Steep inclines flanking the Intake Building present opportunities for natural, topographic, amphitheater-like spaces that help facilitate the flow of water where they occur. Similarly, strategically placed gardens designed to receive stormwater runoff from hardscape can filter particulates and cleanse rainwater before reaching the lake. These water-harvesting interventions also provide opportunities to expand wetland habitat further into the Trail.

Additionally, allowing Shoal Creek to revert to its natural course has many benefits. Namely, the peninsula would no longer flood during storm events. If the Trail were re-routed, the new “island” could become a less populated wetland and bird sanctuary, while the land between Cesar Chavez and Shoal Creek could be activated by Trail use.
**Design**

**Option B**

This alternate option takes many design cues from Option A, but has a lighter touch. Waterfront access points are designed to direct foot traffic and simultaneously protect native habitat. Pedestrian bridges along the Trail emphasize and celebrate surface stormwater as it crosses the site, thereby introducing riparian plantings closer to the Trail and reducing erosion by carrying drainage under the decomposed granite path. Terracing of the steeply graded hillsides creates passive lookouts over the water. Graphically enhanced crosswalks provide traffic-calming measures and pedestrian wayfinding for this newly activated zone. In this version, Shoal Creek and the Trail are left in their current configuration, while the Trail stays low across the front of the Intake building, becoming a boardwalk over the water. Secondary paths take Trail users to the new Cesar Chavez Promenade at street elevation.
**Option C**

This option imagines a Trail that does not go out over the water, but rather shares a widened space with the Promenade along Cesar Chavez. Accessible paths navigate the topographic changes to engage the new Power Plaza, Intake Plaza, and Odom Pavilion Plaza. Terraced passive seating continues to provide views over the lake, with boat-docking opportunities at the water’s edge. Hardscape design at street level has a flexible-use configuration to allow for occasional food-truck parking and maintenance access.

All three options propose reconfiguring the existing parking lot to make better use of the space, introduce shade trees, and continue the Promenade connection into the new Intake Plaza.
WATER ACCESS POINT
Recognizing Trail users’ desire to engage the waterfront, the provision of designated access points in turn protects adjacent native habitat. Hardscape improvements provide wayfinding, reduce trail erosion, and celebrate the path of water. Small docks can also offer boat tie-offs, allowing these nodes to become multimodal in nature.
DRY AMPHITHEATER

Recirculating lake water through a new cascading water feature brings the cooling properties of wetland habitat and riparian plantings to the site. Capitalizing on natural topography, built terraces provide passive seating, a makeshift performance stage, or an outdoor classroom environment.
TRAIL AT ODOM PAVILION

Natural drainage—normally hard-piped straight out to the lake—is allowed to flow across the site, slowing runoff, trapping pollutants, and creating ecological benefits. Bridging over these ephemeral flows protects the trail from erosion. In the background, the Odom Pavilion is reimagined as an accessible and active amenity to the Trail.
PHASING

Steps Forward for the Trail

PHASE 1 - WEST WATERFRONT

The West Waterfront, from east of Pfluger Circle to the Odom Pavilion, is a logical first step in the Seaholm Waterfront improvements. The area is largely vegetated, with a mature tree canopy and few structures. Ample opportunities exist for ecological restoration; woodland expansion; improved stormwater management; native landscape enhancements; trail enhancements; invasive species removal; erosion mitigation; hardscape improvements; and water access improvements. The plan of action is aligned with numerous city plans, including Imagine Austin, the Urban Forestry Plan, the Climate Protection Plan, and the Invasive Species Management Plan. The result of these efforts will be a landscape with healthier native plant communities, improved ecological function, enhanced resiliency, and a better user experience.

The Urban Forest and Natural Area Management Guidelines denote the area edging the lake and Shoal Creek as woodland and calls for woodland expansion for most of the area, which recognizes its ecological characteristic as a low-lying floodplain landscape. The exception is the area in front of the Intake Building, where a more formal landscape is planned. The West Waterfront is ideal for expanding woodland and woodland enhancement for a more biodiverse, aesthetically pleasing environment for Trail users that allow them to interact with the flora and fauna of central Texas. Enhancement will create more shade and allow the lake to be bordered by a cathedral-like canopy of bald cypress, pecan, American elm, green ash, oaks, and other native trees. In addition to expanded tree canopy, woodland enhancement calls for a diverse understory and herbaceous layer throughout the study area, with species as recommended within the guidelines.

Stormwater-management interventions along with erosion mitigation are critical for the area. Within the study area, there are seven erosion issues identified by the Natural Area Management Guidelines that include rill erosion, sheet erosion, overbank flooding, and informal trails. These should be addressed in Phase 1 through the use of green-infrastructure techniques within the landscape; formalization of the user experience at the lake edge where erosion and trampling are prevalent; and the decommissioning and restoration of informal trails. Additionally, existing traditional storm-water-management infrastructure provides opportunities for conversion to amenities that help create a robust, diverse, and aesthetically pleasing central Texas native landscape. These improvements are addressed with the wetland enhancement areas shown on either side of the Intake Building in the accompanying schematic.

The "sponge area" between Pfluger Bridge and the Odom Pavilion allows for greater capability of infiltration of water into the landscape. Three plan of a study area, small and large green infrastructure projects will include grading alterations to reduce water flow across the Trail, pedestrian bridges/grates to allow water to move under the Trail, grading alterations to lengthen the path of water flowing across the landscape; and bioswales, rain gardens, and "creeklets." Erosion through linear hardscaping will also include appropriate plants, such as Lindheimer Muhy, eastern gamma grass, Cherokee sedge, and rough leaf dogwood. These interventions will reduce erosion while creating a more diverse, resilient landscape for Trail users to enjoy.

Along with improvements that reduce erosion of the Trail and subsequent maintenance costs, the formalization of water-access points will result in less informal use along the Trail system and less disturbance to tree roots, and ultimately provide for a more compelling experience for Trail users. In turn, this allows surrounding areas to host more robust riparian flora. Plants around formal areas should be at a density and height level (at least 2”) that dissuade informal use. Visual cues, such as path edging, would repeat along the DG trail, signaling an access point at the water’s edge and separating Grow Zones from the pedestrian zones. Some of these trail openings might also lend themselves to boat docking.

To restore the landscape and allow for robust native plant communities, invasive species found throughout the site must be managed. Within the study area, there are nine recorded invasive species of concern, with fifty-four areas of establishment. Of these, Arundo, Sweet Autumn Clematis, Johnson Grass, Chinaberry, Chinese tallow, and elephant ear are of greatest concern. Those impacts should include removal and treatment of these invasives per the recommendations in the Natural Area Management Guidelines.

Lastly, the Odom Pavilion has the opportunity to be a revenue generator in the form of a tenant-occupied space that will not only activate the dormant structure but also justify the expenditures. Interventions would maintain the integrity of the original structure while bringing it up to ADA-code compliance and any other necessary updates to allow the Pavilion to be occupied.

In total, the West Waterfront has an opportunity to be a model landscape for the whole of the improvements occurring at the Intake Building, Parking Lot, and Shoal Creek.

PHASE 2 - STREETSCAPE

City agencies have greater influence over the final design of the streetscapes in general and, for that reason, streetscape improvements are proposed as part of Phase 2. More time will allow a greater consensus with the final outcome and also ensure they are in keeping with the other improvements occurring at the Intake Building, Parking Lot, and Shoal Creek.

PHASE 2 - SHOAL CREEK PENINSULA

The design team is proposing opening Shoal Creek at its natural river mouth for a number of reasons. During rain events, the creek follows this natural path, creating the banks of the man-made peninsula. Providing an opening here would bring the creek’s path back to its natural state pre-Seaholm and reduce upstream flooding. Doing so would require new bridge crossings, which could benefit both sides of the creek’s banks. By allowing the peninsula to naturalize, this new island could become a wetland habitat and birdwatching sanctuary, pushing Trail users back to the north of the peninsula and recapturing what is an underutilized part of the Trail between Cesar Chavez and the creek. A new, wider pedestrian crossing is also envisioned at Cesar Chavez for safer bike and pedestrian traffic. These alterations allow for the implementation of the Natural Area Management Guidelines.
Next Steps
Moving Toward Action and Implementation
Next Steps

Continue coordination and integration with nearby projects:
- Cesar Chavez Promenade project coordination
- Austin Central Library
- Green Water Treatment Plant Redevelopment
- Shoal Creek Trail connections

Activate the parkland through inclusive installations and limited events

Present study to City Council and relevant Boards and Commissions in 2018

Secure funding to begin early phases of ecological restoration
Secure funding to bring existing building up to code
Select elements from each design based on public input to create a final recommendation
Explore partnership models
Study operational and maintenance models for sustainable building operations

The Intake Building from Lady Bird Lake, August 2017
**PHASE I**

**START IT UP**
Make the Intake Building safe and inhabitable for small programs and events by updating the building for code-compliant occupancy.

1. Update egress requirements.
2. Replace the windows.
3. Prune trees and remove invasive plantings.
4. Cover openings in floor.
5. Upgrade lighting fixtures.
6. Power wash and clean facade.
7. Explore partnership models for design, construction and programming.
8. Curated site activations to engage community.

**PHASE II**

**BRING IN THE AMENITIES**
Expand the capability of the Intake Building with new programs such as a Welcome Cafe, lake dock, and amenity pavilion with a kitchen, office, and restrooms.

1. Serve food and drinks at the Welcome Cafe.
2. Provide a lake dock at the water’s edge.
3. Diversify the landscape and ecology in the yard.
4. Determine a location for external amenities and support structures.
5. Add a design element to block noise.

**PHASE III**

**RUN LIKE A MACHINE**
Bring back core elements from the building’s past. Reinstall a gantry crane to assist with flexibility. Repurpose the basement as an Eco-Cooling Machine.

1. Install a new gantry crane.
2. Increase the number of openings on the facade.
3. Upgrade to high-performance windows.
4. Tell its history with an Interpretive Kiosk.
5. Use the basement for lake cooling.
Techniques
The following pages showcase a selection of information and research about the process of the work. For more information on the Seaholm Waterfront, go to www.seaholmwaterfront.org for more information on site history, precedents, analysis, and engagement.
There is a diversity of ecology across the entire watershed that needs to be understood at both the macro and micro scale. The rivershed has a series of dams that control the flow and direction of water.
Envisioning Potential

In 1941 the Lower Colorado River Authority commissioned a recreation study that envisioned a wide range of programs and activities that could occur on the lakes created by new dams on the Colorado River. This past effort remains relevant today in helping to determine how to best activate the Seaholm Waterfront.
The activation of the Intake Building is rooted in the past work of recreation and environmental advocates in Austin.

**RESEARCH**

**Recreation and Environmental Advocates**

The book *Silent Spring* outlines a case where a pesticide mishap resulted in a large amount of fish killed in Austin in 1961.

**Lady Bird Johnson**

Former First Lady of the United States and Town Lake (Lady Bird Lake) recreation advocate, pictured in front of Lady Bird Lake.

**Ann and Roy Butler**

Mayor of Austin Roy Butler’s wife, Ann Butler, established the Town Lake Beautification Committee.

**Roberta Crenshaw**

Civic activist, philanthropist, and civic pioneer. Advocated for no motorboats on the lake.

**Rachel Carson**

The book *Silent Spring* outlines a case where a pesticide mishap resulted in a large amount of fish killed in Austin in 1961.
Study the Work of Others

Past planning and design efforts served as a critical resource for the project. Key themes from these efforts were used to guide the engagement and design process for the Seaholm Waterfront.
The people of Austin know their city best. To gather their input on the potential of the Intake Building, a wide range of means and methods were employed.
What Do People Want To Do?

As part of the engagement process, the team launched an online survey that received responses from people across the city on how to best activate the Seaholm Waterfront. This data was used to inform design decisions.

This is a summary of the first survey. For summaries of the two subsequent surveys, go to www.seaholmwaterfront.org.
Connect with Civic Context

Identifying potential programs and activities across the Seaholm Waterfront site reveals possible connections to other civic assets. A great starting point is the new Central Library, which has a series of programs that could mutually benefit both assets through collaboration.
Constraints to Opportunities

There are a wide range of site and building constraints that affect the Intake Building. By leveraging constraints as opportunities, new solutions authentic to the Intake Building make the space more comfortable.
The shell of the former Intake Building is highly adaptable. Its upper level is directly accessible from a flat, wide plateau off Cesar Chavez. The lower level is deep below the upper level at the water’s edge and framed by thick concrete, offering a surprising opportunity to make the upper level comfortable year-round with a passive lake cooling system.

Purpose and Possibility

The purpose of the Intake Building was to bring in water to cool power turbines. The possibility is to make a new machine with unique elements from the building’s past.
Seaholm Intake Building and Site

The Intake Building sits directly on the edge where the city meets the lake. This condition offers a unique set of experiences from urban to natural. In addition, the building is listed on the National Register of Historic places, which requires respecting character-defining features and elements.

At the scale of the immediate site, a narrow park space is located along the edge of Lady Bird Lake. The Intake Building prominently breaks the continuous riparian tree canopy of the park. The building acts as a retention wall against the city, forming a plateau of accessible but under-utilized outdoor space.

There is a range of character-defining features in the Intake Building that either need to be preserved or can be respectfully reimagined within the guidelines of the National Register of Historic Places.
Preservation Priorities

Rising two levels out of the water, the south facade of the Intake Building is the main character-defining feature and has the highest visibility. In contrast, the one-level north facade, gently visible through a grove of heritage oak trees and a flat lawn, is open to the potential of change and respectful adjustment.
Precedents

Northerly Island Chicago, Illinois, 2015
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Beloit College Beloit, Wisconsin. 2016
Studio Gang

Lincoln Park Zoo Chicago, Illinois, 2010
Studio Gang

University of Texas El Paso El Paso, Texas, 2015
Ten Eyck Landscape Architects
Precedents

James Corner Field Operations

A Path in the Forest Tallinn, Estonia, 2011
Transsolar & Tetsuo Kondo Architects
Precedents

Hearn Power Station  Toronto, Ontario, 2002
Luminato - Toronto’s international arts festival

Tirpitz Bunker Museum  Blavand, Denmark, 2017
BIG

The Water Installation at the Cisterns Museum
Copenhagen, Denmark, 2017
Hiroshi Sambuichi
Precedents

Long Dock Park  Beacon, New York, 2014
Reed Hilderbrand

Aarhus University Campus  Aarhus, Denmark, 1979
CF Møller

Studio Gang
Early concept sketching explored various options for the Porch at the Intake Building.
Concept Process

Sketches and study models of the yard between the Intake Building and Cesar Chavez explored how various architectural elements could be used to block sound and shape a new urban space.
Concept Process

These design sketches focused on the landscape and ecology design of the site and Trail.

SITE STUDIES
Seaholm Waterfront | Austin, TX
10.27.2017
Concept Process

Evolutions of conceptual sketches explored how the interior of the Intake Building could be preserved and upgraded with “soft touch” elements such as furniture, lighting, and unique elements from the building’s past (crane, pumps, etc.).
ANALYSIS

Environment and Sustainability

The project, developed in collaboration with dbHMS, explores various environmental strategies to make the Intake Building more comfortable and accessible for future activation.

1 COMFORTABLE DAY - Natural Vent
Doors and windows are open to catch the prevailing breeze on the south side for natural cross-ventilation.

2 WARM DAY - Passive Systems
Windows are closed. Fresh Air is taken in and routed through earth tubes for pre-conditioning. A labyrinth of lake water tanks further cools incoming air. On the roof, a fan extracts hot interior air. All pumps are powered by PV cells. Solar gains are minimized by an integrated shading mechanism on all south windows.

3 HOT DAY - Active Systems
Passive Systems are supported by a Air-to-Water heat exchanger which uses lake water and is powered by roof-mounted PV cells.

1 Fresh Air Intake
2 Earth Tubes
3 Air Intake Fan [PV powered]
4 Lake Water Tank Labyrinth / Thermal Mass
5 Lake Water Pump [PV powered]
6 Aqua Thermal Loop for Heat Exchanger
7 Lake Water Intake w/ Temperature Sensor
8 Air-to-Water Heat Exchanger Lake water sourced, PV powered
9 Exterior Shading, visually integrated
10 PV panel, flat-mounted
11 Hot Air Extraction Fan (PV powered)
12 Indoor Temperature Sensor
ANALYSIS

Environment and Sustainability

Working closely with dbHMS, the team examined the south facade of the Intake Building and studied how window details could be used to reduce solar heat gain.

SOUTH FACADE SHADING STUDY
OA Dry Bulb > 75°F

ANNUAL
Hours Per Year – 8,760

Studio Gang
Throughout the design process, the team used physical models to explore various spatial conditions. Each model was reiterated to explore new design ideas and possibilities.
Models - Porch Yard

Sketching and modeling to develop the scheme

Studio Gang
Models - Court Yard

Sketching and modeling to develop the scheme

Studio Gang
DESIGN
Models - Garden Yard

Sketching and modeling to develop the scheme

Studio Gang