

# The Reconsidered River:

## *Strategies for Connections in Post-Industrial Buffalo*

by Laura R. Schmitz

Bachelors of Science in Architecture  
University of Buffalo, 2011

Submitted to the Department of Architecture in partial fulfillment of the requirements for  
the degree of Masters of Architecture at the Massachusetts Institute of Technology.

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# The Reconsidered River:

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Submitted to the Department of Architecture in partial fulfillment of the requirements for the degree of Master of Architecture on January 15th, 2015.

Abstract

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This thesis sets out to connect two isolated neighborhoods within the post-industrial city of Buffalo, NY. The design strategy capitalizes on existing opportunities in Silo City, a neighborhood of abandoned grain elevators that attracts visitors with intermittent activities and seasonal events; and the Old First Ward, a river side residential neighborhood once home to grain elevator laborers. The two are separated by the Buffalo River, a barrier that once linked the two economically. There are three strategies within the Master Plan - *River*, *Rail Spine* and *Ward Plan*, each of which could be further developed and work together simultaneously. This thesis

develops the *River Plan* and the urban elements within it. Each urban element within the plan can either repurpose, construct or deconstruct features along the river. One of these proposed elements is the *Ice Boom Room* which both repurposes a site and constructs a new building by using a seasonal and industrial process of the controlled melting of the ice on Lake Erie each winter as an opportunity to connect two neighborhoods year-round. This thesis asks how post-industrial cities like Buffalo can harness existing industrial and natural processes to promote growth and change.

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## *Contents*

03	Abstract
06	Site / Context
16	Site Analysis
26	Urban Proposal
26	Master Plans
32	Urban Elements
46	Architectural Development
	Ice Boom Room
	Appendix
66	Thesis Defense
70	Site Visits
86	Bibliography

## *Site / Context*

This thesis sets out to connect two isolated neighborhoods within the post-industrial city of Buffalo, NY: Silo City and the Old First Ward. The connection strategy capitalizes on Silo City's existing opportunities, where a group of abandoned grain elevators attract visitors with intermittent activities and seasonal events; and the Old First Ward's potential, where a river side residential neighborhood harbors the descendants of grain elevator laborers.

The two vary vastly in scale- the concrete walls rising high above the two story wood-frame houses, and stretching the length of a neighborhood block. The two are separated by the Buffalo River, a barrier that once linked the two economically.



*Google Earth image 2014*



*Standard elevator behind houses in First Ward. photo: sbrof, panoramio 2007.*

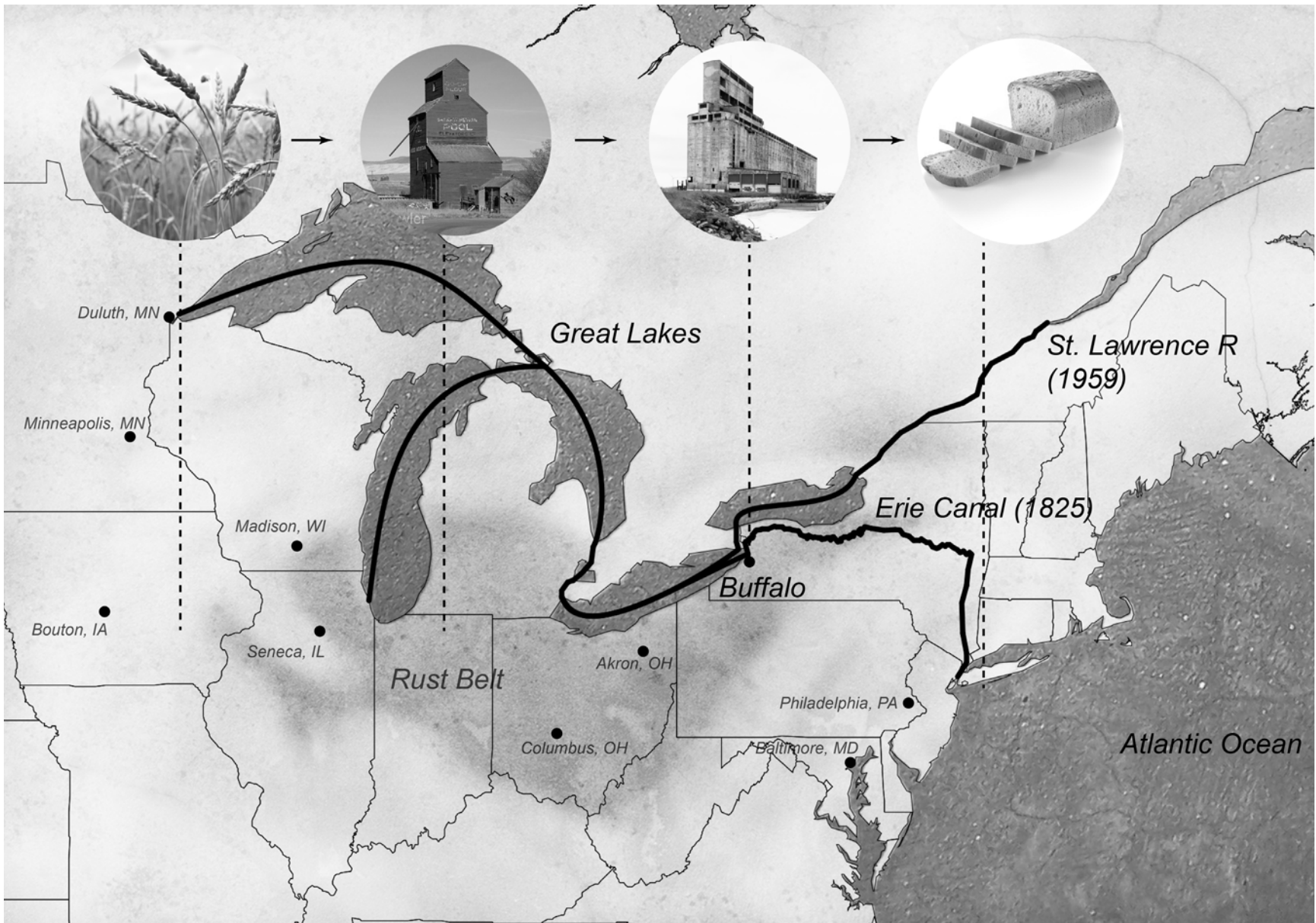


The Great Northern Elevator, Buffalo River 1900

*Great Northern elevator and shipping, Buffalo, N.Y. Photographer: Unidentified. Published: 1900 / Detroit Publishing.*

A hundred years ago, the Buffalo River was a site of constant activity—large river barges and ships crowded the river, trains traveled in and out of a vast network of railroads and an army of workers labored to keep everything running. At the center of this booming industry was grain.

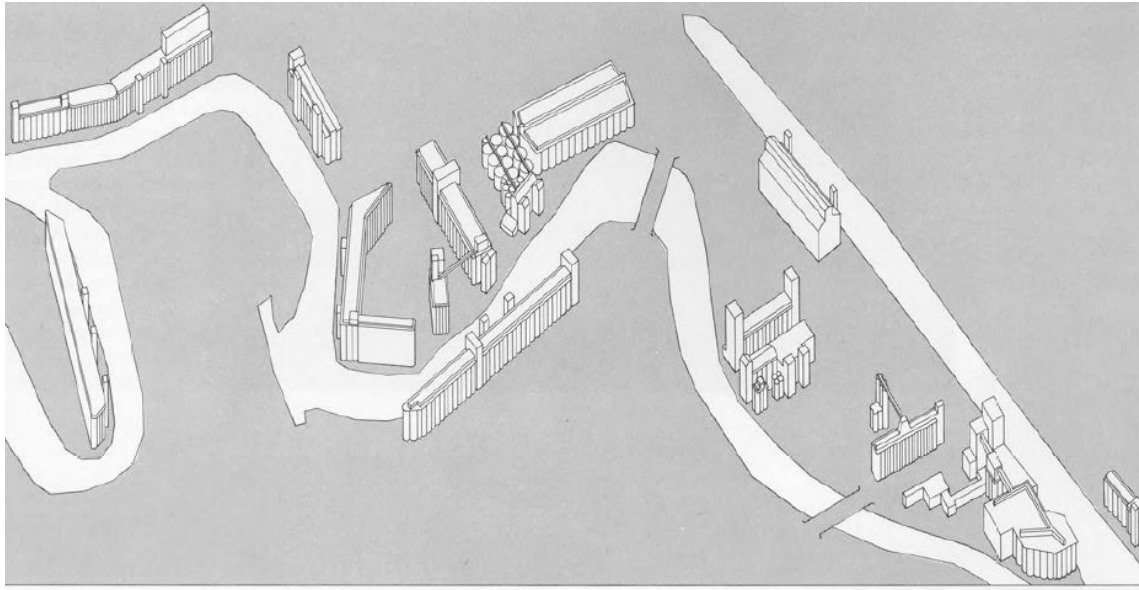




The city of Buffalo was a major hub in a national grain-transshipment industry. Farmers in the American west harvested wheat and other grains which were then transported by train or canal boat to lakeside cities. Grain was transferred to the hulls of large lake freighters which could travel easily through the network of Great Lakes across half the country.

The route from the Great Lakes to the East Coast was along the Erie Canal, which opened in 1825, a crucial connector to the Hudson River and then to New York City, the Atlantic Ocean and beyond where the residents of large cities bought the processed wheat products in the form of breads and cereals. Before it made its way to the Erie Canal, it stopped in Buffalo.

Buffalo was the hub of the grain industry, hosting a total of 13 grain silos along the Buffalo River-more than any other city. The silos were giant containers that held the grain delivered by the large lake freighters. There it was weighed, measured and stored. The grain was then processed in nearby factories such as General Mills, Pillsbury and Kellogg and then transferred East by canal boat or train.

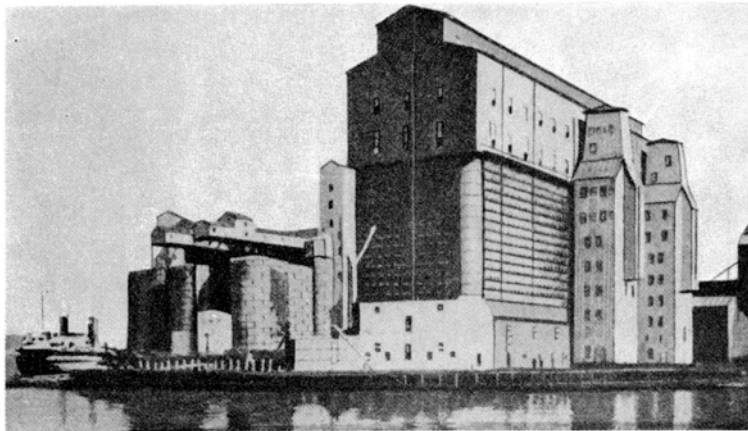
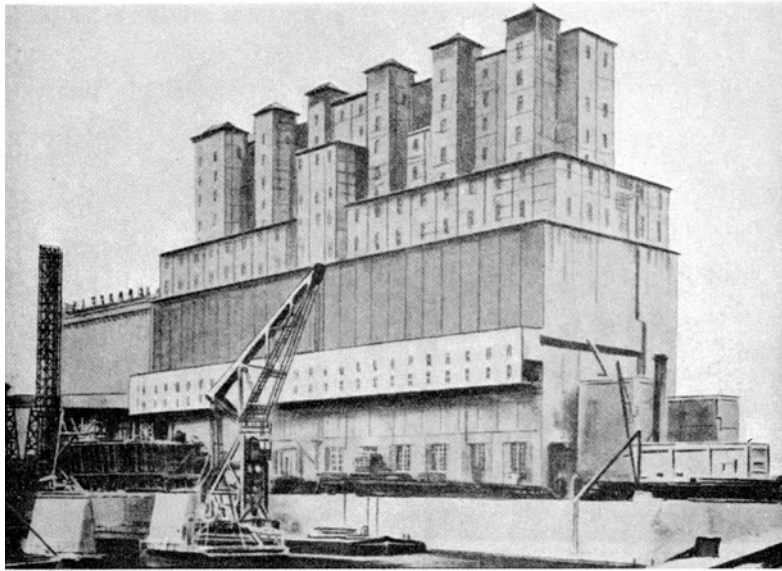


*Elevator Alley, redrawn by Lisa Mahar-Keplinger for her book Grain Elevators, 1993.  
Originally from A Concrete Atlantis by Reyner Banham, 1986.*

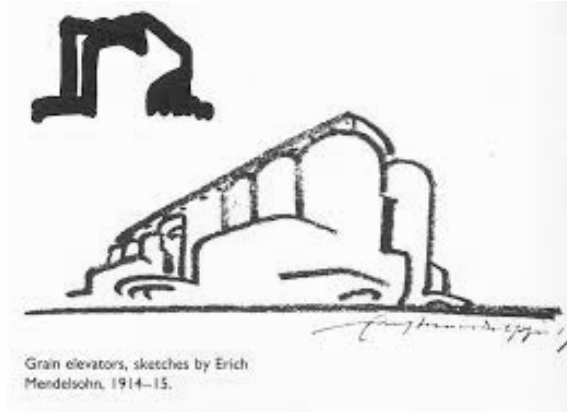
The demand of the industry produced remarkably inventive engineering and structure, capturing the attention and awe architects Erich Mendelsohn ("Amerika": 82 photographs), LeCorbusier (Towards a New Architecture) and Reyner Banham (A Concrete Atlantis).

Buffalo's grain silos represent the history of technological advances and brought Buffalo into the conversation about Modern Architecture.

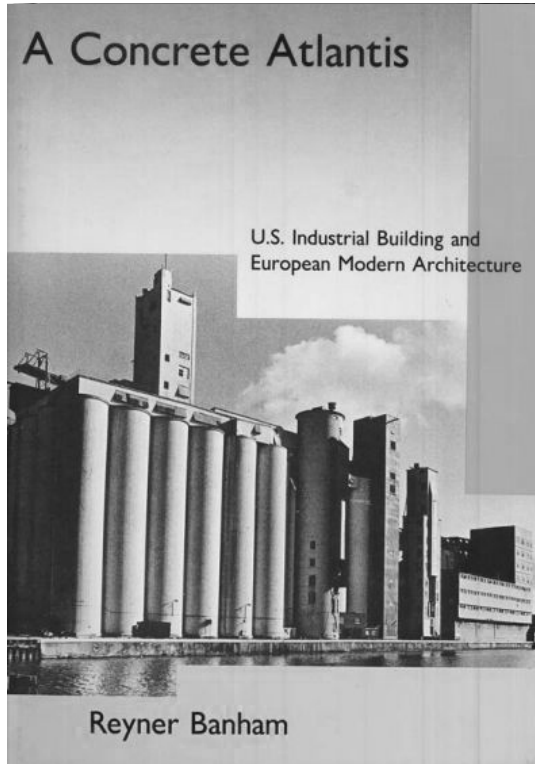




AMERICAN GRAIN STORES AND ELEVATORS



Grain elevators, sketches by Erich Mendelsohn, 1914-15.

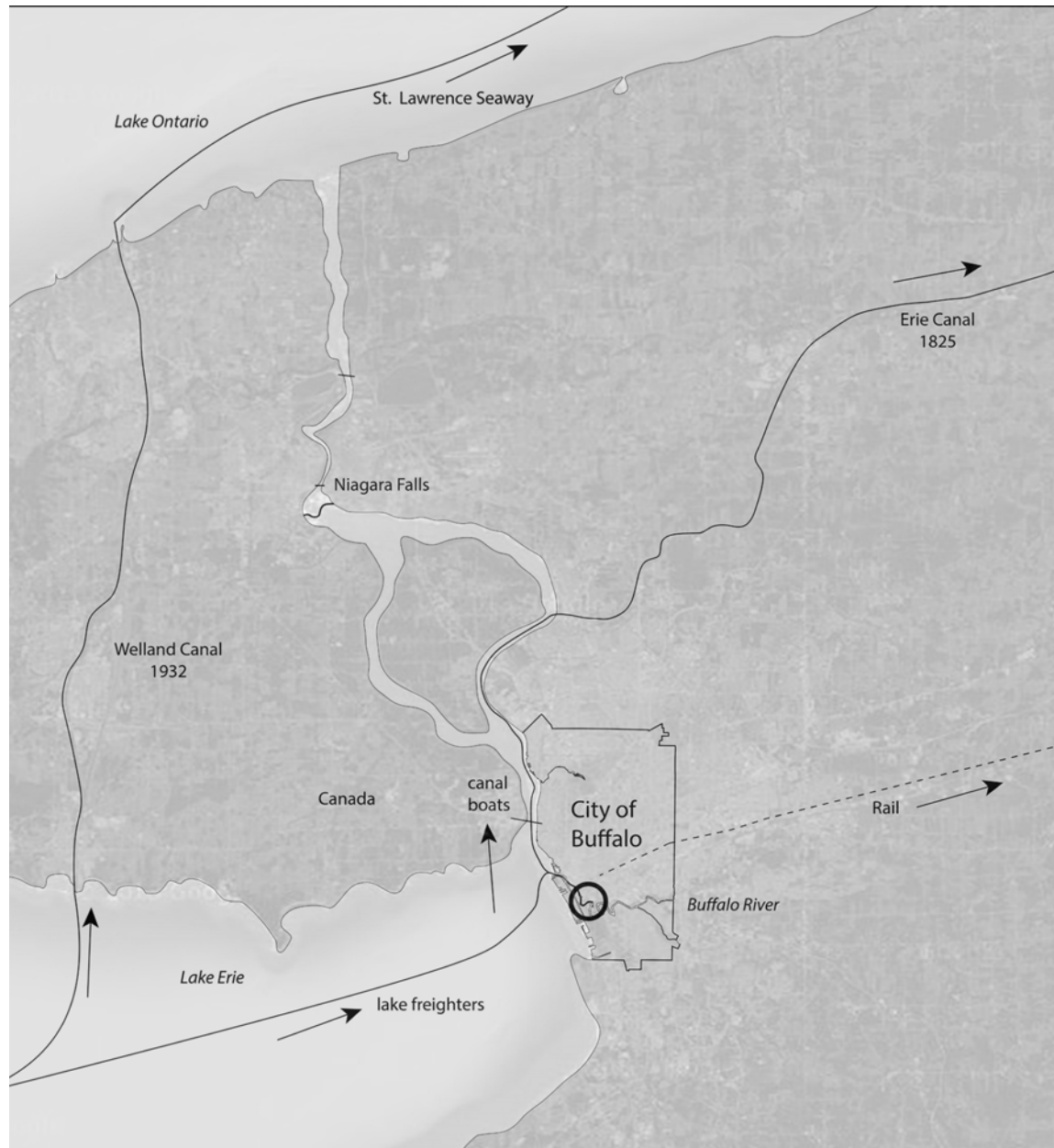


The city became a site of extreme economic consequence—from being the booming center of the country at the turn of the century, to a plummeting population and economy in the 1960's after the St. Lawrence Seaway opened.

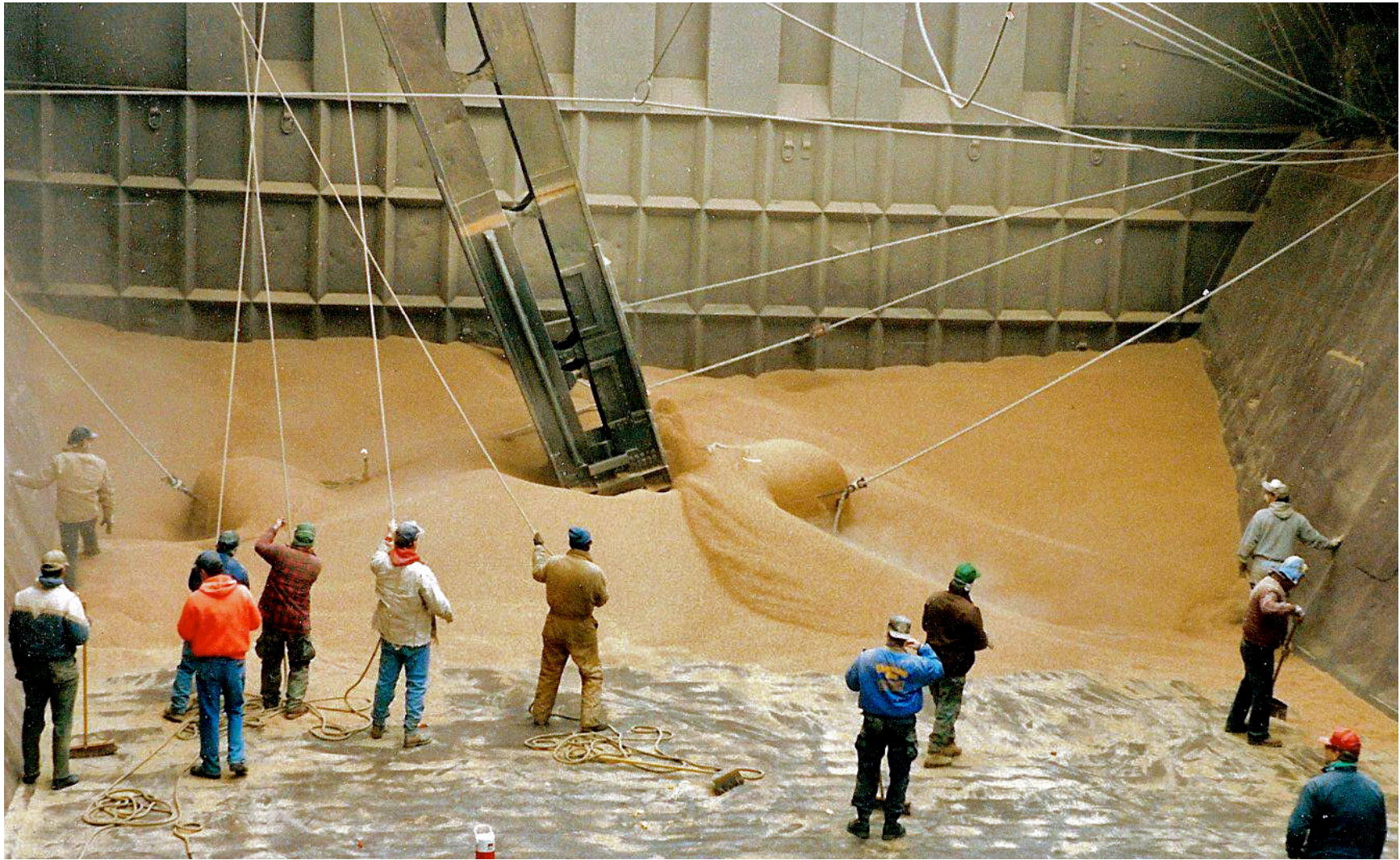
The new water route now connected Lake Erie and Lake Ontario with the Welland Canal, allowing ships to bypass Niagara Falls and continue on to the St. Lawrence River to the Atlantic. It also bypassed Buffalo.

Almost overnight, businesses along the Buffalo River closed and moved elsewhere. Many grain silos were left abandoned and many Buffalonians were left unemployed.

The city is still recovering. Today, the population of Buffalo is only half of what it was when the St. Lawrence Seaway opened in 1959.

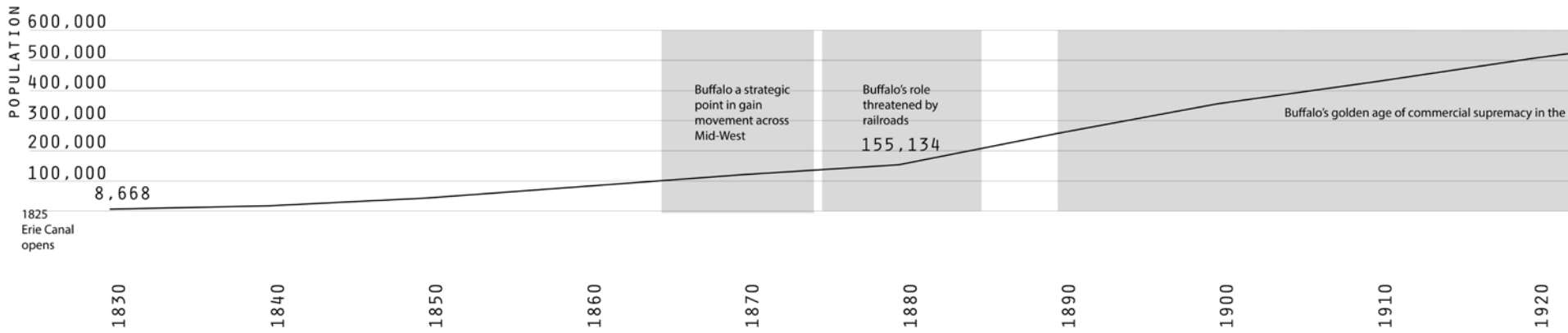




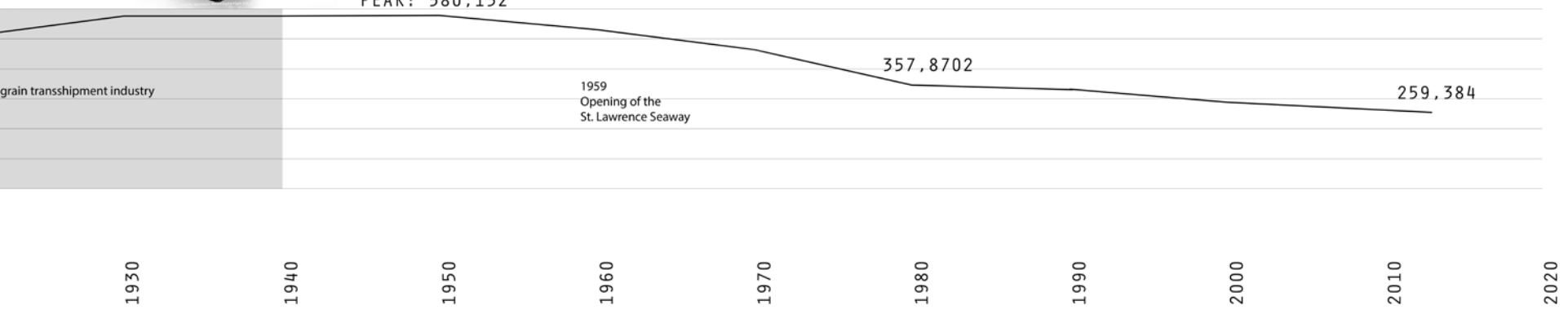


*"Scoopers": these laborers are pictured in the hull of a lake freighter that just delivered a shipment of grain. The Scoopers moved the grain towards the "Marine Leg" (shown at center of photo) which transferred the grain from the hull of the ship up to the top of the grain silo for storage.  
Photo: Jerry Malloy, Buffalo History Gazette.*

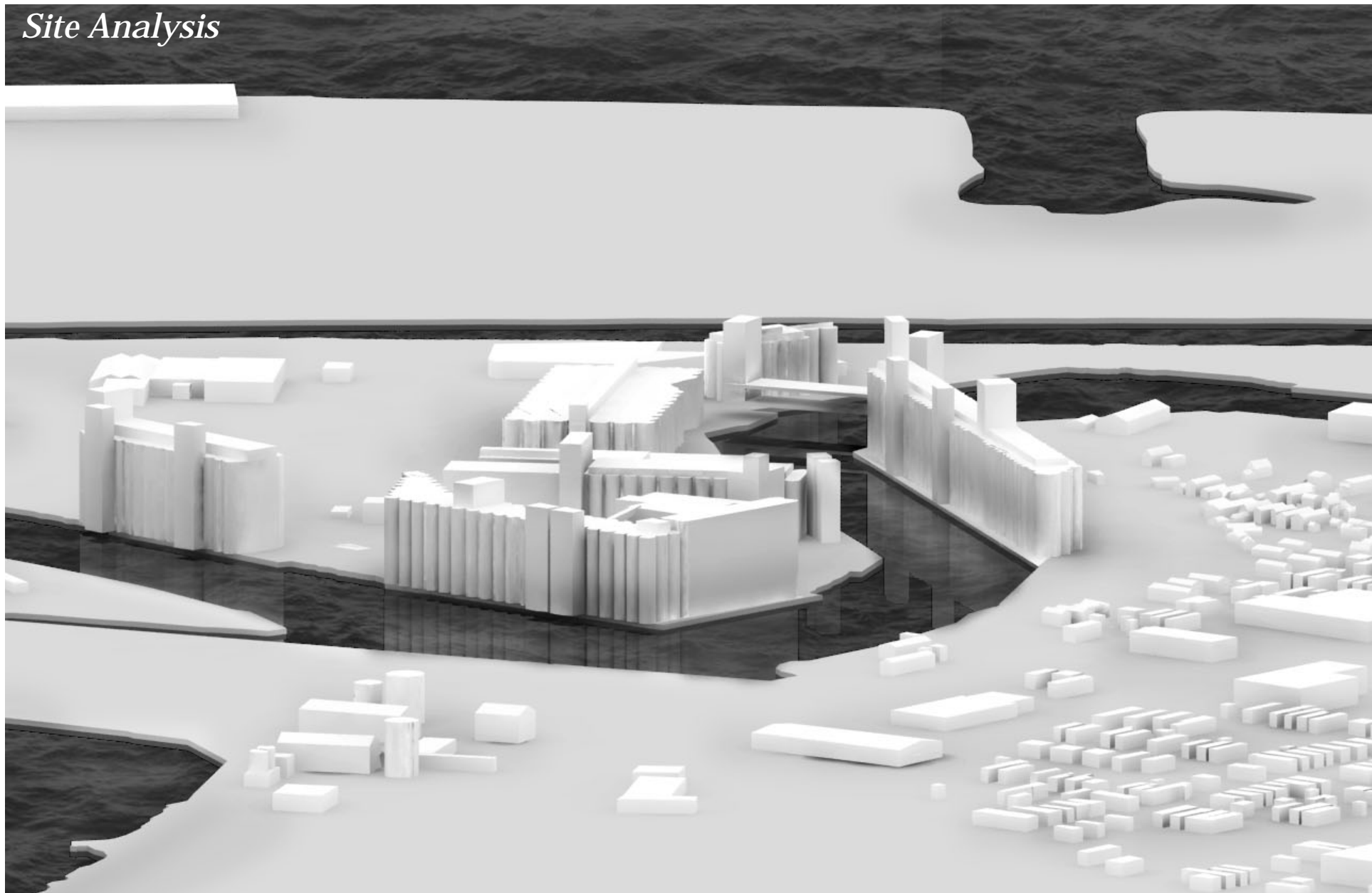


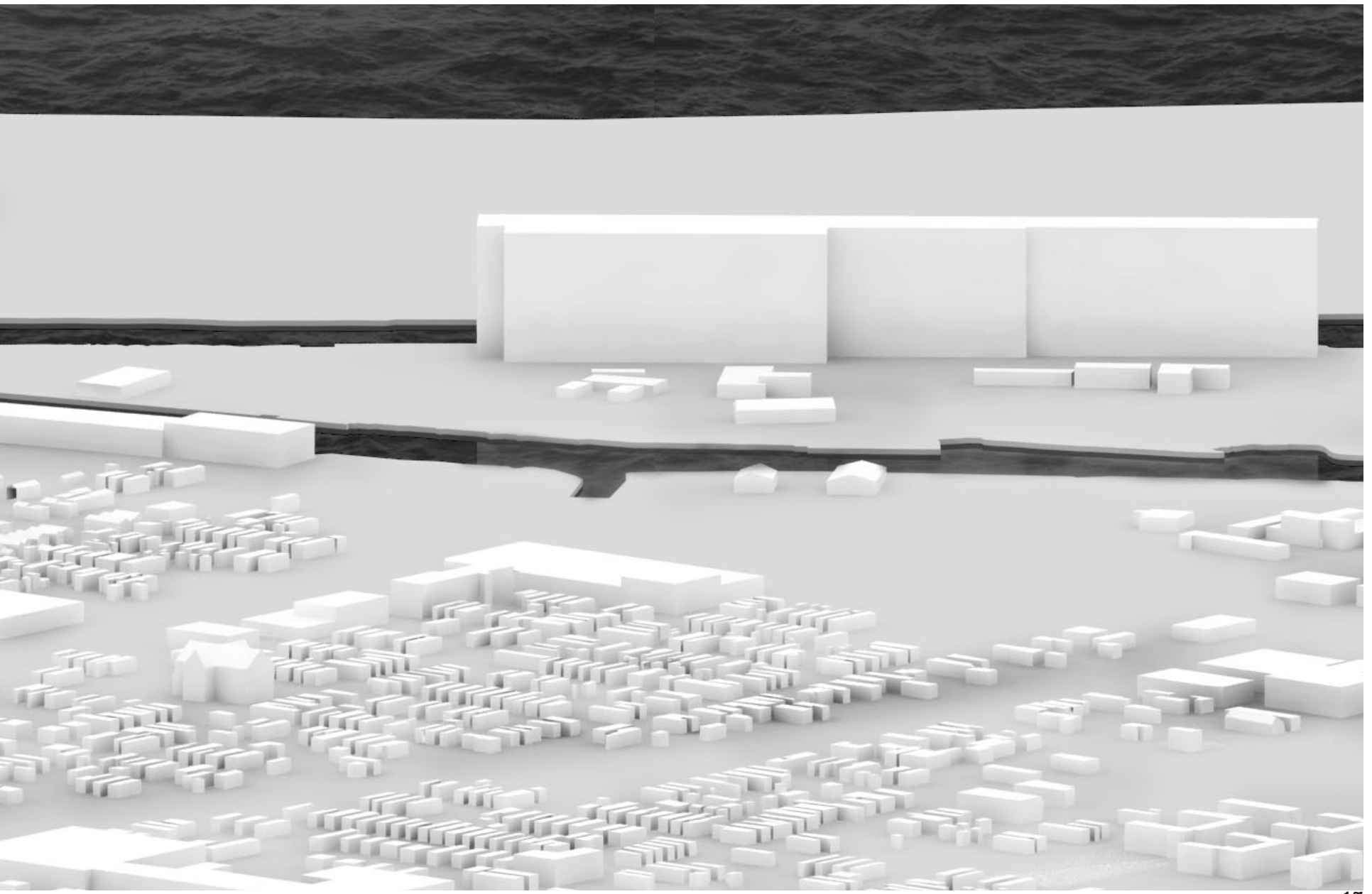


timeline showing population change over time in Buffalo from 1850 to present.

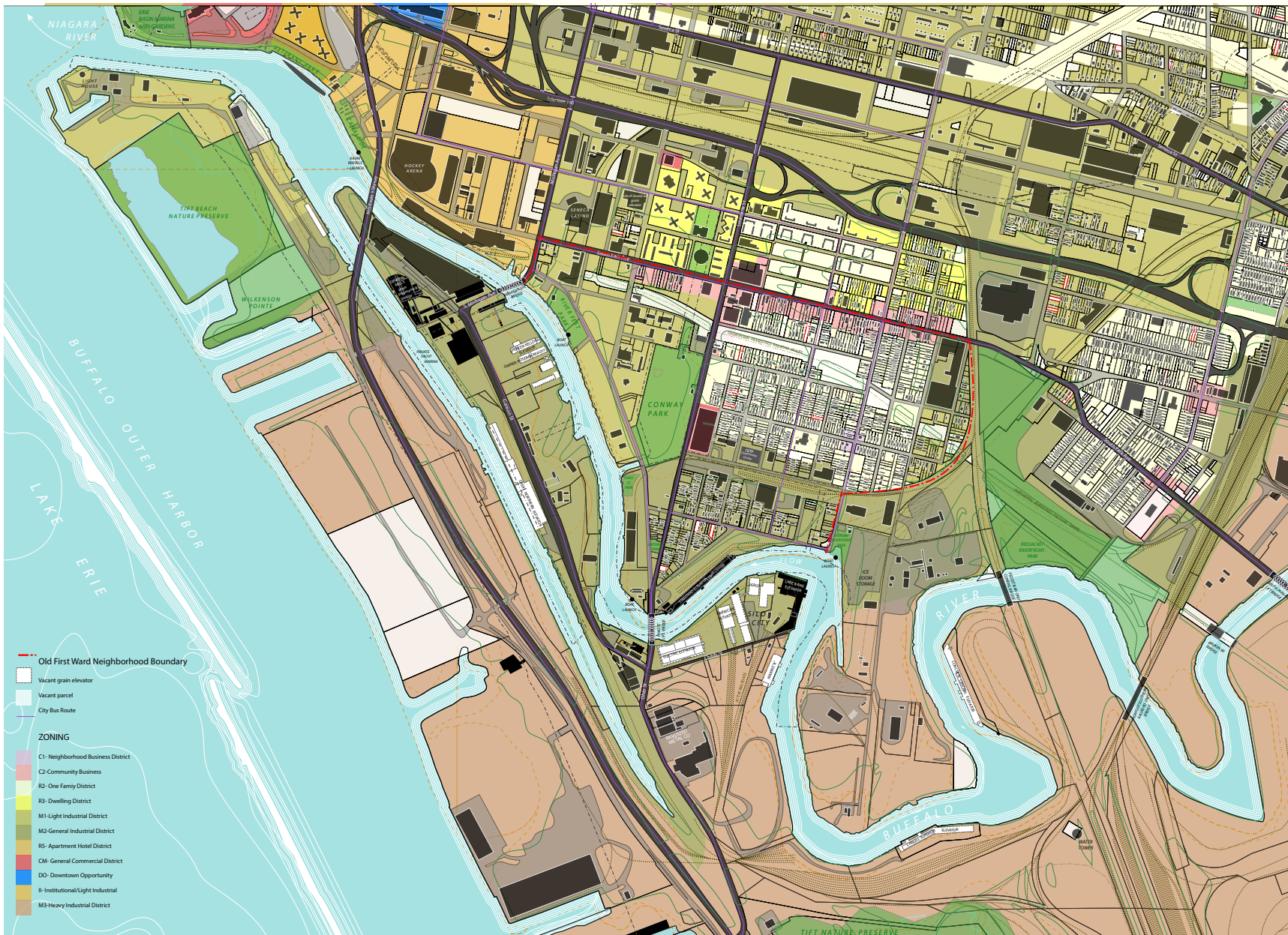


*Site Analysis*







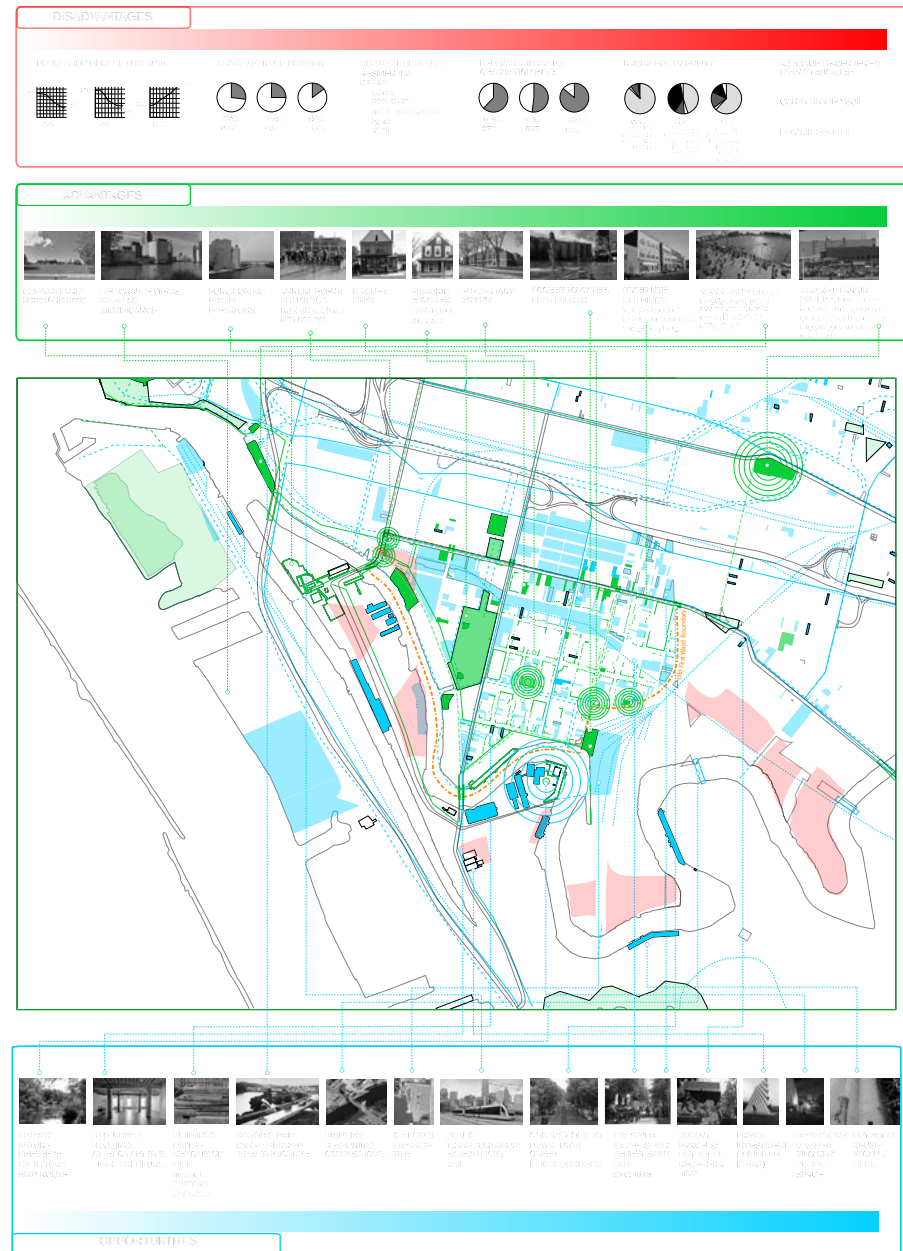


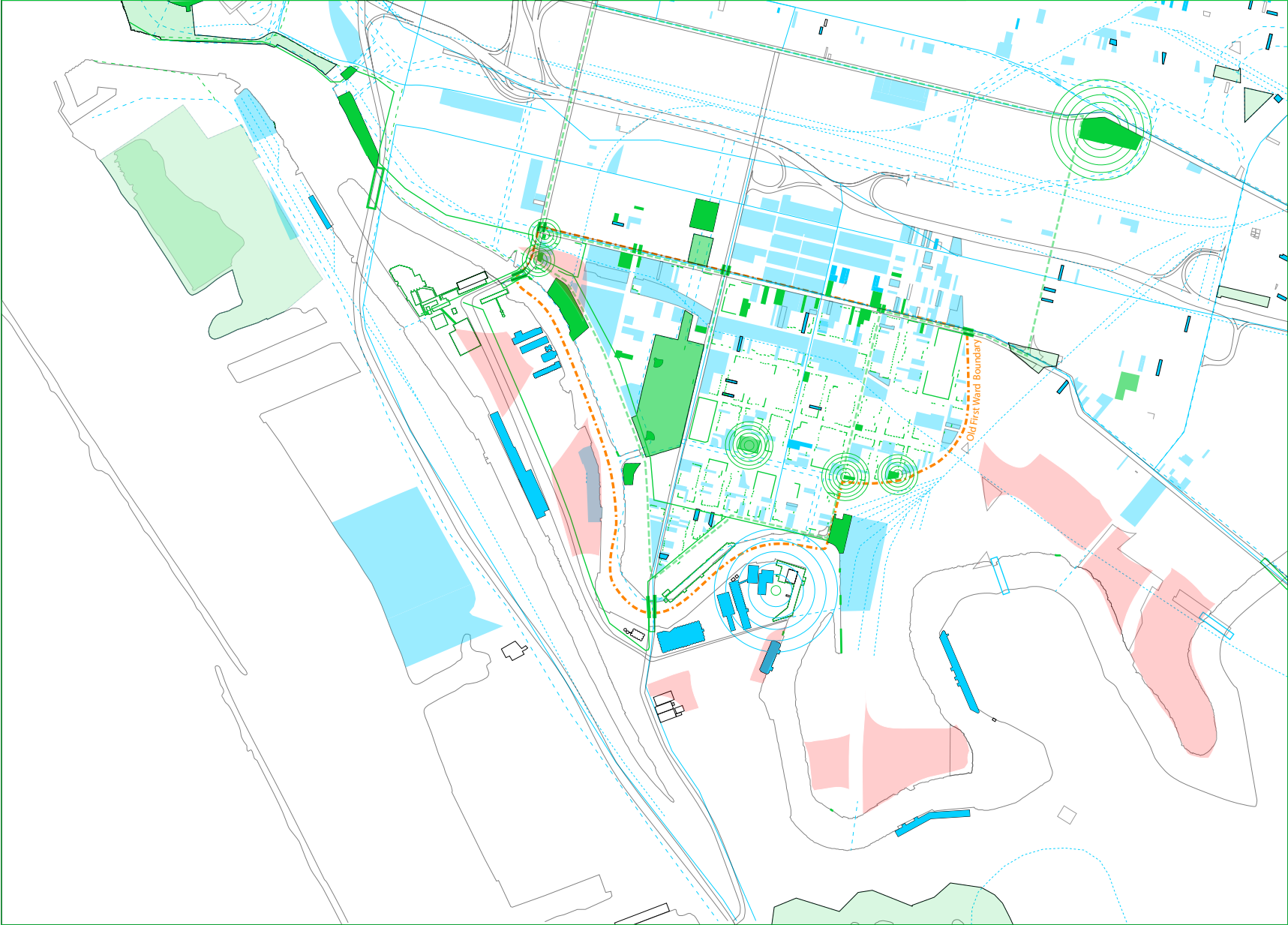


# The Site Today

The site along the Buffalo River today carries many memories of the past. The map at left shows much of the south Buffalo zoned as industrial, which still contain some active grain elevators (shown in black) such as General Mills at the Northern part of the river. The cluster of four inactive grain elevators (shown in white) are now known as Silo City. They were purchased by the owner of Rigidized Metals (Rick Smith), a business shown just west of the silos.

The area is still a network of rail road tracks, some still used daily, while others are overgrown and abandoned. The residential area north of the Buffalo River, the Old First Ward neighborhood, is plagued with vacant houses and empty lots.





## Disadvantages

Looking further at the site today, one can identify the advantages, disadvantages and opportunities for design.

The Old First Ward's (OFW) struggles are representative of the city. Its population decline is even more extreme than the city's itself. Since 1950, the OFW's population declined from 6,900 to 1,900.

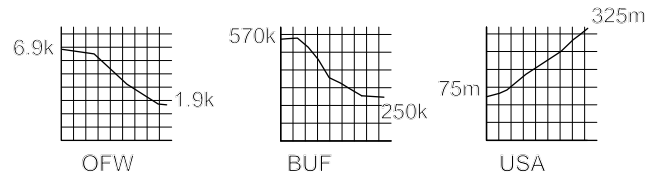
27% of the OFW population is under the poverty level, whereas Buffalo is 25% and the nation is at 15%.

The OFW is also struggling to meet education goals: only 62% graduate high school, lagging behind the national rate of 86%.

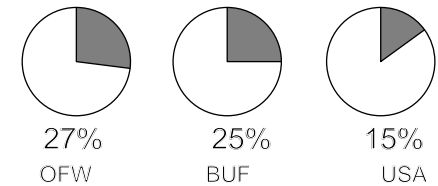
Other disadvantages are that it is homogenous in use - overwhelmingly residential, meaning its residents lack access to schools, post offices, major grocery stores, banks and retail. These distances mean the people are automobile dependent.

From its industrial adjacency, it also suffers from contaminated soil and low air quality.

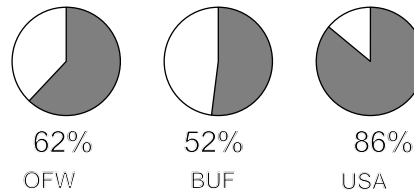
POPULATION DECLINE since 1950



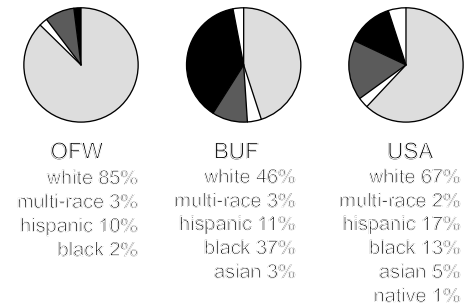
ABOVE AVERAGE POVERTY



BELOW-NATIONAL HS GRADUATION RATE



RACIAL HOMOGENEITY



## Advantages



CONWAY PARK



VIEWS



GRAIN  
ELEVATORS



SHAMROCK RUN



MAGNET:  
PUBS



HISTORIC  
FACADES



ELEMENTARY  
SCHOOL



ACCESS TO WATER,  
BOAT LAUNCH



MIXED USE  
BUILDINGS



CANAL SIDE



MAGNET: LARKIN  
SQUARE

The area has its advantages, though. The residents that do live there are proud of their history and celebrate it. Most uniquely, there are memorable views of historic significance seen from the neighborhood. Some of these include functioning grain elevators which still offer local jobs to residents. The residential fabric contains historic facades and the Buffalonian porch culture which fosters strong relationships amongst neighbors. A local victory has been Conway Park, a large green space that was created by filling in the Ohio basin, a polluted channel of water no longer used.

Its closeness to the river means access to boat launches and summer activities

including the new Canal Side, a waterfront park with music events in the summer. Some local “magnets” that attract outsiders to the area are the Irish pubs and Larkin Square to the Northeast, a success story of rebirth of an abandoned area turned into a hot spot of food trucks, music, and corporate sponsors attracting businesses to the empty neighborhood, revitalizing it.

The dirt-cheap housing attracts artists and entrepreneurs, as seen 20 years ago in the Elmwood Avenue district, another success story in Buffalo. With many buildings on the demolition list, the supply of materials to reuse is rich and abundant. The vacant

lots have the potential to strengthen the neighborhood if regenerated as community gardens, sculpture parks, or learning spaces. The history of the site can potentially attract more visitors and swell local pride—recently the buried infrastructure of the Erie Canal was uncovered as part of a new park design.

To build connections to the rest of the city, old abandoned bridges can be restored, and public transportation can be increased. Buffalo’s single-line subway which is an above-ground light-rail in downtown Buffalo, could be extended to service large events by the Outer Harbor or Silo City.

## Opportunities



NEARBY NATURE PRESERVE, MIGRATORY BIRD ROUTE



DIRT CHEAP HOUSING: ATTRACT ARTISTS, ENTREPRENEURS



BUILDINGS ON DEMO LIST: material reuse



HISTORIC ERIE CANAL: BURIED INFRASTRUCTURE



BRIDGES: RESTORING CONNECTIONS



ICE BOOM STORAGE SITE



PUBLIC TRANSPORTATION: EXTEND LIGHT RAIL



CONNECTIONS TO DOWNTOWN, OTHER NEIGHBORHOODS



IMPROVED STREETS FOR PEDESTRIANS AND CYCLISTS



VACANT PARCELS: POTENTIAL REGENERATION



PRIVATE INVESTMENT (RIGIDIZED METAL)



DEVELOPING MAGNET: SILO CITY PUBLIC SPACE



POTENTIAL REUSE: VACANT SILOS

An area like this has lots of opportunities for design. Its asset, the Tift Nature Preserve to the South attracts naturalists to the area to observe activity in the migratory bird route.

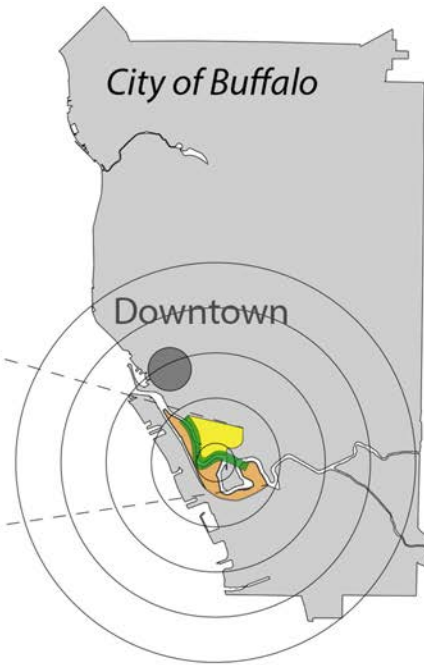
The site has already seen the benefits of private investment with Rigidized Metals sponsoring events at Silo City, and there is potential for more corporate sponsorship.

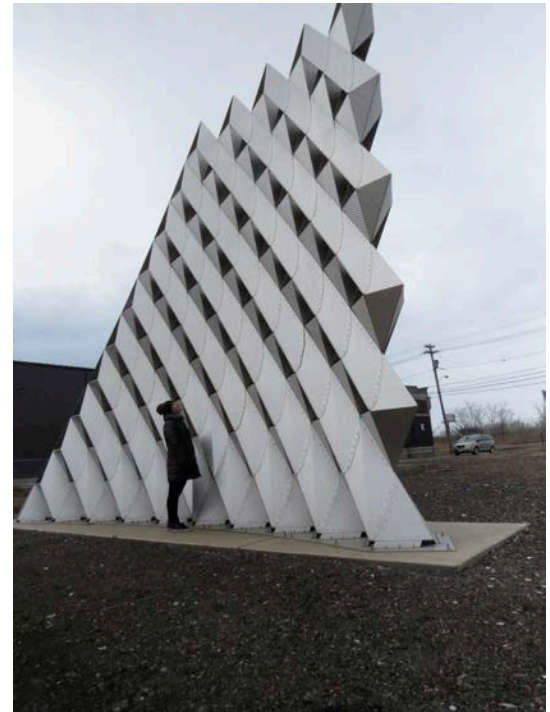
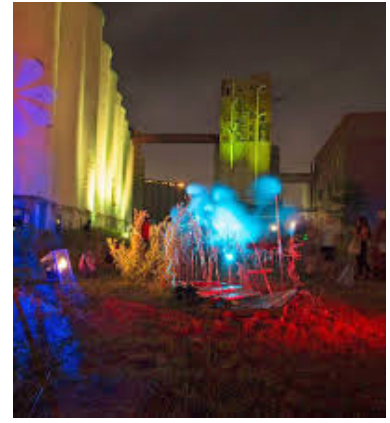
The vacant silos themselves are now seen by many as an opportunity for reuse. Most recently they have been used for rock

climbing, art and music festivals, poetry readings, flea markets, and weddings.

In the past three years, interest and activity in Silo City has really increased. However, the area is activated only for intermittent events in the summer and only reaches a select population. It has the potential, however to be activated year-round, bring revitalizing activity and attention to the OFW, and connect back to the downtown area and have lasting economic effects on the entire city.







*Opportunities at Silo City*

## *Urban Proposal: Master Plans*

From this understanding of the area and the need for connections, come three possible Urban Site Strategies, the River Plan, the Rail Spine Plan, and the Ward Plan. Each could be developed in detail separately but could be integrated together to work with larger plans within the existing and future city of Buffalo.

### *River Plan*

The *River Plan* proposes redefining the edge condition between river and land to be an activated asset for the public.

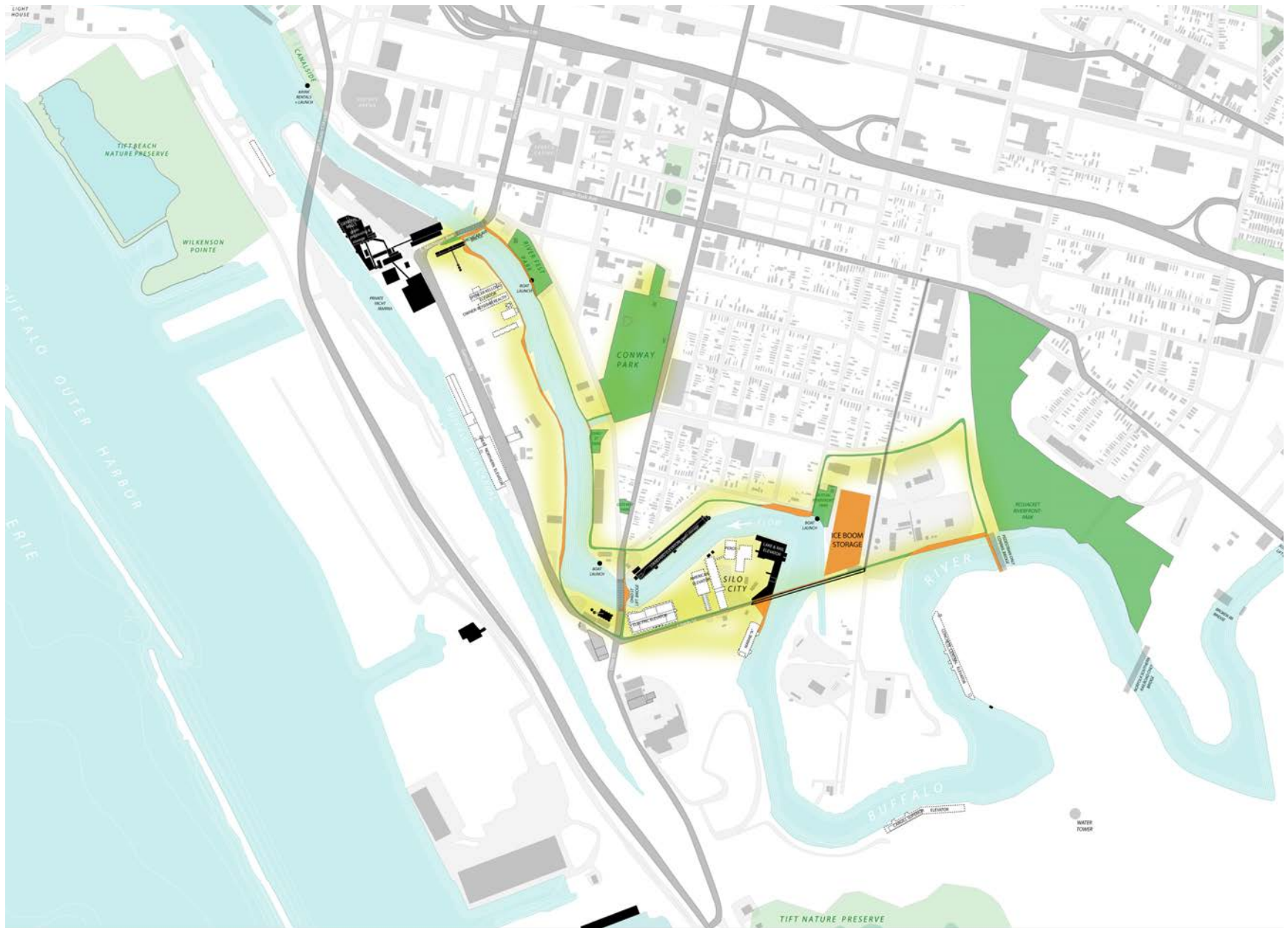
A boardwalk along the water's edge connects existing green spaces including Conway Park, River Fest Park, Ohio St. Park, Mutual Riverfront Park and RedJacket RiverFront Park. The 3.5 mile path alternates between a hard-scape boardwalk projecting over the water and a soft-scape path that continues behind existing silos.

It incorporates three existing bridges and proposes one new one, a pedestrian bridge that is an extension of Childs St., the only access to Silo City. The pedestrian only bridge would offer a clear invitation to local residents to access the industrial area.

The *River Plan* would engage local residents with the other side of the river as part of their daily routine of a morning run, walking their dog or biking with their children or friends. It would also attract residents from other parts of the city to frequent the site. It would provide further infrastructure for more frequent events and activities.

It integrates with the Olmstead tradition in Buffalo of connecting parks with parkways, generating captivating vistas along the winding river and showcasing Buffalo's architectural marvels. Fundamentally, it takes what is now a barrier, the river, and reimagines it as a site of connectivity.





## *Rail Spine Plan*

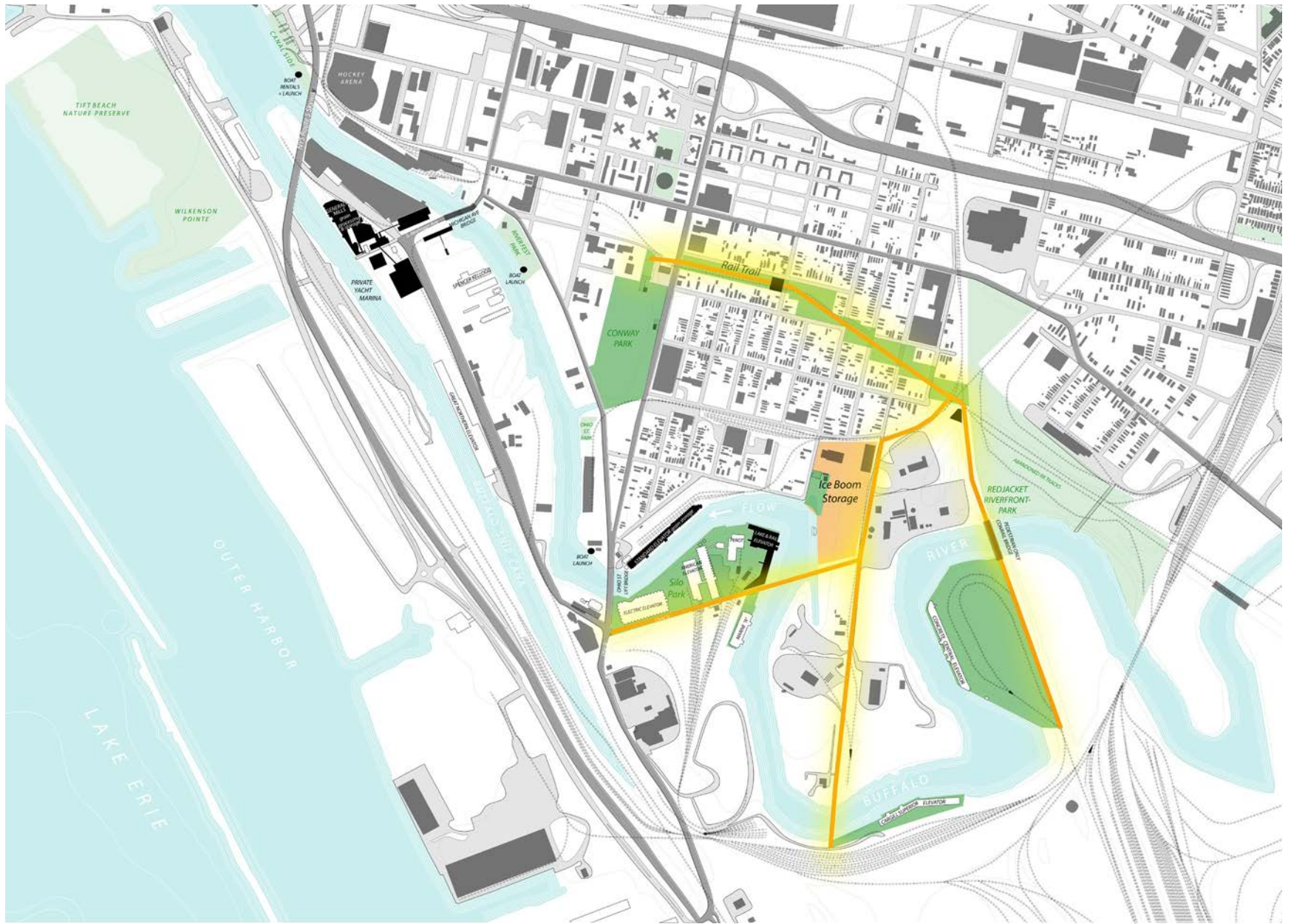
The *Rail Spine Plan* is a new take on another vestige from the industrial past: the railroad. On a large scale, railroads connect cities to one another by train. However, at a local scale they chop up neighborhoods and create barriers.

The inactive railroad tracks in the OFW are currently overgrown with dense shrubs and trees, and the rail itself is built up on a small hill. This creates a visual and physical barrier within the residential neighborhood. It prevents interaction between neighbors and increases isolation.

A re-landscaping of these paths would create an opportunity for connectivity. The adjacent vacant lots could be accumulated to form a linear park or trail, with mixed-use paths, punctuated by community buildings as nodal points.

The paths are book-ended by larger existing or proposed parks: Existing Conway Park, proposed Silo Park which reimagines the cluster as an industrial landscaped area, existing RedJacket Riverfront Park, and proposed parks that encompass the abandoned silos of Concrete Central and Cargill Superior.

Given the success of activating vacant silos at Silo City, it seems there is a lot of potential for the two giants down-river, once connections are extended to them via new bridges. The *Rail Spine Plan* uses existing abandoned infrastructure to physically connect two sides of the river, while offering opportunity for community growth in public spaces at varying scales.

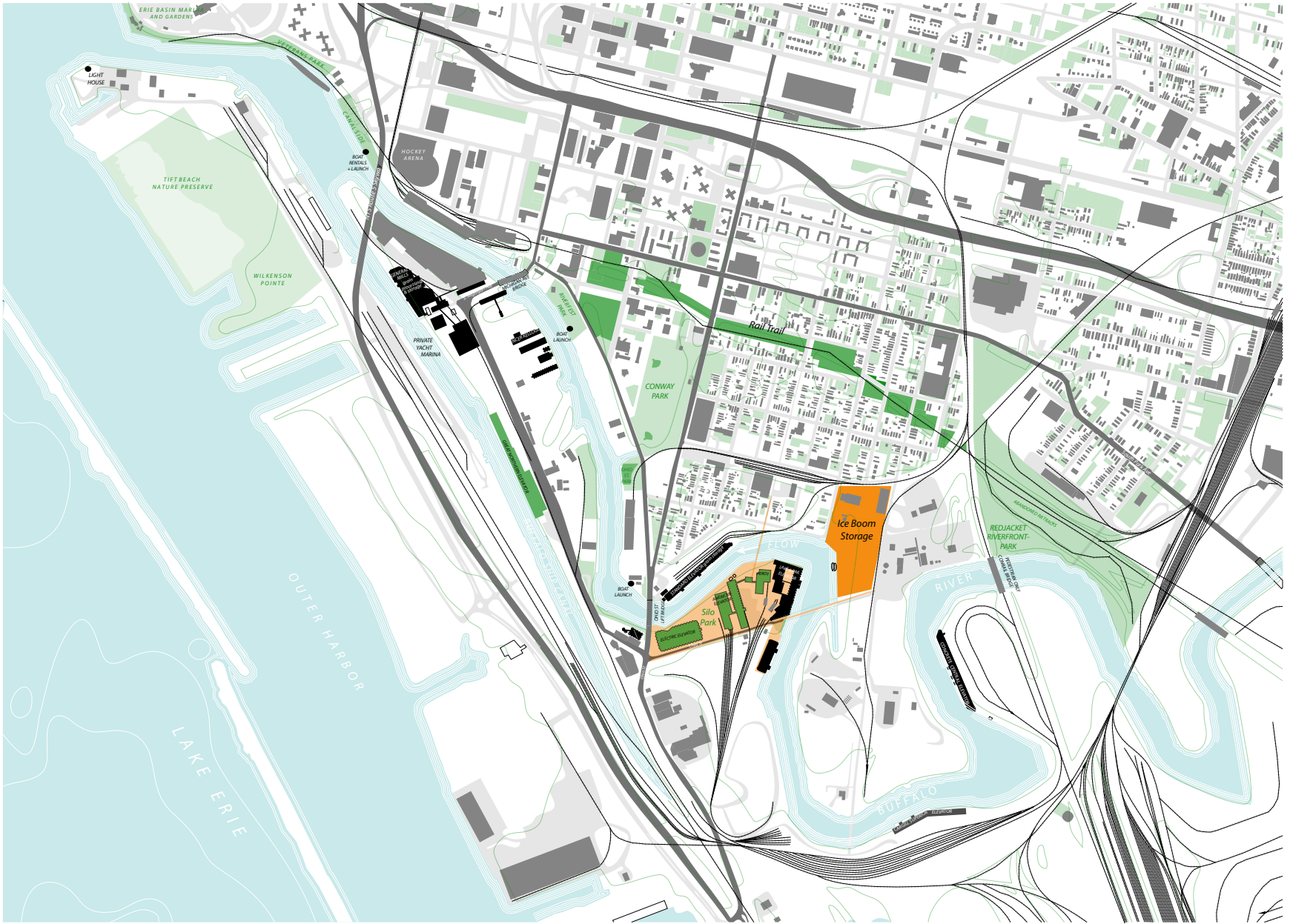


## *Ward Plan*

The *Ward Plan* harnesses the opportunities of the vast amount of vacant parcels in the area. In a bottom-up approach, if each parcel is activated by the community in some way, as a community vegetable garden, as a children's playground, a bike mechanic school, a farmer's market, an art park- then collectively, it could launch the neighborhood into economic recovery.

This, combined with large sponsors, such as the University at Buffalo, Rigidized Metals, General Mills and Kaleida Health, might foster innovative growth at a larger scale on the industrial side of the river. Connections between the patch-work of vacancy scales are created with proposed bridges across the river.





## *Urban Elements*

Of the three plans, I continued to develop the *River Plan*. Within each strategy, certain urban elements emerge to be further developed. The urban elements are manifestations of the plan at an architectural scale. They can push the plan forward through methods of construction, deconstruction or reuse. Identified here are six possible urban elements within the River Plan.

**1 River Walk**

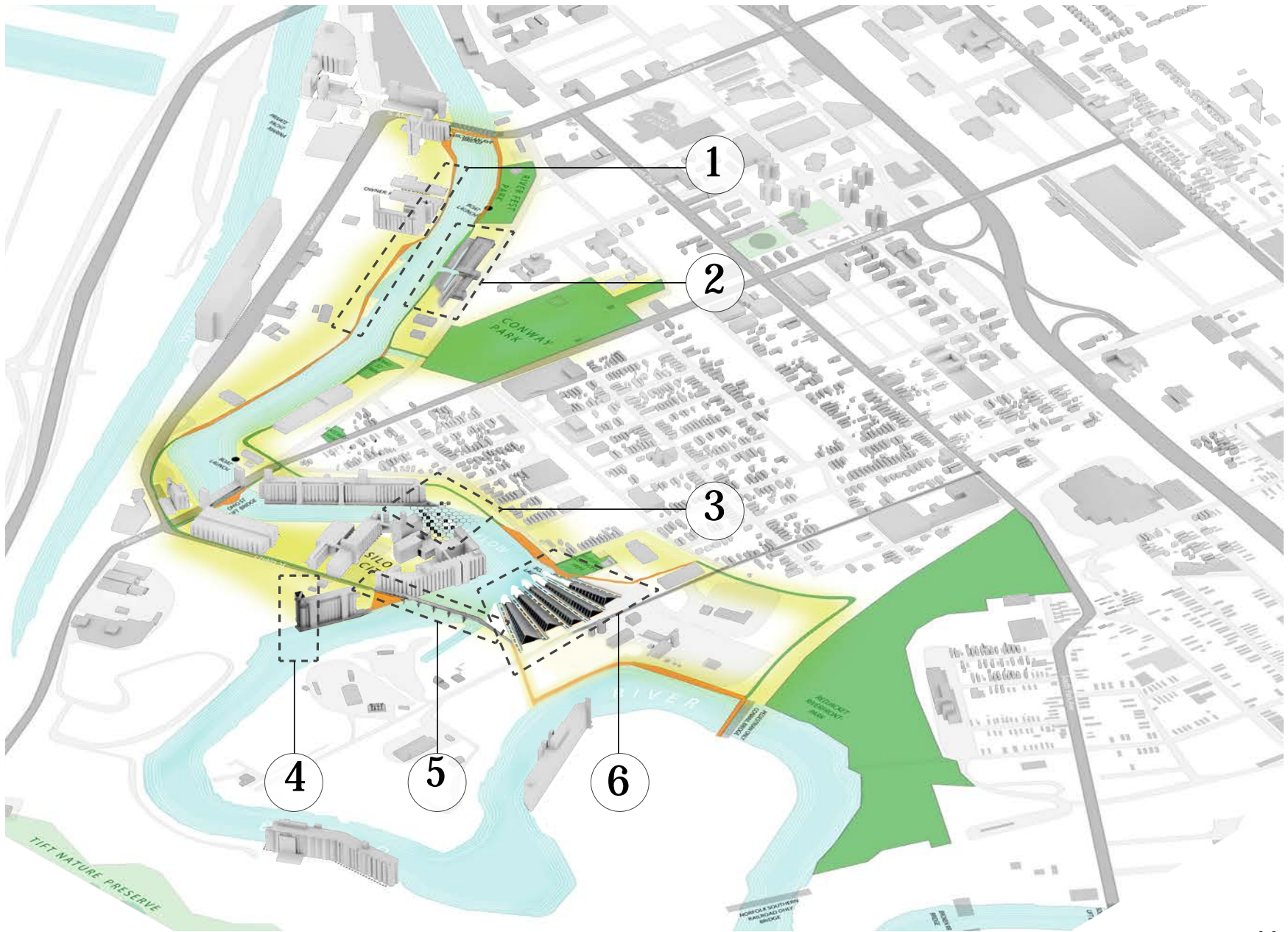
**2 Dredge-Scape**

**3 Ice Walk**

**4 Bird Watch**

**5 Pedestrian Bridge**

**6 Ice Boom Room**





## 1 *River Walk*

The *River Walk* is the architectural implementation of the path in the River Plan. This is a new construction that redefines the edge condition between water and land.

Currently, the majority of the edge condition is a sheer concrete wall of about a 5 foot drop from land to water. Originally designed for accessing the hulls of docked ships, it now creates a physical barrier and limits access by individuals to the water. Other edge conditions include dense shrubs and trees growing along the edge, creating physical and visual barriers.

The *River Walk* proposes constructing a wooden boardwalk that projects over the water, placing path-users close to the water and opening up views around each winding curve.





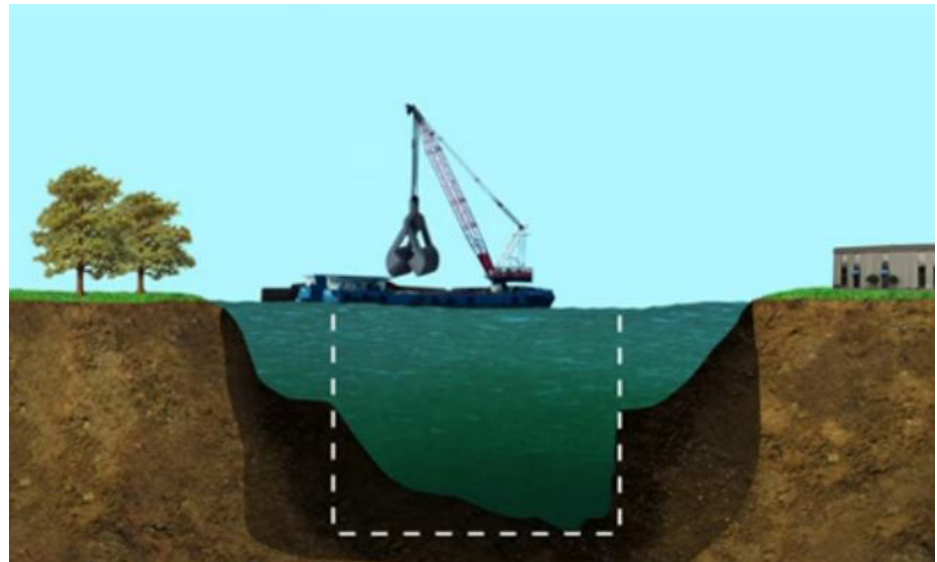


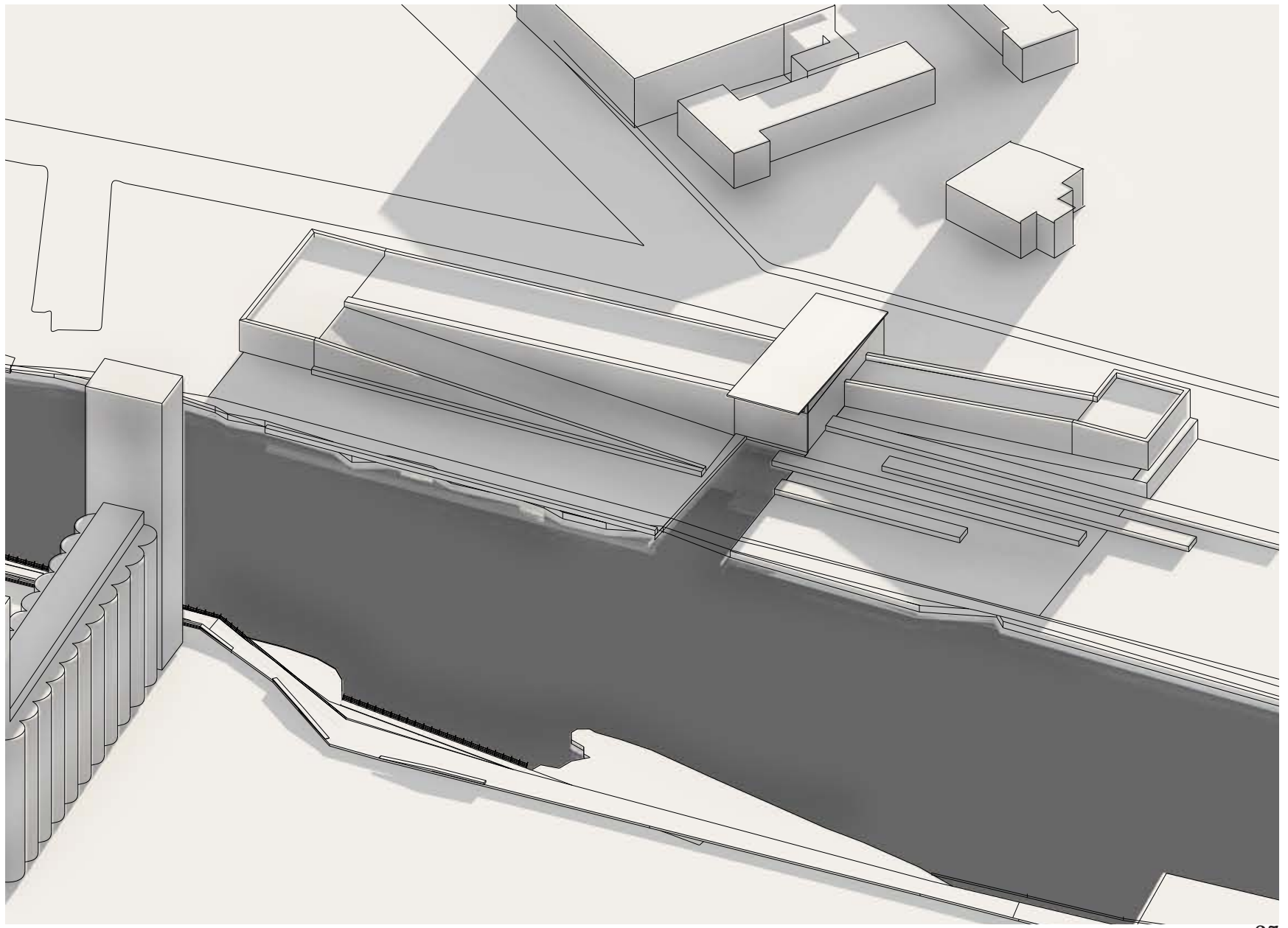
## 2 Dredge-Scape

The *Dredge-Scape* is a deconstruction of the river bed, a reuse of the extracted soil and a new construction of a water-side landscape. Currently the US Army Corp of Engineers is conducting systematic dredging up and down the Buffalo River and Ship Canal. This process removes accumulated sediment on the river bed to maintain a safe water depth for ships.

Since the industrial area has contaminated soil, it is carried off on a barge South to the very most edge of the city where it is deposited and accumulates.

This soil though, has the potential to be treated or used and “capped” to contain and harmful chemicals and then can be used to infill areas or build up landscaped parks to serve as another node within the River Loop. This activates an otherwise vacant brown-field using what was considered to be waste material.





### 3 Ice Walk

The *Ice Walk* acts as a connecting joint on the river. The structure is a new construction that changes with the changing state of the river. It functions differently in the summer, when the river is water used recreationally, than in the winter when the river is frozen and vacant.

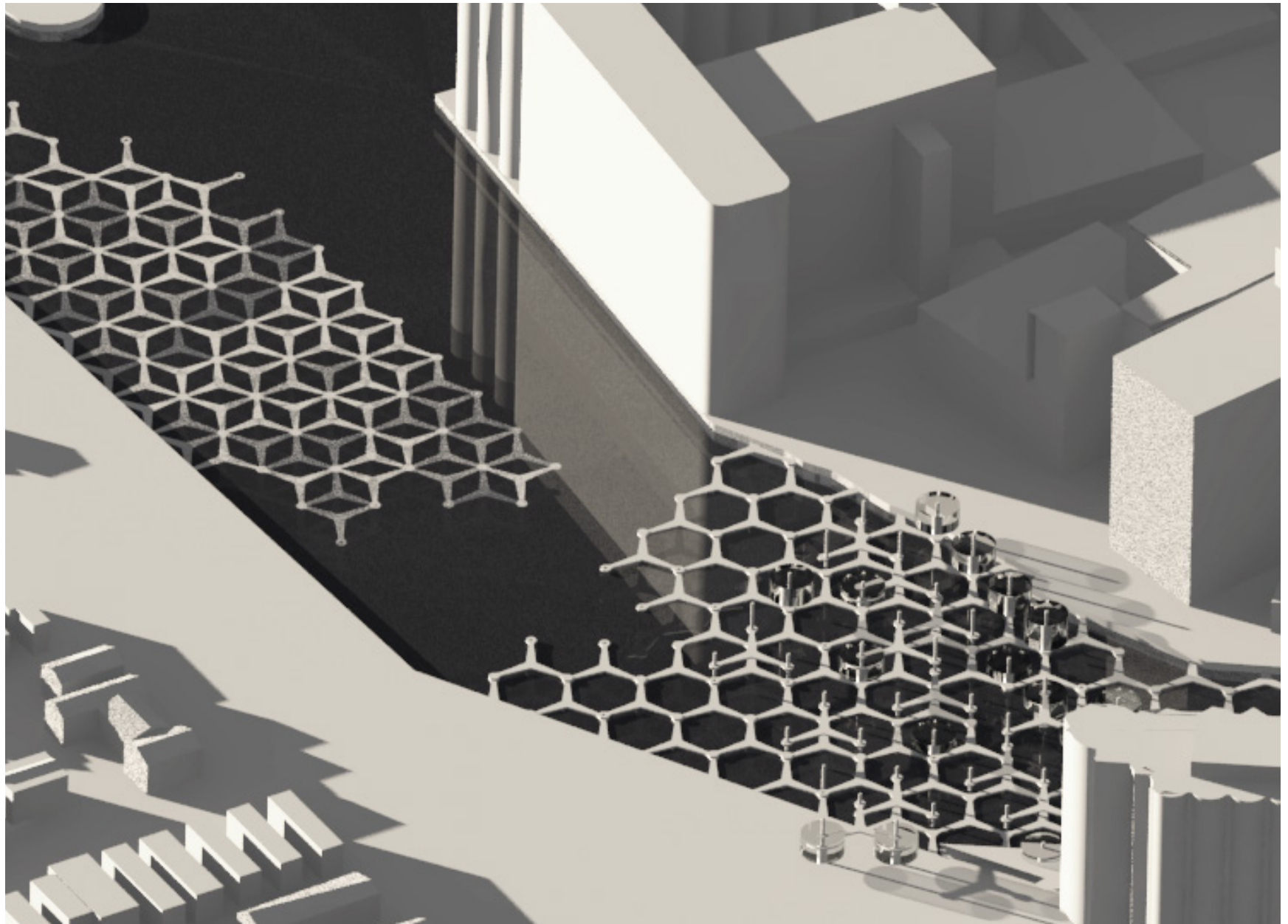
The joint is a floating lattice of units that can expand to bridge the river in the winter and contract to accommodate river traffic in the summer.

In summer, the lattice can host plants that can naturally filter the river water-which is currently contaminated. Other functions might be a kayak rental station, a research station for Buffalo River Keeper, or a floating music venue.

As winter approaches, the lattice can be expanded across the river as the water begins to freeze. By sectioning off the surface of the water and slowing the flow, freezing could happen faster and more evenly, creating a large, safe frozen surface to occupy and physically connect Silo City and the First Ward neighborhood. Once the river is frozen, the lattice is stationary and becomes a hub for river ice-skaters.







## 4 Bird Watch

The *Bird Watch* is an added appendage to the existing Marine “A” grain elevator, currently inactive. The Bird Watch brings people up to the top of the grain elevator into a glass observatory area, a perfect spot to enjoy a 360 degree vista, not currently available from the existing architecture.

The Buffalo River is situated along an important migratory bird path, the Atlantic Flyway, which allows people to view non-native bird species traveling north to south in the fall and back north again in the spring. It would be a welcomed addition to the adjacent Tift Nature Preserve which already serves a large number of bird and wildlife enthusiasts. The *Bird Watch* offers a vertical extension of the *River Plan*.

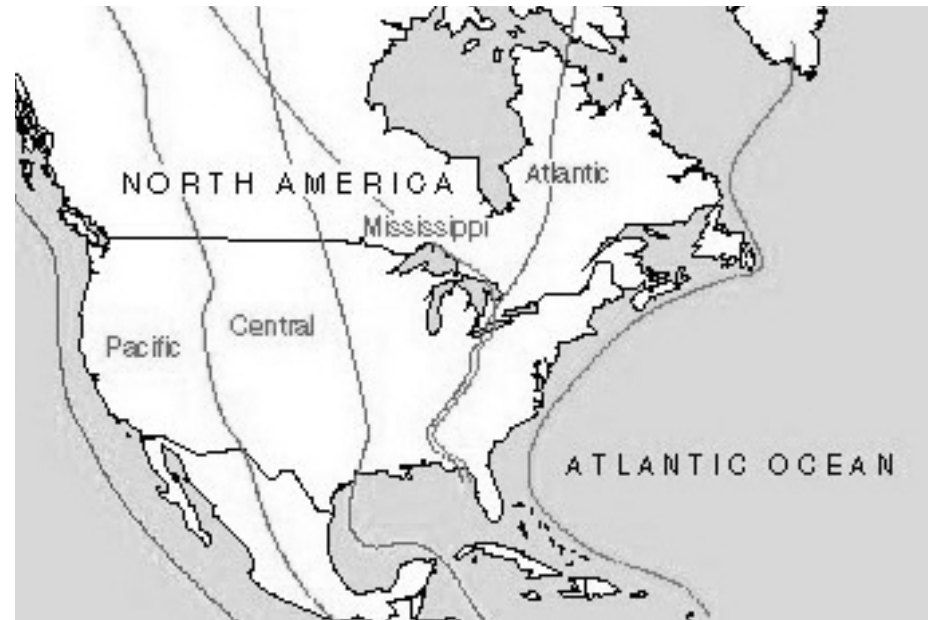
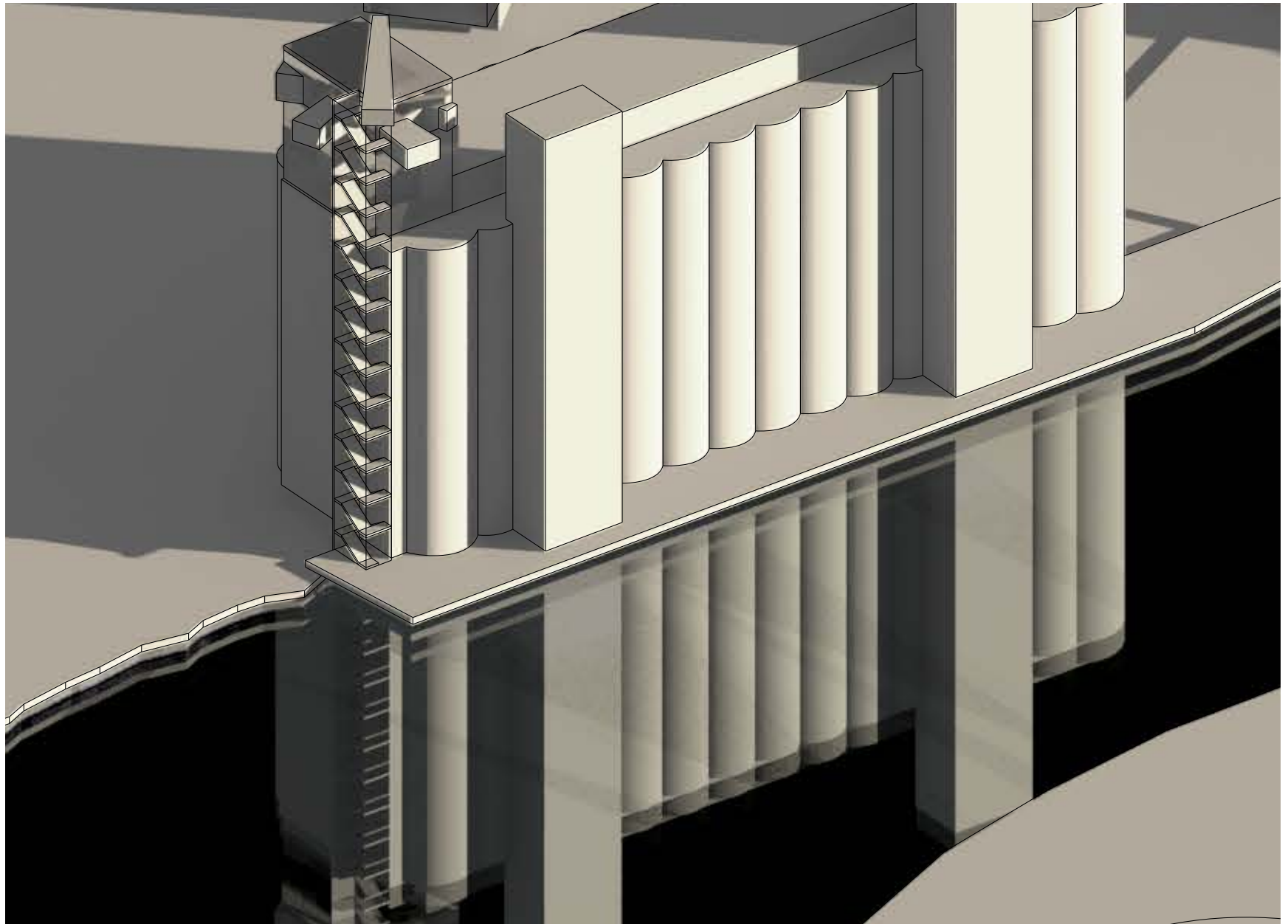


photo: Laird Robertson, Buffalo Rising December 2014.

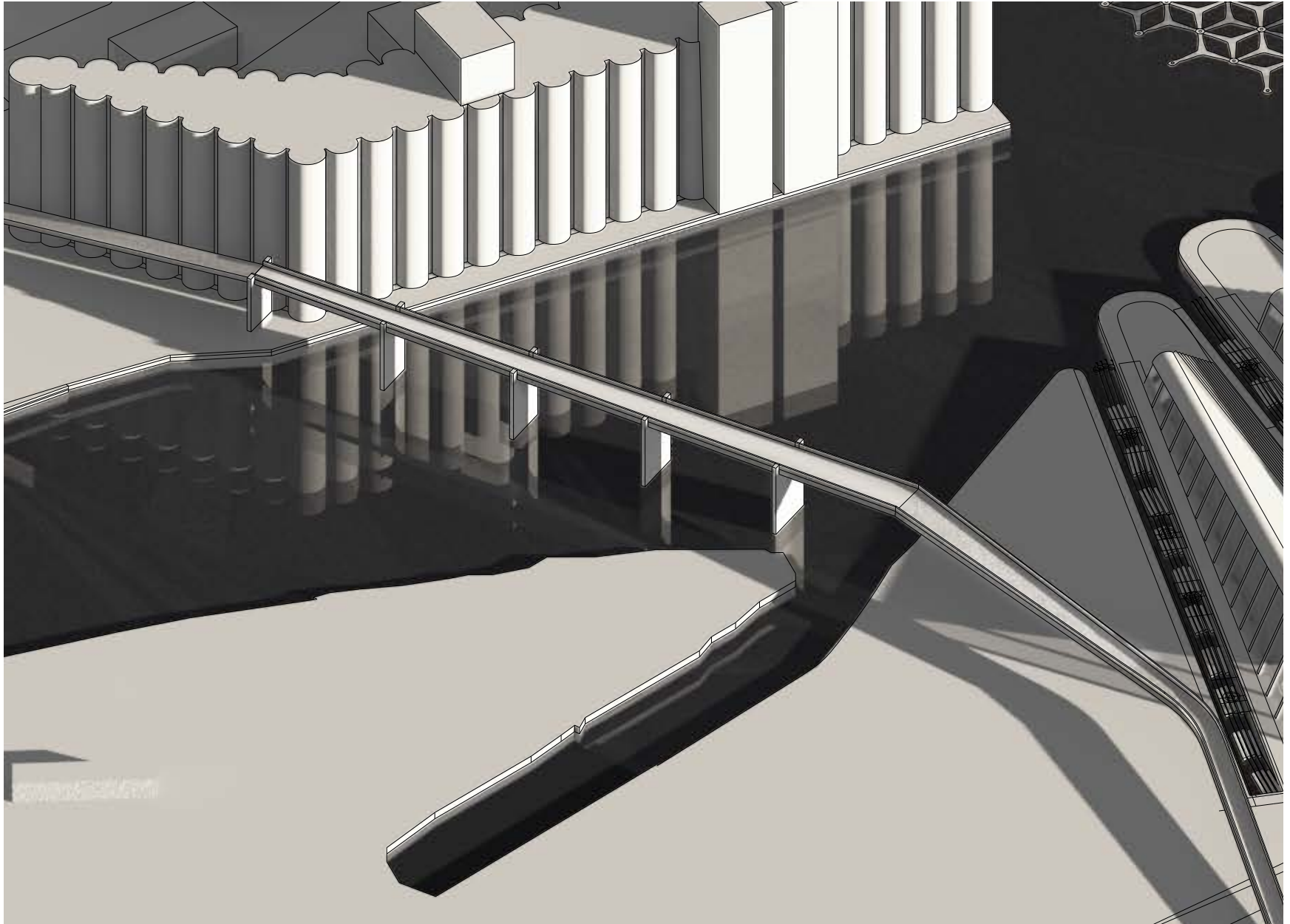


## 5 *Pedestrian Bridge*

The *Pedestrian Bridge* is a new construction of a physical extension of Child St. which is currently the only access to Silo City. The new bridge would add another access point and connect Silo City to the river loop. Built high above the water to allow ship passage, it offers stunning views of the area, giving a new perspective to both the OFW and the silos. The pedestrian-only bridge would offer a clear invitation to local residents to access the industrial area.







## 6 Ice Boom Room

The *Ice Boom Room* is a reuse of an existing industrial process and site, and a new construction of a building on the site.

At the elbow of the river which sits directly on the border between the OFW and Silo City, is a large site currently used to store the ice boom in the summer.

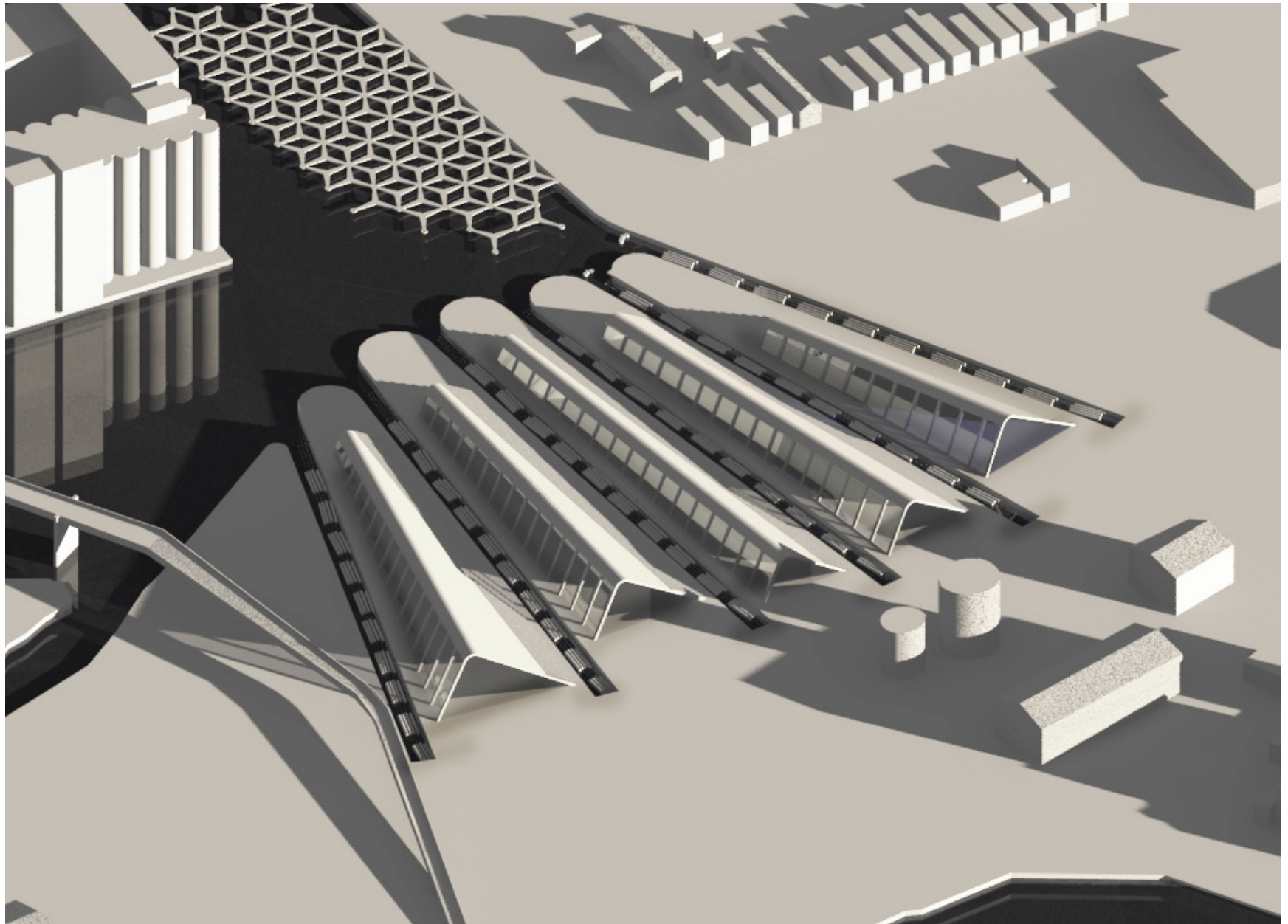
The ice boom is a series of strings of hollow steel pontoons, which in the winter are brought out to the mouth of Lake Erie and deployed on the surface of the water in a series of arcs. This systematically controls the flow of ice chunks in the spring when the frozen Lake begins to melt.

Since the site is only used during the summer, it lies vacant for half the year. The *Ice Boom Room* is an architectural proposal to link the two areas by activating the site year-round.

An undulating surface, conceived of as an extension of the landscape, weaves in and out of the surface creating 5 enclosed buildings and 6 channels of water that collectively store the ice boom in the summer and become frozen curling and ice-skating areas in the winter.

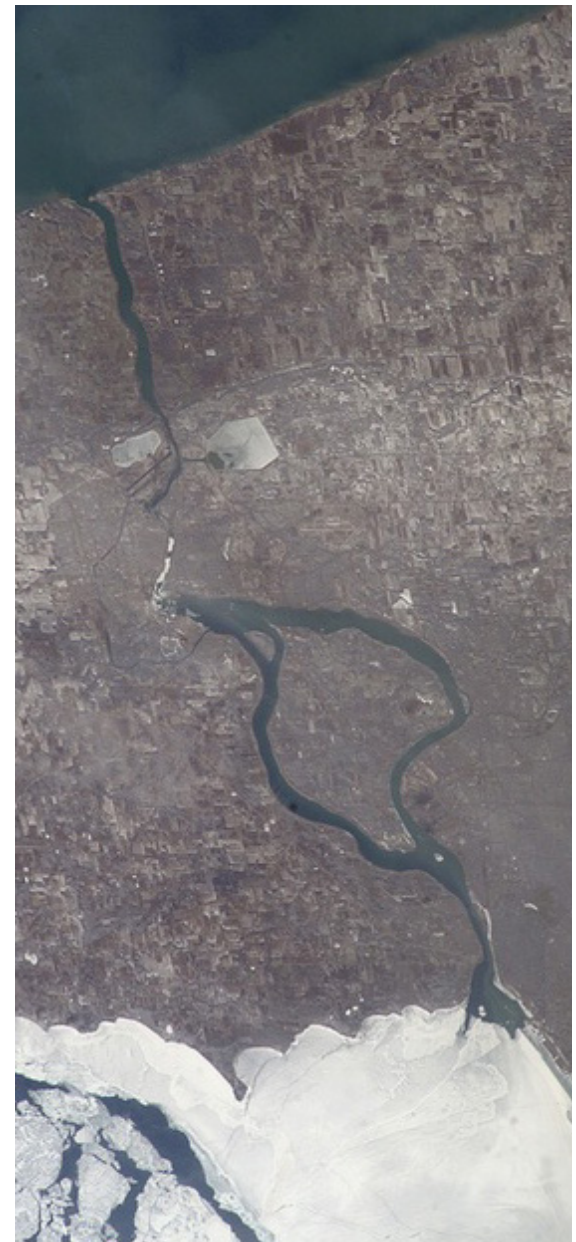
Sited adjacent to both water and railroad and activating a partially vacant site, the *Ice Boom Room* contains elements of each urban strategy, *River Plan*, *Rail Spine Plan* and *Ward Plan*. Therefore, this urban element is proposed to be developed first.



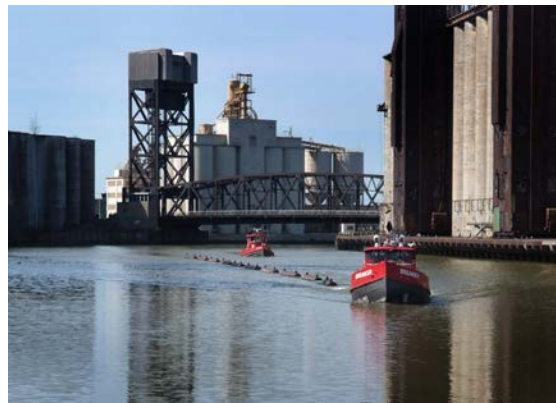




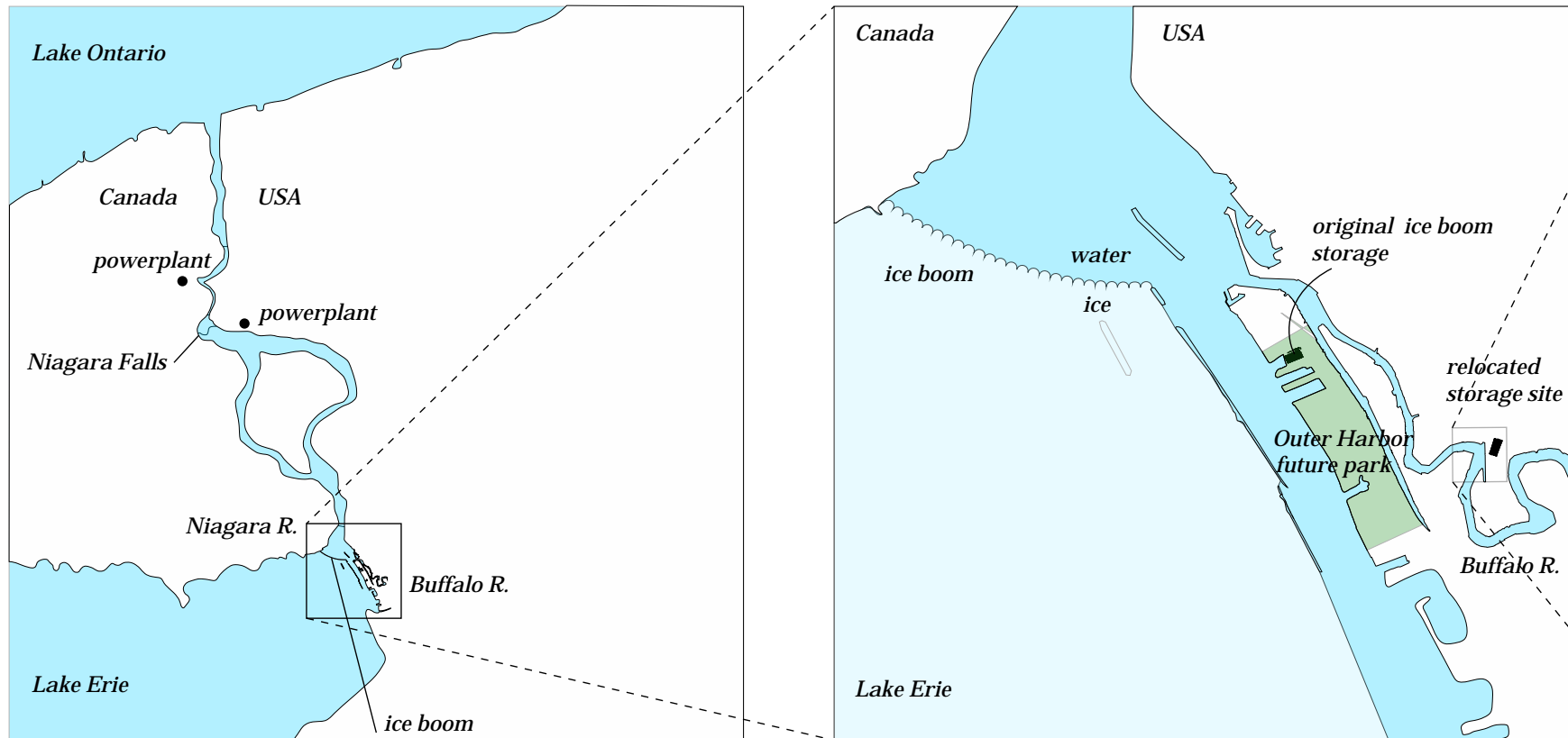
*The Ice Boom*





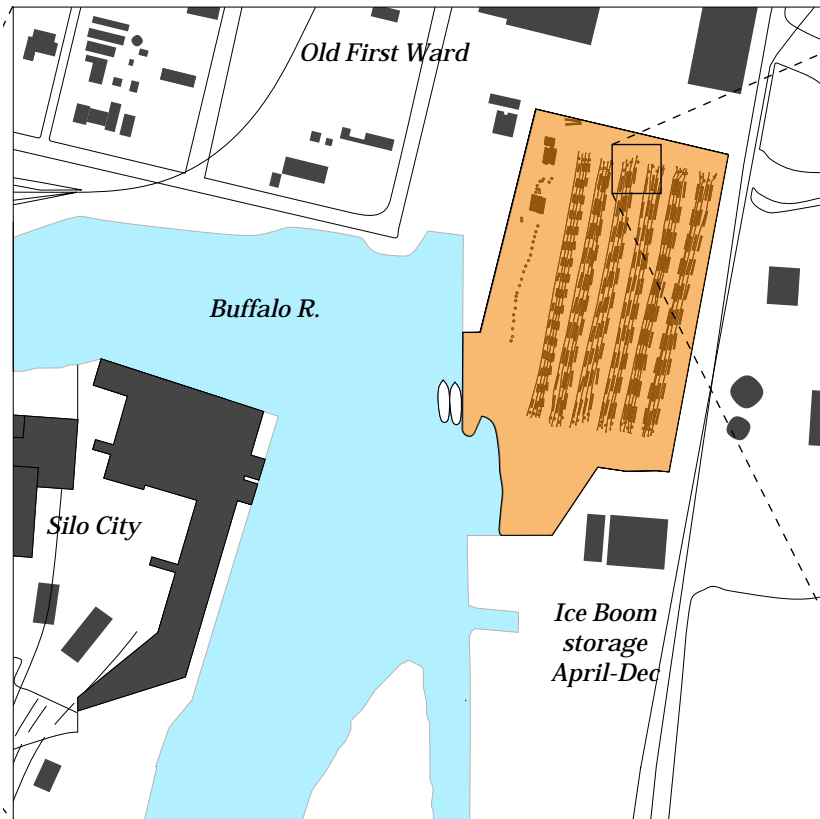


## The Ice Boom

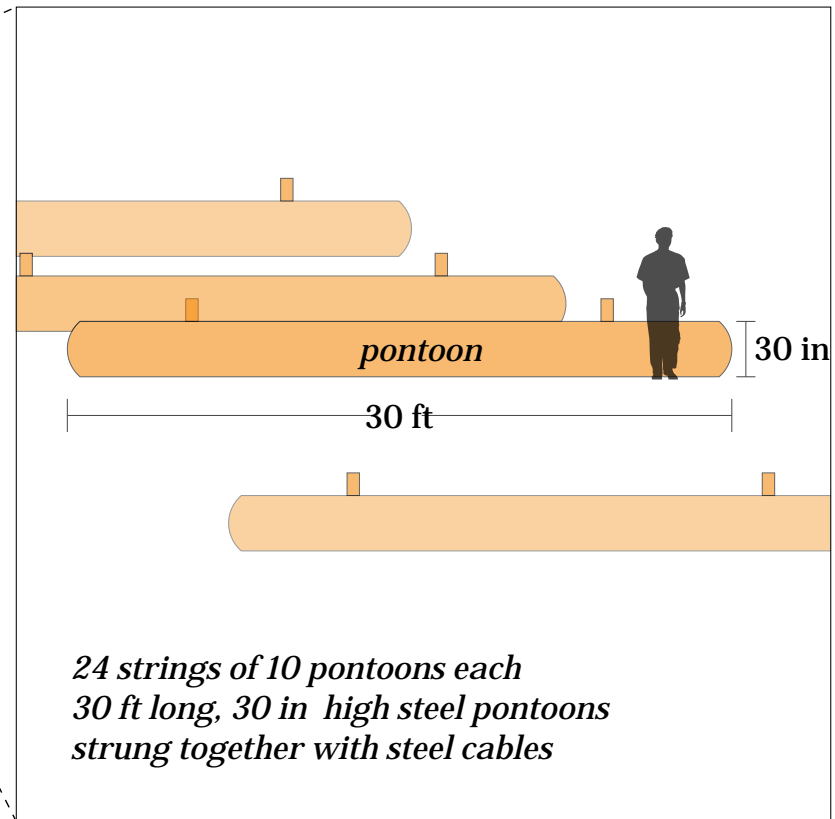


The ice boom is a collaborative intervention by the US and Canada to regulate ice flow along the Niagara River. Each country uses the Niagara River as intake for hydro-electric power plants that supplies the region with electricity. Holding back the ice with the ice boom decreases damage to the powerplants and shorelines by large ice chunks, and decreases the pile up over Niagara Falls. The ice boom is stored on the US side.

The ice boom was originally stored on the shore of the Outer Harbor in Buffalo, when first implemented in the 1960's. Recently, plans have been made to activate the Outer Harbor as a park. Because the ice boom is deemed "unsightly," it was relocated inland to its current location near Silo City. Shown in winter, the ice boom is seen deployed across the lake in a series of small arcs formed by the string of pontoons which hold back the ice of the lake, while the river water keeps moving, unfrozen.



In the summer, the ice boom is stored on land in 24 cable strings of steel pontoons.



Each string is made up of a series of units. The units are hollow steel pontoons which can float on the surface of the water. They are each 30 feet long and 30 inches high and strung together by a steel cable.

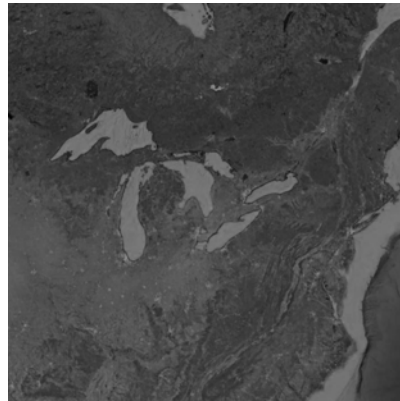




Recent site photo, with ice boom stored in rows on dry land, behind opaque fence along railroad  
*Google Earth image*

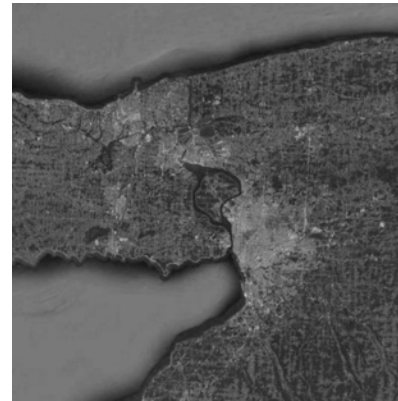


**A  
Story  
of  
Scales**



**1. National**

Great Lakes,  
grain-transshipment industry



**2. Regional**

Canadian/US Niagara River  
ecological system



**3. City**

City of Buffalo



**4. River**

Buffalo River



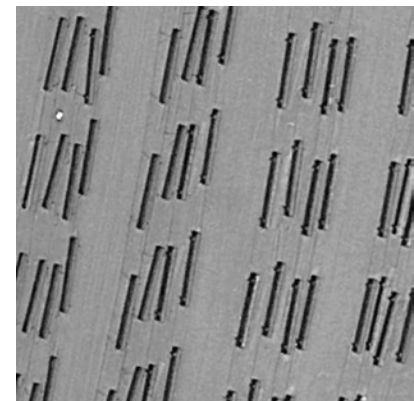
**5. Ward**

OFW Neighborhood, Silo City



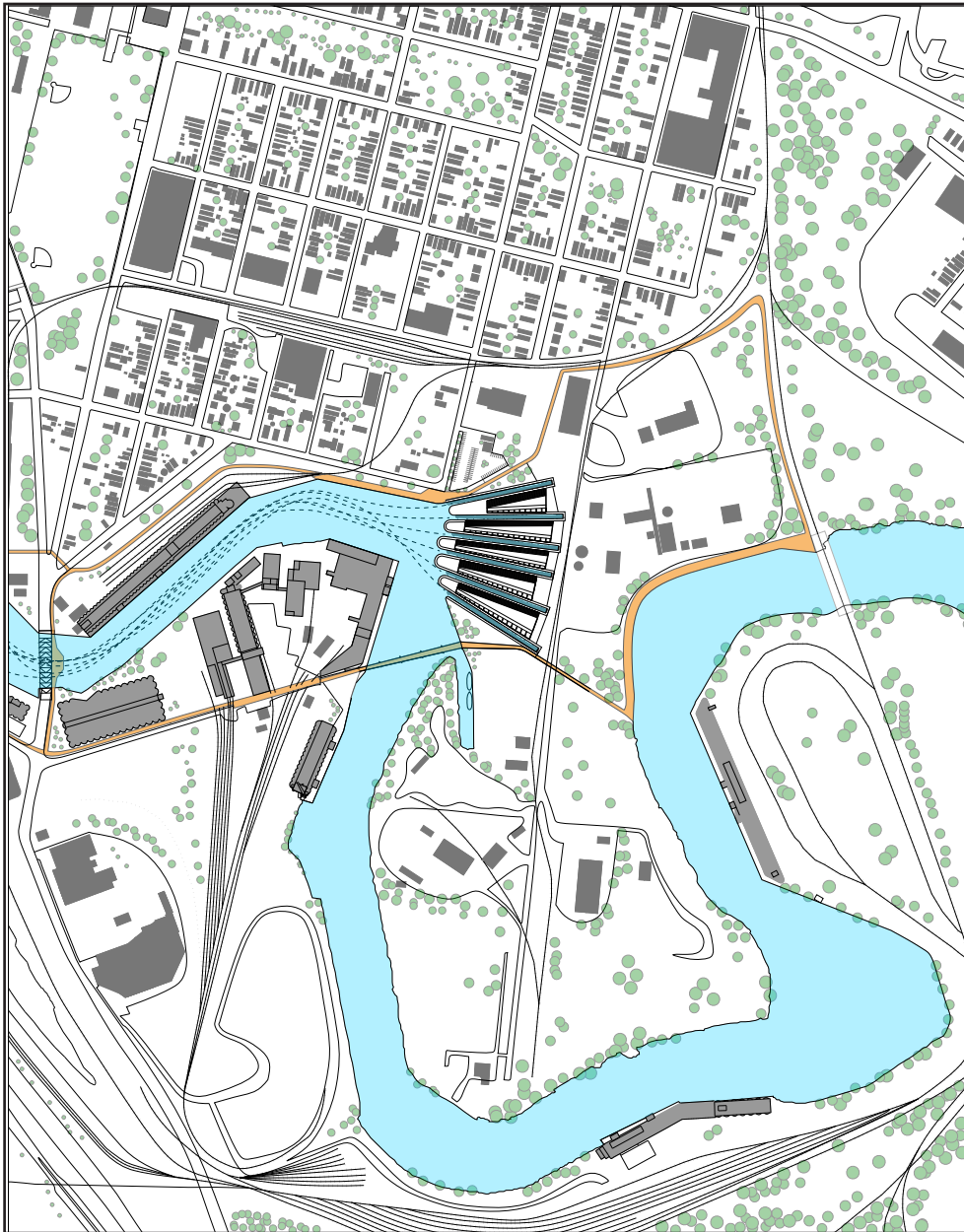
**6. Urban Element Site**

Ice Boom Storage Site



**7. Unit**

Ice Boom pontoon



The *Ice Boom Room* exists at the scale of the massive grain elevators in plan, and at the scale of the residential neighborhood in section. Each undulation frames a view of the river from the inside, and creates sloped seating on the roof to gather and watch events such as the winter sports or summer music events.

Each wedge-shaped building creates a large flexible ware-house space that house activities, attractions and community spaces that service the OFW, but also the large population of the city and region.

With the global tourist attraction of Niagara Falls nearby, the *Ice Boom Room* has the potential to attract similar scales of tourists to events in conjunction with Silo City such as the existing festival of Boom Days, which celebrates the removal of the ice boom from Lake Erie and the coming of spring.

Site Plan of Ice Boom Room, summer  
River walk shown in orange.





Aerial view in winter of Buffalo River with downtown Buffalo in the top left, the Old First Ward on the right, Silo City on the left and the Ice Boom Room across from Silo City on the right.

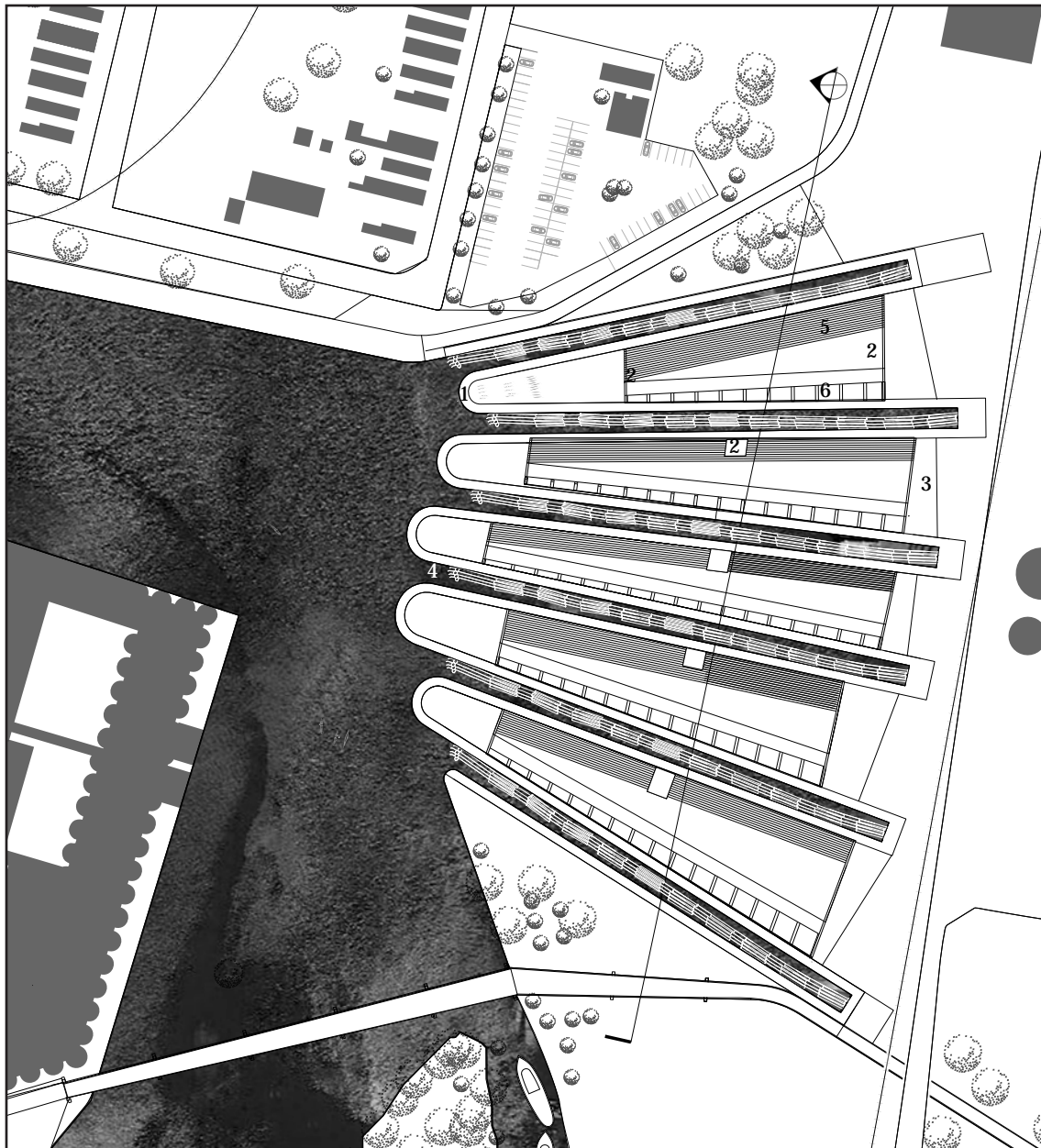


The *Ice Boom Room* contains a kayak and canoe rental and shop, a bowling center (a popular winter activity in Buffalo), a food market, classroom or community meeting room space, an indoor swimming pool, dining, a brewery and bar.

*Ice Boom Room*  
Winter, Interior Plan

- 1 River Loop
- 2 parking
- 3 access from street
- 4 boardwalk
- 5 kayak rental
- 6 bowling alley
- 7 food market
- 8 classrooms/  
meeting rooms
- 9 swimming pool
- 10 locker room
- 11 restaurant/dining
- 12 bar
- 13 brewery
- 14 pedestrian bridge
- 15 bulkhead passages
- 16 curling, skating



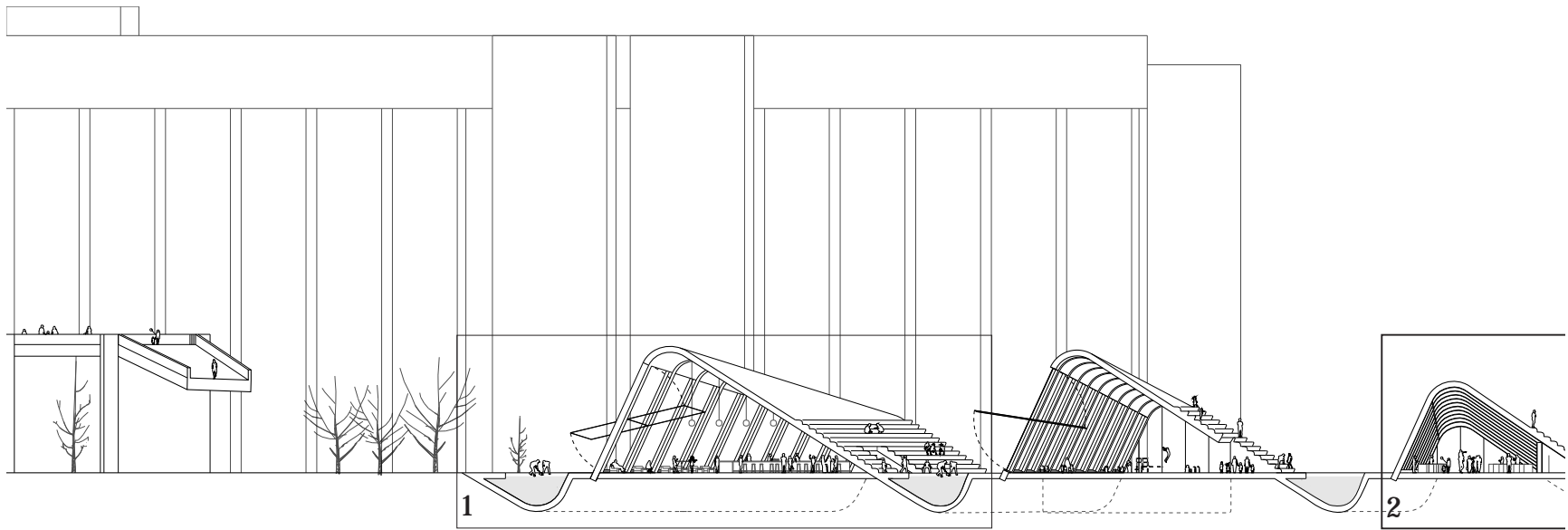


In the winter when the water freezes over, each of the finger channels become a connector between the wedges. Panels in the south facades rotate open to create passages between wedges and the building is winterized for the season to create one enclosed building.

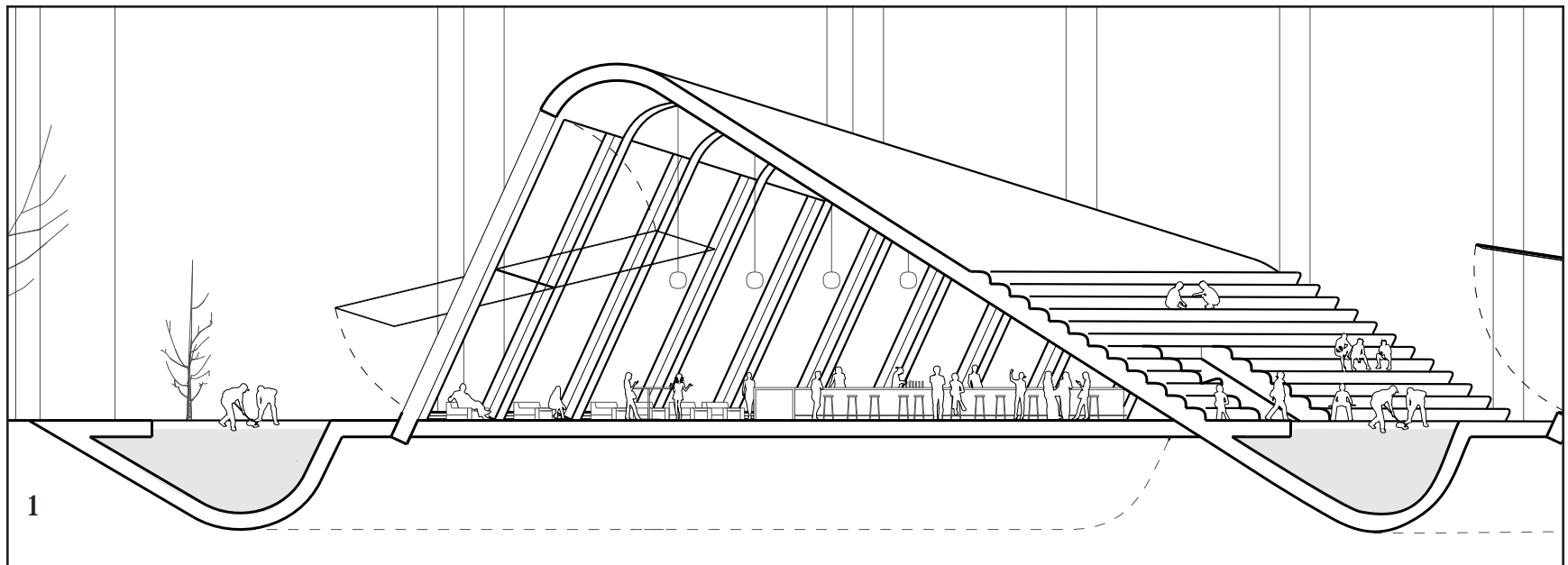
Navigating between the scale of the OFW, the silos, and the scale of the ice boom process itself, the *Ice Boom Room* seeks to build connections between these, as well as between industry and daily life, past and present, as a strategy to reactivate a post-industrial shrinking city.

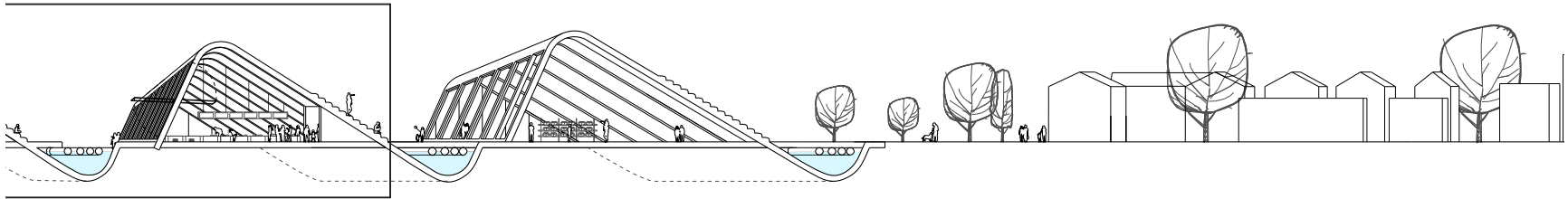
*Ice Boom Room*  
Summer, Roof Plan

- 1 boat launch
- 2 entries
- 3 patio
- 4 ice boom storage
- 5 bleacher seating on roof
- 6 southern glazing

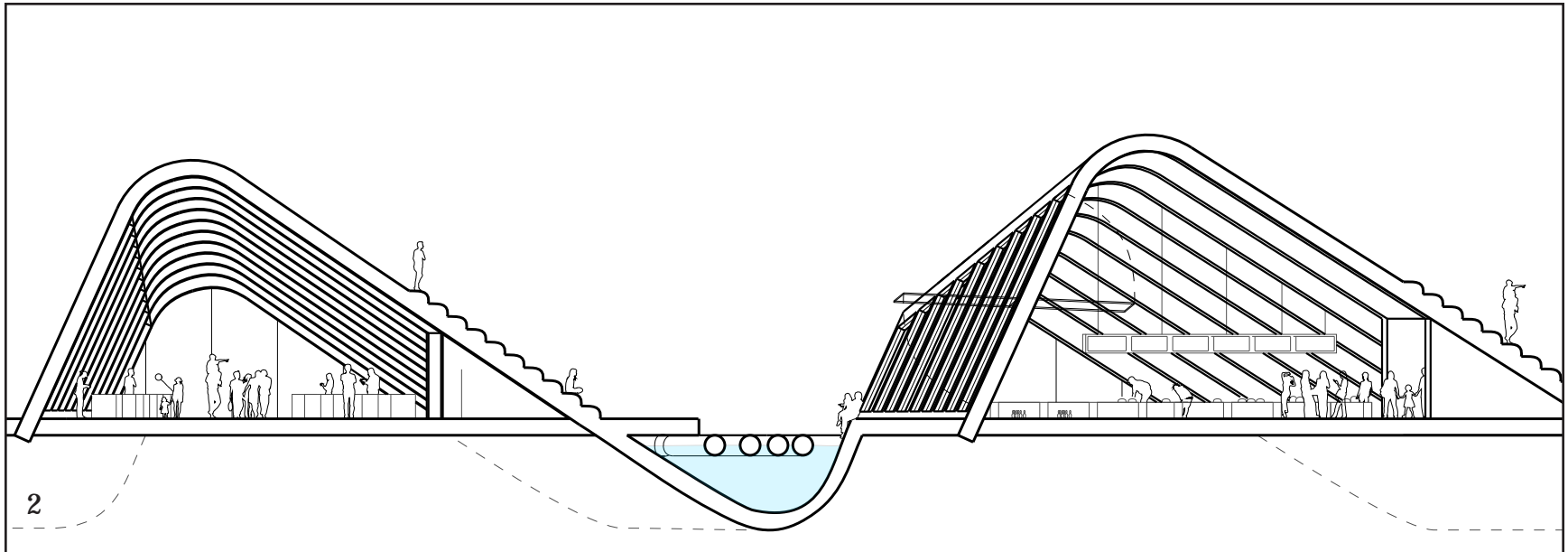


Winter Section

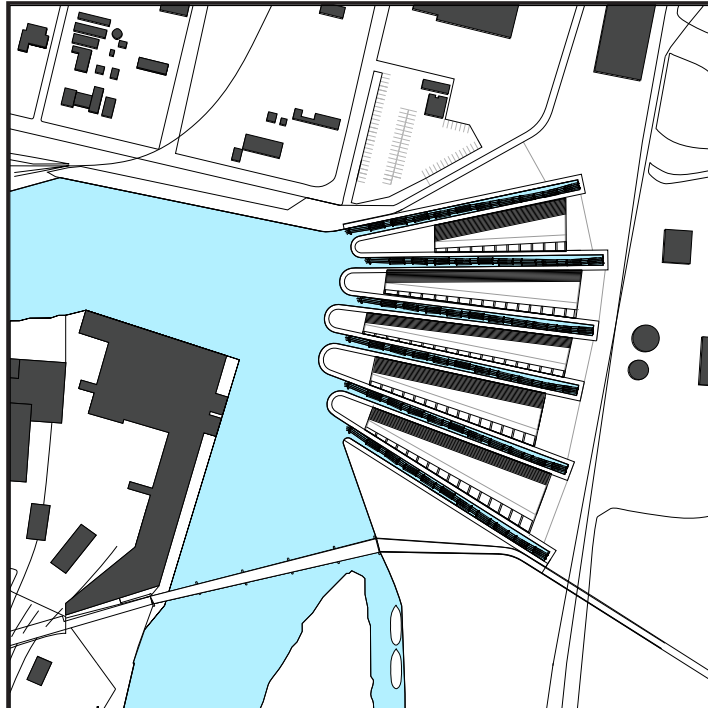




Summer Section

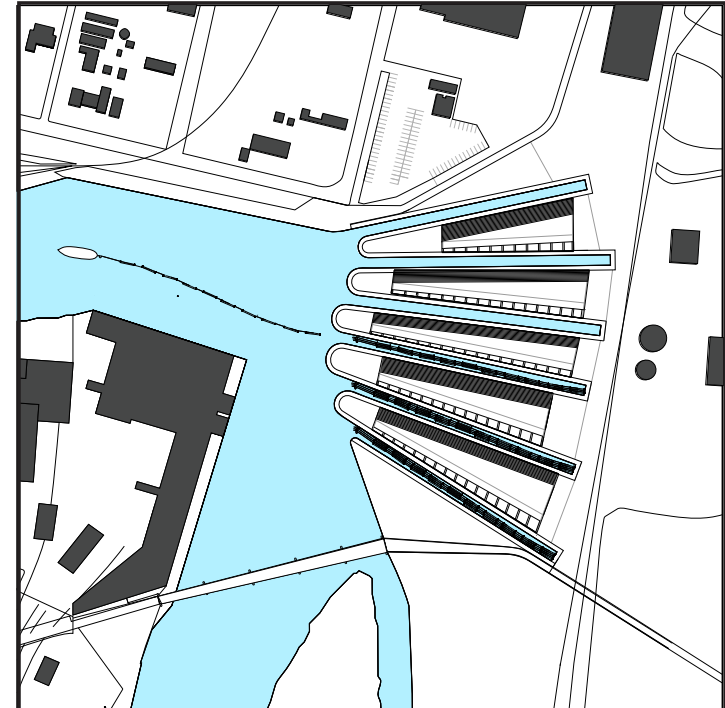


## Annual Ice Boom Room Activity



Summer

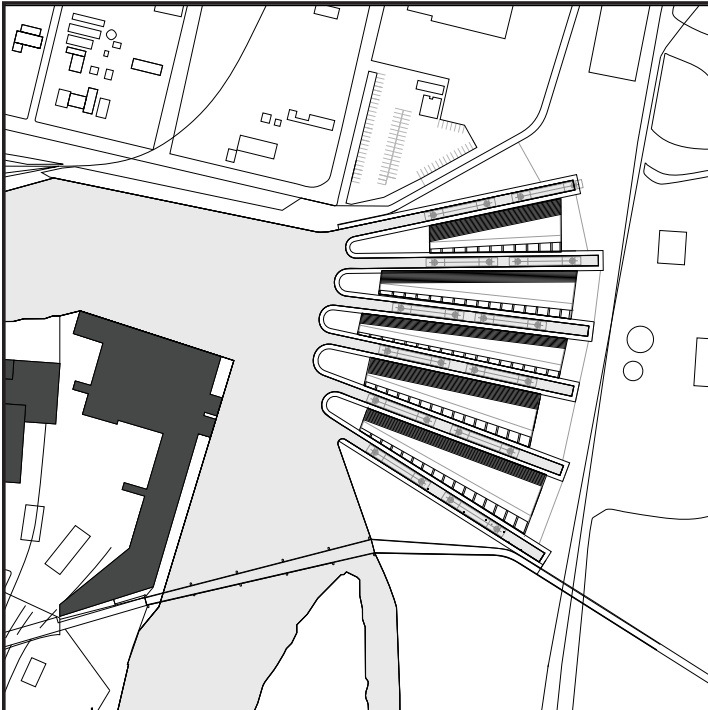
The ice boom is stored in shallow water channels. Site activities include kayaking, outdoor music events, art festivals, walking and running along River Loop.



December

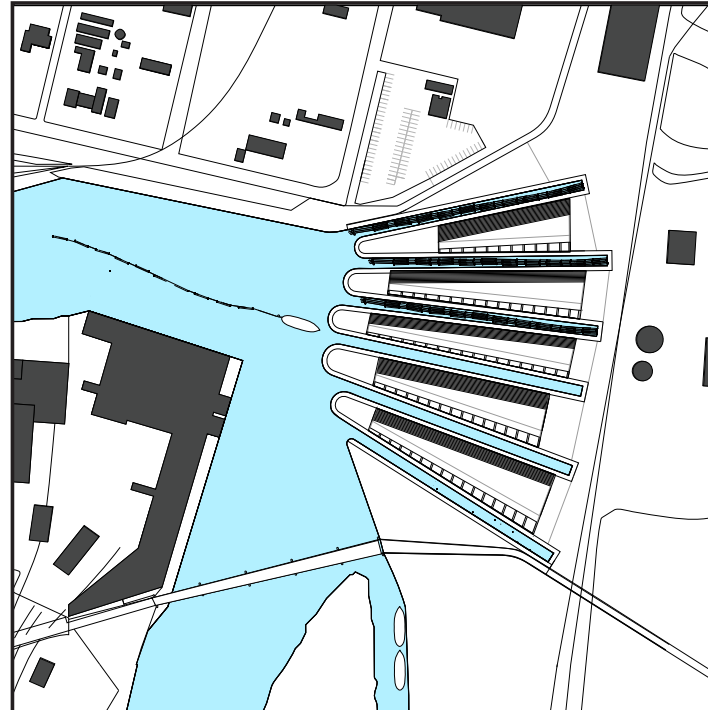
In late December, the ice boom is brought out of storage by two tug boats. It takes about 2 weeks to tug all 24 cables up the Buffalo River and out to Lake Erie, depending on the weather conditions. The process is a theatrical event welcomed by a regional winter festival.





Winter

After the ice boom is brought out the Lake Erie, the river water begins to freeze over. The frozen channels create bridging between the 5 separate structures of the Ice Boom Room. People come to the site to ice skate and compete in curling.

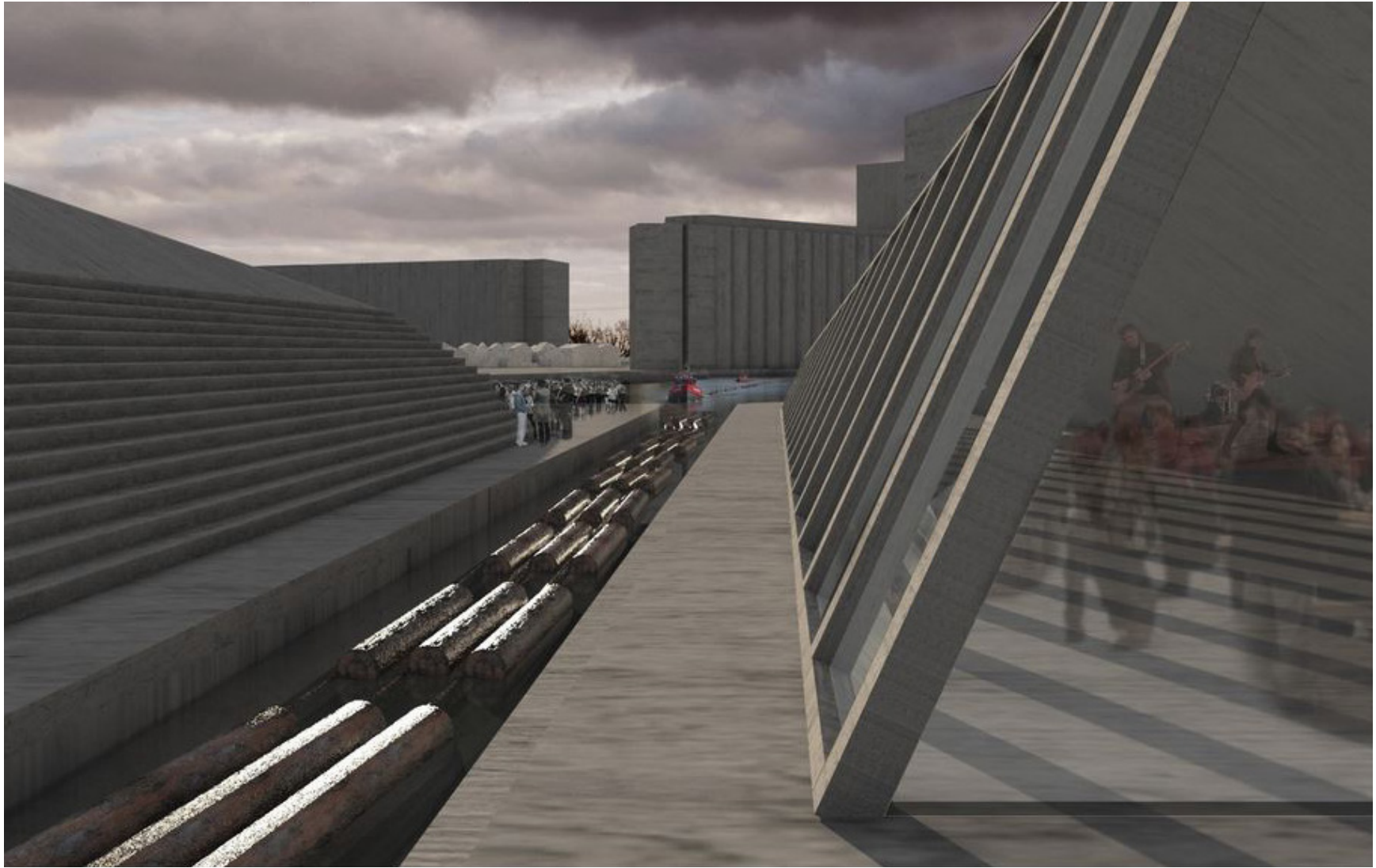


April

When the ice coverage on Lake Erie has melted to about 20%, the ice boom is brought in back in. This is already a celebrated event, called *Boom Days*. It marks the beginning of spring and warmer weather. People celebrate along the Niagara River in the US and Canada, culminating at Silo City. Adding the Ice Boom Room will draw more people from a larger area, equivalent of Mardi Gras or Oktoberfest festivals.

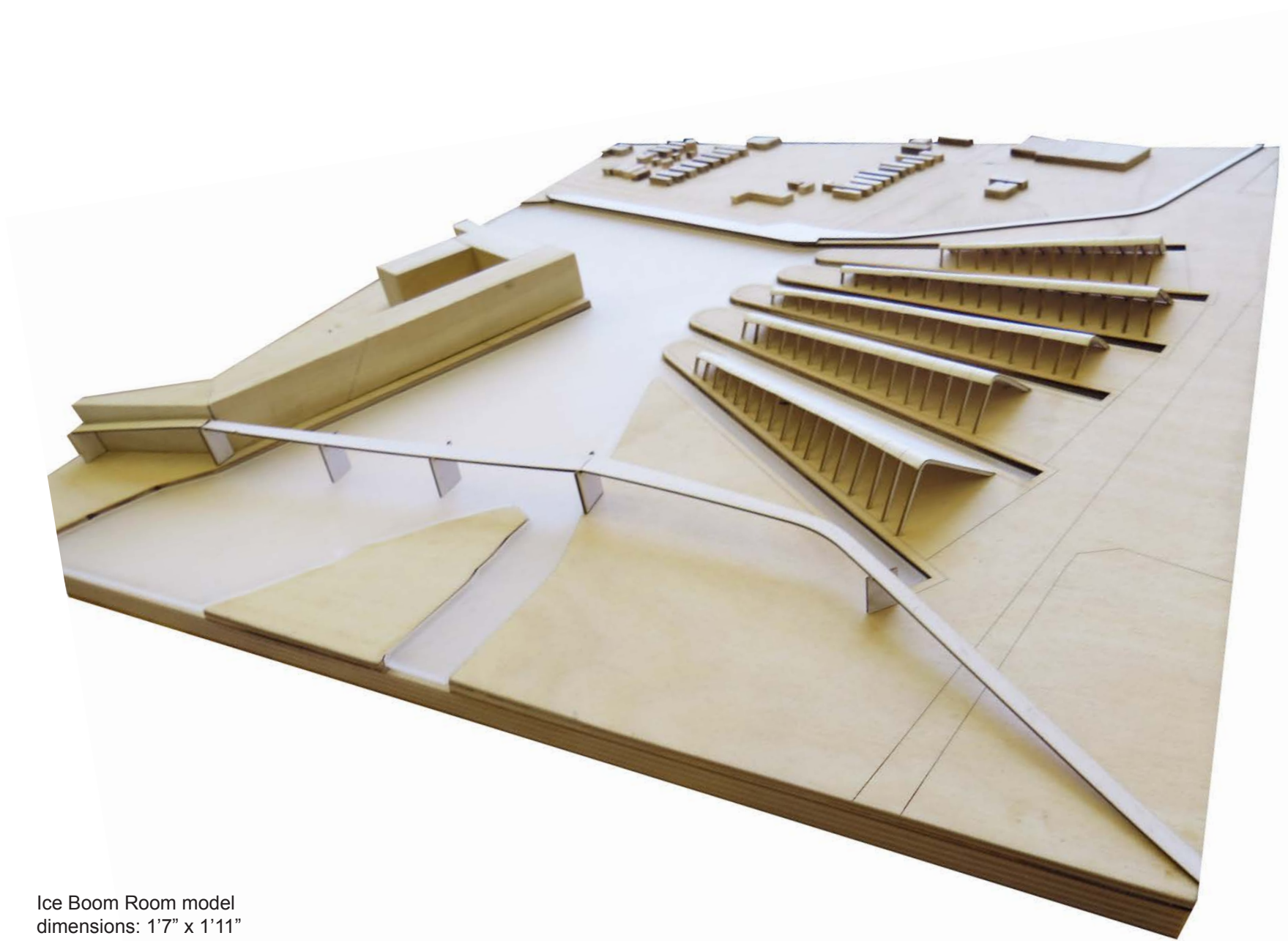


Winter Render of Ice Boom Room, juxtaposing the scale of the grain elevators to the left and the scale of the residential Old First Ward to the right.

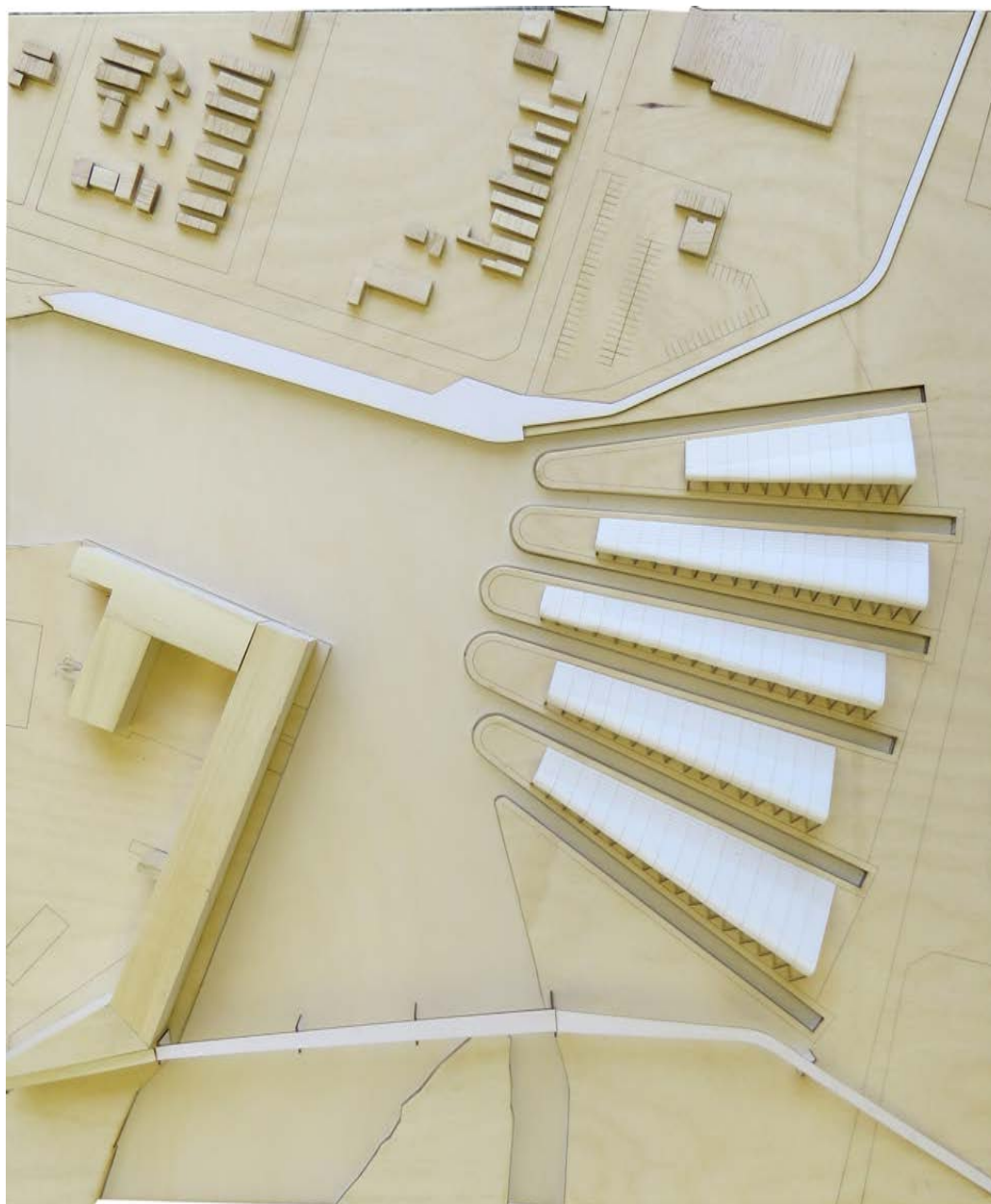


Summer Render of Ice Boom Room, showing the steel pontoons in storage.





Ice Boom Room model  
dimensions: 1'7" x 1'11"  
scale: 1/64" = 1'-0"  
lasercut wood, bristol board, plexi  
*built by Alexis Sablone and Kristina Eldrenkamp*





Ice Boom regional model, for projected animation

dimensions: 3'4" x 5'10"

scale: 1:4000

3D milled 3/4" mdf painted white, 3D printed buildings with Z-corp

*built with help from Elizabeth Galvez, Kristina Eldrenkamp, Mike Schmitz, Michelle Schmitz, and Allie Schmitz*

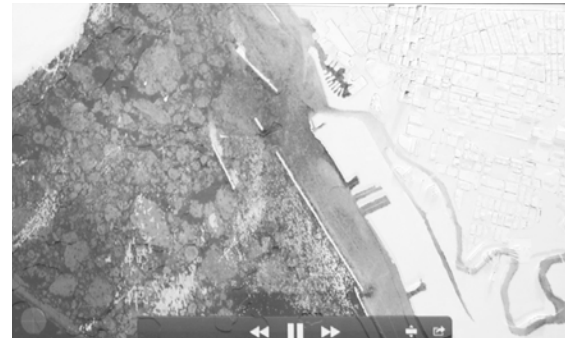




Ice Boom Room, 3D printed using Z-corp



view of Downtown Buffalo on model



Stills from projected animation  
*animation completed with help from Alexis Sablone*

*Thesis Defense: Dec 19th, 2014: MIT Media Lab*



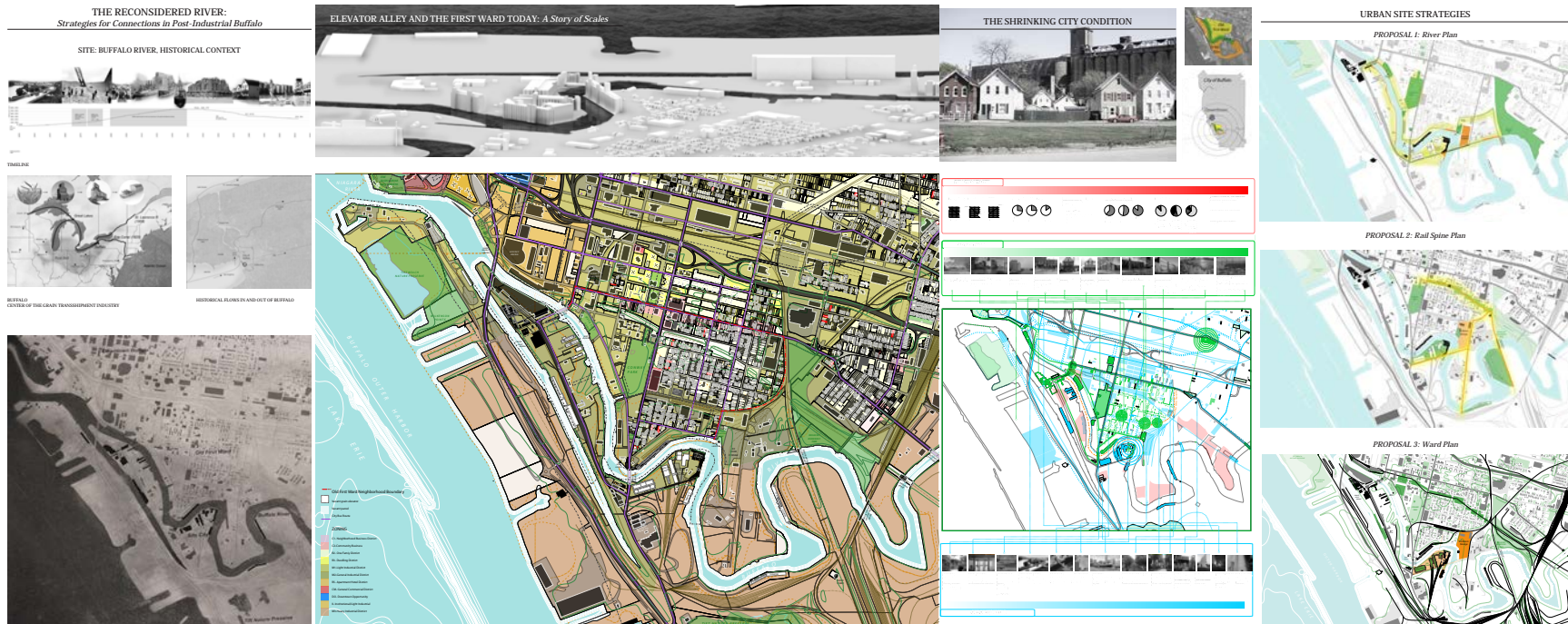
*photos by Barry Beagan*

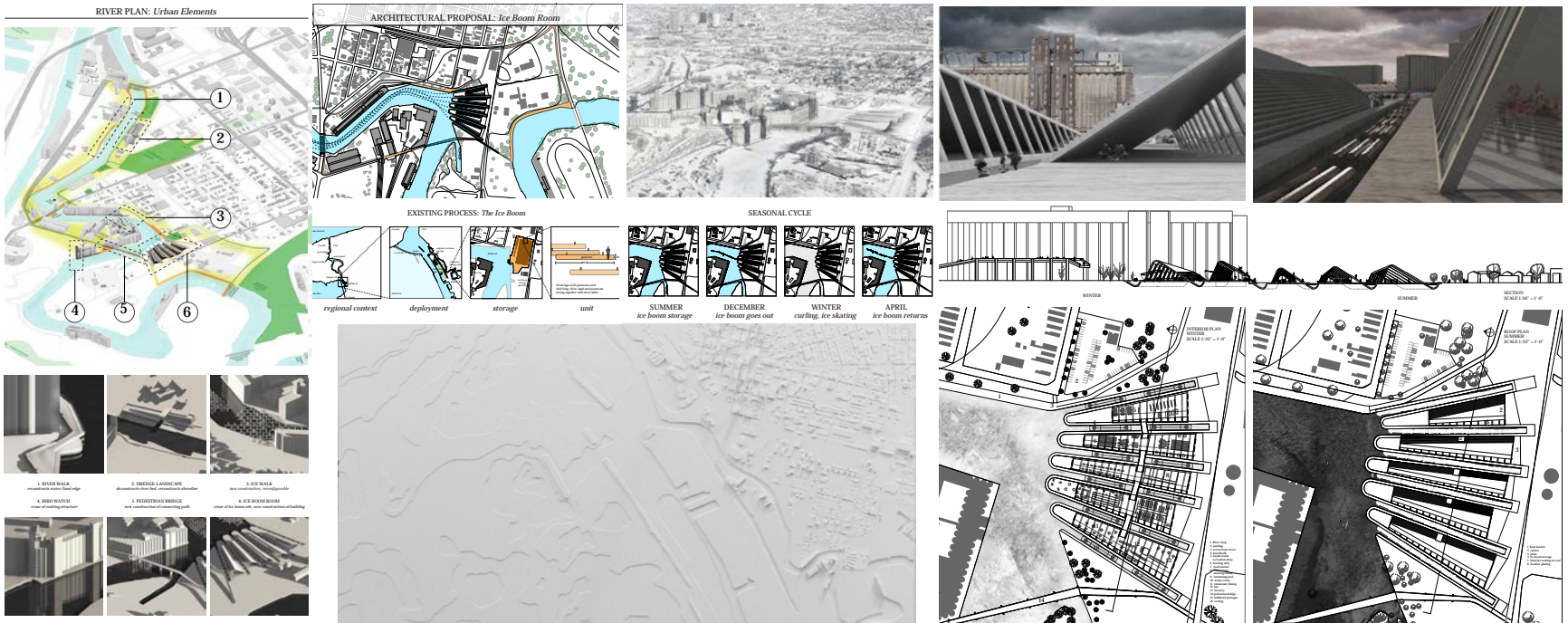


*photo by Juney Lee*



# Final Boards





## *Site Visit: Buffalo, August 2014*

*Special thanks to those I interviewed while in Buffalo:  
Jim Watkins, Rick Smith, Chris Romano, Bernice Radle, Dana Saylor and William Haskas*



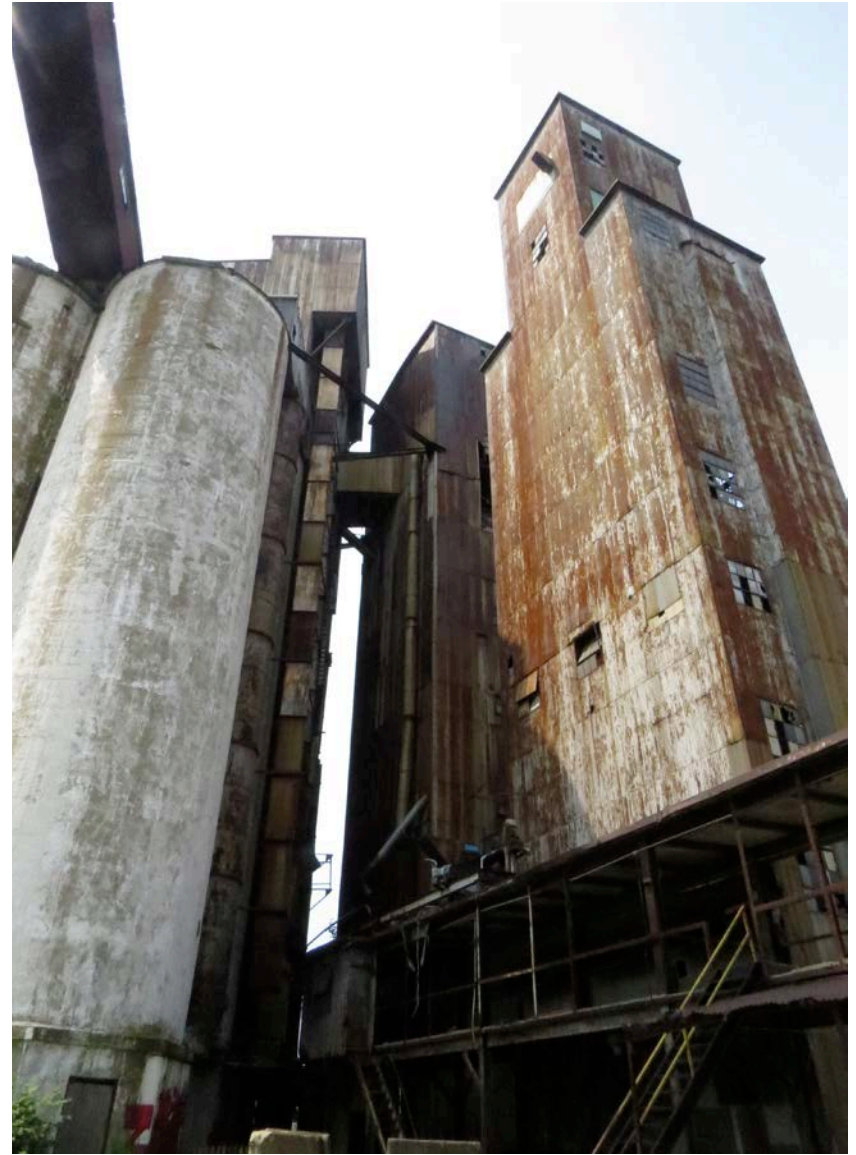
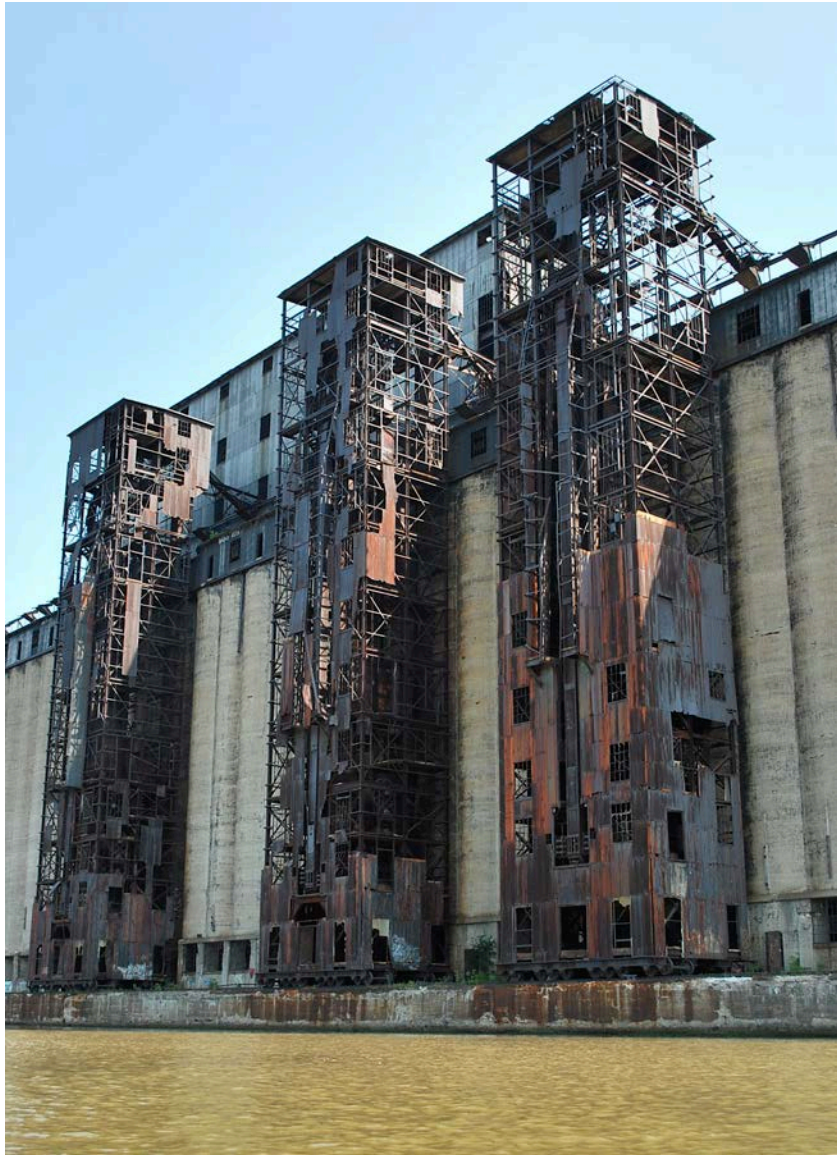


















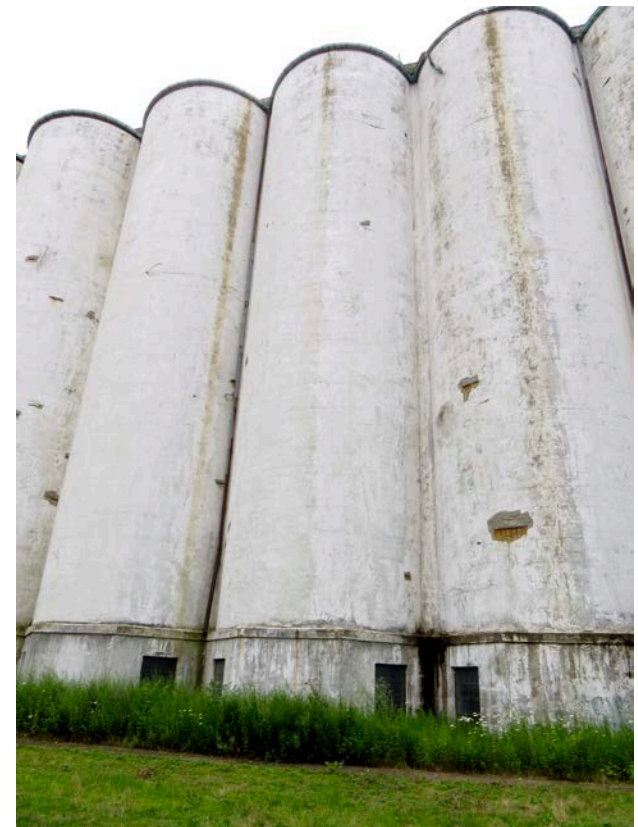


















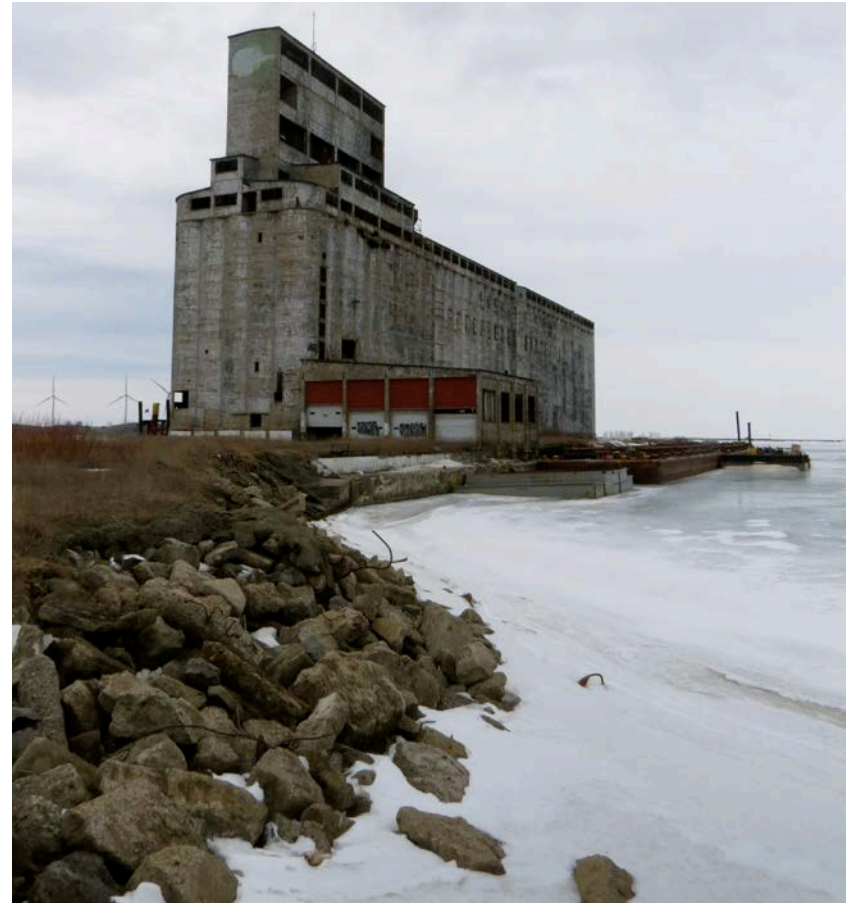
*Site Visit: Buffalo, March 2014*



*overlooking frozen Lake Erie, with downtown Buffalo visible on the right*



*abandoned Cargille-Superior grain elevator along Buffalo R.*



*grain elevator on shore of Lake Erie*





*Cargill- Superior grain elevator, view from abandoned rail road*





*"Elevator alley" along Buffalo River looking West*





*metal structure funded by Rigidized Metals, designed by students and faculty at the University at Buffalo*



*Elevator "B", designed and built by University at Buffalo Architecture student, Courtney Creenan, sponsored by Rigidized Metals*



*Lake and Rail elevator, still in use*



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