Gra[in]vincible

A Thesis Presented for the
Master of Architecture
Degree
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DEDICATION

I dedicate this thesis to my supportive friends and family back home. Thanks for believing in me and pushing me to be the best version of myself I can be. And my sister, for emphasizing the importance of never giving up.

ACKNOWLEDGEMENTS

I would like to thank the people of Buffalo, New York for not only teaching me the definition or resiliency, but showing me. Your actions do not go unnoticed. To my teammates on the Buffalo State Cross Country and Track and Field team, thank you for teaching me perserverence and drive. These are characeristics I will hold onto forever.

This project is the product of tireless nights, endless revisions, and every fiber of sanity I have left after years of higher education. My everlasting gratitude goes to the professors of the University of Tennessee for changing my life and opening my eyes to the world around me, and why it's shaped the way in which it is.

I would like to acknowledge all of my colleagues for both the welcome and unwelcome critiques, and putting up with my antics day in and day out for 3.5 years straight. My incredibly supportive friend, Rachel Parker, for never failing to provide an ear to vent to, and for never turning down a minute to walk around and appreciate the beauty in architecture with me.

To all of my friends, family, and strangers who have somehow come into my life, either briefly or long term, you have done more than you'll ever know. Thank you for your companionship.

And lastly, Professors James Rose and John McRae for pushing me far outside of my comfort zone and providing me with the most incredible educational opportunities in which I have ever had the pleasure of taking part in.

ABSTRACT

This thesis is about the stitching of a community back together at a scale that is appropriate to the existing demographics. The memory of place and time are still evident in the relics that are the Buffalo Grain Elevators; the only changing variable is the rate of population and affordability in the adjacent Old First Ward.

The economic downturn of big business and the havoc it wreaked on the worker community created a ripple effect in large enough scale to grab hold of an entire city. In an attempt to bulldoze rust covered structures and knock down abandoned homes rather than revive the existing fabric, the dilemma between saving the city's heritage or starting new is born.

This project creates a conversation about appropriate inclusion of community as a whole, marrying the negotiation of industrial boundaries and community access. It aims at penetrating through implied and physical borders to create a conscious fluidity using green ways, visual connectivity, defining public and semi-private space, and local participation.

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Chapter 1
Historical Analysis

> "Aesthetic of the Engineer, Architecture: two things firmly allied, sequential, the one in full flower, the other in painful regression."
>
> -LeCorbusier [1]

The presence of looming industrial shadows weighs heavily upon the post-industrial city. These shadows stand as relics of what once was and how the city came to be. Now, they are seen as a burden, a barrier on the skyline, a present hindrance on the urban development to some, a celebration of the integral process of community and corporation to others.

While this project focuses on Buffalo, New York, the term post-industrial city is linked to the definition of "Rust Belt", an intensely knitted conjunction of waterways allowing barges and immense amounts of materials to be shipped from port to port. The Great Lakes region was thriving from 1825 to the late 1950's.[2] To the west, automotive factories fueled growth in cities like Milwaukee, WI, Detroit, MI. Steel plants created an increase in population in Cleveland, OH and Pittsburgh, PA. To the east in Lake Erie, coal, grain, and flour storage and trade fed the drive in Erie, PA, Hamilton, Ontario, and Buffalo, NY.

The industrial era began to decline in productivity due to a lack of interest in research, employment shares, and competitive pressure. With no outstanding competition, companies did not feel the need to reinvent themselves to become more dominant in business, ultimately

1 LeCorbusier, pg 92, "Towards An Architecture"

2 http://www.history.com/this-day-in-history/erie-canal-opens

leading to their demise.[3]

> "Lack of competitive pressure leads to low levels of industry innovation, productivity growth and industry growth. This follows from the idea that industries not faced with vigorous competition can maintain their market leadership without needing to pursue costly innovations, leading to stagnation in production." (Ohanian)[4]

Due to the decline of productivity and jobs, cities were left segmented into sections that defined areas with voids of activity and abandoned buildings.

The goal of urban renewal is to re-establish these unwelcoming areas into informative and pleasant experiences for the communities these industrial structures once helped create. For example, Milwaukee, has worked to rebrand itself as a "Coastal City" rather than "Rust Belt."[5]

Currently, Milwaukee, Wisconsin is holding a design competition to redevelop a 107 acre plot of abandoned land that served as the site for the Chrysler automotive factory. Despite being shut down and demolished in 2010, the city has chosen to act fast and implement a 5 year plan to aid to the surrounding community development by providing easily accessible public green space. The design should be "'reactive and proactive'" to respond to community needs and allow for change over time."[6]

3 https://www.minneapolisfed.org/research/economic-policy-papers/competition-and-the-decline-of-the-rust-belt

4 https://www.minneapolisfed.org/research/economic-policy-papers/competition-and-the-decline-of-the-rust-belt

5 https://nextcity.org/daily/entry/milwaukee-water-technology-hub

Other cities such as Pittsburgh have chosen to embrace their rust belt heritage through their urban renewal. A celebrated series of steel factories known as the Carrie Furnaces (in operation from 1884-1982) are now a part of the history and art communities (fig 1 & 2). They are presently shown in a museum fashion with other segments of the factories showcase artwork done by local artists.[7] The Carrie Furnaces hold outdoor concerts and shape unique experiences for the public to appreciate their heritage.[8]

One thing both of these projects have in common is the proactive approach to use abandoned space as a positive element in redesigning community. Reconfiguring spaces through a series of conscious movements can aid in strengthening a city by providing social and economic opportunity. These strategies will be used as precedents for the selected Buffalo, New York site where the community in extremely close proximity to active and inactive industrial structures is becoming redeveloped without community involvement.

6 http://www.archdaily.com/773073/winners-of-the-rust-belt-contest-offer-ideas-for-a-107-acre-former-factory-site

7 https://www.riversofsteel.com/things-to-do/attractions/

8 http://www.thrivalfestival.com/carrie-furnace/

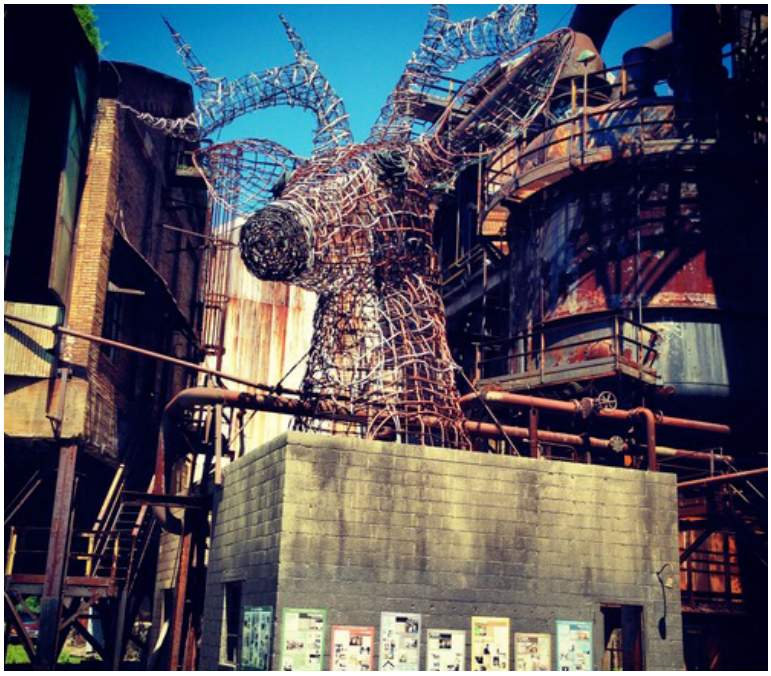


Figure 01
Carrie Furnace, Pittsburgh PA
Art Installation
Source:http://www.thrivalfestival.com/carrie-furnace/



Figure 02
Carrie Furnace, Pittsburgh PA
Brewfest
Source:https://www.riversofsteel.com/things-to-do/attractions/

i. Create
The Rise of the Grain Elevator

Buffalo, New York boasts a history that fits the definition of a resilient city. Located in the northeast region of Lake Erie, Buffalo was one of the major eastern ports of the rust belt waterway connection.

In the war of 1812, a trading post (est. 1788) in Western New York State was burned to the ground. In 1825, the Erie Canal was opened and began a new age of trade with the cargo barge transporting flour and grain. With the Erie Canal growing in popularity with businesses, there become a need for new methods of storage and processing. In 1827, Joseph Dart, a local Buffalo man, along with Robert Dunbar, designed the first grain elevator made out of wood. With this new storage strategy being introduced, the immediate response was to see how much bigger these elevators could get and how much more grain the silos could hold.[9]

Eventually the entire length of the Buffalo River was covered in grain elevators and provided employment positions that were filled by Irish immigrants. It wasn't long before the First Ward was densely populated with single and multi-family residences. To this day, some of those families still reside in the houses. The massive industrial elevator boom created such a statement on the Buffalo skyline, they formed a physical barrier between

9 http://www.buffaloah.com/h/dart/

the core of downtown and the outer harbor, essentially cutting off access to the residents on the other side of the steel bridge that linked the residents to their place of employment.

The grain elevators have had multiple trials and errors in terms of material and durability. Wood elevators burned, brick elevators required high levels of maintenance, but a combination of concrete and steel elevators have stood the test of time. This construction method was the first slip form experiment with grain elevators. They are said to be the "world's most impressive array of early modern engineering."[10]

10 http://buffaloah.com/h/elev/concrete/conc.html

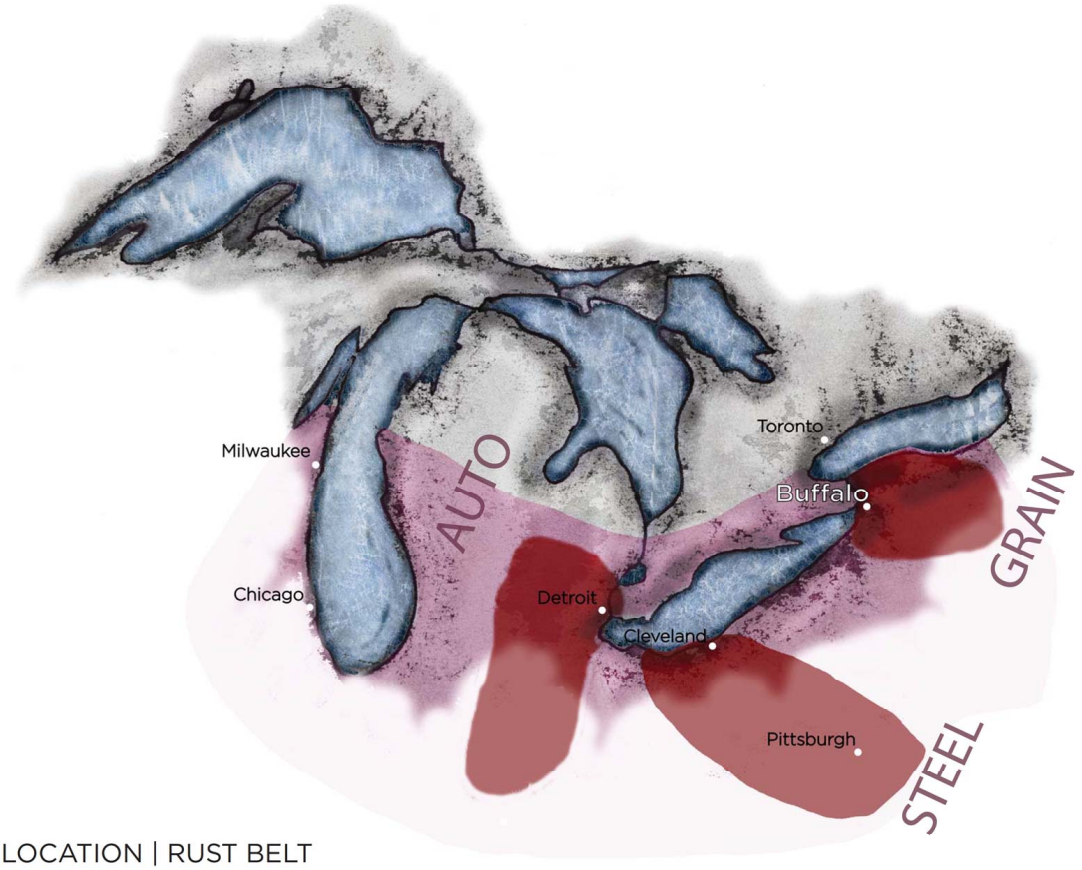


Figure 03
Rust Belt Map
Source: Author



Figure 04
Location Map of Erie County
Source: Author

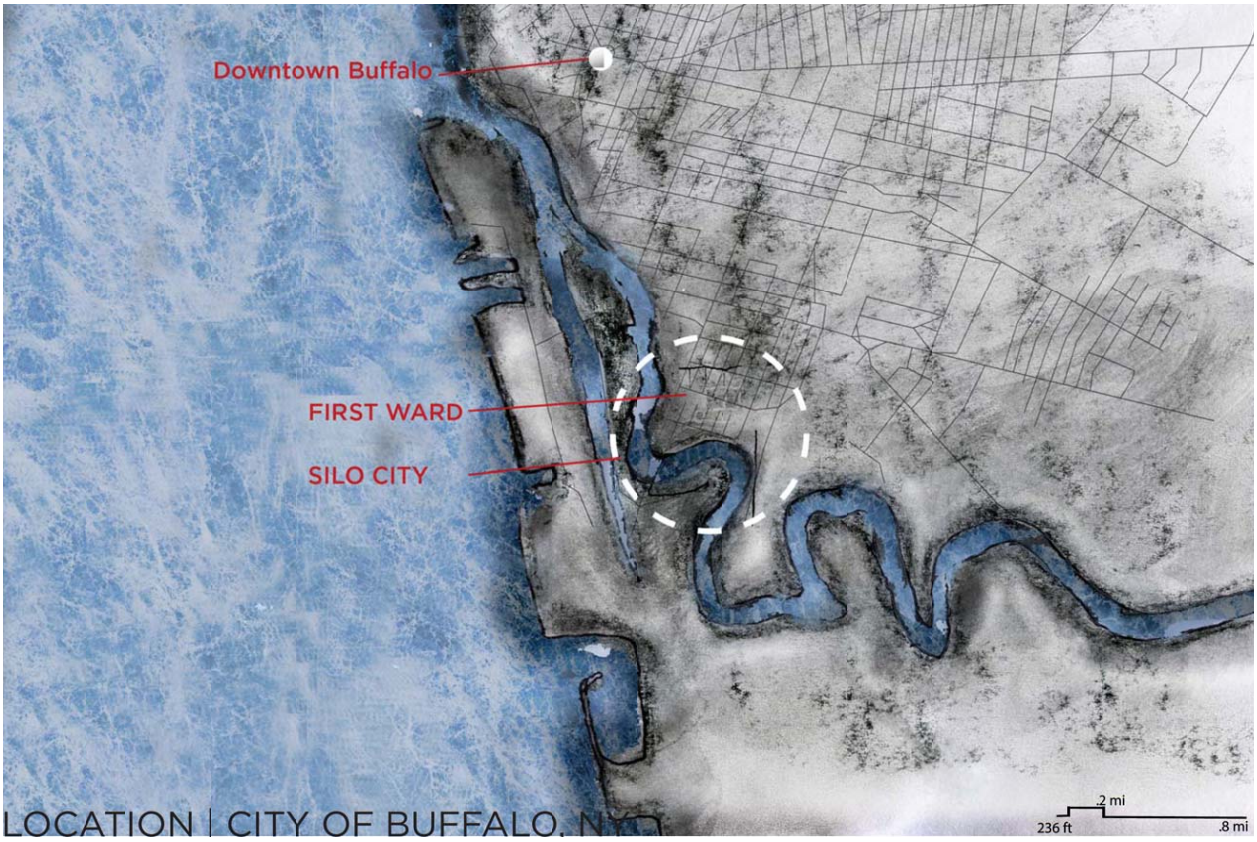


Figure 05
Location Map of City of Buffalo
Source: Author

First Ward



Figure 06
Ward Map
Source: http://www.buffaloresearch.com/maps.html



Figure 07
Photograph of Canal Barge, Mid 1800's
Source: https://www.youtube.com/watch?v=E-YgcN-en3U

ii. Thrive
Worker's Housing, Immigration, and Urban Density

The First Ward was named for its sequential order of inhabitance. Following the First Ward was the Second through Thirteenth Wards. Separating by ward allowed for easier census records and contributed to the pattern of growth within the city.

Families in each ward were integrated together by creating relationships with each other based off of culture and nationality. Since Buffalo was a growing city, immigrants would come over from Europe and settle in groups. The sense of familiarity eased tension and created a mutual respect.



Figure 08
Young Irish Men on a Porch in the Old First Ward
Source:
https://www.pinterest.com/pin/132785888988699256/

With a tight urban fabric, multi-family homes were a common thing. Some houses were less than 4 feet from their neighbor. To date the scale of the residences do not go past 3 stories (multi-family) or 2 stories (single family). The houses closely line the streets, hugging the sidewalks, and establishing a dramatic horizontal to vertical scale with the surrounding context being grain elevators that range from 100 ft- 170 ft.



Figure 09
Horizontal to Vertical Scale Difference
Source:
http://davidschalliol.com/blog/2013/04/15/the-buffalo-telescope-house-and-some-silos/



Figure 10
Grain Workers Operating Pulling Systems
Source:
http://www.buffalohistorygazette.net/2010/10/grain-elevators-as-they-were-part-three.html

iii. Shift in Progress

The Deceleration of the Industrial Movement

The Champlain Canal constructed in 1823 was built to connect southern Lake Champlain to the Hudson River and emptying into the Atlantic Ocean. The Erie Canal opened in 1825 connected the Atlantic, Hudson River, Lake Champlain, and the Champlain Canal to the Great Lakes. The Erie Canal created various ports throughout the state for trade.[11]

In 1959, the St. Lawrence Seaway opened and ships would no longer need to cruise down the Champlain Canal to the Erie Canal in order to reach the Great Lakes.

Saint Lawrence Seaway
Erie Canal
Champlain Canal

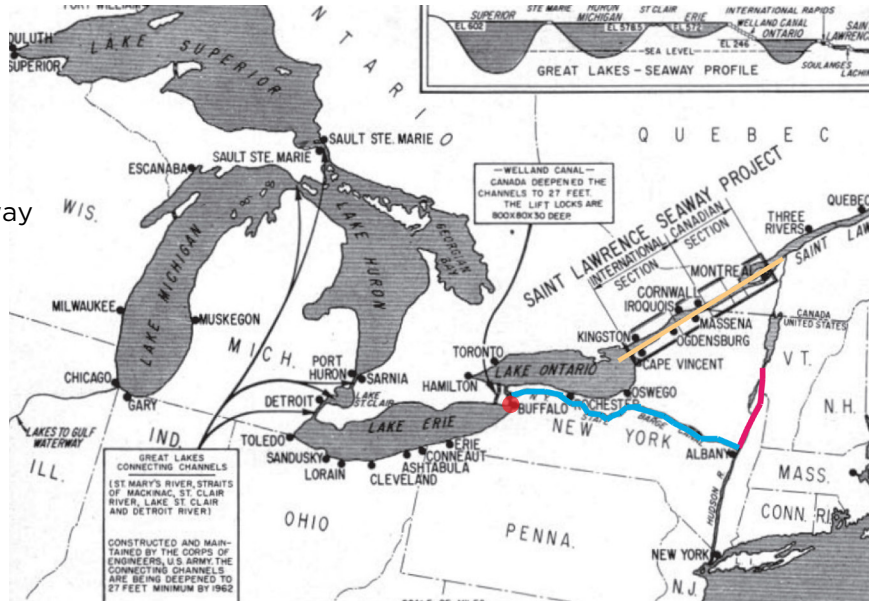


Figure 11
Map of Erie Canal, Champlain Canal, and Saint Lawrence Seaway
Source: https://en.wikipedia.org/wiki/Great_Lakes_Waterway

11 http://www.nycanals.com/Champlain_Canal

12 http://www.buffalohistoryworks.com/grain/history/history.htm

13 Glaeser, Edward L., "Can Buffalo Ever Come Back?", New York Sun

The Saint Lawrence Seaway expanded travel to Lake Superior and created wider openings allowing for larger vessels to come through.[12] With less companies using Buffalo as a designated port for storage and redirecting grain, investment in the port decreased. Businesses made the decision to move and switch to the automotive industry or steel, traveling further down the Great Lakes.

There were 27 elevators in 1863. This was the peak of the industrial era for Buffalo. Today there are 17 left standing, while out of those 17, 6 are presently active (fig 12). With jobs disappearing due to companies relocating, the First Ward began to see its property values diminish. Houses began to become vacant, neglected, or torn apart for scrap metal.[13]

iv. Deteriorate

Memory vs. Time

Decades later, people have become accustom to seeing vacant houses unsuitable to live in. The solution? Tear the house down and leave an empty lot. Elevators crumble due to the lack of durability in their structure and material. There's little to no maintenance on the elevators other than the occasional purging of mechanical equipment. Others were simply bulldozed and paved over for parking lots or an attempted rebranding of the city.

The direct correlation between the rise and fall of the economic and social variables of the industrial era are what sculpt a basis for an opportunity to stitch together the existing fabric. By recognizing the social and aesthetic value of the industrial remnants, the community can begin to identify ways to activate the surrounding context while implementing economically beneficial strategies as a way to create local revenue.

The industrial companies that are still using some of these elevators are part of the equation as well. The way in which the ADM Standard Elevator on St. Claire Street defines private property creates a disconnect between two variables that would not exist without the other. Those variables are the community members (once primarily composed of workers) and industry (fig 14).

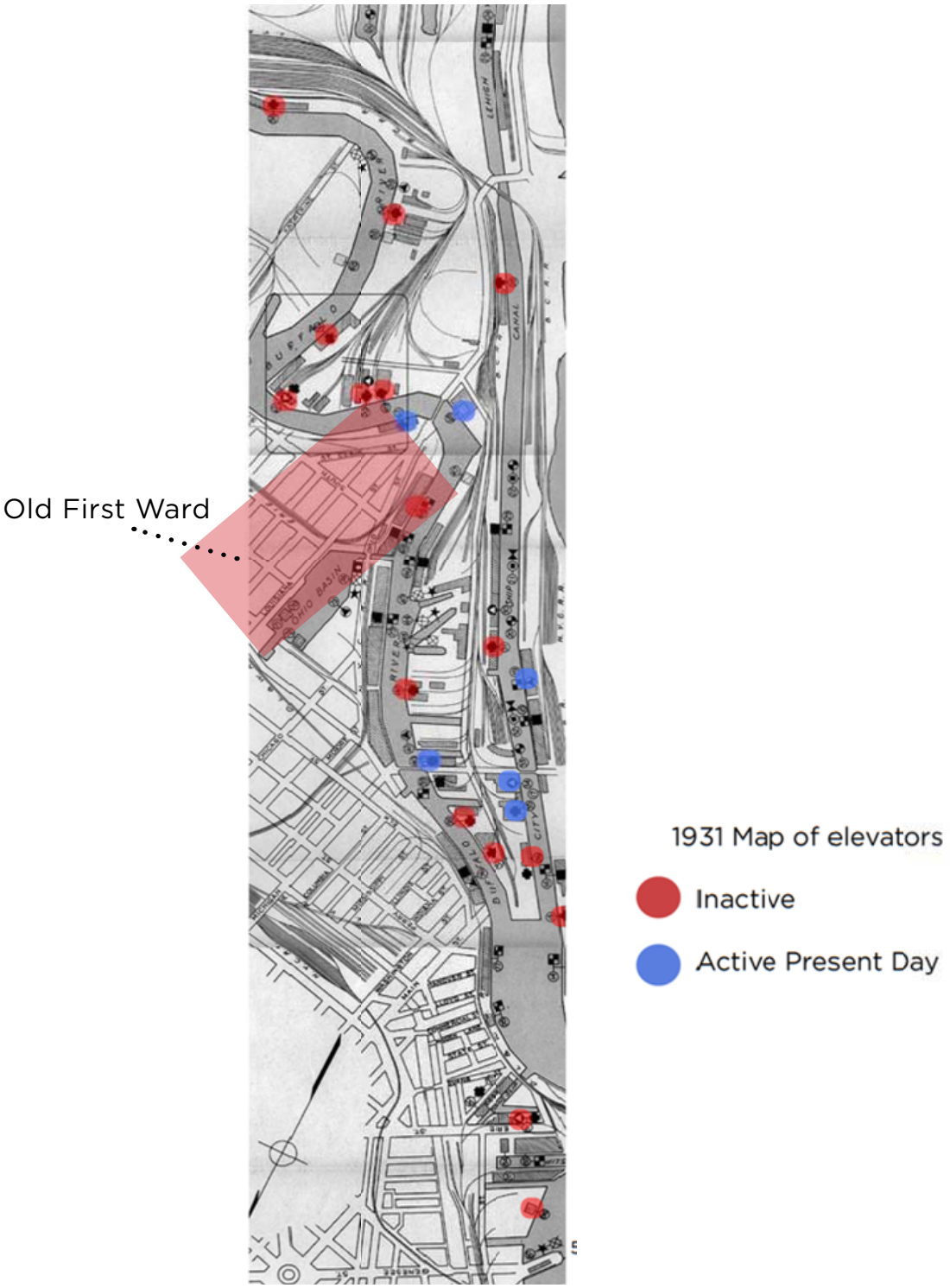


Figure 12
Active/Inactive Silos
Source:
http://www.buffalohistoryworks.com/grain/map/location-map.htm

When does it become appropriate for community and industry to bridge the divide and come to an agreement to provide a more socially encouraging experience that feeds into a pleasant overall atmosphere? Even though there are railroads feeding into the active elevator as well as vessels dropping off grain, this could be used as an opportunity for train and ship enthusiasts to do some observing.

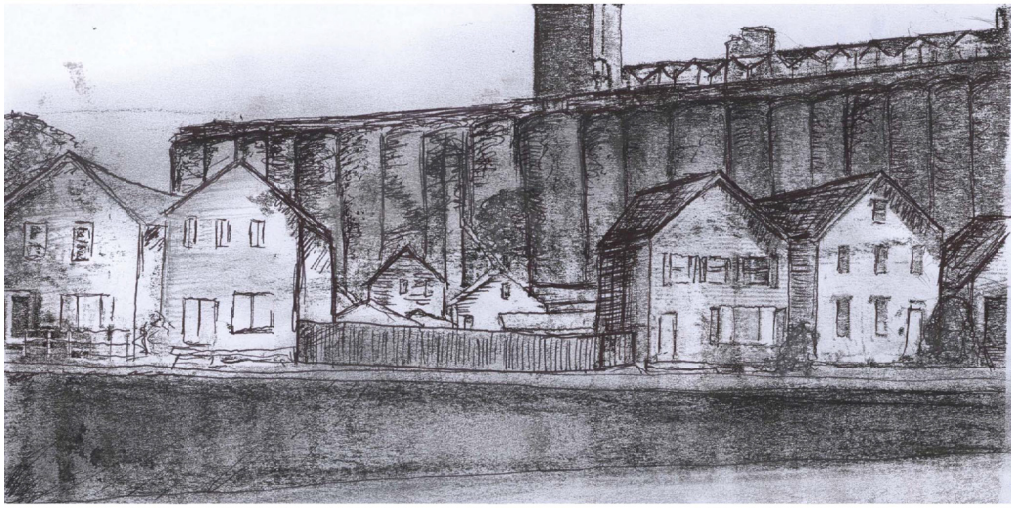


Figure 13
Homes with the ADM Standard Elevator towering behind
Source: Author

Chapter 2
The Artifact

i. The Rust Belt
Active & Inactive

The goal of this thesis project is to help encourage the revitalization of community, encourage social interaction, and assisting the Old First Ward in becoming a destination spot throughout the year by following the pattern of progress within the city as a whole.

In addition to active and inactive grain elevators on and near the chosen project site, there are active and inactive warehouses (fig 14). Some of these warehouses are being converted into lofts, breweries, distilleries, and event spaces. One of these projects is entitled the Barrel Factory, built in 1903 (fig 20 + 21). Originally the Quaker City Cooperage Company, it was a manufacturing site for wooden slack barrels, used in coordination with the adjacent grain elevator companies for grain, malt, and flour storage. The building's exterior is remaining the original brick, which was made on site.[14]

Other examples of redevelopment within close proximity include Canalside which is a public greenspace on the waterfront that holds concerts, events, and fitness classes. Canalside is 1.5 miles to the North of the First Ward and boasts a rather large skating rink which serves as a reflection pool during the summer months, a stage, restaurants, naval ship park, bars, 3 indoor skating rinks that have gained international attention, a National Hockey League arena, and hotels. At night it offers a light show on an adjacent grain elevator (fig 15-19).

14 http://www.barrelfactory.com/our-building.html



Figure 14
In Use and Abandoned Industrial Buildings in immediate area
Source: Author

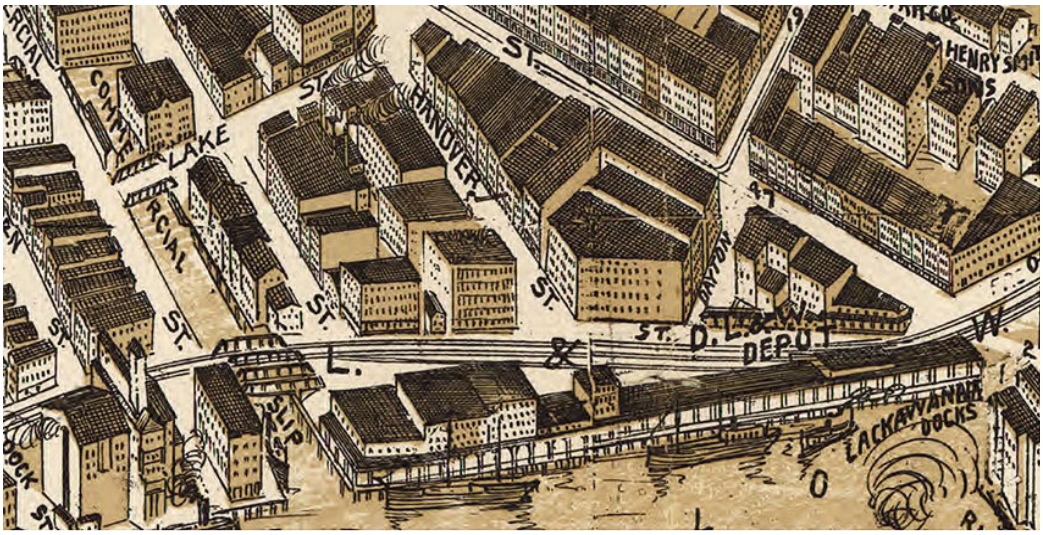


Figure 15
Inner Harbor Waterfront 19th Century
Source:http://www.buffalo.edu/ubreporter/research/news.host.html/content/shared/university/news/ub-reporter-articles/stories/2013/canalside_dig.detail.html

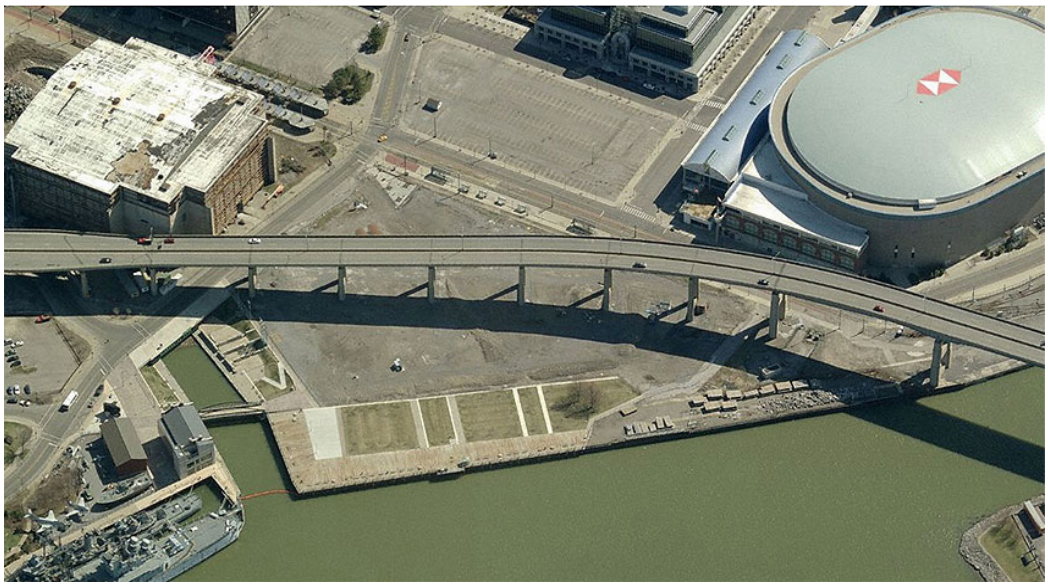


Figure 16
Inner Harbor Waterfront 2009
Source:http://www.buffalo.edu/ubreporter/research/news.host.html/content/shared/university/news/ub-reporter-articles/stories/2013/canalside_dig.detail.html

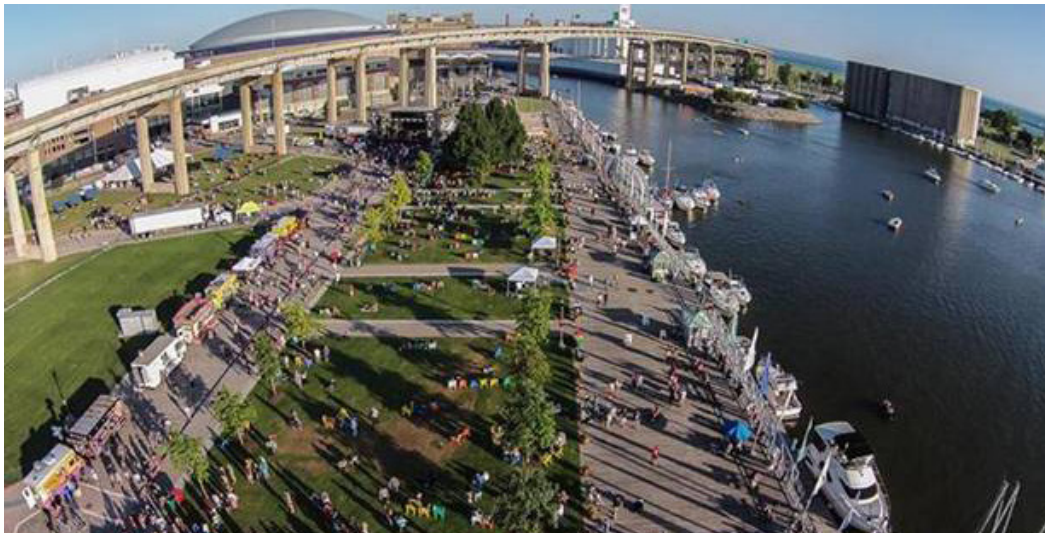


Figure 17
Inner Harbor Waterfront Canalside Development Project Present Day
Source: https://www.canalsidebuffalo.com/about-canalside



Figure 18
Inner Harbor Waterfront Canalside Development Project Present Day
Source: https://www.youtube.com/watch?v=OnsyFyRdvlk



Figure 19
Inner Harbor Waterfront Canalside Development Project Present Day Grain Elevator Light Show
Source: https://beautifulbuffalo.com/tag/buffalo-grain-elevators/



Figure 20
View of Barrel Factory from Railroad Strip
Source: Author



Figure 21
View of Barrel Factory from Railroad Strip
Source: http://www.barrelfactory.com/barrel-factory-gallery.html

ii. Community
Designing for a Dilemma

A collection of 5 silos located off of Childs Street next to the First Ward have been named Silo City. As times have changed, the First Ward has also been dubbed the Old First Ward, simply because of the amount of time in which the community has been around.context of the immediate area around Silo City and the Old First Ward consists of mainly flat land separated by the Buffalo River which empties out into Lake Erie.

The site is 1.4 miles from the city center. The demographcis of the area are as such:
Old First Ward:
Area: 1.9 sq. mi.
Population: 1,251

2013 Census Average:
Old First Ward:
663 people per square mile

City of Buffalo:
6,376 people per square mile

Other Old First Ward Statistics:

Residents Below Poverty Level:
23.6%

Unemployment: 19.4%

Housing Cost:
Average: $39,000-$40,000
HUD Housing Program
Average Property Size: .06 Acres

Average Age: 41 [15]

15 city-data.com

The current development within Buffalo is beginning to spill over into the Old First Ward and Silo City. Silo City has seasonal tours, boat launches, events, poetry readings inside the elevators, and concerts because of the opportunities of the sound properties and reverberations that occur within the silos.

A unique feature of this location is the greenway that runs along the Buffalo River and connects to an Olmsted parkway system (fig 26).

The residential development has been focusing on the Buffalo River waterfront properties that are available. So far, two large development corporations have purchased land to convert into luxury apartments that do not match the pre-existing horizontal/vertical scale previously mentioned in the neighborhood. There is also no space conjoining the two in with the other side of the street or neighboring parks.

Both development projects have been approved and are underway. Apart from the issue of scale and context, the socioeconomic properties of the people which this market is catering to is composed of young and wealthier professionals. They do not fit into to the demographics of the Old First Ward. The luxury apartment designs fail to create any connection to the rest of the neighborhood. They exclude the blue collar workers who have lived in that particular ward for generations. The renderings of the upcoming projects can be seen in figures 22 and 24.



Figure 22
301 Ohio Street Luxury Lofts

Source:http://www.buffalorising.com/2015/08/ellicott-can-dig-it-301-ohio-street-under-construction/

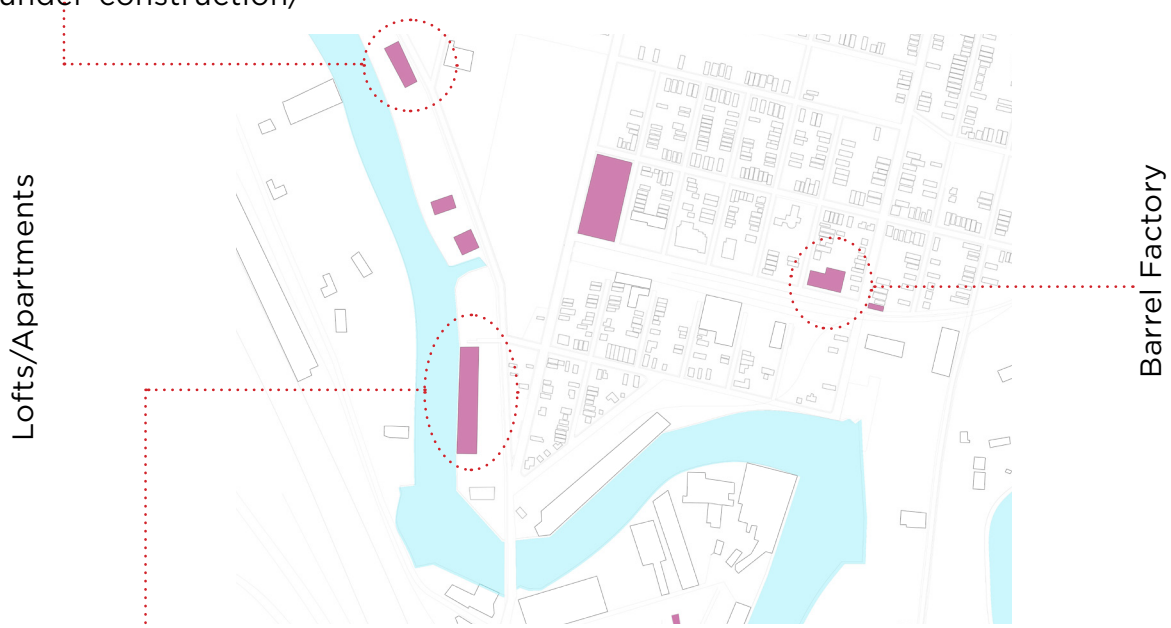


Figure 23
Current Development
Source: Author



Figure 24
Buffalo River Landing Luxury Apartments
Source:
http://www.buffalorising.com/2016/02/buffalo-river-landing-project-is-under-way/



Figure 25
Olmsted Parkway Connections
Source: Author

Existing Conditions



Figure 26
Observing the Site from The West
Source: Author



Figure 27
The only Market
in the Old First Ward
Source: Author



Figure 28
Site reference map
Source: Author



Figure 29
Site reference map
Source: Author



Figure 30
Existing Community Garden
Source: Author



Figure 31
Existing Riverfront Condition
Source: Author



Figure 32
View of Top Corner of ADM Standard Elevator, Old First Ward, and Downtown Buffalo
Taken from inside Perot Elevator
Source: Author

iii. Barriers

Physical Separation and the Joining of Community & Big Business

Presently in the Old First Ward there is one active silo owned by Pillsbury. It is separated from the community by a tall fence overgrown with vines and weeds and creates a feeling of exclusion. This particular elevator also acts as a wall that cuts off access to the riverfront and the rest of the city.

Wall-like barriers are not the only attributes to the impediment of progress in the community. There are empty lots and vacant buildings that feed into the “keep out” feeling of the Old First Ward and Silo City. At night these spots are not well lit, and during the day there are no encouraging activities other than the occasional event which draws a crowd for a few hours. After the event, the area once again becomes the “untouchable” zone of the neighborhood.



Figure 33
Existing Physical Barrier defining industry vs. community
Source: Author



Figure 34
Houses with ADM Standard Elevator in Background
Source: http://www.bizjournals.com/buffalo/gallery/9871

Chapter 3
Making a Connection



Figure 35
Existing Site Plan
Source: Author

i. The Stitch

Forming Community

The existing condition of the urban fabric contains gaps where houses once stood, and the streets have an immediate interruption once they reach a discontinued rail line. That same street will then continue on the other side of the railroad strip, but there is no way to drive or safely walk continuously.

Upon observation of the site, there is a heavily used community center with a community garden that is on the opposite side of that block. The community center offers afterschool programs, food for families, and holds city events such as the annual Shamrock run on St. Patrick's day. Neighboring the community center is the long strip of discontinued railroad, an apartment building to the right, an abandoned warehouse to the left, and a large abandoned warehouse directly across (fig 36).

The number of abandoned warehouses creates a disconnect in the community and makes the area seem cold and empty. The fence surrounding the ADM Standard elevator also creates a feeling of disconnect, when it's actually a very large part of the identity of the area. There are also two parks that have no established path connecting them or relating one to the other.

The Buffalo River is a historical part of the forming of the nieghborhood and is currently inaccessible by the public from this specific location.

The grain elevators separated from the Old First Ward by the river hold a strong visual connection from any point of view while moving about the area.

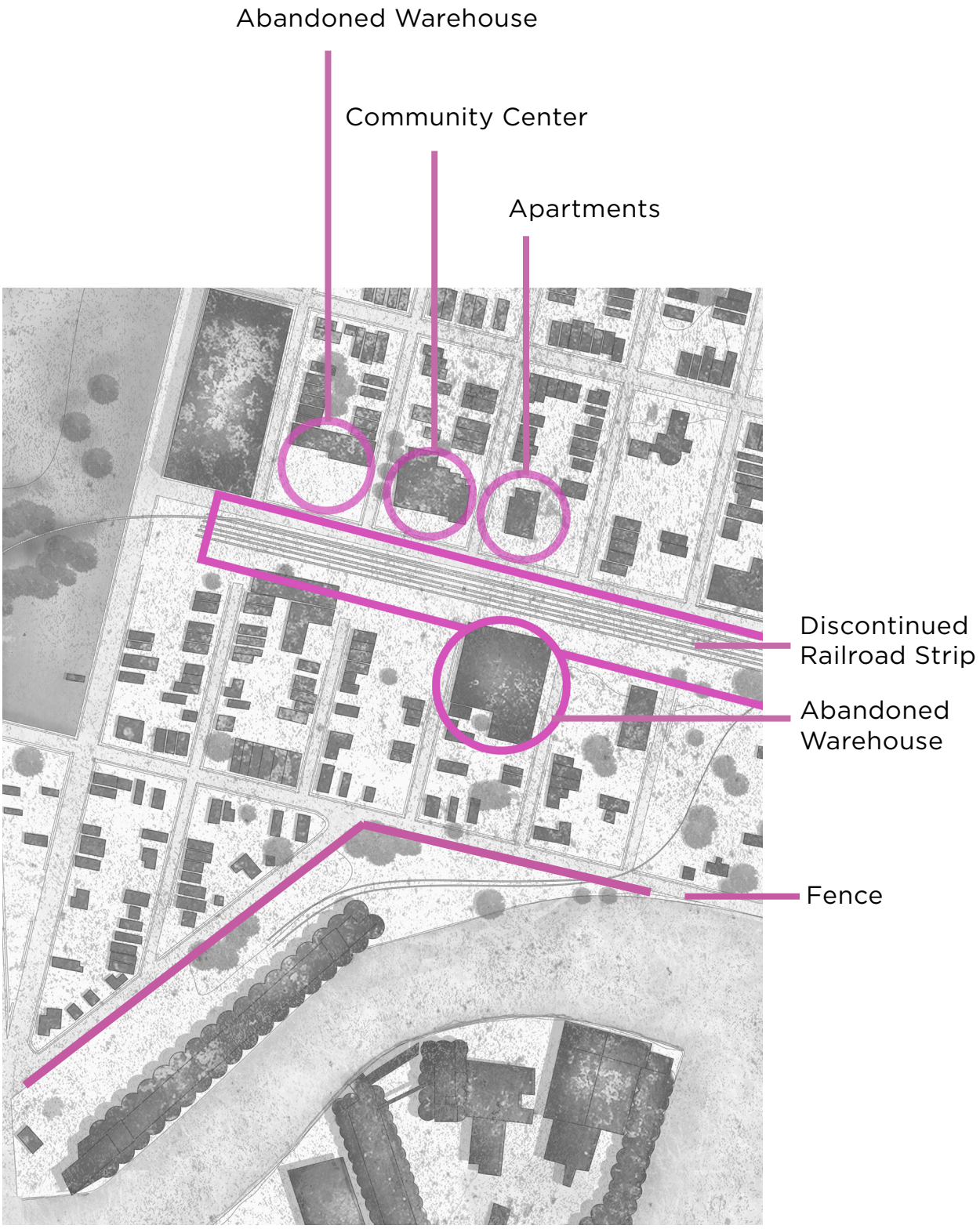


Figure 36
Site Analysis
Source: Author



Figure 37
Site Map
Source: Author

The community center serves as a social gathering place, however dated. It is very active with the community and has limited outdoor space for children/families. The community garden is further away from the building than it should be, as the garden appears to be its own entity rather than a community involvement.



Figure 38
Community Garden
Source: Author



Figure 39
Community Center
Source: Author

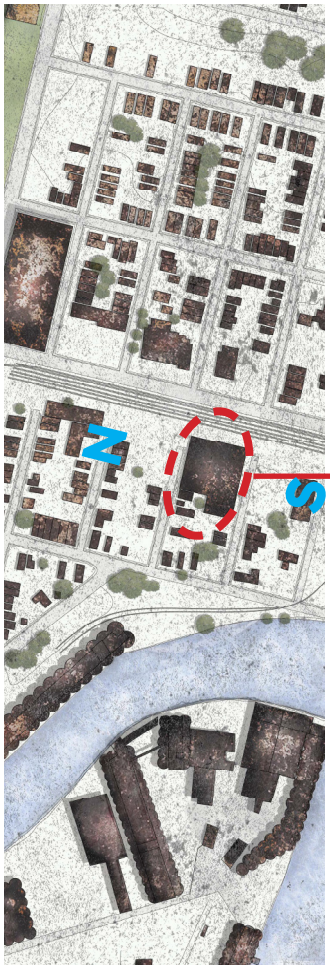


Figure 40
Site Map
Source: Author

The warehouse on Vicennes Street and Alabama Street holds a position within the surrounding context that defines the geographical center of the site. The building is accessed from the north and south sides, with the main entrance being on the south. Both sides are set back from the street by approximately 10 feet. The adjacent lot to the north is a large dirt patch used for extra parking by the houses next door (fig 44). The adjacent lot to the south is a paved over parking lot (fig 43).

The visual experience looking west from the warehouse lines up directly to the silos located in Silo City as well as the ADM Standard Elevator on St. Claire Street. Both Vicennes Street and Alabama Street empty onto the presently closed off riverfront.

To the east there is the community center and a long strip of discontinued railroad.

Given the conditions of this particular central location, this warehouse will be identified as the start to the redevelopment of the community.



Figure 41
North Side of Warehouse, Looking West down Vicennes Street
Source: Author



Figure 42
Site Map
Source: Author



Figure 43
Paved Parking Lot, Alabama Street
Source: Author



Figure 44
Empty Lot
Source: Author

Program

Since this project is about the redevelopment of a blue collar community, the objective program should undoubtedly serve as a socioeconomic boost to the neighborhood by providing a way in which the community can generate local revenue. The warehouse on Vicennes Street and Alabama Street provides visual connection to the surrounding context and will be easiest to redevelop, as it is essentially a big open box.

Precedent studies for ways to generate local revenue include setting markets. These markets assist in allowing vendors to rent or purchase a small area inside of the building to sell goods. They can also aid in getting larger companies off the ground by providing a space for a starting pop up shop. In addition, markets have the opportunity, dependent on contextual density, to redefine streetscapes. Additionally, local markets assist in shaping public space, revitalizing existing structures otherwise left to decay.

Projects worth noting include the Union Market and the Eastern Market, both located in Washington, DC, and the Grand Central Market in Los Angeles, CA.

Precedents
Union Market, Washington, DC



Figure 45
Union Market
Washington DC
Source:
http://www.dcoutlook.com/2014/07/union-market-announces-fourth-annual-dc.html

Eastern Market, Washington, DC



Figure 46
Eastern Market
Washington DC
Source:
http://macdonaldbecker.com/eastern-market-in-capitol-hill/



Figure 47
Grand Central Market
Los Angeles, CA
Source:
https://www.oyster.com/los-angeles/areas/downtown-los-angeles/photos/grand-central-market-317-s-broadway--v4429668/

The market will define a central core in which to frame a series of connections to the surrounding context. This connection will include circulation, selective local material, and the removal of the fence from the Standard elevator property.

Identifying a central core to begin a series of moves within the community will assist in solidifying a sense of togetherness and unity. By allowing the core of the stitch (fig 48) to become more active, the neighborhood can remain family oriented. This can help in identifying segments of the area that might be less active during daytime hours for the sake of privacy.

By allowing the central core to be accessible to all citizens of Buffalo, the Old First Ward and Silo City can be stitched as a whole back into the fabric of the city.

The existing greenway does not take full advantage of the Buffalo River and the views it offers. By creating an extension of the greenway, the waterfront can begin to come down to a more human scale and become easily accessible and appreciated. The greenway addition will also link to Silo City and allow the city to generate a steadier flow of bike and foot traffic (fig 49).



Figure 48
Stitching Diagram illustrating the main area of re-development and how it will join the community together.
Source: Author

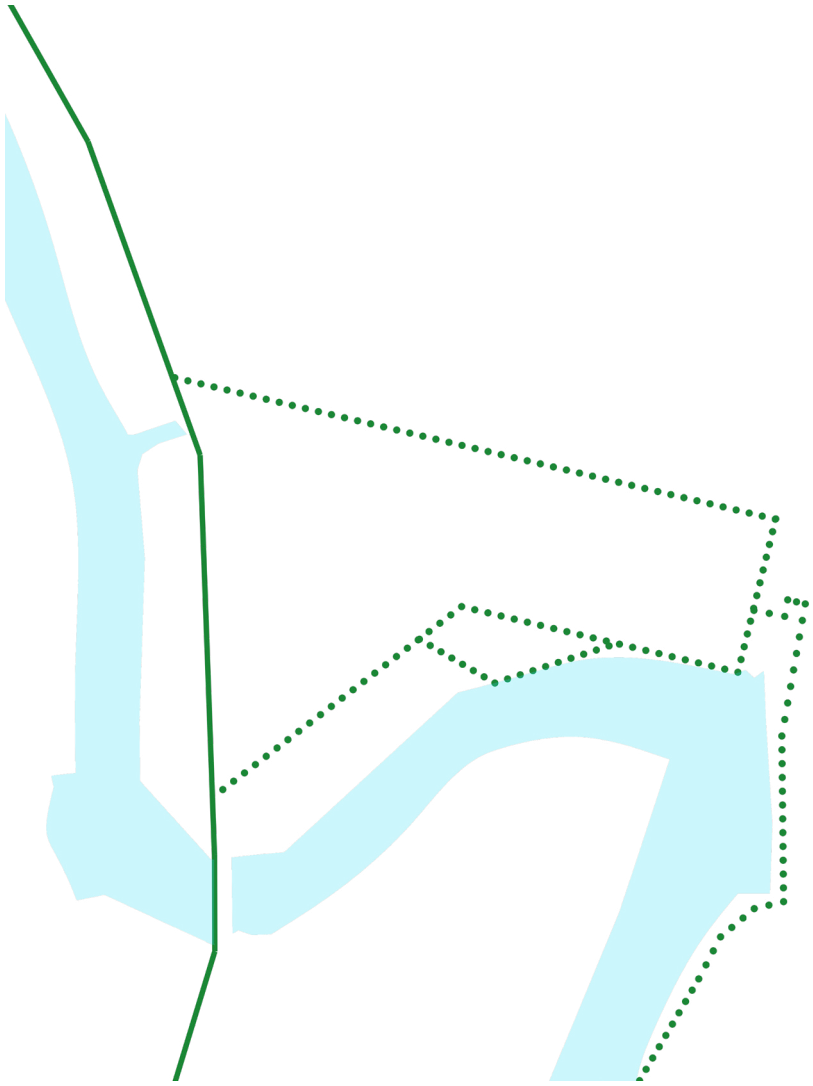


Figure 49
Greenway extension to allow for ease of access to destination points.
Source: Author

Existing Greenway

Addition

The introduction of a new program to the warehouse will begin to shape the community by encouraging other spaces to become inhabitable. The strip of land behind the warehouse with the discontinued rail line will be transformed into a green space. The location will allow for a small, outdoor venue for families to host parties or for the market to extend its sales outside on days with good weather. The community center will no longer have the community garden on the opposite side of the block, but rather across the street in the linear park. This will aid in the creation of a much more visibly active space.

Shaping the Community

Due to the north-south positioning of the market, there are 4 issues that will need to be resolved.

1. Light Quality
2. Proximity to housing next door
3. Vehicular/Pedestrian circulation
4. Connecting to the new riverfront park

Currently, the warehouse is less than 4 feet from the nearest residence (fig 50), is located on a series of segmented streets cut off by the linear lot behind it, and it receives a majority of its light by the main entrance rather than evenly distributed. It is closed off from the Buffalo riverfront and ADM Standard elevator by houses and some backyard fences, the elevator privacy fence, and two active rail lines.



Figure 50
Warehouse is less than 4 feet from nearest residence
Source: Author

On the east side of the building there is a community mural that will be preserved (fig 26). The existing building will be subtracted from on the west side to allow light to fill the interior spaces and allow the existing residence to have more privacy.

The orange line below represents a pathway that will be implemented to make a connection from the courtyard of the market to the riverfront park. It will subtract one existing house and define public and private residential space. (Fig 51)

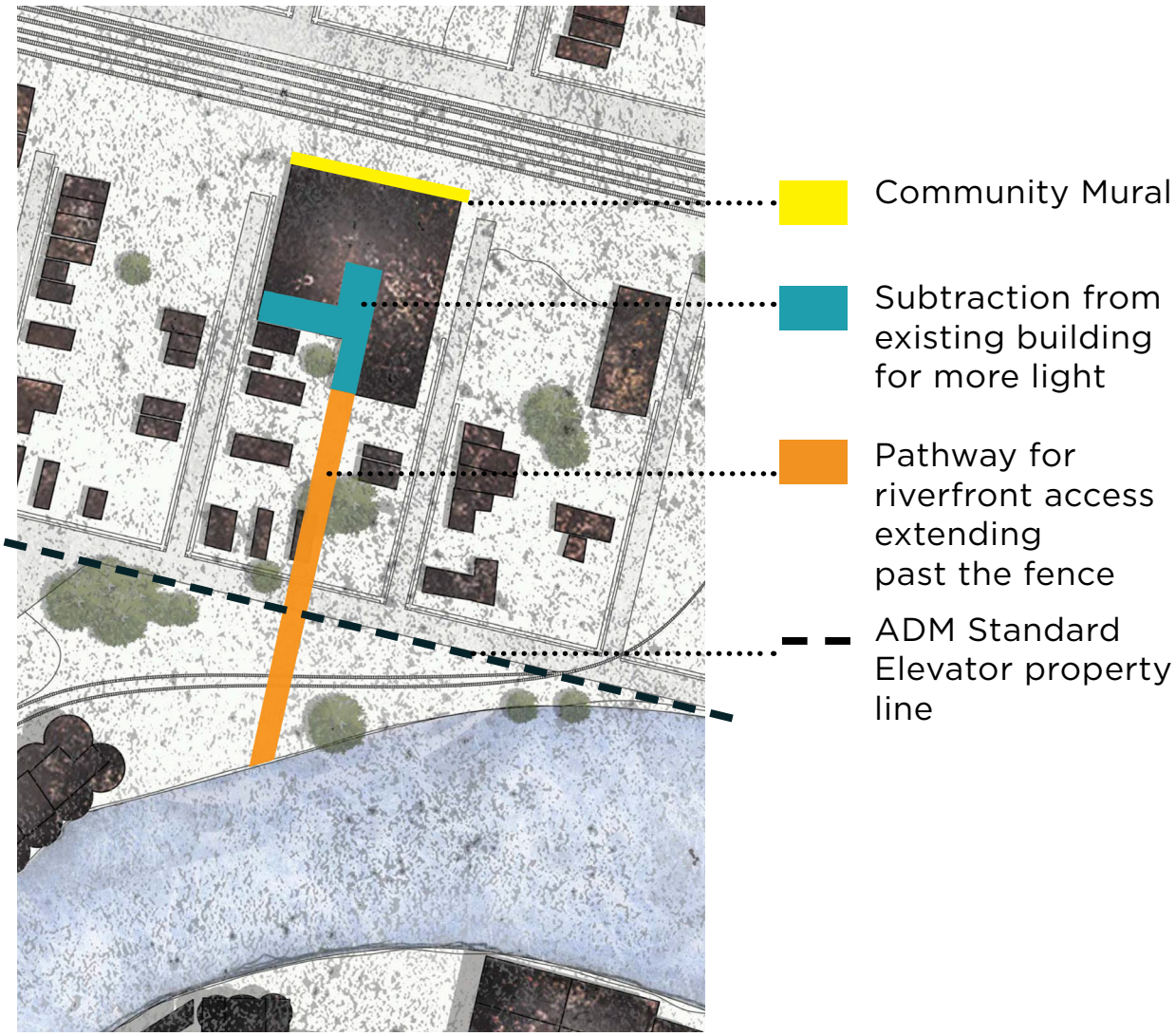


Figure 51
Program and Site Analysis
Source: Author

In the existing site plan (fig 35), the street pattern is interrupted by the linear strip of discontinued railroad. The streets on both sides of the strip have the same names, but do not link. By connecting the central street (Vicennes Street), cars and market vendor trucks can begin to maneuver about the site in a more efficient manner. Vincennes Street becoming connected allows for the park to maintain a neighborhood presence rather than being chopped up into segments. As for the surrounding streets closer to the warehouse, they will be connected through a single road.

The parking lot on the south side of the new market will be beautified.

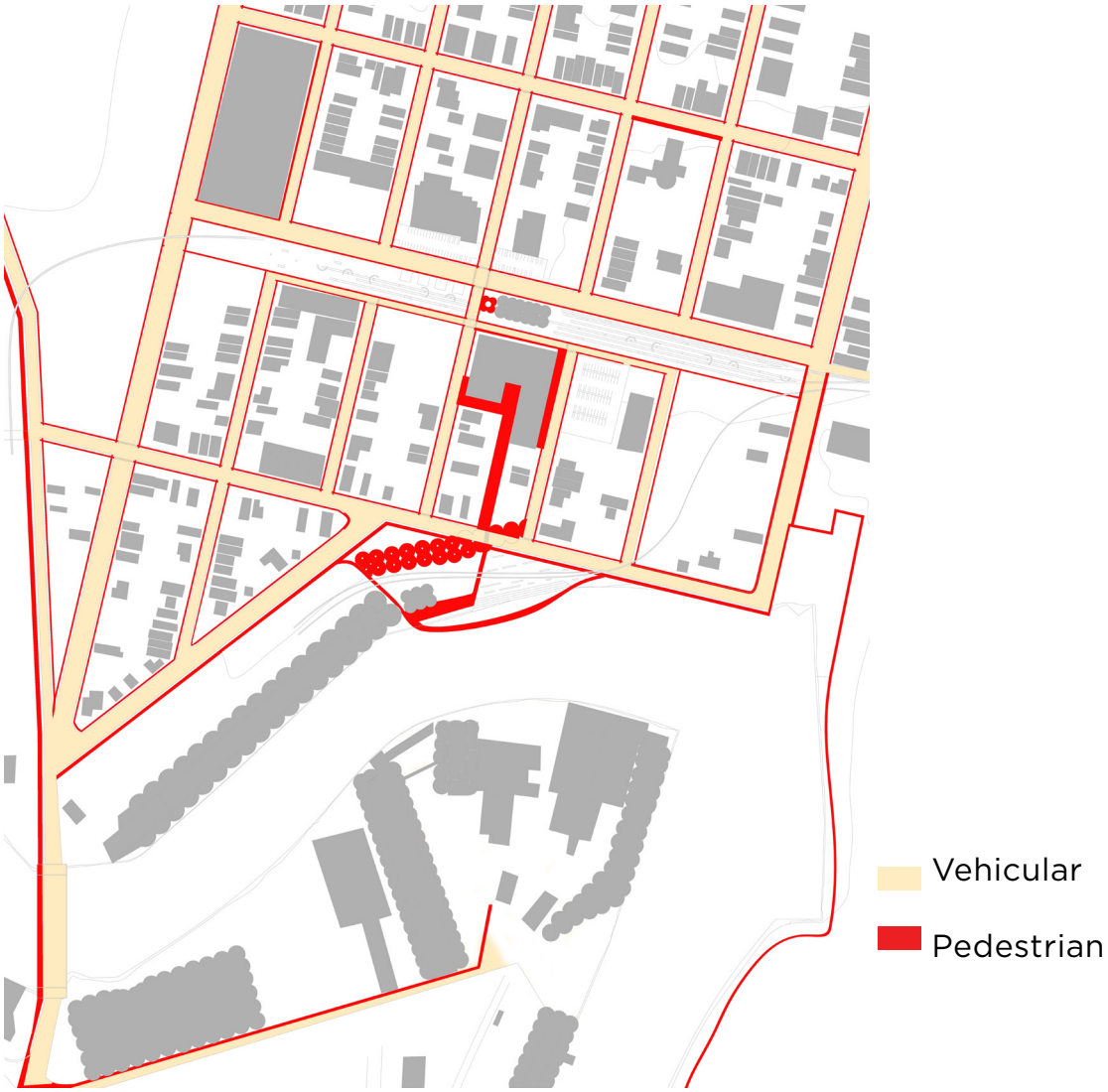


Figure 52
Vehicular and Pedestrian Circulation
Source: Author

ii. Connectivity
Space and Experience

Defining major arteries in the design development will designate major points of interest and high activity. The main artery runs along Vicennes Street and consists of the community center, market, riverfront park, and the light show on the Perot Elevator in Silo City.

The linear park creates an intersecting secondary artery with the relocated community garden and the outdoor market space (fig 55).

The arteries help to define how people will move throughout the spaces. By lining the streets, park, and market courtyard with trees, the residences can have more privacy and the neighborhood seems friendly and pleasant. The trees shape the views of the community and of the silos. It is also similar to the Olmsted Parkway of Buffalo with tree lined streets (fig 53).

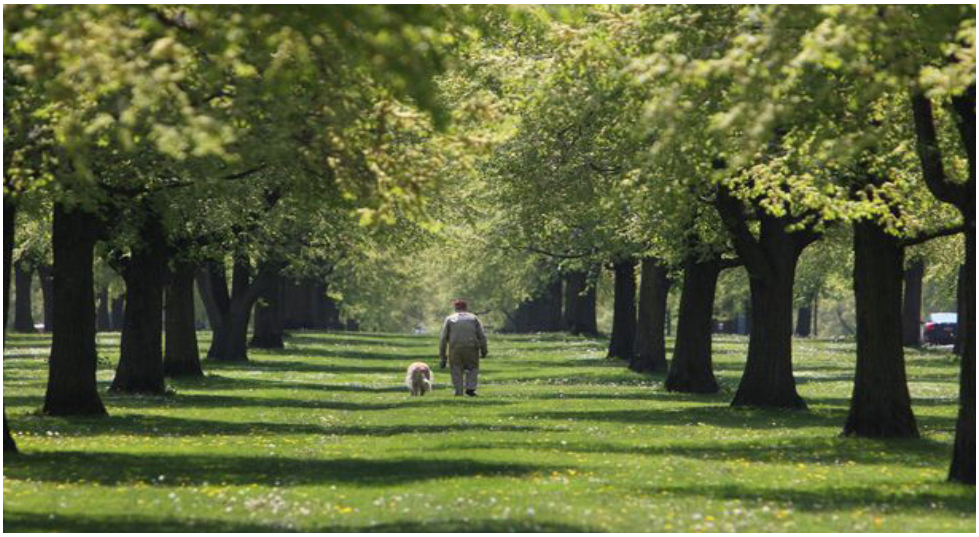


Figure 53
Olmsted Park System
Bidwell Parkway
Source:http://www.ajc.com/photo/news/photos/ajc-photos-week-may-12-17-2013/psDJW/



PROPOSED SITE PLAN
SCALE: 1/128" = 1'-0"

Figure 54
Proposed Site Plan
Source: Author

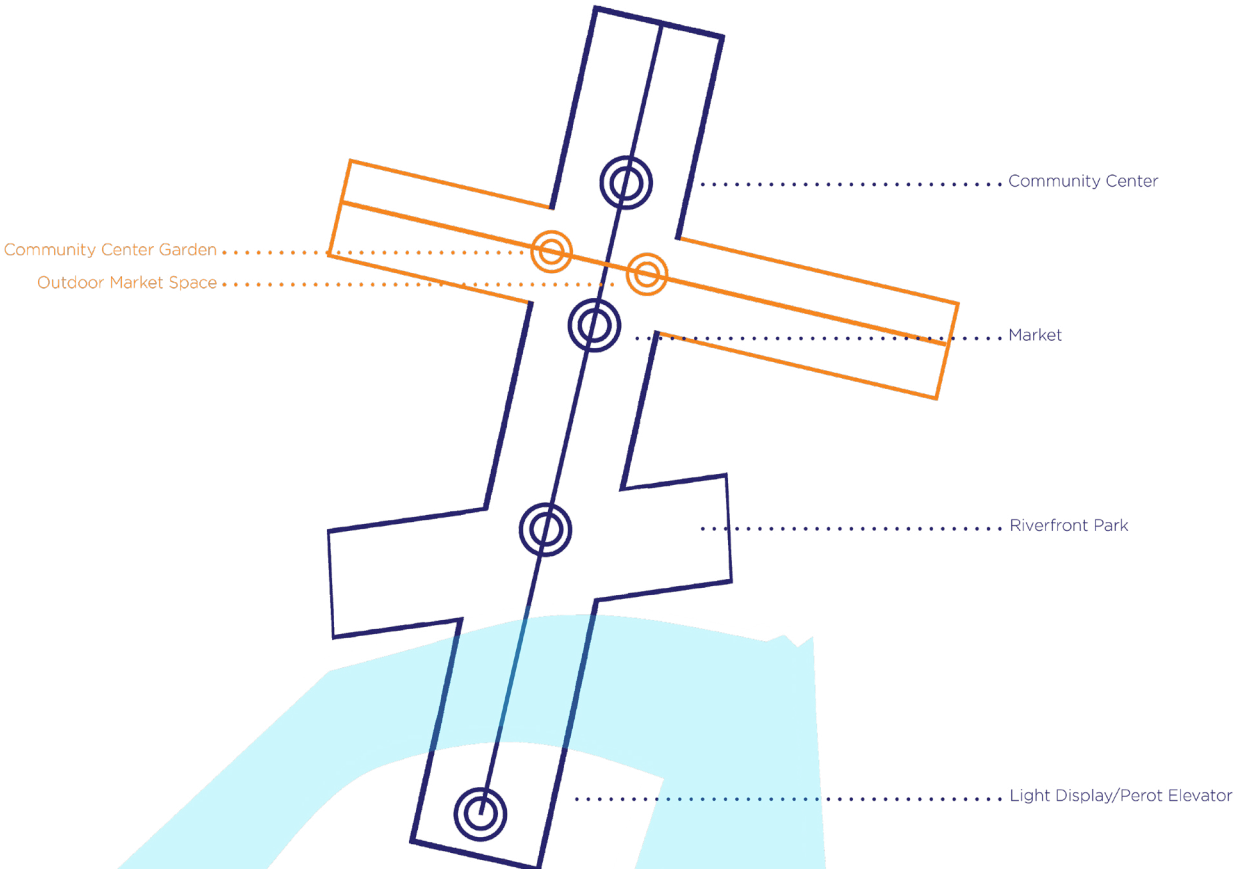


Figure 55
Intersecting Arteries Diagram
Source: Author



Figure 56
Zoom-In of the Proposed Plan
Source: Author

Where the rail lines once were on the strip of land that is now the linear park, there is now only the footprint of the rail line. The rail line footprints are infilled with oxidized fuel chips, similar to black gravel, from the grain elevators. Along these strips of stone are benches for seating and tall blue deconstructed columns. These deconstructed columns look like trees in the park setting. These are 17' art installations which are located throughout the project. They symbolize the rust belt identity with a gritty appearance and rebar twisting out of the tops (figs 57 +58).

They stand out in the community and are highly visible, however they do not have a high impact on the skyline. The sculptures are 17' so that they do not overpower the homes and create an alienating scale or steal attention from the elevators in the background.

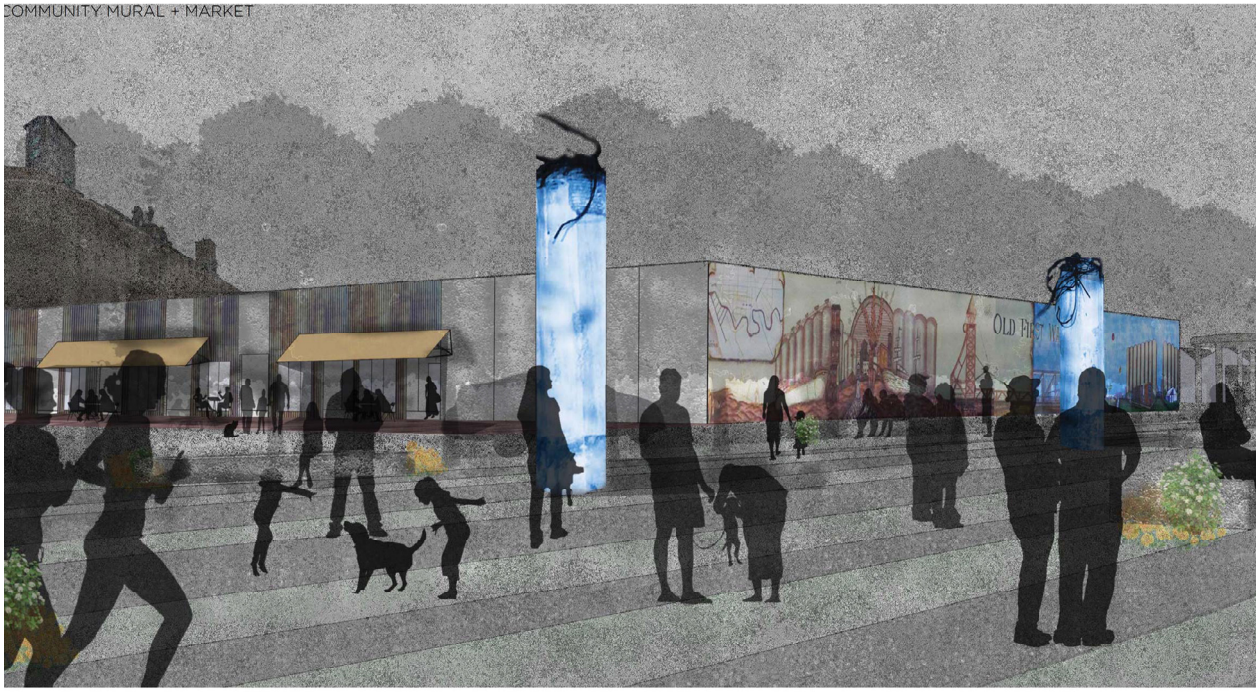


Figure 57
Perspective of the Mural and Southern Facade of the Market
Source: Author

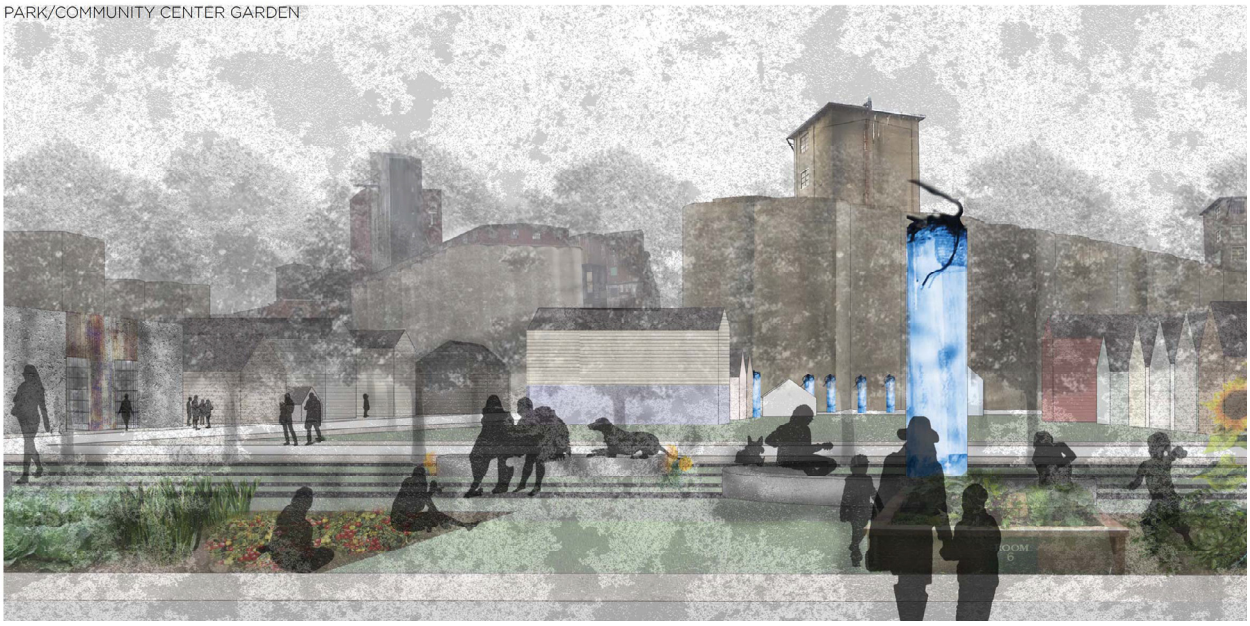


Figure 58
View of the Community Garden
Source: Author

Since the Old First Ward and Silo City have common materials, these same materials will be applied on top of the existing warehouse to help design something that will be familiar to those who live in the area. These two materials are corrugated steel and concrete. However, the concrete being applied to the market are a series of concrete panels (fig 57 + 59).

Instead of placing a deliberate barrier between the market and the neighboring houses (like the fence that was taken down for the marriage of property lines between the market and elevator), there is a softer barrier of trees and greenery (fig 59 + fig 60).

The tree lined street sidewalks will be made up of red brick cobblestone, which is reminiscent of the Erie Canal era. This same cobblestone will line the entire block of the market, including the outdoor seating areas, pathway to the riverfront, and courtyard, where it will continue along the waterfront.



Figure 59
Rendering of the Market to the Riverfront Park
Source: Author

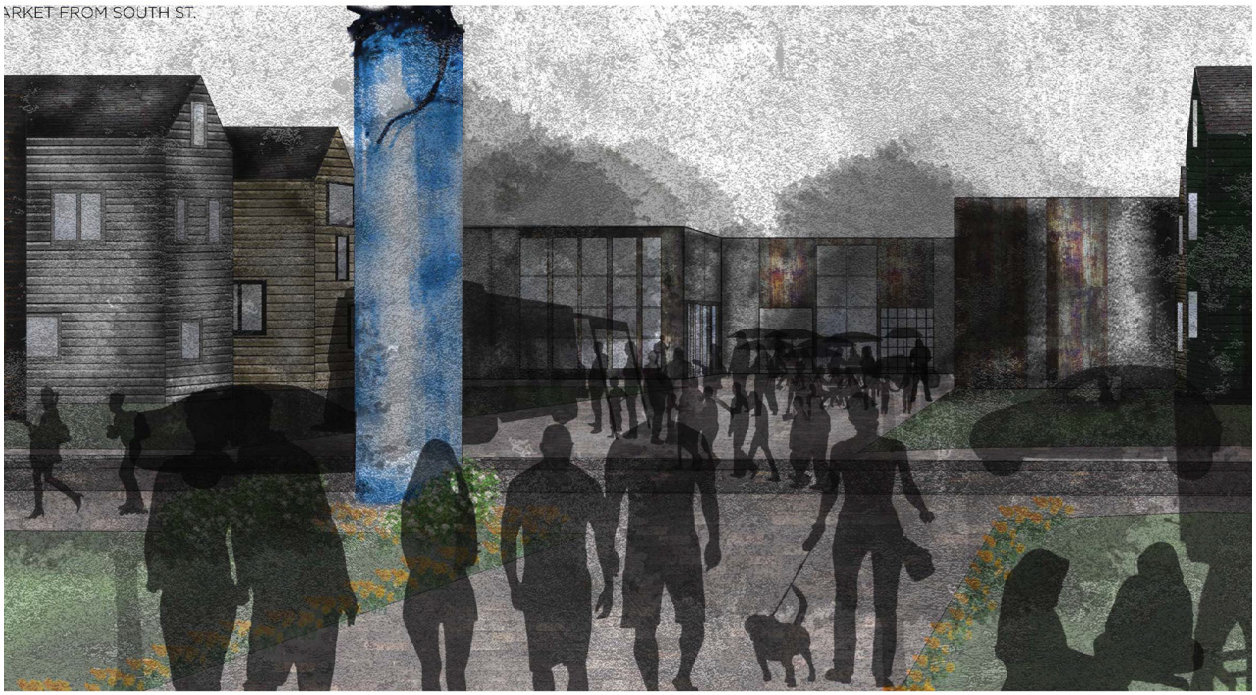


Figure 60
Rendering of the Riverfront Park to the Market Courtyard
Source: Author

The proposal for the riverfront park is based on a deconstructed silo. The inspiration for the definition of hardscape vs softscape comes from this concept, as seen in the footprint in figure 56. The pathway is connected to the greenway addition and the courtyard procession that leads from the linear park to the riverfront.

The river can now be used by the public by a series of steps leading down into the water. Kayaks can also be rented on site and launched here, traveling under the steel bridge to get out of the enclosed swimming area.

Since the ADM Standard Elevator is active, there are still vessels that dock and unload. There are groups in the Old First Ward who enjoy watching them. The bridge can serve as an observation point (fig 63).

The inspiration for an inhabitable space to bring a larger scale area back down to a human scale comes from the Zhangjiagang Town River Reconstruction project designed by Botao Landscape (fig 61 + 62).

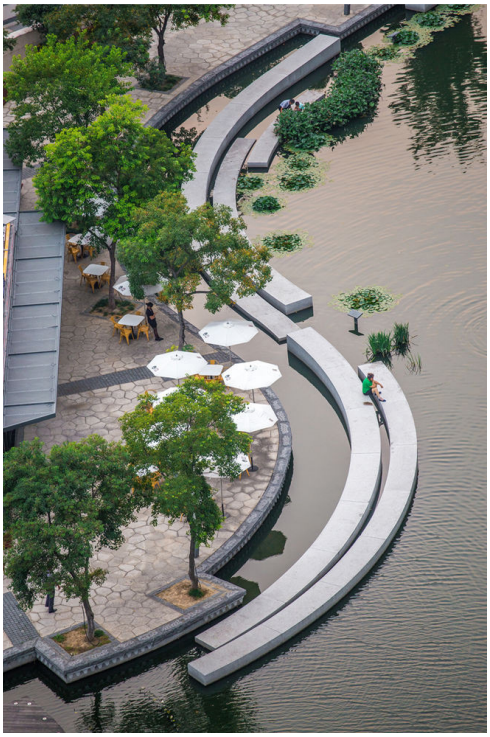


Figure 61
Zhangjiagang Town River Reconstruction
Source: http://www.archdaily.com/563128/zhangjiagang-town-river-reconstruction-botao-landscape



Figure 62
Child Splashing in River
Source: http://www.archdaily.com/563128/zhangjiagang-town-river-reconstruction-botao-landscape

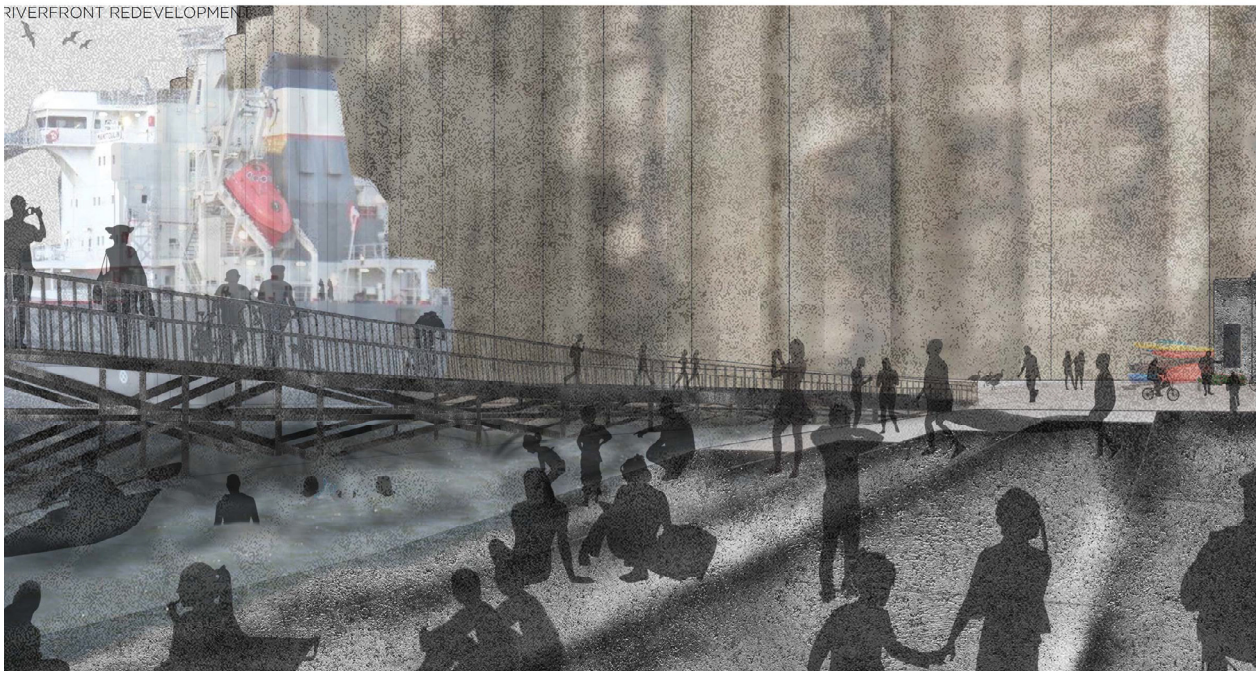


Figure 63
Rendering of Riverfront redevelopment
Source: Author

Having a steadier flow of traffic to Silo City will assist in giving life to the Grain Elevators. By creating events inside of elevators weekly, the city can celebrate its heritage. Much like the Carrie Furnaces, the historic industrial structures can be used for displaying art and hosting food and beverage events (fig 1 + 2).

The silos have unique light and sound properties. On Sundays, the interior of the silos will be used for religious ceremonies and during the weekend at night, the space will be used for concerts, poetry readings, or social gatherings with dancing (fig 65 + 66).

A light show will illuminate the silos at night in a similar fashion to the elevator at Canalside (fig 19). This will allow the city to come to the Old First Ward for a moment of relaxation, reflection, and to spend time with their families.



Figure 64
Rendering of Riverfront redevelopment
Source: Author



Figure 65
Rendering of Silo as Worship Space
Source: Author

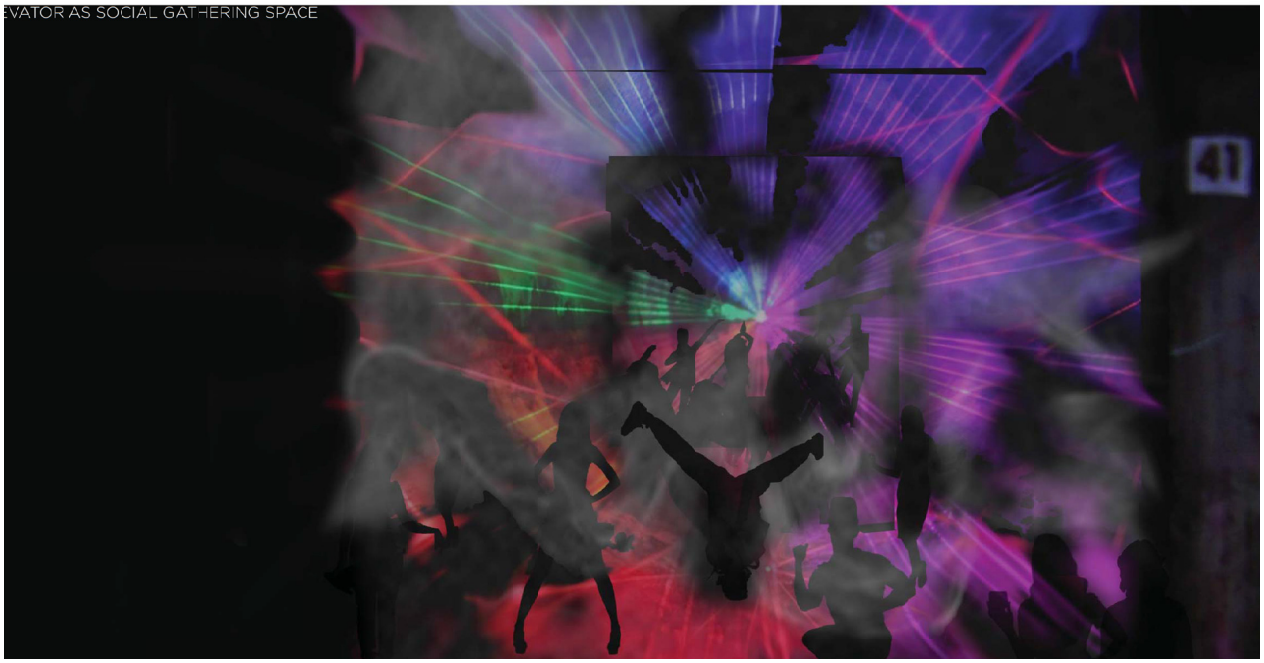


Figure 66
Rendering of Silo as Recreational Space
Source: Author

iii. Conclusion
Future Development

By introducing a series of concious movements to create relationships between industry and community, the city can begin to see a true transformation. This transformation is inclusive of all people, expanding social barriers, and assisting in the re-establishment of a blue collar community.

The looming industrial shadows are no longer behind a barricade. The Old First Ward has the ability to generate community profit to reconnect, rebuild, and reuse. The other abandoned warehouses could be redeveloped and eventually the ward could see itself in its former glory.

The purpose of the series of conscious movements that connect the primary and secondary arteries is so that, yes the community can rebuild, but with residential single family housing over an extended amount of time. These changes won't happen overnight, nor are they expected to. With time come change, and perhaps in the future, the market will no longer be needed, and replaced with another program.

The silos are not a burden, a barrier, or a hindrance. The Old First Ward is not a disappearing community. The process of blending industry and community can strengthen the city one step at a time.

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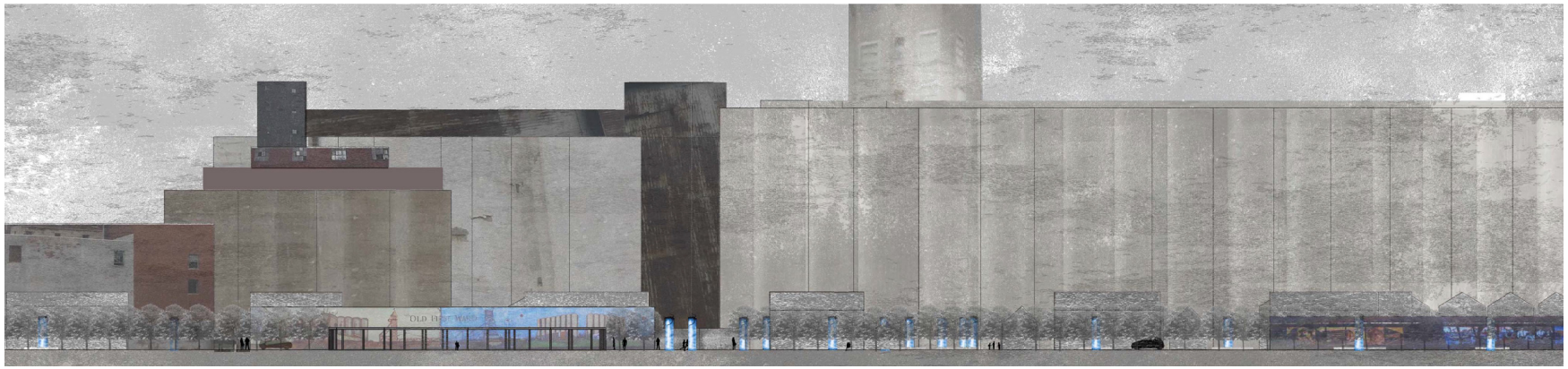
15 ”Buffalo, New York.” (NY) Profile: Population, Maps, Real Estate, Averages, Homes, Statistics, Relocation, Travel, Jobs, Hospitals, Schools, Crime, Moving, Houses, News, Sex Offenders. Accessed November 2015. http://www.city-data.com/city/Buffalo-New-York.html.

Appendix

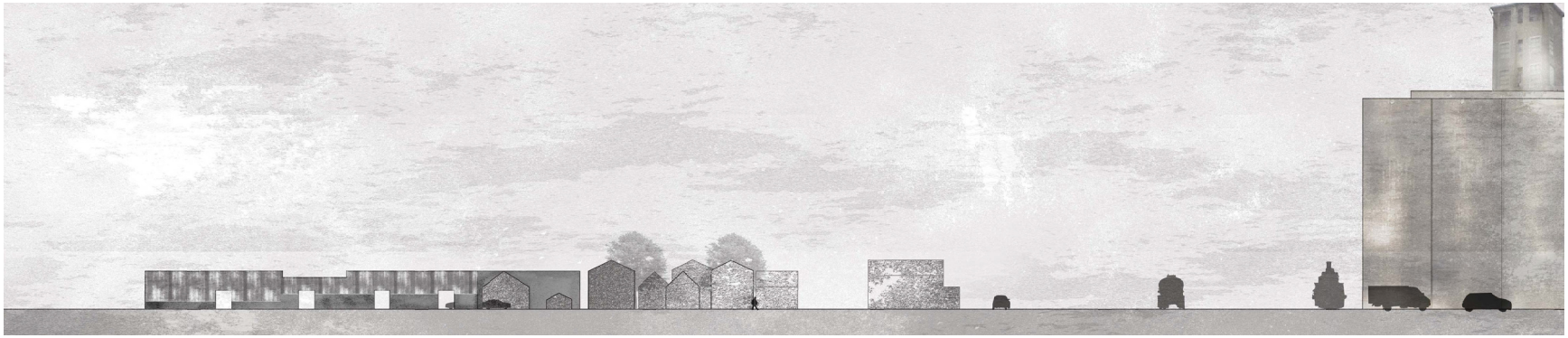
Existing East Elevation



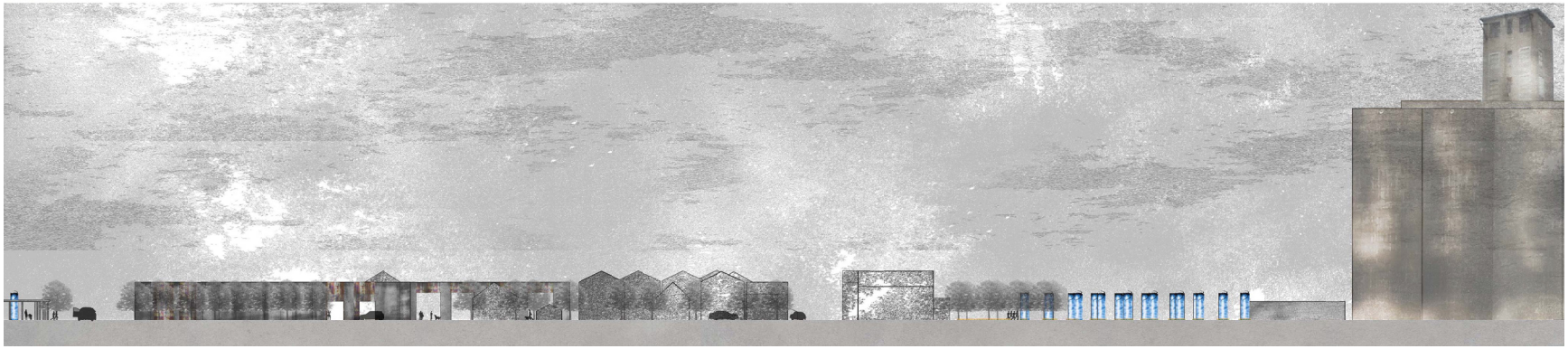
Proposed East Elevation



Existing North Elevation



Proposed North Elevation



VITA

Kimberly Wojcik was born in Buffalo, New York where she spent her days observing the product of depression and the fabrication of resiliency. In 2013, she moved to Knoxville, Tennessee in pursuit of a Master of Architecture.

During her time at the University of Tennessee, Knoxville, Kimberly has achieved concentrations in Conservation & Stewardship and Urban Design.

Kimberly holds a Bachelor of Fine Arts in the field of Interior Design with a Minor Concentration in Wood/ Furniture from the State University of New York College at Buffalo.

Upon completion of her studies, Kimberly hopes to produce designs that provide a representation of place and identity. She also hopes to educate others on the impact of architecture and memory.