

REVITALIZATION THROUGH REHABILITATION

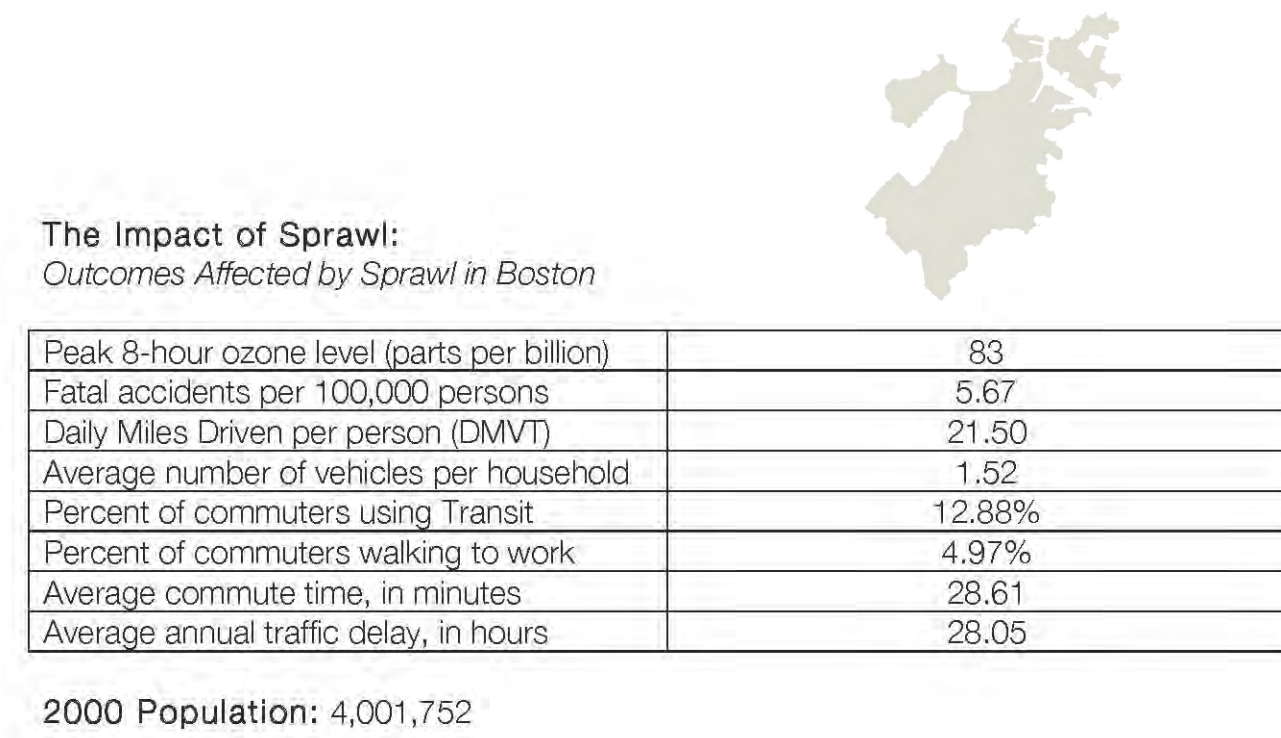
Jason Pimsler

M.Arch Thesis: Spring 2013

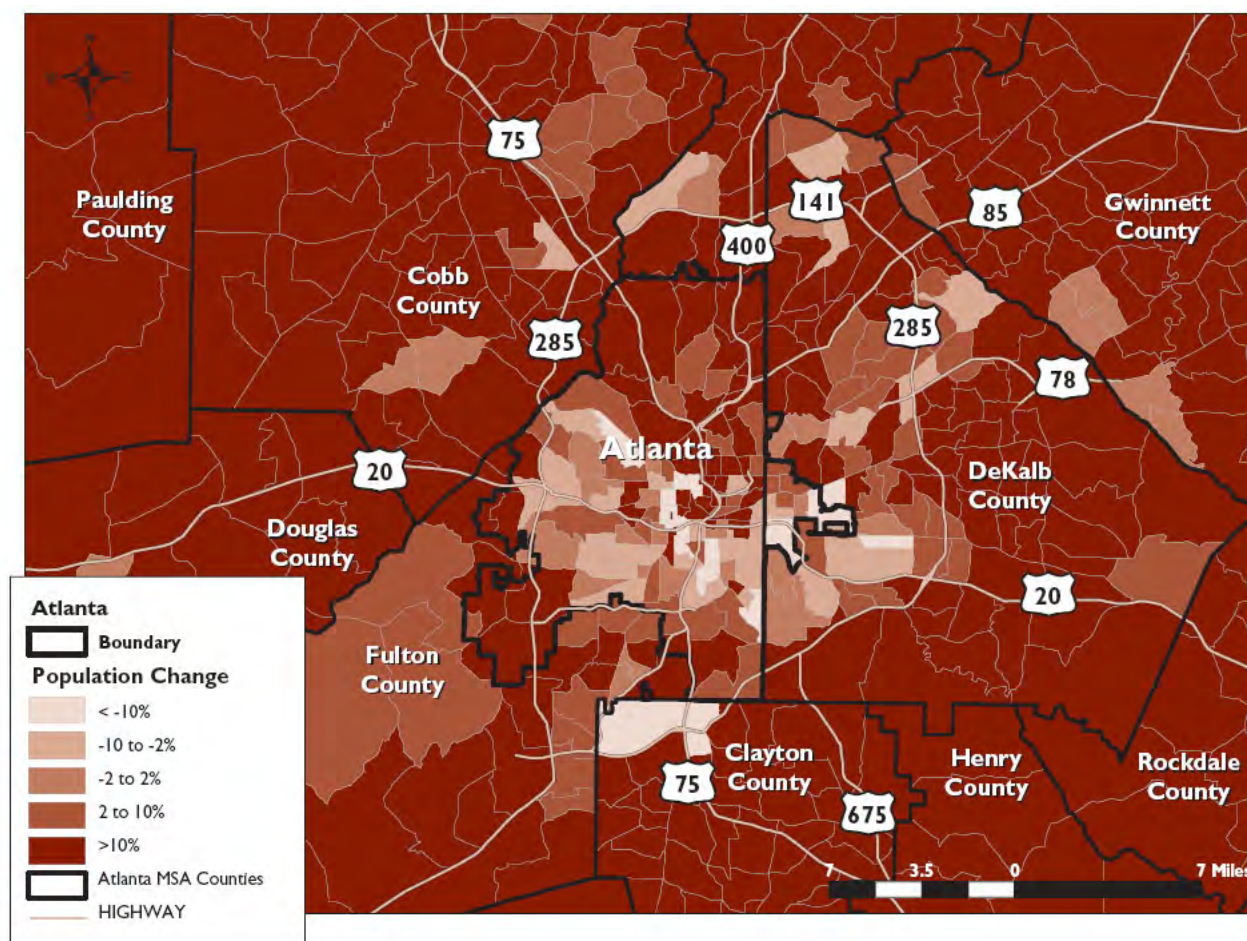
Site: 1200 Foster St. Atlanta, GA

Committee: S. Rabun, J. Akerman, S. Wall

The densification of an existing community through the implementation of sustainable design principles, such as adaptive reuse, promotes revitalization. The re-inhabitation of the proposed abandoned structure along the BeltLine can lead to further development of the existing arts complex. As part of this revitalization, linkages established along a city-wide master-planned path provide nodal connections between the local art district and the artists of the Goat Farm and educate visitors of the significant industrial history of the area.

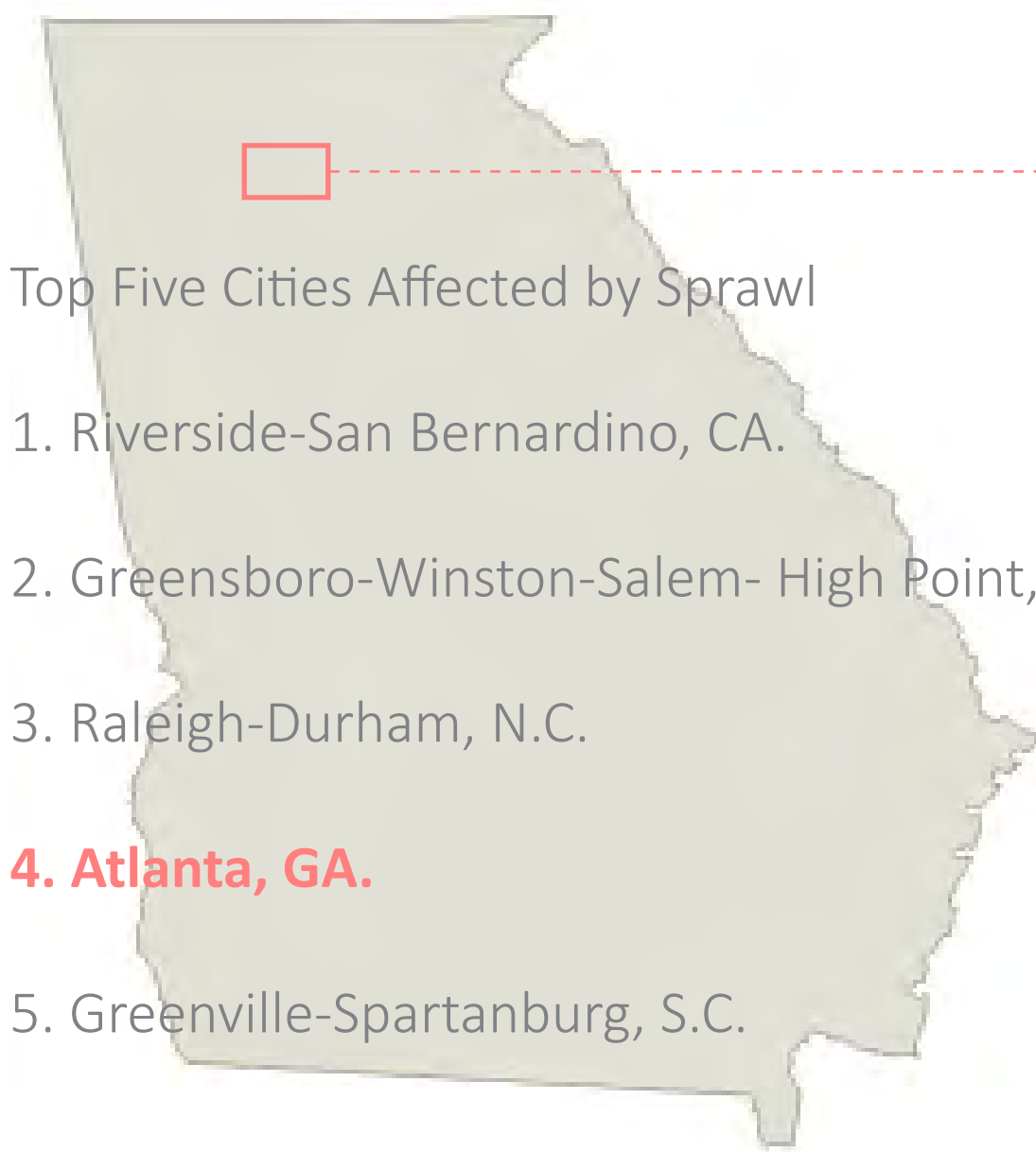


Boston is the **7th** least sprawled city in the U.S.

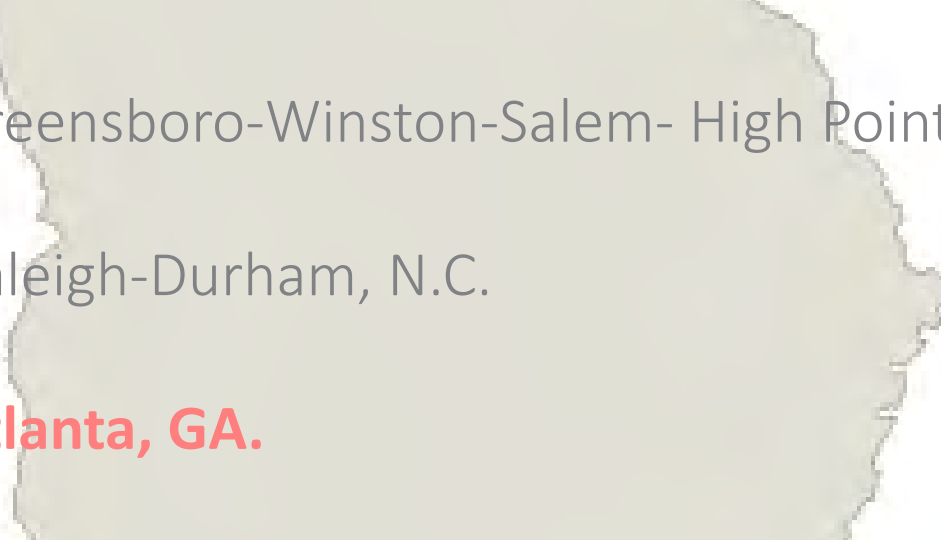


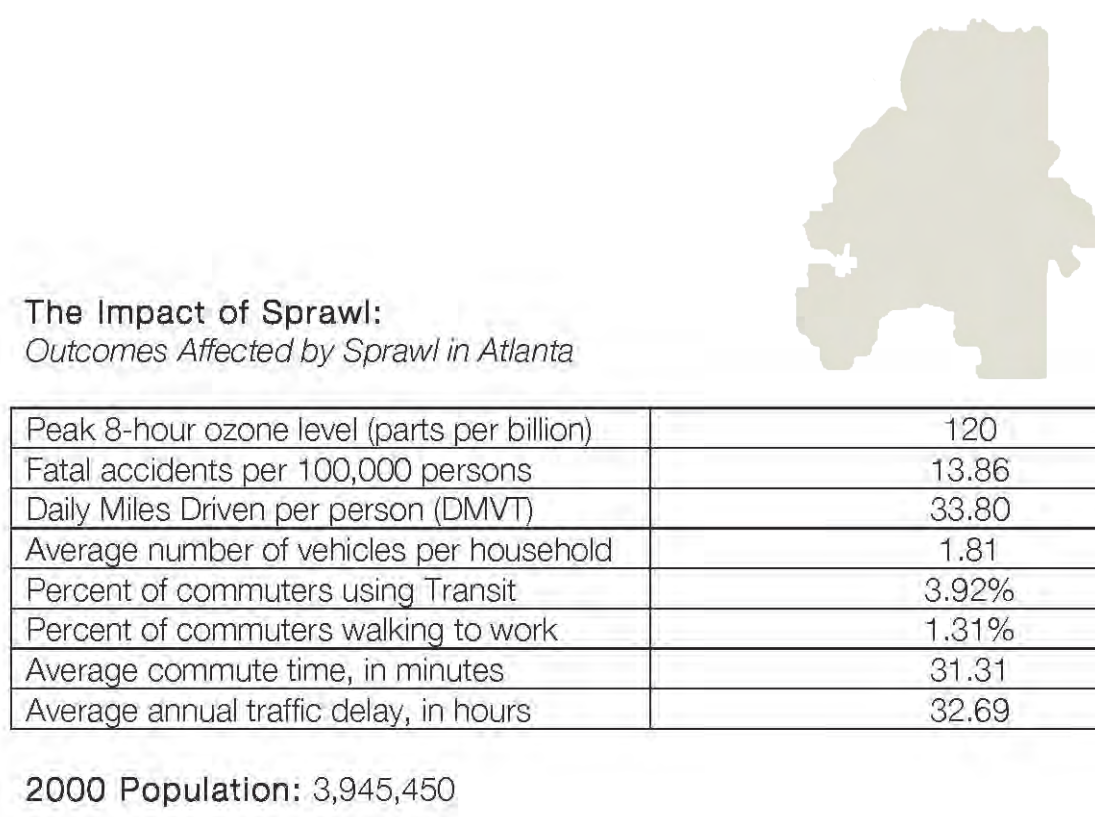
Population Change Occurring Outside Central City

The Atlanta Metro area has grown consistently since the 1900's. Undesirable living conditions and lack of neighborhood connections during these crucial years of development led to unplanned expansion of Atlanta. This trend continues due to a lack of economic investment in the central city, resulting in fragmented neighborhoods in the metro area separated by railroads and highways.



Top Five Cities Affected by Sprawl

- 
- A map of the Southeastern United States, including parts of Virginia, North Carolina, South Carolina, Georgia, and Florida. Five metropolitan areas are highlighted with red dots and numbered. A legend in the top left corner shows a red dot next to the text 'Metropolitan Area'.
1. Riverside-San Bernardino, CA.
 2. Greensboro-Winston-Salem- High Point, N.C.
 3. Raleigh-Durham, N.C.
 - 4. Atlanta, GA.**
 5. Greenville-Spartanburg, S.C.



Atlanta is the **4th** worst sprawling city in U.S.



Aerial Atlanta, Circa 1892. Highlighting Central Business District

"...one simple number, population, can predict a stunning array of details about any city, from crime rate to economic activity. It's all about the plumbing, he says, the infrastructure that powers growth or dysfunction."

Geoffrey West - Physicist

Sprawl is random unplanned growth that results from certain places being isolated from adequate land uses such as housing, jobs, schools, hospitals and mass transit. Development that results in sprawl negatively impacts the population, jobs and tax base of the central city. Sprawl creates a society dependent on the automobile and consumes land at an exponential rate. This is a serious problem, that needs immediate attention.



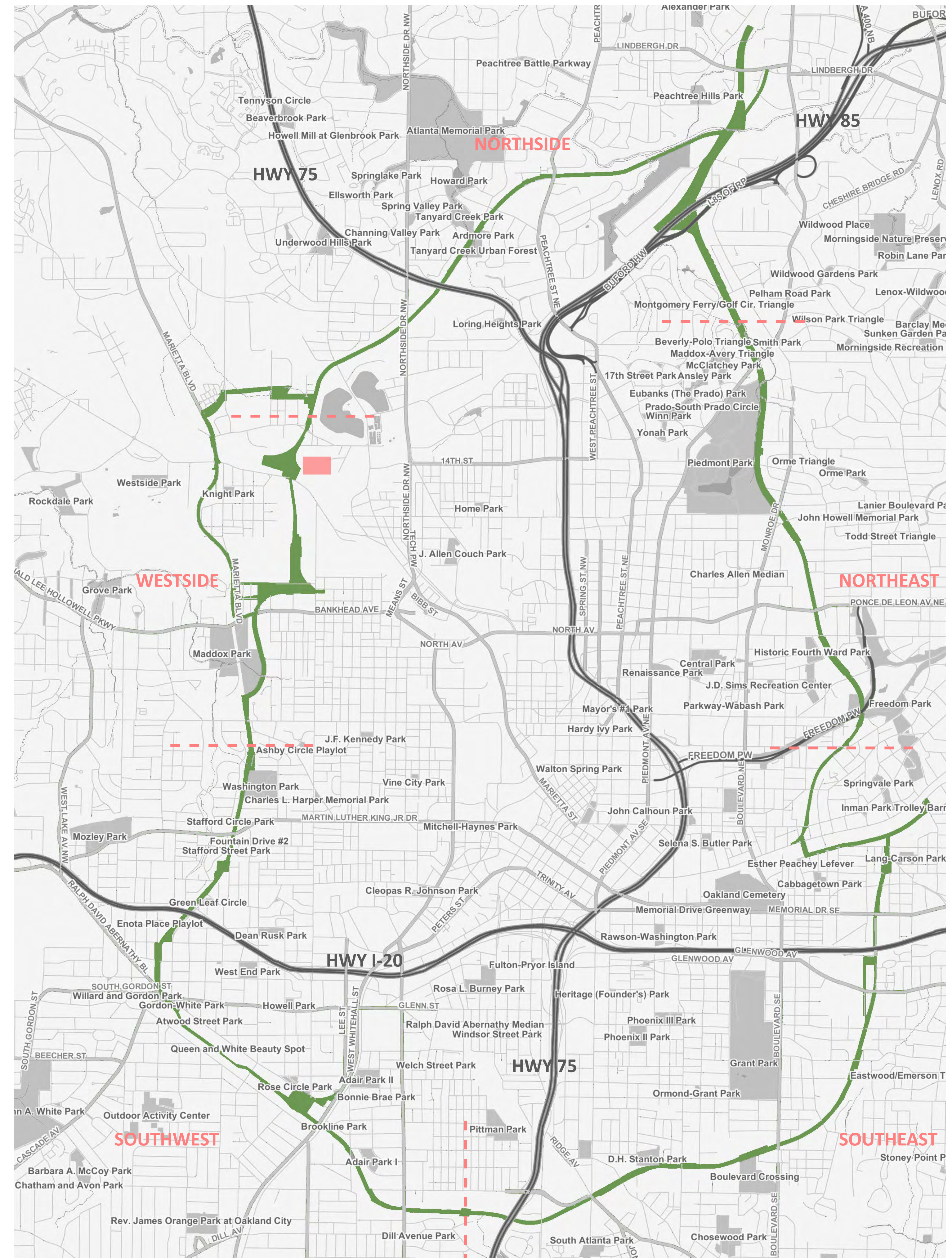
Axonometric of Atlanta, GA with BeltLine Highlighted

RAILS TO TRAILS - RECONNECTING ATLANTA

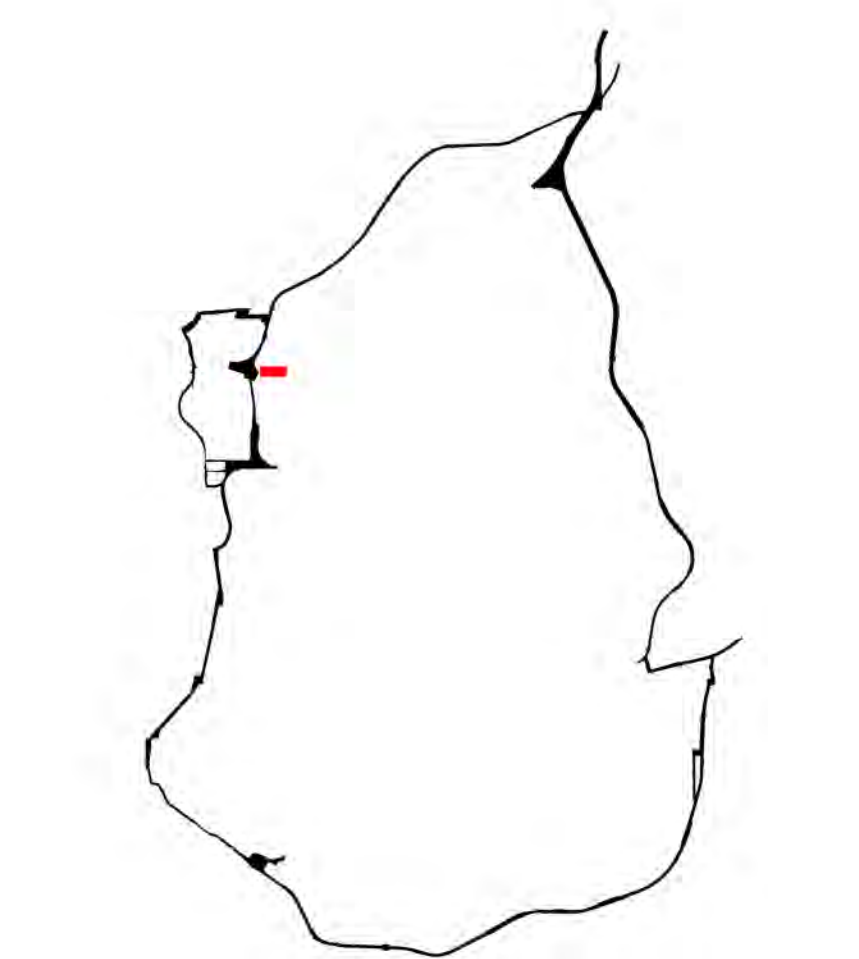
Ways to combat sprawl:

- www.csmonitor.com

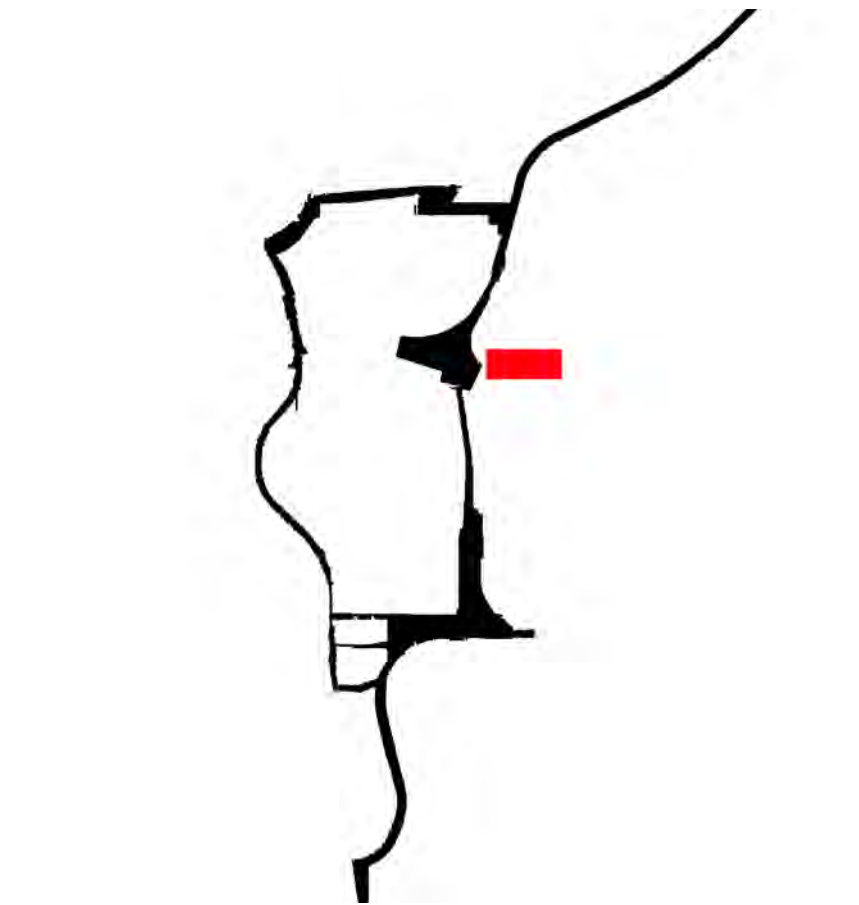
— Jane Jacobs, *The Death and Life of Great American Cities*



22 Mile Loop of Atlanta BeltLine



Adjacency to BeltLine



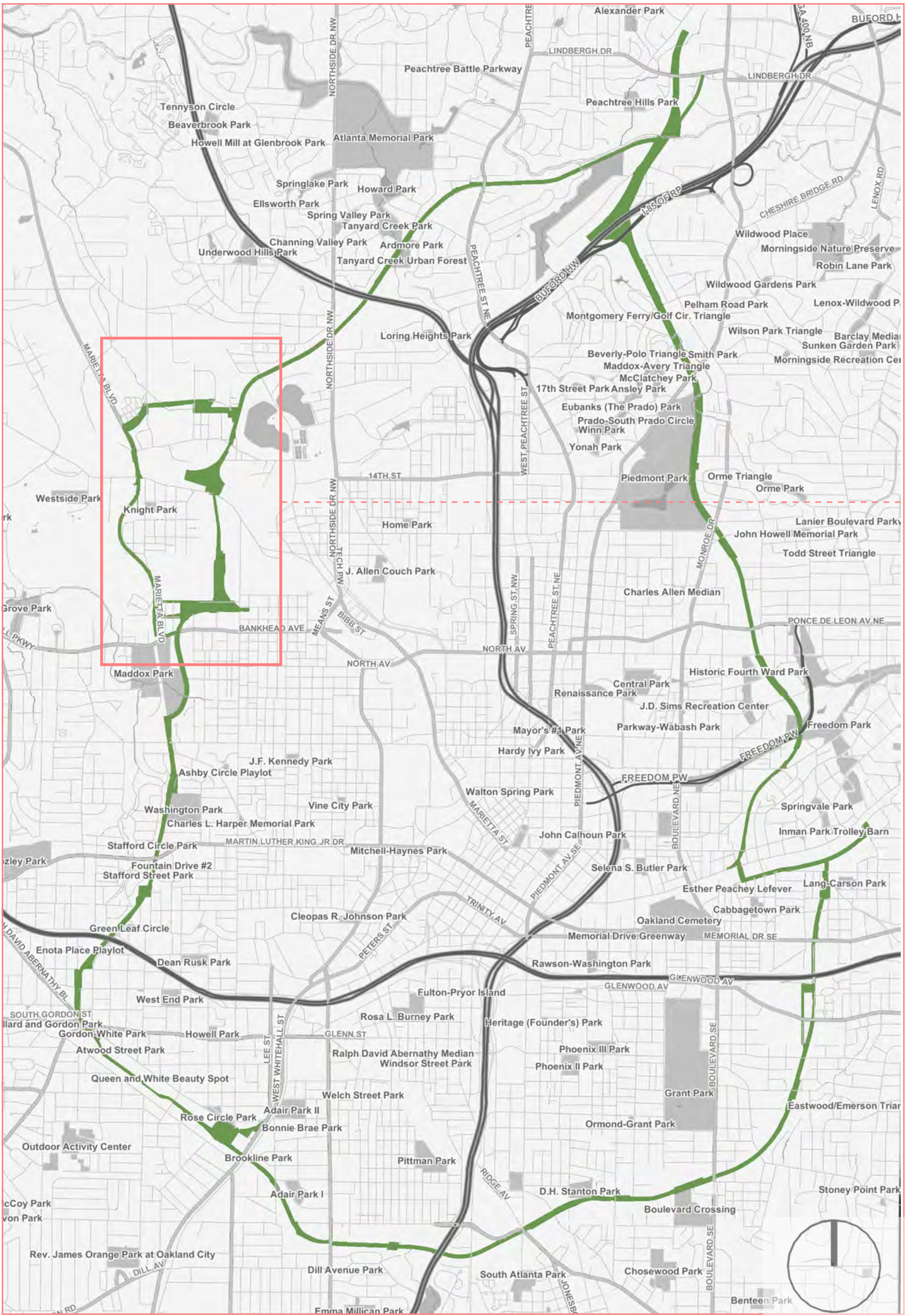
Area of Revitalization



Indsutrial Site with Arts Agenda



Potential in Sawtooth Outlier

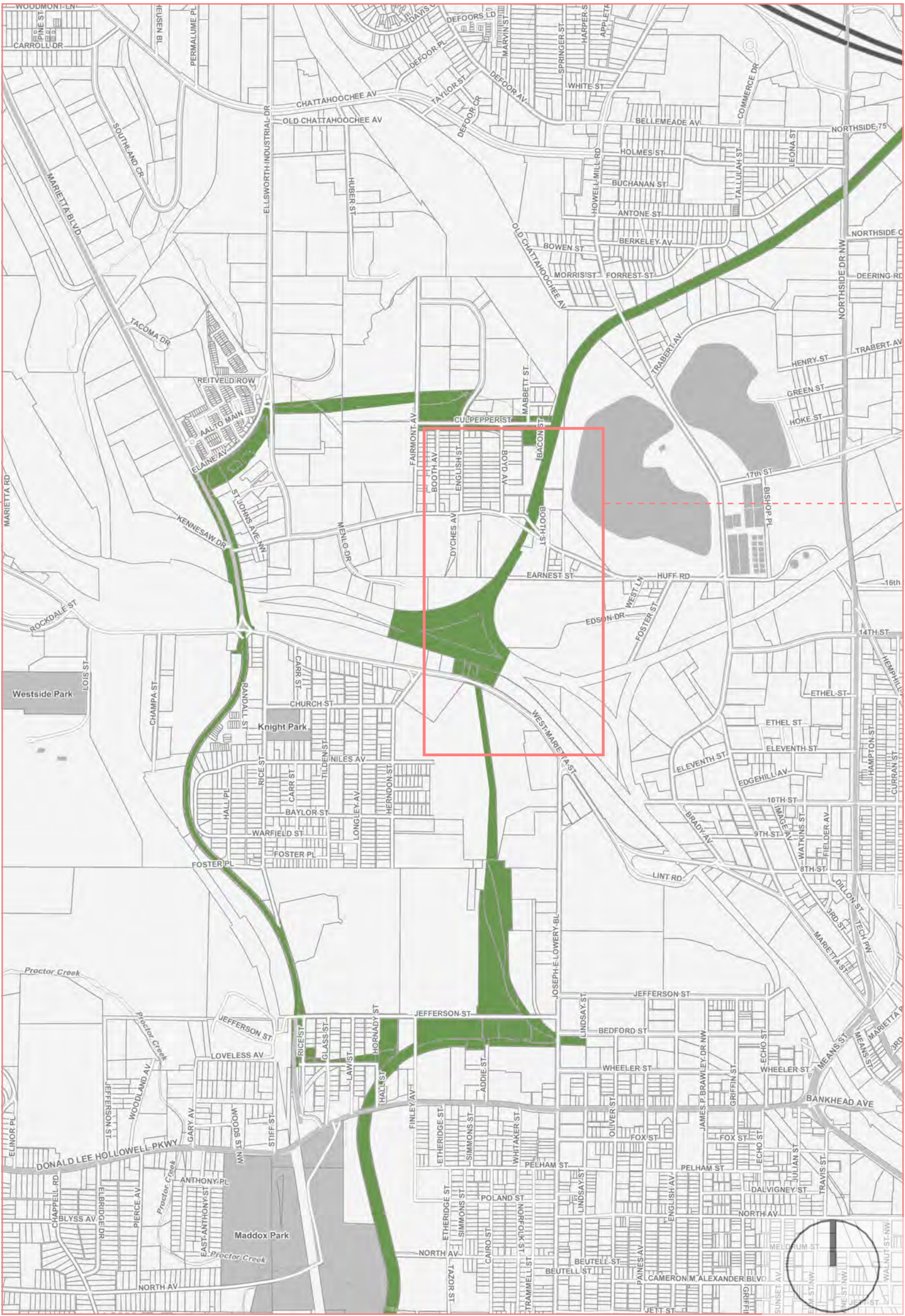


Adjacent to BeltLine Scale 1 : 30,000

Similar developments like the High Line in NYC have proved to have a positive influence in revitalizing struggling areas of town, and connects gaps within the urban fabric which are important in mitigating sprawl.



NYC High Line



An Area of Transformation Scale 1 : 10,000

For revitalization to work in an urban area like Atlanta, there has to be investment in nearby areas with the potential for further development.



West Side Provisions Atlanta, GA



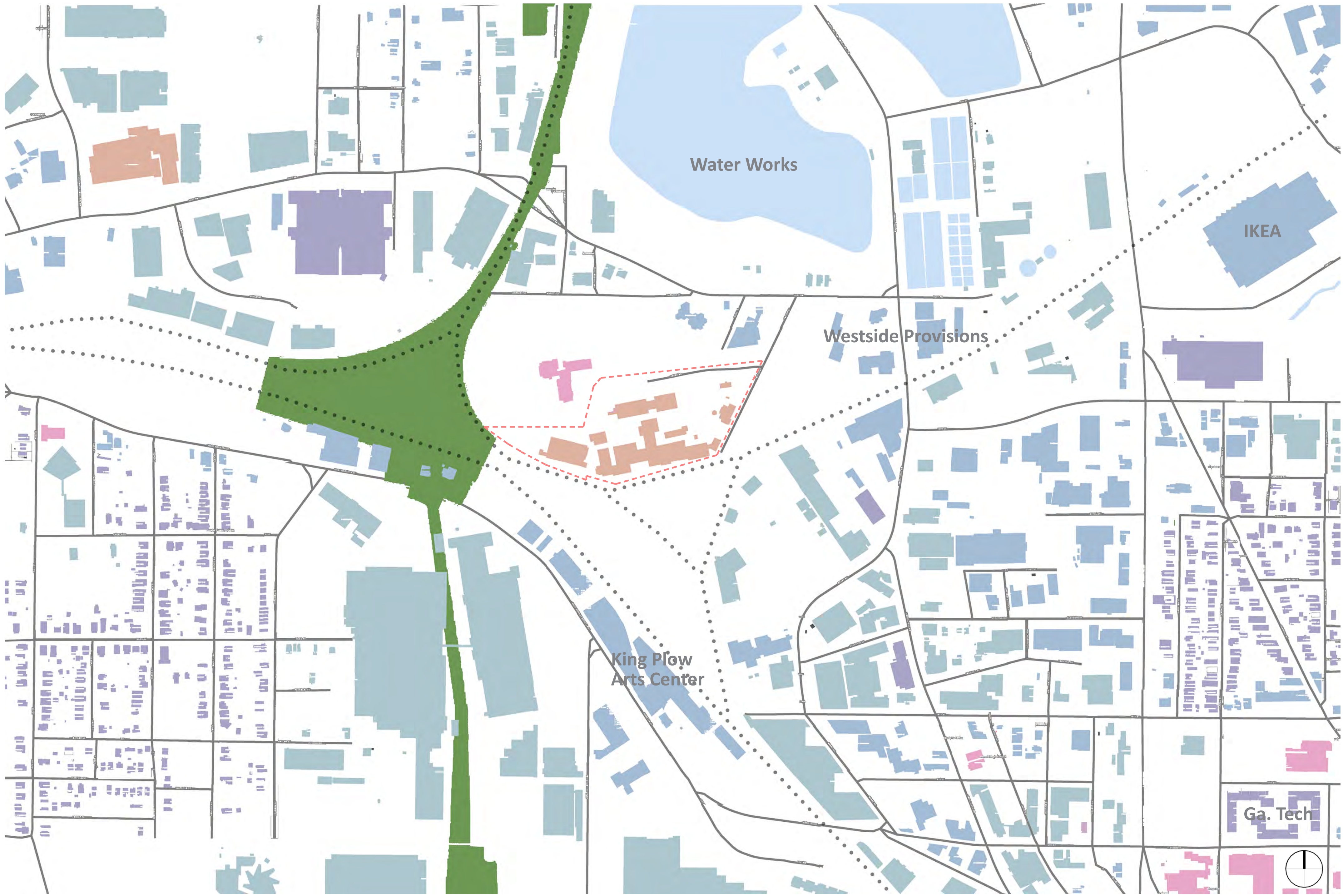
Historical Site Scale 1 : 2,400

One of the most effective ways to mitigate sprawl is to re-purpose vacant buildings such as post industrial warehouses. Many times these buildings have a historical connection to a city and a community which is no longer present.



Goat Farm Arts Center

SITE SELECTION CRITERIA



Development Analysis

- Railroad Tracks
- Residential
- Mixed use
- Institutional / Religious
- Commercial
- Industrial
- Proposed BeltLine

After conducting an extensive study on all uses in this area, zoning in Atlanta is very haphazard and many conflicting occupancy uses that are adjacent to each other. There are residential neighbors intermingled with commercial and industrial. Basic needs like grocery stores are not among the commercial services offered. Mixed-use is practically non-existent in this area. There is an overall lack of community.

“But when you look at where innovation and creativity and new ideas come from, they typically don’t come from the skyscraper districts. They come from older neighborhoods with mixed-use buildings that have warehouses and industrial areas... where people can mix and mingle and interact, combine and recombine. And that’s where the spur for innovation and creativity comes from.”

Richard Florida - Urban Theorist

“We see the arts as an economic tool that is just as important as any other service people pay taxes on.”

Anthony Harper - Goat Farm Owner

Implementing a **visitor center** and **cafe** will help reinforce community, and teach people about the history of the site and provide a destination along the BeltLine.



Rubenstein Atrium at Lincoln Center

Implementing a **CSA (Community Supported Agriculture)** will provide a service for people needed in this area, and encourage sustainable living and reinforce community interaction and involvement.



Community Supported Agriculture Pick-Up

Auxiliary components such as **galleries** and **offices** can bridge the gap between public and private allowing a free exchange between the pedestrians using the BeltLine and the current inhabitants on the proposed site.

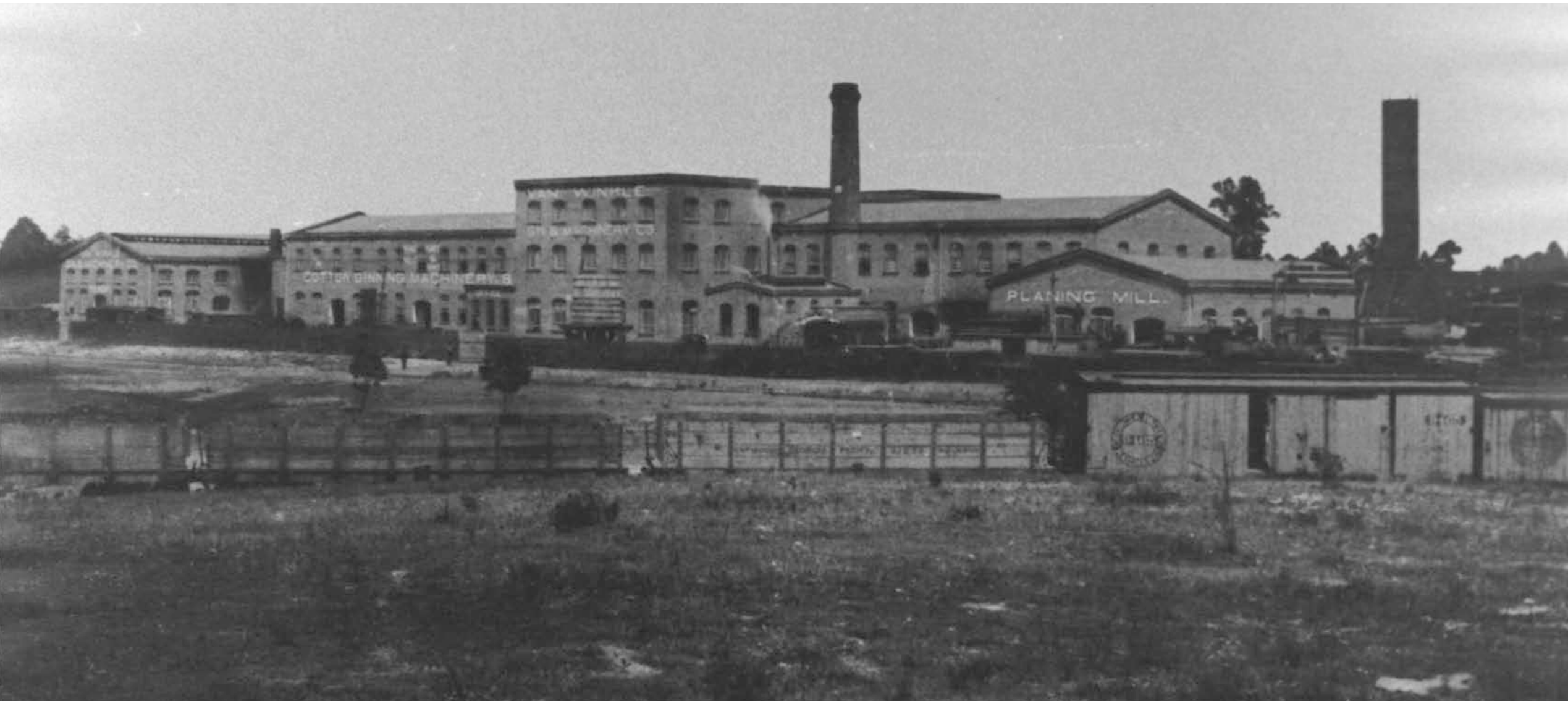


King Plow Arts Center interior

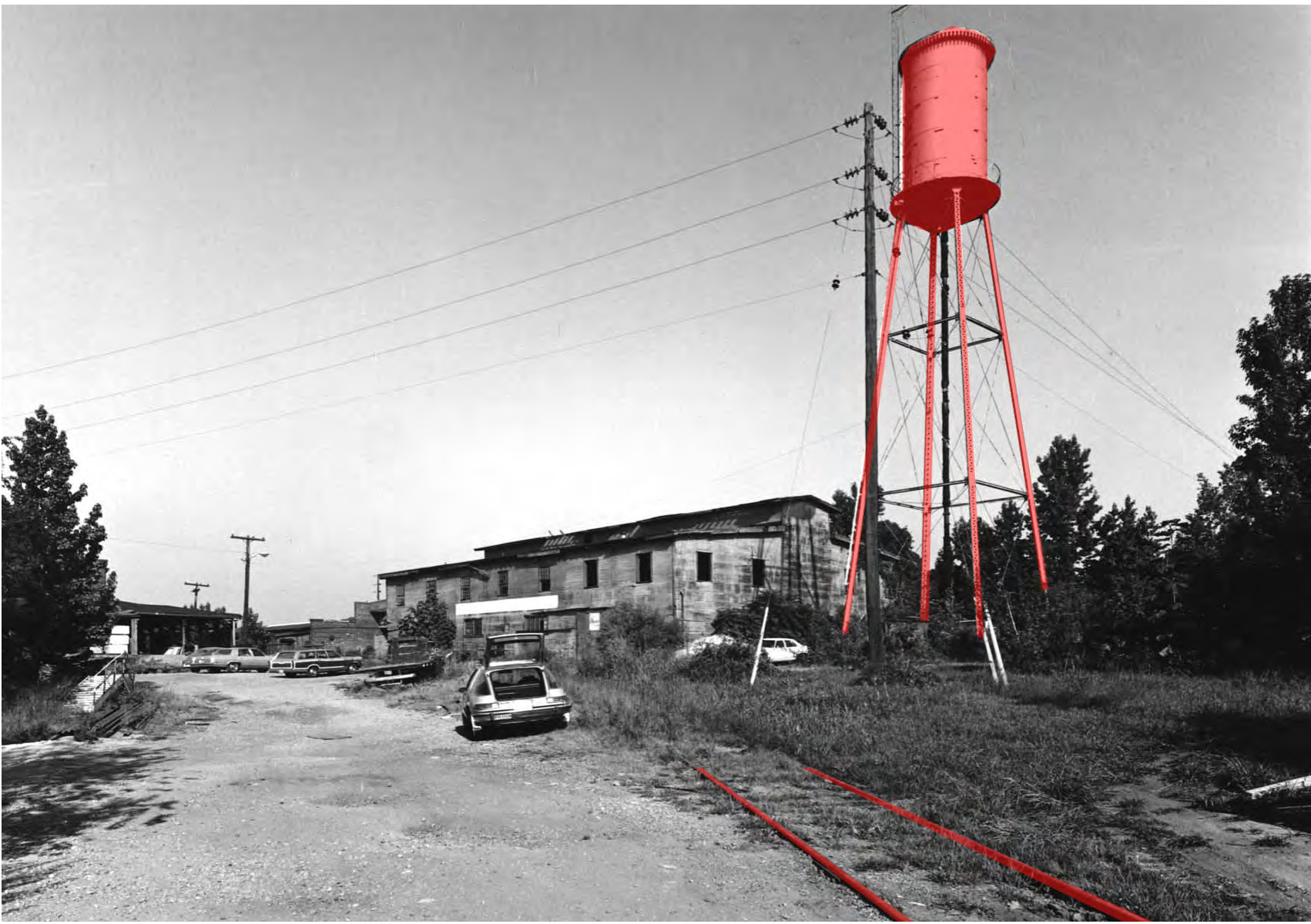
Historical Significance of Site

The E. Van Winkle Gin and Machine Works is a 11.3 acres with 15 industrial buildings and a water tower complex nestled amongst railways. Most of the buildings are red-brick buildings with load bearing masonry exterior walls and “slow burning” timber-and-plank interiors with some cast-iron structures. The complex, developed over several decades between 1880’s and 1930’s, was focused on demonstrating the use of utilitarian construction and the implementation of technological advancements of the era such as planning around train transport. Listed on the National Register of Historic Places, the complex is a significant representation of a well preserved and almost fully intact late nineteenth century manufacturing complex.

During the 1880s Van Winkle was one of three cotton-gin manufacturers in Atlanta and the only cotton-seed-oil mill producer in Georgia. When Van Winkle died in 1923, the Atlanta Journal Constitution published that the complex had an important effect upon development of the cotton manufacturing industry in the South. Later during World War II, the plant was used to produce ammunition and mortars. In 1966 the site was held in trust by Trust Company of Georgia until 1972 when Robert Haywood, the current owner, purchased the property.



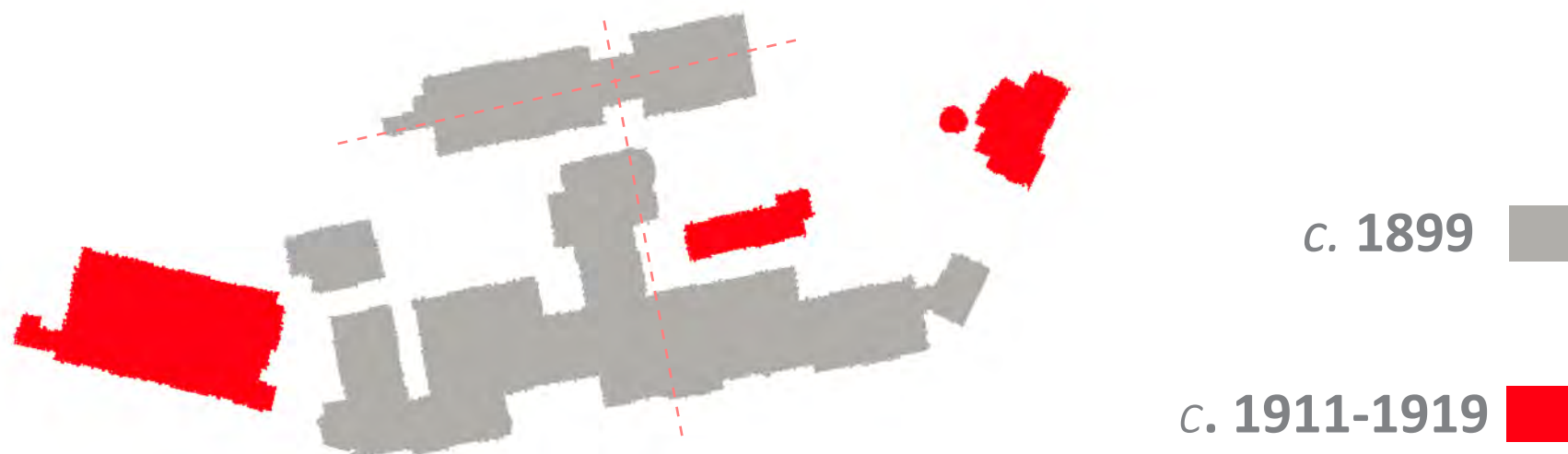
E. Van Winkle Gin and Machine Works Circa 1976



Water Tower and Railroad Tracks Circa 1976



Service Bridge Circa 1976



Cross Axial Alignment and Chronology



Load Bearing Masonry Circa 1976



Advertisement for Cotton Ginnery



Arched Tunnel Circa 1976



Porch Overhangs Circa 1976



1

c. 1919



W1

c. 1899



W2

c. 1899

- 1- Machine Shop
- 2- Hardware House
- 3- Foundry
- 4- Blacksmith Shop
- 5- Pattern Shop
- 6- Warehouse
- 7- Shipping Depot
- 8- Wood Shop
- 9- Lumber Drying
- 10- Office Building

- A- Ginnery Building
- B- Seed Cotton House
- C- Water Tower
- D- Locker Room
- E- Super Intendant
- W1- Gin Warehouse
- W2- Paint / Oil House



E

c. 1911



D

c. 1911



2

c. 1899



3

c. 1899



4

c. 1899



5

c. 1899



6

c. 1899



7

c. 1899



8

c. 1899



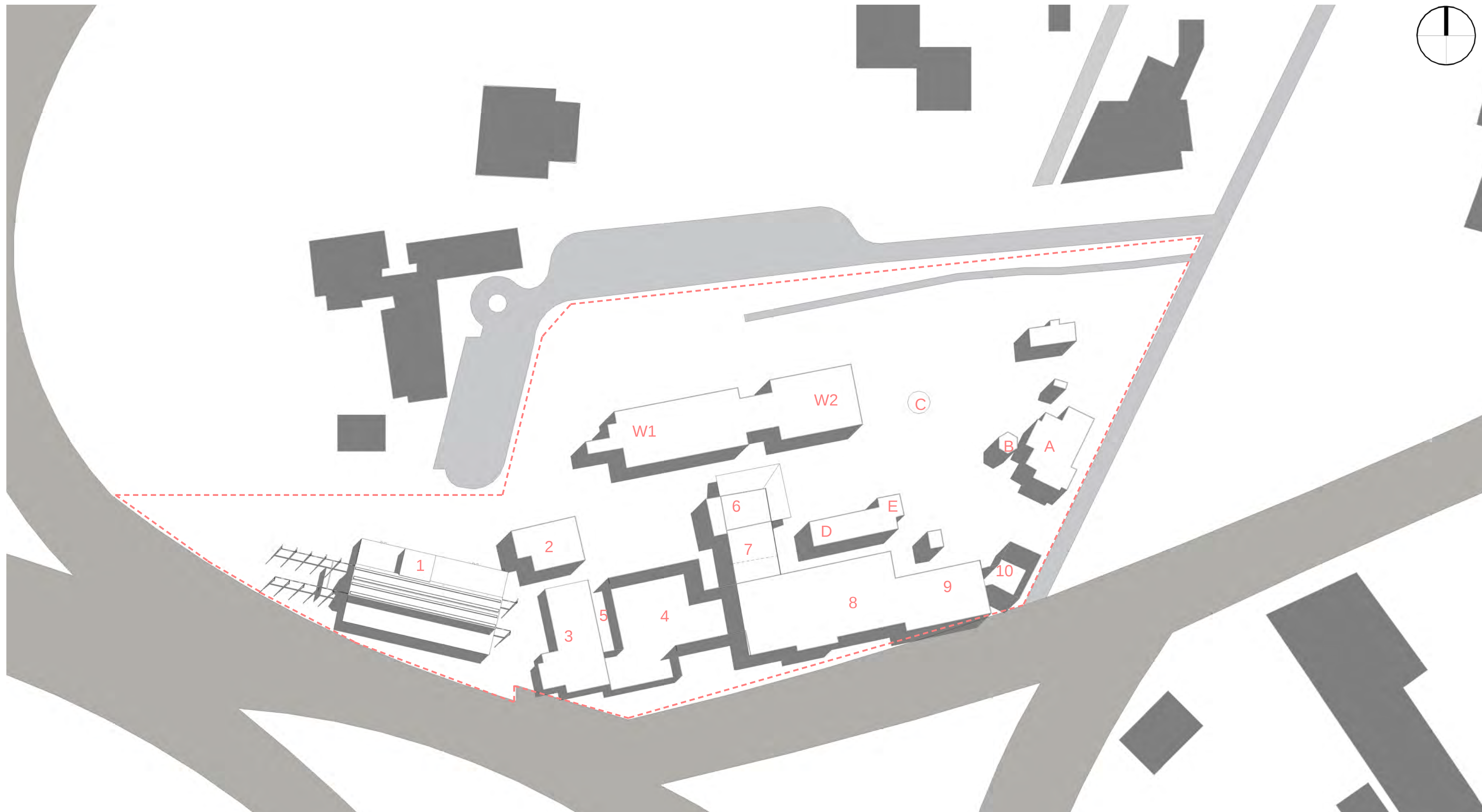
9

c. 1899



10

c. 1899



Inventory of Existing Buildings on the National Register



C

c. 1899



B

c. 1911



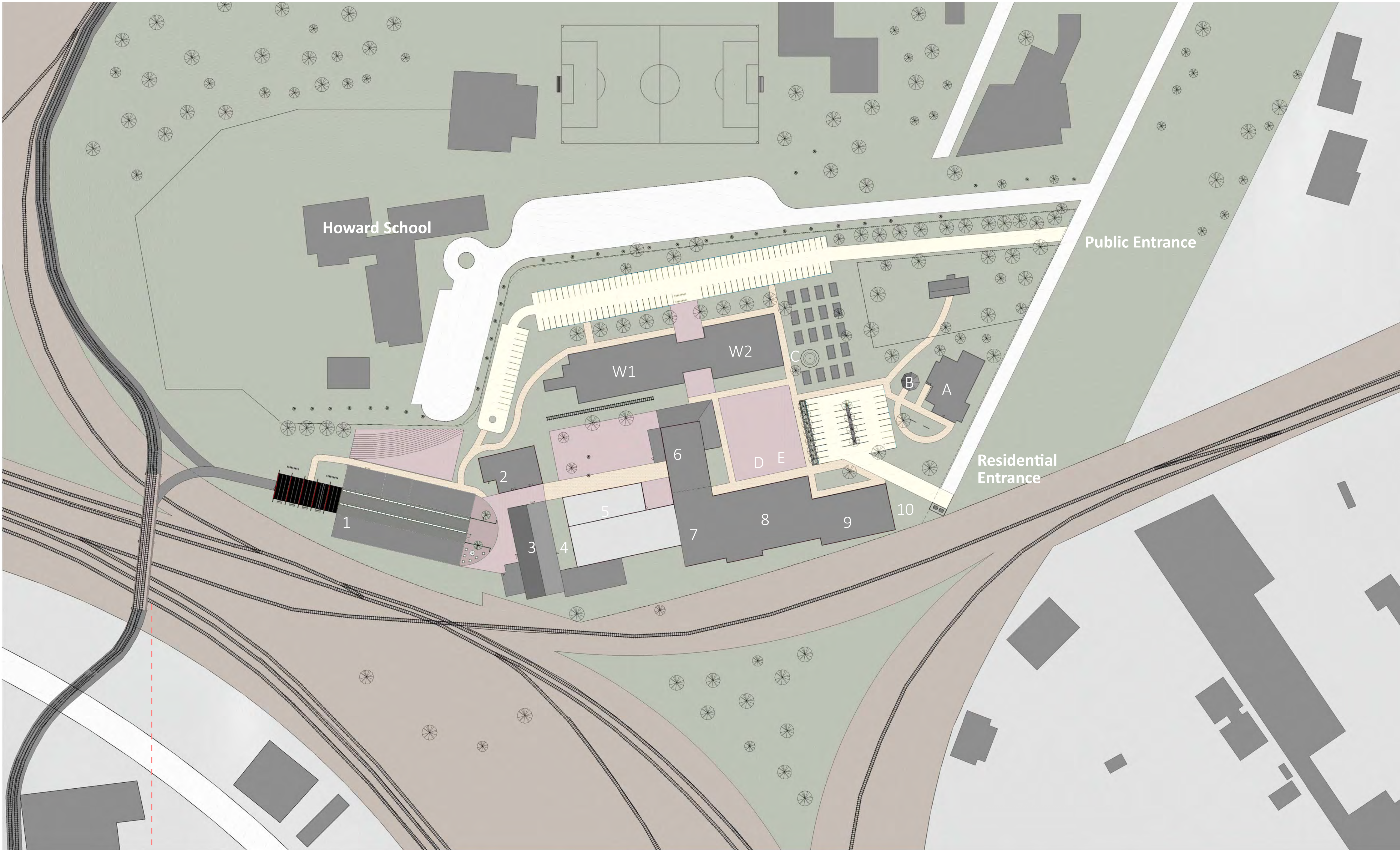
A

c. 1911

GOAT FARM ARTS CENTER

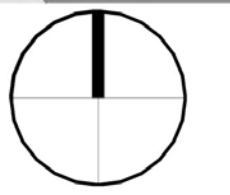
ID/Previous Use/Proposed Use

- 1 Machine Shop / Cultural Center
- 2 Hardware Shop / Black Box Theatre
- 3 Foundry / Goodson Yard Auditorium
- 4 Blacksmith Shop / Outdoor Flex-space
- 5 Pattern Shop / Village Green Venue
- 6 Warehouse / Floor 1-Studio 2-3 Lofts
- 7 Shipping / Floor 1-Studio 2-3 Lofts
- 8 Wood Shop / Floor 1-Studio 2-Lofts
- 9 Lumber Drying / Floor 1-Studio 2-Lofts
- 10 Office Building / Demolished
- A Ginnery Building / Education Center
- B Seed Cotton House / Painters Space
- C Water Tower / Water Tower
- D Locker Room / Demolished
- E Superintendent / Demolished
- W1 Gin Warehouse / Studios
- W2 Paint and Oil House / Studios

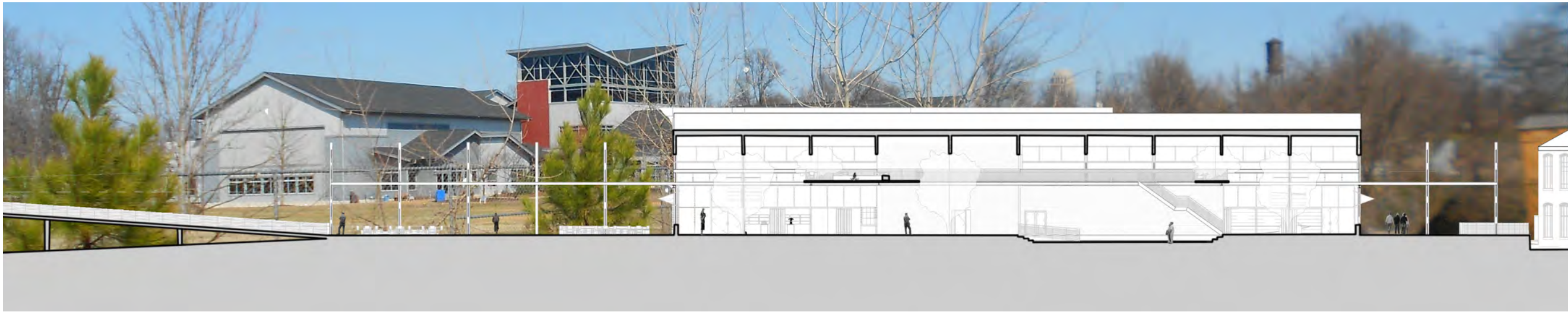


Master Plan

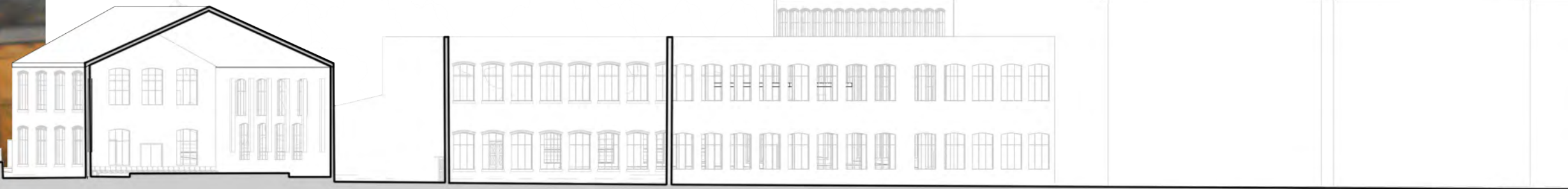
Scale: 1" = 80'0"



Alcoa Bridge Maryville, TN



Section Looking Northeast



Scale: 1/32" = 1'0"

Three Principles of Sustainability
Ecological
Economical
Cultural

What makes the Goat Farm special is that everyone here is always looking for a new innovative way to do something”

Anthony Harper - Goat Farm Owner



Re-use of Water Tower as Irrigation



Chicken Eggs from Barn



Using Resources on Site



Honey Bee Display



Collection and Re-use of Old Bricks



Community Supported Plots



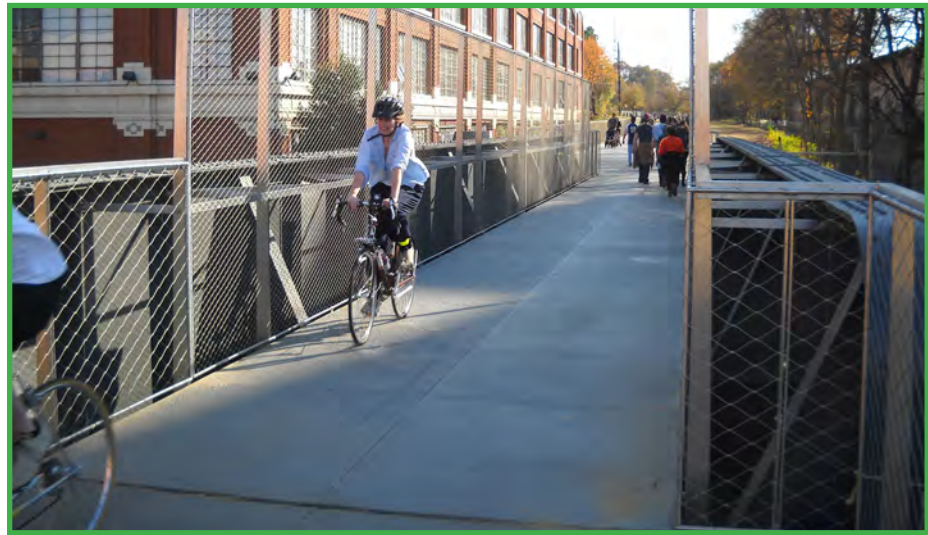
Bike Racks



Historical Railroad Tracks



Historical Machinery



BeltLine

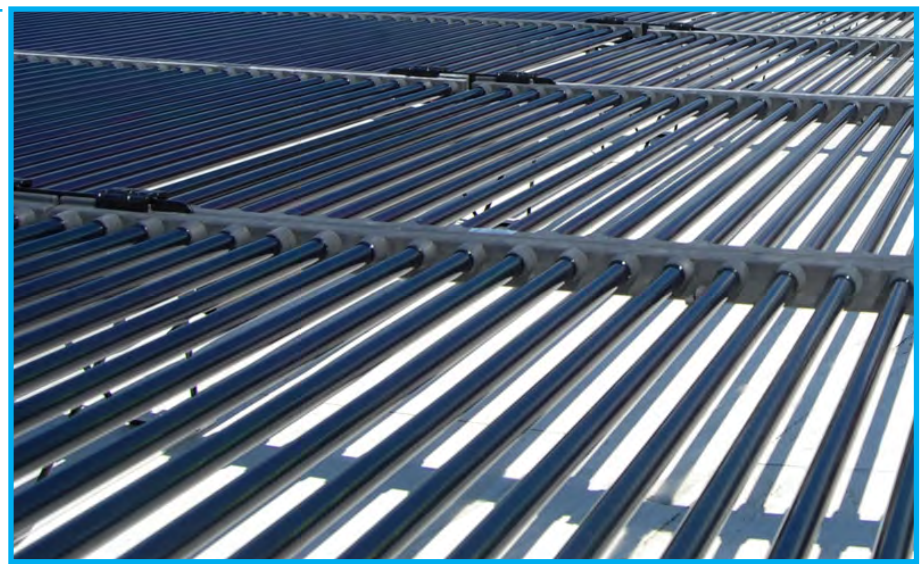


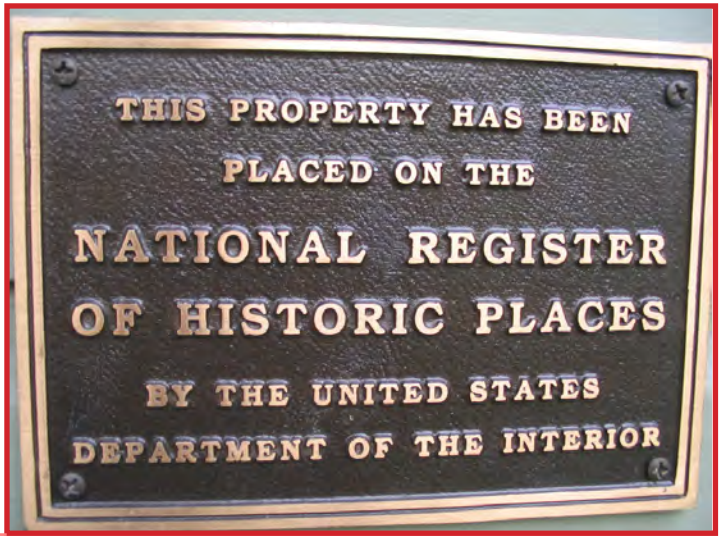
Photo-voltaic Panel Display



Informal Community Library



Hydroponic Produce Display



Plaques for Hiistoric Artifacts



Pasteurization of Goat Milk

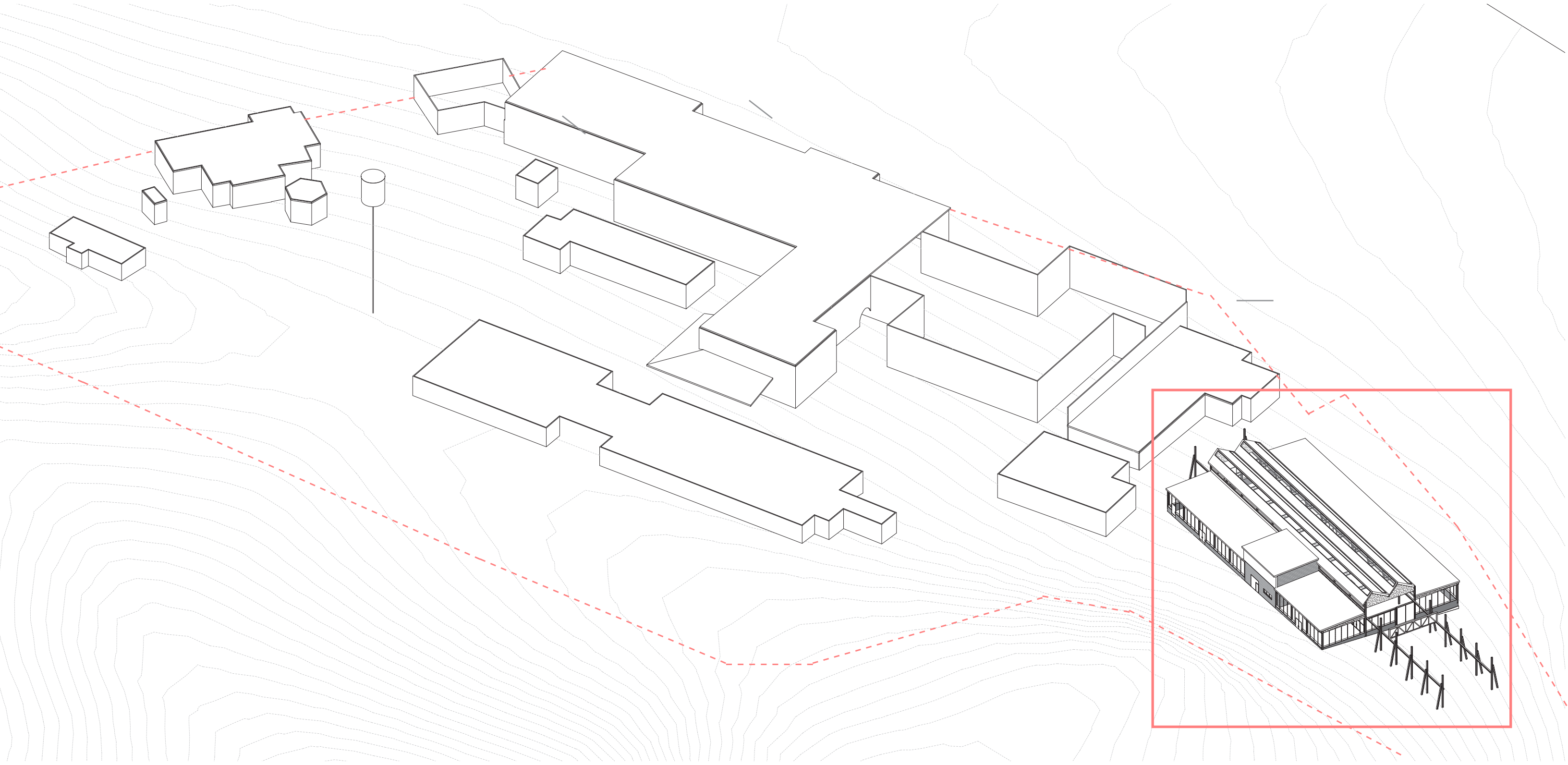
SUSTAINABLE DESIGN FEATURES

Architectural Design Strategies

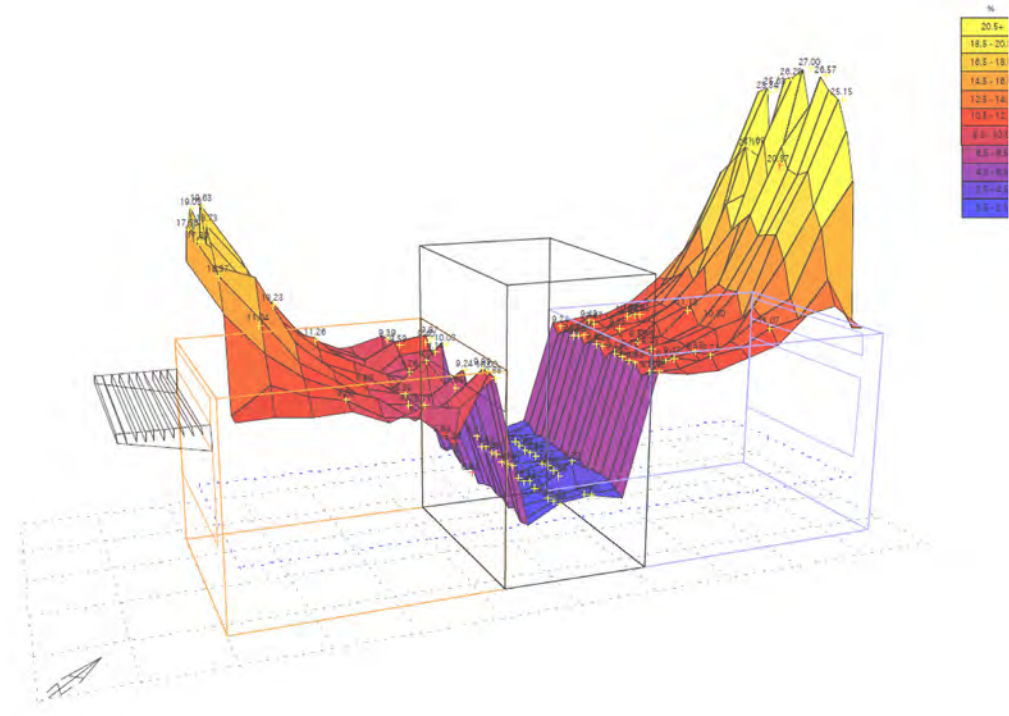
The history of the building provides an excellent opportunity for adaptive re-use. Since the sawtooth was used in industrial purposes the trusses support the roof and allow for an open floor plan to take place below. The sawtooth section has potential of being an atrium space that can serve as a welcoming threshold between indoor and outdoor. Also a major advantage to the sawtooth

roof is that it can mitigate solar gain in the summer and allow for passive ventilation through the roof. The overhead gantry system that extends through both ends of the building that was previously used to move heavy goods can provide the opportunity to implement a mezzanine level that could be tied into the existing structure. There is an existing concrete ma-

sonry structure that could be utilize to house core service elements such as the kitchen or water closets that require direct access to the exterior. There are techniques used in the connection between the existing concrete wall and load bearing wall that can be maintained and implemented in future construction.

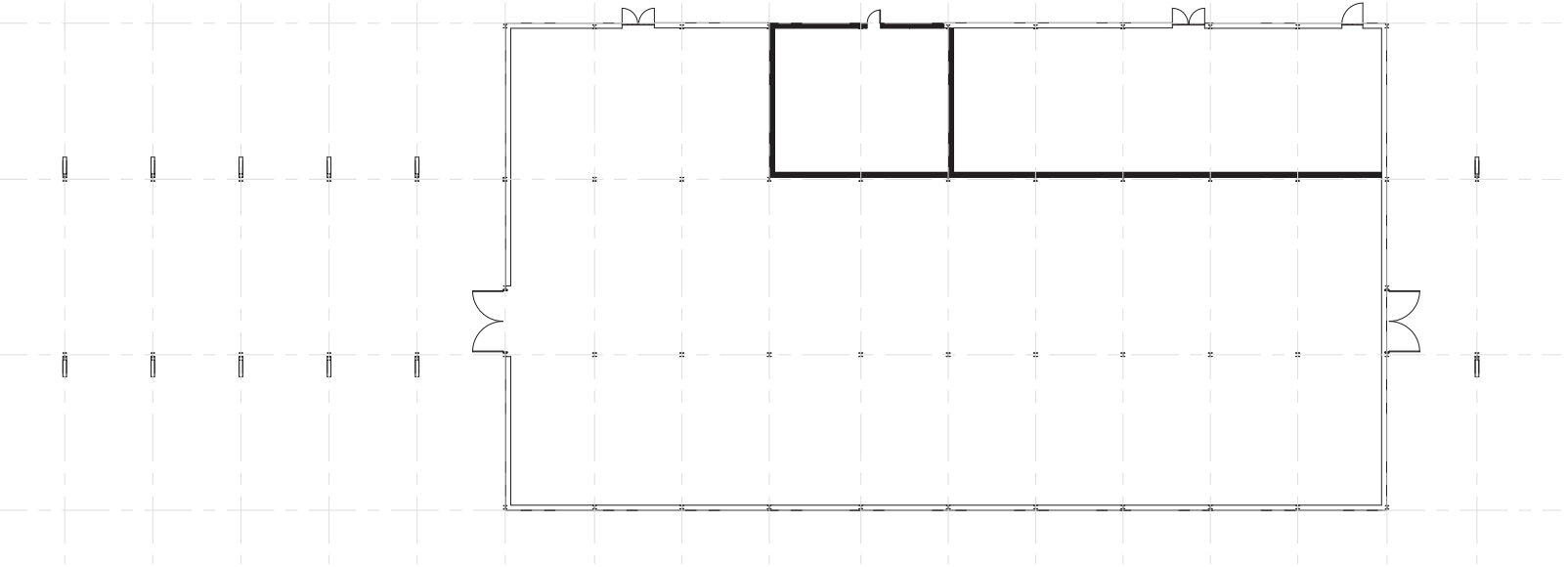


Existing Goat Farm Complex



Daylight Factor Distribution of Horizontal Illuminance

<http://www.lalc.msstate.edu/designweek2013/docs/Courtyard%20Design%20Case%20Study.pdf>



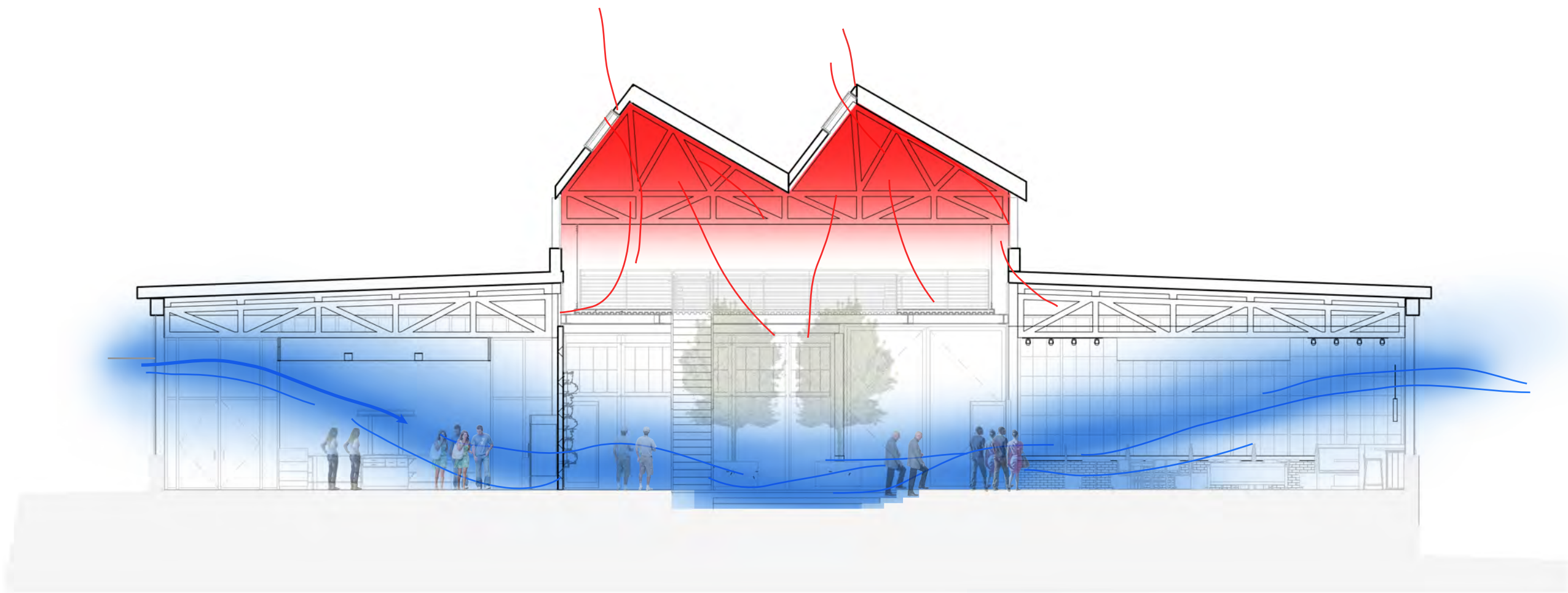
Existing Saw Tooth Building Floor Plan



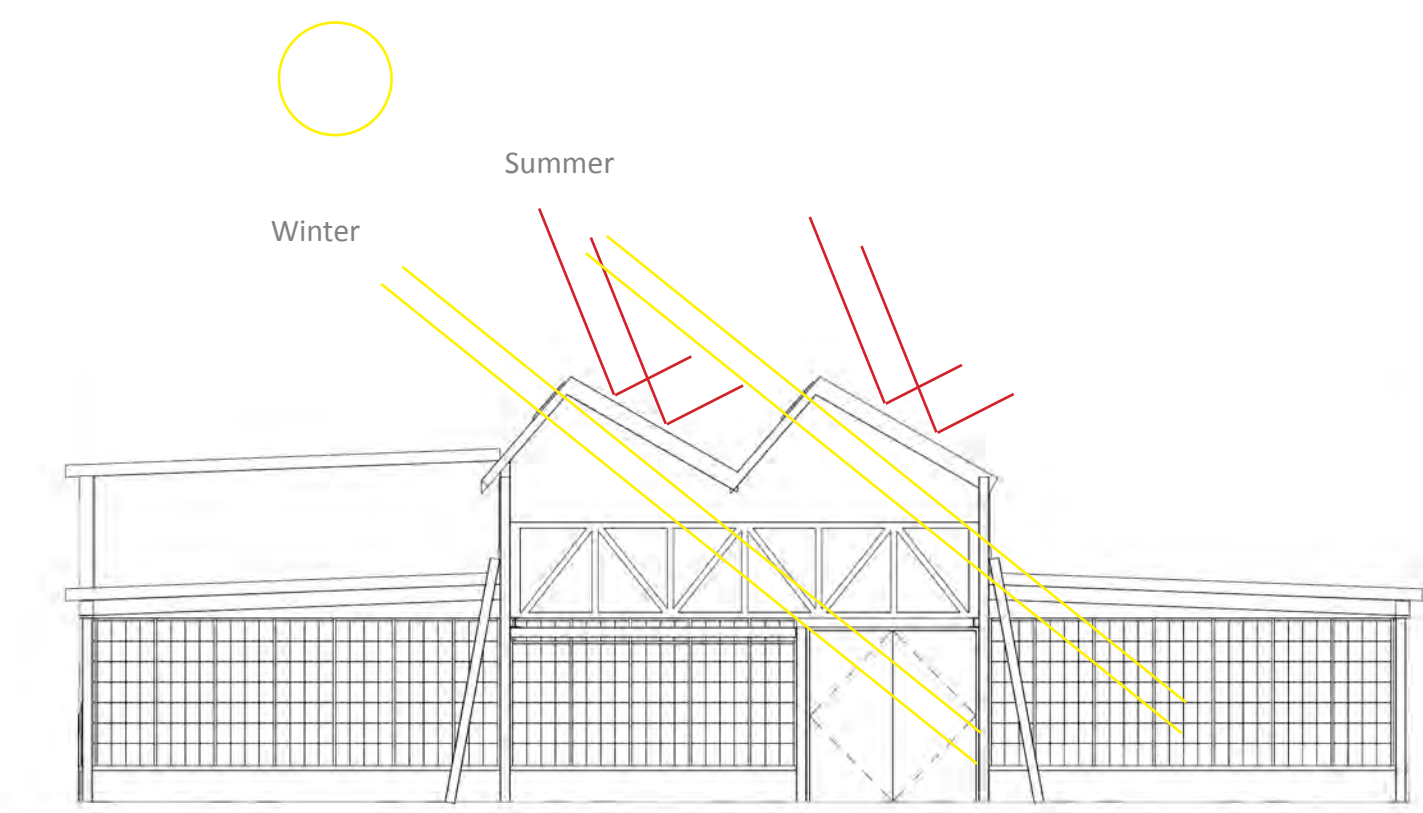
Ford Assembly Building



Interior of Proposed Sawtooth Building



Implementation of Passive Ventilation



Optimal Daylighting

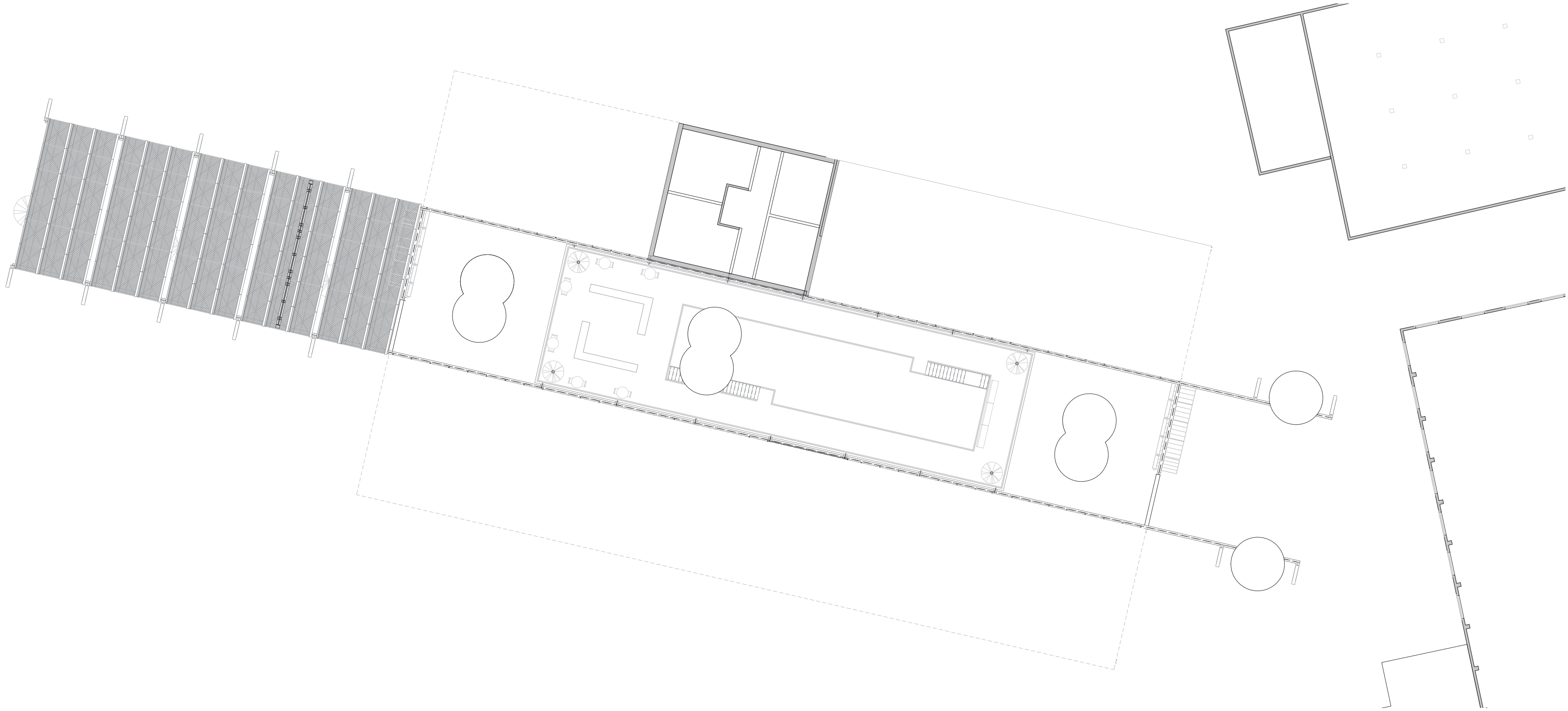
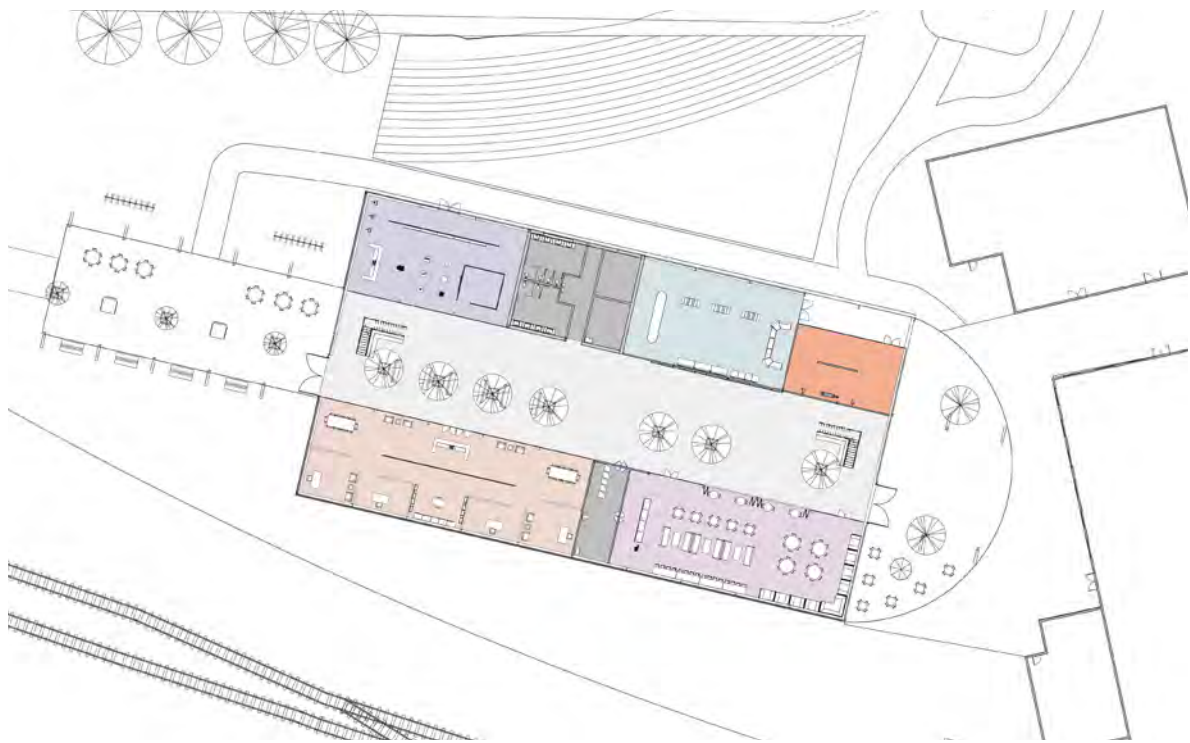


Saw Tooth Roof / Movable Overhead Beam

RE-USE POTENTIAL IN SAWTOOTH TYPOLOGY

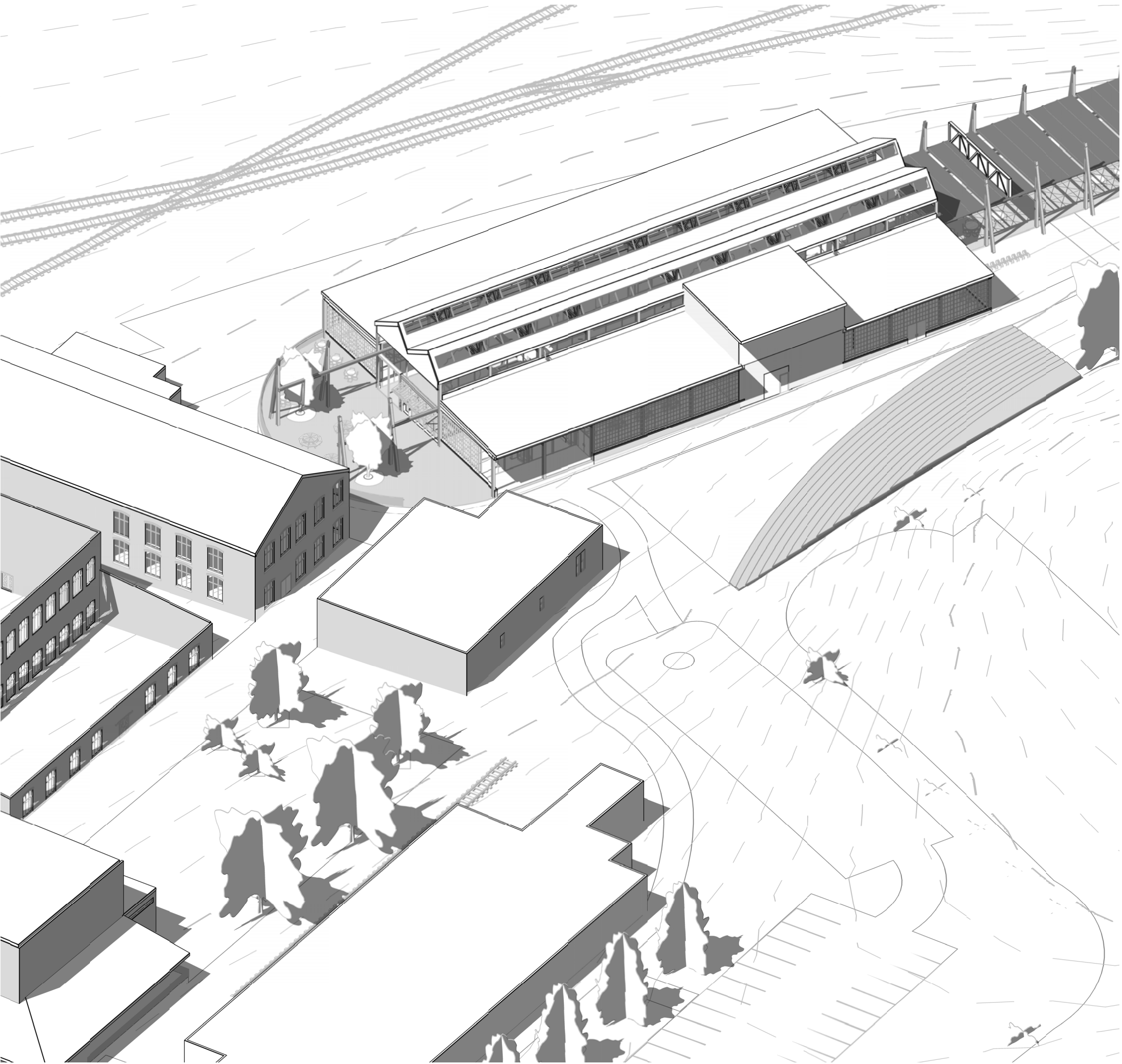
Program Key

- Gift Shop 2000 sq ft
- Cafe 2700 sq ft
- Gallery 2000 sq ft
- Service Core 2050 sq ft
- Administration 3500 sq ft
- Visitor Orientation 950 sq ft
- Atrium 7500 sq ft

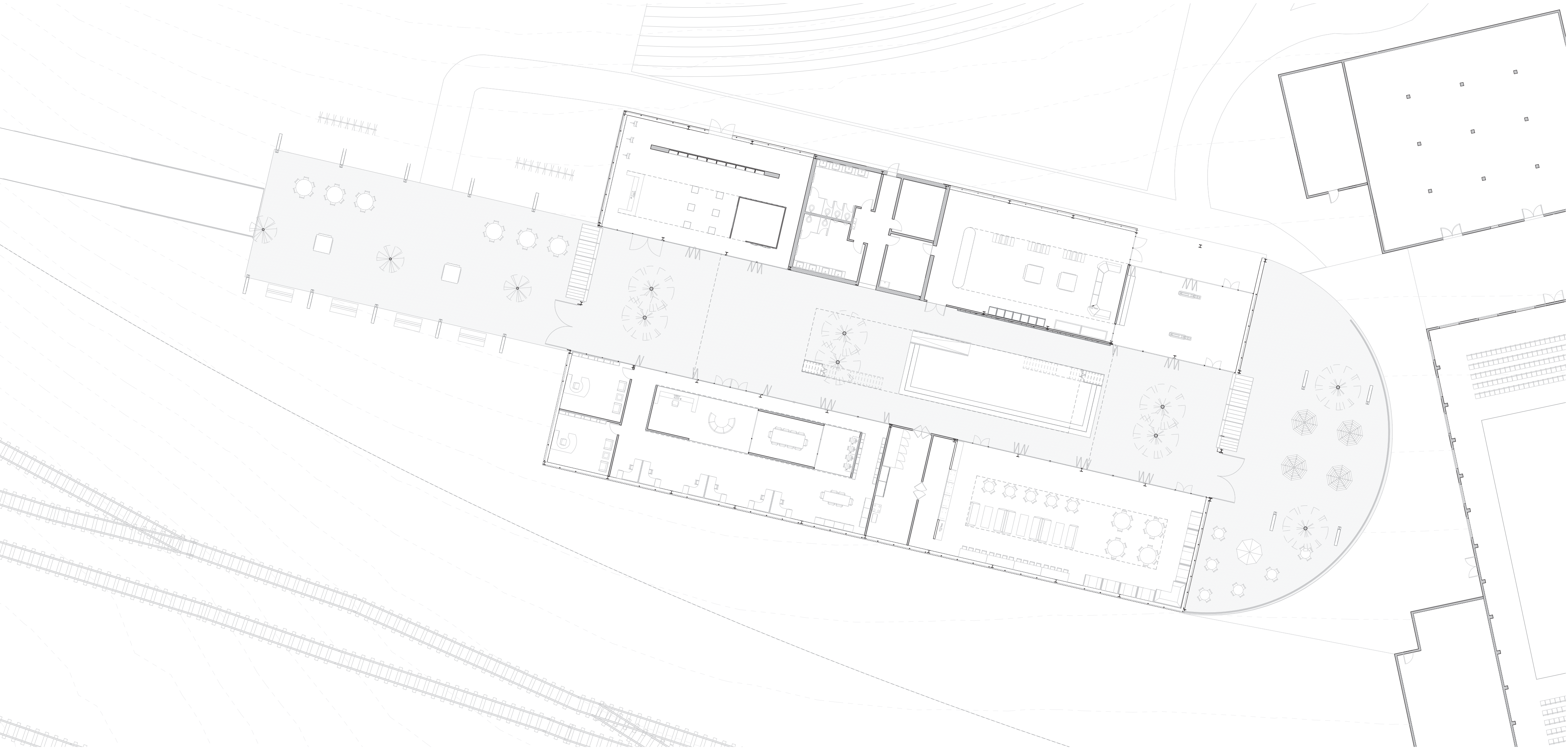


Second Floor Plan

3/32"=1'0"



Axon of Public Spaces



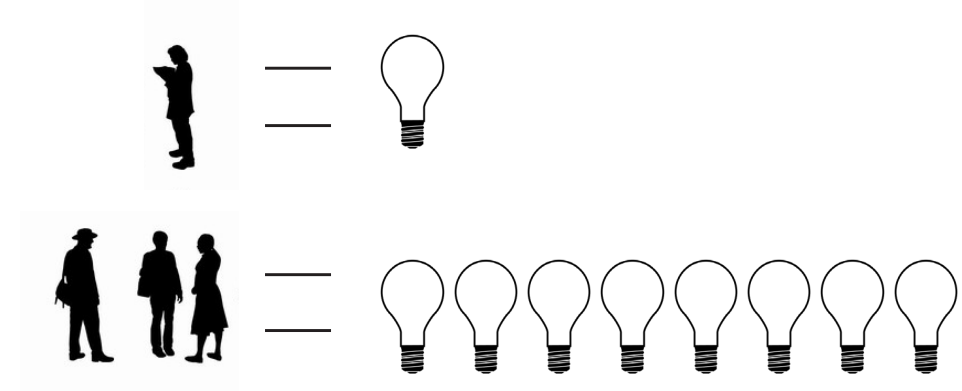
Ground Floor Plan

3/32"=1'0"

PROPOSED PROGRAM FOR SAWTOOTH BUILDING

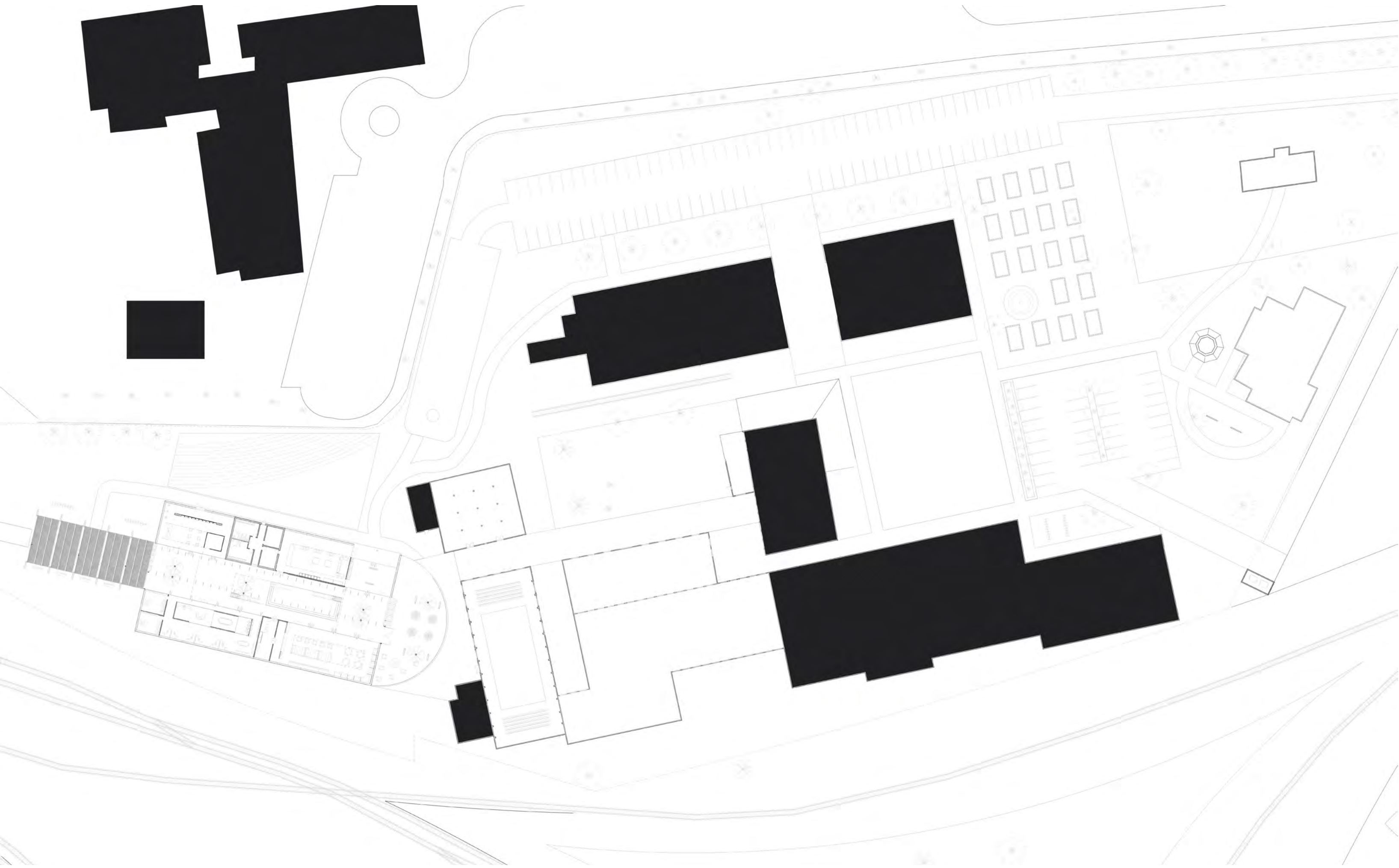
Creating Nodes

Nodes are points within the city, strategically located, into which the individual enters (and which is often the main focal point to which she or he is traveling to or from). There are often junctions – a crossing or converging of paths. They often have a physical element such as a popular hangout for the individual or a plaza area. In many cases, the nodes are the centers of the district that they are in.

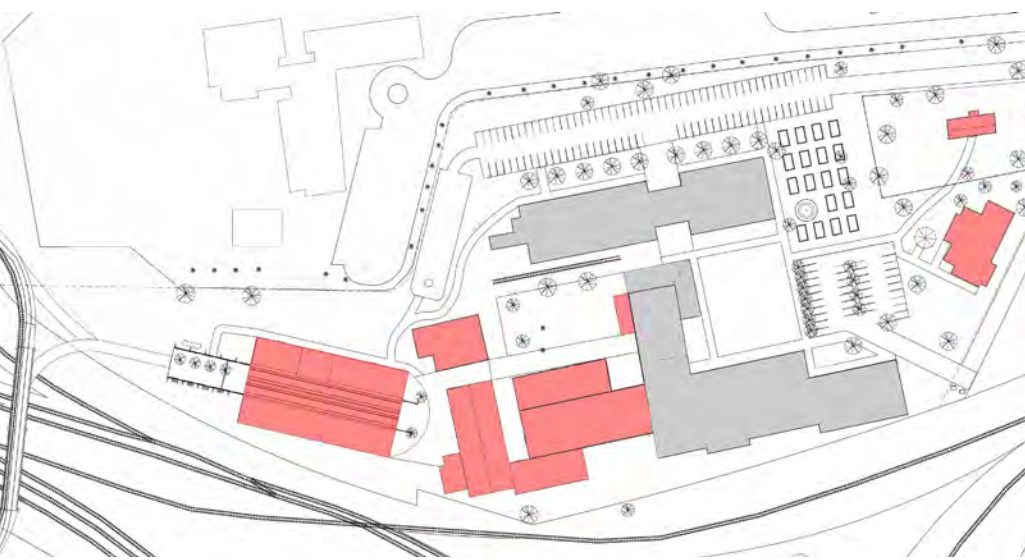


Kevin Lynch- Professor M.I.T.

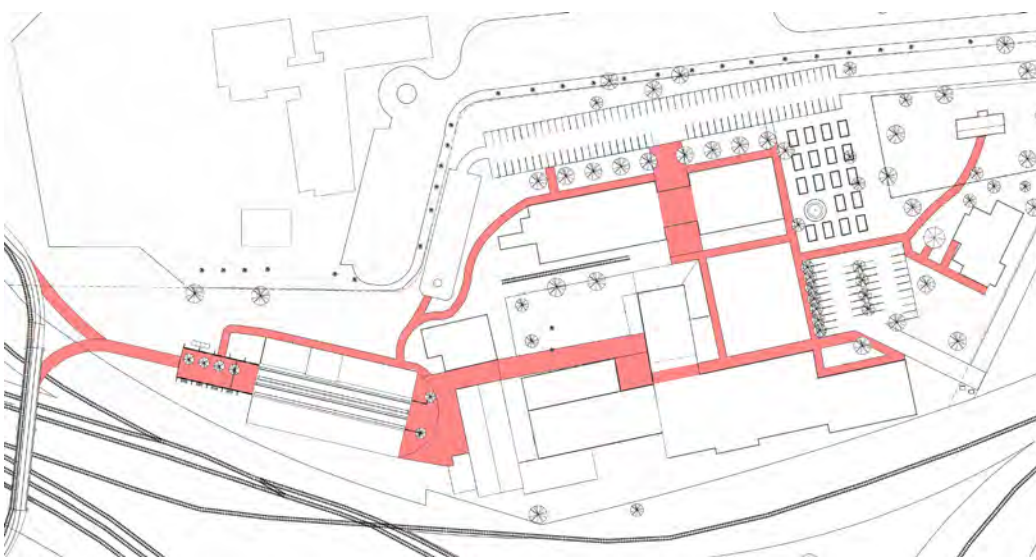
Synergy



Nolli Plan



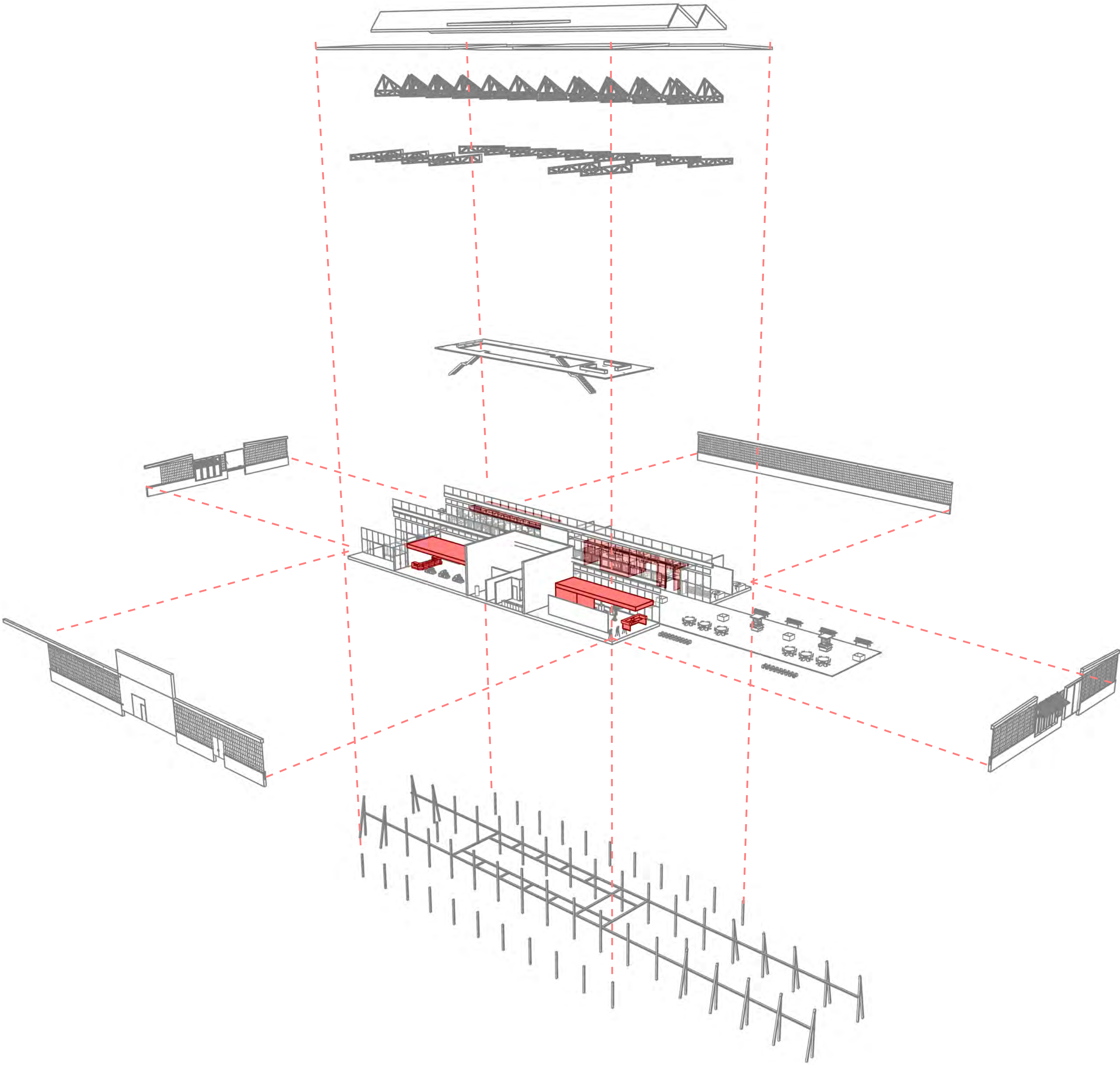
Public vs Private Program



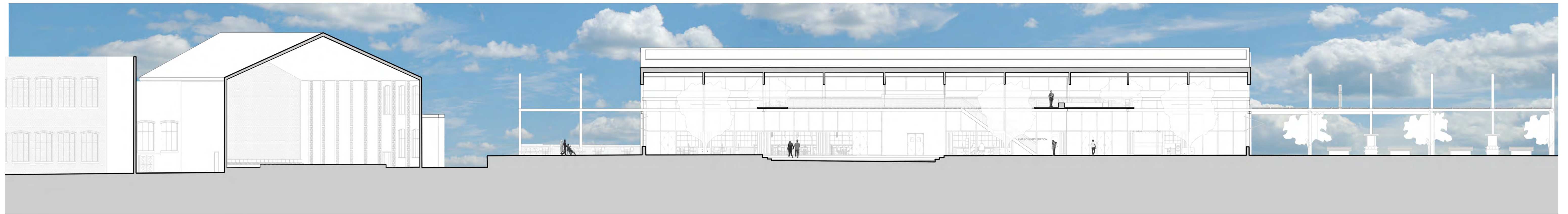
Pedestrian Paths



Nodes of Interaction



Inserted Programmatic Elements

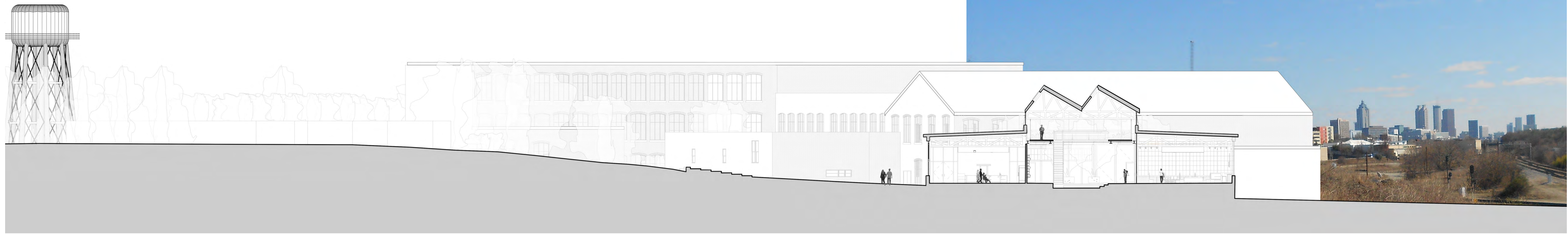


Longitudinal Section

Scale: 1/32" = 1'0"



Approach from BeltLine



Transverse Section

Scale: 1/32" = 1'0"



Atrium Space

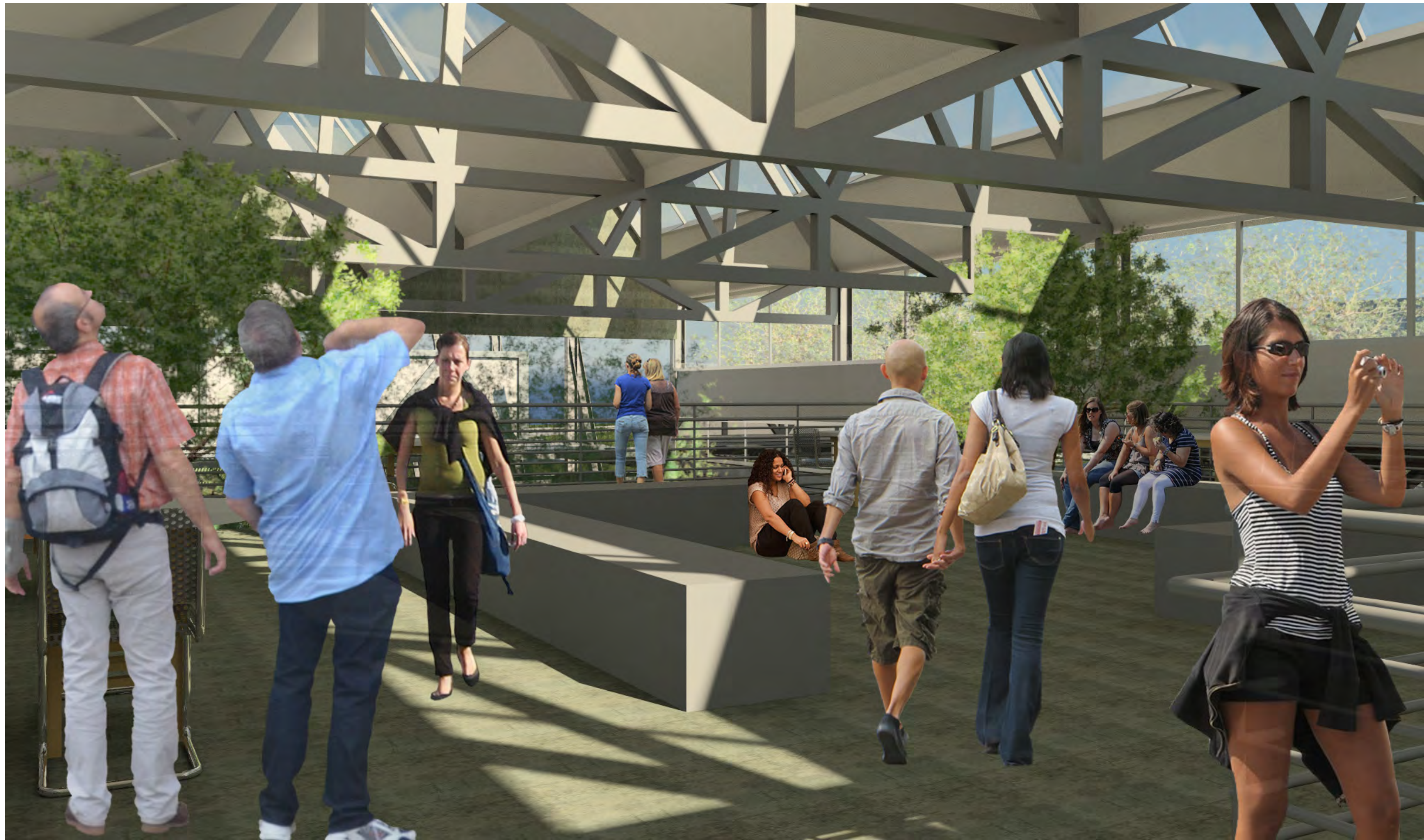
SPACES OF INTERACTION



Patio

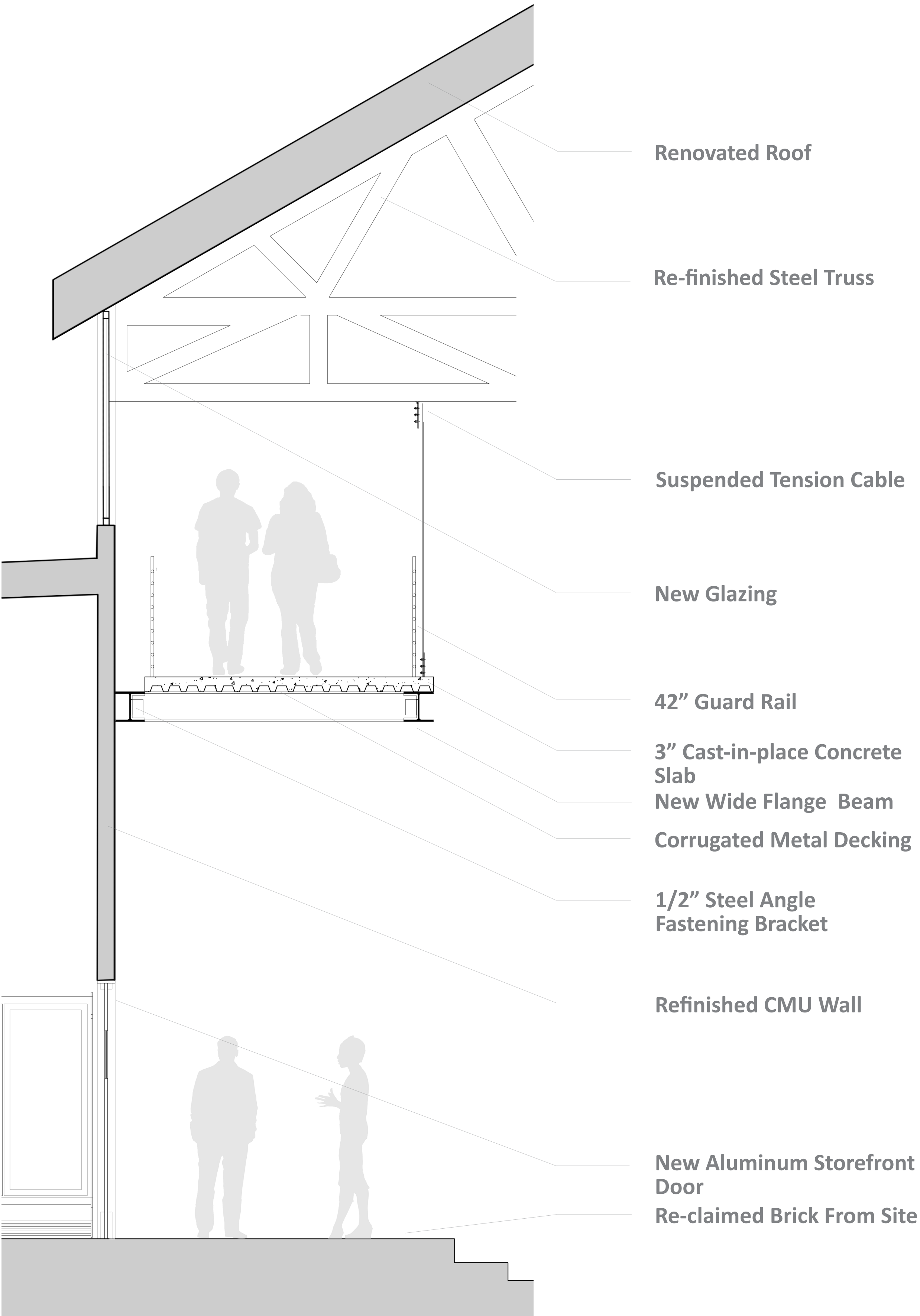


Sectional Perspective



Mezzanine Level

PUBLIC MEZANINE SPACE



Detailed Section 1/2"=1'0"



Cafe and Restaurant



Office Space



Goat Farm Artist Gallery



Gift Shop