

Urban Regeneration: East Cleveland's Superior Avenue as the "Street of the Future"

An Honors Thesis (LA 404)

By David Bader

Thesis Advisor:
Malcolm Cairns

Signed

Ball State University
Muncie, Indiana

May 2011

Expected Date of Graduation
May 2011

Sp Coll
Lindergrad
Thesis
LD
2489
.Z4
2011
.B342

ABSTRACT

Urban Regeneration: East Cleveland's Superior Avenue as "The Street of the Future"

East Cleveland, Ohio is a city that has seen its prosperity fall into a grey period but is finally ready to forward toward a more colorful future. This once thriving 3mi² industrial-metropolis has slowly degraded into a state of urban decay and widespread poverty. East Cleveland's main arterial road, Superior Avenue, was at one point the commercial center of the city. It was the center of both the city's economy and its public space. Most importantly, it was the center of the inedible character of East Cleveland. This blue-collar, working class character has become lost amongst broken glass, plywood covered windows, and untamed landscapes. Beautiful boarded up buildings, abandoned lots, and empty storefronts line a majority of this 1.5mi stretch of Superior. Because of its importance to the Greater Cleveland Area and its prime location within the context of the city as a whole, East Cleveland was the perfect location for an urban regeneration project that reconsidered Superior Avenue as Cleveland's new "Garden District".

East Cleveland needs to move away from its unsustainable past and toward a more productive and sustainable future. Overall, this design proposal responds to the countless voided spaces that exist on Superior Avenue. These spaces are in the form of unused parking, abandoned buildings, and empty lots. Not only are these voids unsightly, they are a waste of essential spaces that could be transformed into vital assets for the East Cleveland community. The design proposes that these spaces be re-envisioned as areas for the production of food, clean energy, and art. This network of productive spaces is bound together by an almost "greenway-like" right-of-way (street trees, a prevalent vegetated swale, separated bike line, pocket parks, and numerous living wall systems). Even the road itself acts as a productive entity as it allows water to percolate into a subsurface drainage system that is cycled throughout irrigation systems. The entire design is anchored by a new Biological Testing Center for the Cleveland Clinic that has been proposed on the site.

Transforming Superior Avenue into Cleveland's new "Garden District" will attract new residents and help create a more economically stable environment. The design accommodates current residents, students (from nearby Case Western Reserve University), young professionals, doctors (from the nearby Cleveland Clinic), organic farmers, and emerging artists. All of these users will be able to access their places of work easily via transit, walking, or bicycling. The residents of the new "Garden District" will be able to live comfortable lives knowing that the place they call home will be sustainable, exciting, and beautiful for a long time to come.



ACKNOWLEDGEMENTS

I'd first and foremost like to thank you, City of Cleveland. You have been through extreme hardships but you have somehow managed to stay optimistic. You are home to some of the greatest people and places I will ever know and I am grateful for the experiences you have given me over the years.

Next I'd like to thank my family. You are both huge and awesome. Sometimes you drive me crazy but you always support me when I really need it. I'd like to thank my parents, Jim and Mary; my sisters, Sara and Grace; and my brothers, Ryan, James, and Quinn. I'd also like to thank my closest friends, roommates, and other people that have stuck with me over the years and helped keep me sane.

Finally I'd like to thank everyone in my studio. Throughout college we've made so many memories and experienced so many things with one another. We've had an amazing five years you guys have become family to me. Thanks for being awesome.

AUTHOR'S STATEMENT

As a student of Landscape Architecture, I had the unique opportunity to spend my entire final semester developing this thesis proposal. Essentially, this proposal is an exploration of how a rundown street in an impoverished neighborhood (East Cleveland, Ohio) can become productive entity. This design involves the implementation of community garden spaces, a new commercial area, and several educational hubs throughout length of the street. This project would have important implications in the design world because it would reconsider the typical street as a place for *production* and transportation, rather than just transportation. I chose to show my design vision in a primarily graphical format. I used hand drawings and photographs as a base and edited them in Photoshop to show the design elements as clearly as possible. I supplemented these graphics with a substantial amount of text. This text explains the rationale, character, and implementation of the design.

Superior Avenue -- The current state of this once beautiful street



These quick photos give a taste of the character of Superior Avenue today. The shells of beautiful, architecturally rich buildings sit empty or boarded up. An almost never-ending network of abandoned lots are scattered throughout the entirety of the 1.5mi stretch.



TABLE OF CONTENTS

section

0

Title Page _____	i
Abstract _____	iii
Table of Contents _____	v

section

1

Introduction _____	1
Background _____	3
Precedents _____	5
Review of Literature	
Good Pedestrian and Cycling Infrastructure _____	7
Economic Opportunity _____	10
Cleveland Connectivity Problems _____	12
Problem Statement/ Significance _____	15
Goals/ Objectives _____	17
Regional Framework _____	19
Neighborhood Framework _____	21
Inventory/ Analysis _____	23



section

2

Potential Users	25
Master Plan	27

section

3

Area of Interest_1	29
Outdoor Performance Space	31
Construction Details	33
Area of Interest_2	35
Urban Agriculture	37
Construction Details	39
Area of Interest_3	41
Urban Farming	43
Area of Interest_4	45
Commercial Center	47
Transit Hub	49



INTRODUCTION

East Cleveland, Ohio is a struggling neighborhood that has fallen far from its roots. Originally a successful industrial and residential part of Cleveland, East Cleveland has succumbed to the acute pains of dying industry just so like so many other Midwestern towns. As industry slowly began to move out of town, jobs were lost and the residents of East Cleveland were left without economic opportunities, access to surrounding amenities, or character-defining public spaces. A town that used to be home to both wealthy entrepreneurs as well as Cleveland's toughest blue-collar workers became home to widespread poverty and abandoned buildings. Nowadays, East Cleveland remains broken down and depressed. However, with careful design consideration, East Cleveland's future could be looking much brighter in the next chapter of its existence. This project will specifically address the Superior Avenue Corridor that dissects East Cleveland on an East West axis. Because of its prime location within the context of the Greater Cleveland Area as well as the "blank canvas" nature of this dilapidated part of town, Superior Avenue makes a perfect candidate for an urban regeneration project that will spur future growth and redevelopment.

The main artery of East Cleveland, Superior Avenue, is lined with abandoned buildings that are woven into an unsightly network of empty lots. This corridor is the commercial core of East Cleveland, however few businesses can survive because of the lack of people that live, work, and shop in this area. Because the corridor has become so rundown, it is considered a part of town that most Clevelanders try to avoid if they can. The 1.5-mile stretch that runs through East Cleveland is bound by Rockefeller Park to the West and the Superior Avenue Rapid Transit Authority stop (Cleveland's light rail system) to the East. However the corridor has been unsuccessful at using these two tremendous assets to its advantage.

The redesign of Superior Avenue in East Cleveland is significant to the profession of Landscape Architecture because of the way that it challenges the conventional street. This project presupposes that "the street" that we have come to know is not the street of the future. Unlike the concrete casings that have traditionally acted as mediums for our everyday function, this street will be a living, breathing entity. Superior Avenue will be colorful, sustainable, and productive. It will generate food, jobs, and new lifestyle opportunities. It will be a place for current locals, urban artists, young professionals, small business owners, and students. It will be a corridor that provides efficient and sustainable transportation alternatives. Rather than a right-of-way that is dominated by speeding cars, Superior Avenue will be an environment for all users. Superior Avenue will be designed as Cleveland's new "Garden District" and will once again become the major artery that it once was.



EAST CLEVELAND

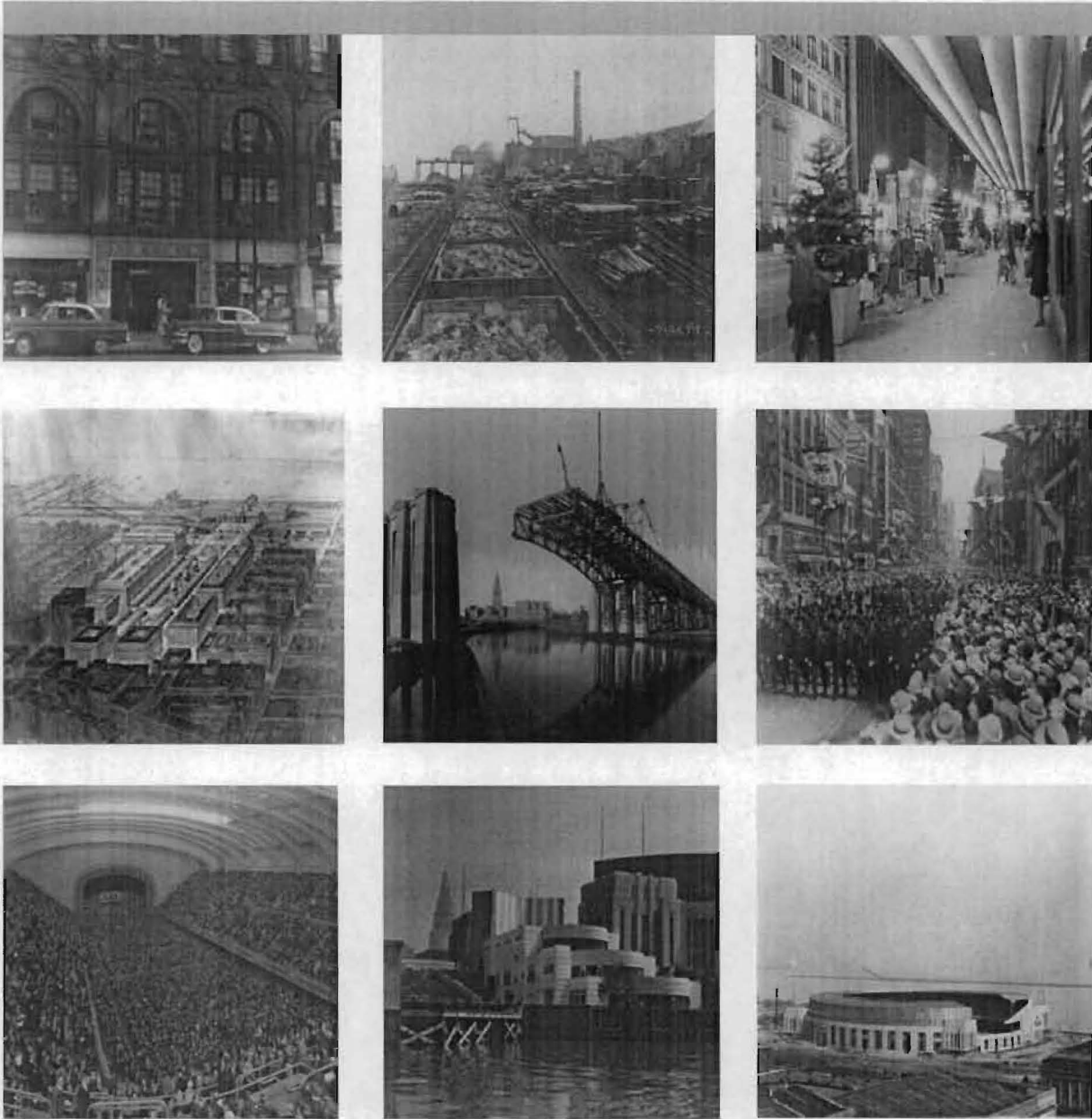
2

Map labels include:

- Neighborhoods: Bratenahl, East Cleveland, Cleveland Heights, Shaker Heights, University Heights, Kinsmann, Fairfax, Hough, University, Forest Hill Park, Shaker Lakes Park, Lee - Miles, Cuyahoga Heights, Newburgh Heights, Brooklyn Centre, Industrial Valley, St Clair - Superior, Glenville, Rockefeller Park, Buckeye - Shaker, Lee - Miles, Garfield Park.
- Parks: Rockefeller Park, Forest Hill Park, Shaker Lakes Park, Garfield Park.
- Streets: Superior Ave, Euclid Ave, Mayfield Rd, Chester Ave, Kinsman Rd, Harvard Ave, Miles Ave, Lakeland Fwy, St Clair Ave, Euclid Ave, E 152nd St, E 185th St, E 118th St, E 93rd St, E 71st St, E 55th St, S Woodland Rd, Chagrin Blvd, Lee Rd, Mies Ave.
- Highways: I-90, I-490, I-76, US-6, US-20, US-322, OH-283, OH-87, OH-14.
- Other: Burke Lakefront Airport, Cleveland Memorial Shoreway, Innerbelt Fwy, Clark Fwy, Willow Fwy, Janney Fwy, Ohio and Erie Canal.

BACKGROUND

CLEVELAND THEN



An industrial Past -- Cleveland was one of the first Midwest Cities to gain prosperity through industrialization. As a result, a lot of Cleveland was designed to celebrate the thriving industrial market that existed in the city. This architectural character has been maintained through the years and is still evident in a lot of the architecture today.

CLEVELAND NOW



A Brighter Future -- Known for its rich industrial history, Cleveland was at one point a major player in America's economy. Cleveland has dealt with some serious turmoil in regards to its failing industry, but it has been successful in maintaining a lot of its architectural character. Cleveland has used design as a way to acknowledge the past while moving forward into the future.

PRECEDENTS

Alberta Street Portland, OR



Community Gardens



Street Life

Bridge Avenue Cleveland, OH



Community Gardens



Street Life



Character Distinguishing Events

A true "Garden Street"

Alberta Street is located in Northeast Portland and is a prime example of a street that has moved into the next generation. Alberta Street was always a relatively successful shopping corridor, but in recent years the city of Portland has done extensive work incorporating major swaths of green to attract visitors. Community gardens and street trees make Alberta Street a more pleasing place to shop.



Character Distinguishing Events

A Cleveland Example

Located in Cleveland's Westside neighborhood, Ohio City, Bridge Avenue has taken an interesting approach on the typical street. This street is used for residential, commercial, and public uses. As an example, within one city block, there is a park, a library, a church, several residences, and several restaurants. This fusion of uses creates a lively atmosphere and also provides more incentive to visit the area.

REVIEW OF LITERATURE

What is good pedestrian and cycling infrastructure?

Bicycle riding is a form of transportation that has been around longer than cars, airplanes, or electric trains. Since its creation in the early 19th century, the bicycle has been used as a piece of equipment for sport, as a status symbol in the early fashion world, and as a transportation unit. In recent years the bicycle has found a niche as a form of transportation due to the countless environmental concerns associated with driving, high traffic roads, and the increased price of gasoline. My research will investigate how a transportation system designed around pedestrian and cycling infrastructure can create connections and economic opportunities for the people of an impoverished neighborhood (East Cleveland, Ohio) that otherwise could not afford transportation in the form of a car.

One of the biggest challenges of this research involves understanding what good cycling infrastructure is and how to implement it in East Cleveland. Understanding good cycling infrastructure is challenging because so little information has been published about it. Very few articles or books have really dealt with the idea of designing cities for pedestrians and cyclists as opposed to the past standard of giving priority to cars. To understand how to design for cyclists, it is important to be aware of how streets function. Many streets accommodate only cars, pedestrians, and the most daring cyclists. However design of

streets is begging to consider more users than just the vehicular driver. One relatively recent trend in urban design is the implementation of "Complete Streets". Complete Streets: Best Policy and Implementation Practices is a book by McCann and Rynne that deals with multi-modal transportation. According to McCann and Rynne, "Complete Streets" are streets that are designed for the equal accommodation of all road users. Road users can be automobile and bus drivers, pedestrians, or cyclists. The idea is to provide safe and equal access to each of these road users by creating a specific space for the users to occupy. For instance, in a city with a transit system, a street should contain a specific or shared space for a bus to occupy in addition to spaces for cars, pedestrians, and cyclists. In East Cleveland where there is a transit system, roads should include specific spaces for pedestrians, cyclists, transit vehicles, and cars. By providing space for each user, roads flow more fluidly and there is less of a chance for accidents.

Not all streets are the same. For instance some streets are wide and can be retrofitted to provide space for all users. However many streets, especially in older neighborhoods such as East Cleveland, are too narrow to create a lane for everyone. McCann and Rynne state that cyclists and pedestrians can be accommodated in different ways depending on the situation. On very nar-

A Bicycle Boulevard in Berkley, CA



What is good pedestrian and cycling infrastructure?

file

row roads where there isn't enough room for a bike lane of any kind, shared lane markings or "sharrows" are used to indicate to drivers that cyclists belong in the street. These markings, depicting a cyclist and an arrow pointing the direction that they should be riding, are painted in the center of the road. In an article by the city of Cincinnati's Transportation and Engineering Department, they say that "sharrows create improved conditions for bicycling, by clarifying where cyclists are expected to ride and reminding motorists to expect cyclists on the road" (www.cincinnati-oh.gov). The cyclist ensures that they are riding in the right part of the road by riding over the point of the arrow part of the sharrow. Sharrows also tell drivers to be aware that they are sharing the road with cyclists and to drive cautiously.

In instances where the road is wide enough to accommodate bicycle facilities, cities can give cyclists their own lane that is separated from pedestrians and cars alike. This separated lane is called a "cycle track". Cycle tracks are usually at grade with the street and are separated from traffic with some physical barrier such as a curb or set of bollards. This physical separation is ideal for cyclists because it gives them space where they can be completely protected from cars while not having to dodge pedestrians on the sidewalk. Alta Planning and Design put together a report about cycle tracks called "Cycle Tracks:

Lessons Learned". In this report, Alta Planning studies the benefits and disadvantages of cycle tracks and examines United States precedents where cycle tracks are successful. The report also lays out the major principles of cycle tracks such as separation, width, and how to deal with cycle tracks at intersections. To eliminate conflict at intersections, Alta writes that "cycle tracks are particularly appropriate on roads that have fewer cross-streets and longer blocks, which often allow high vehicle speeds" (Alta Planning, 2). These principles are applicable to East Cleveland because most of the blocks are very long and there are not many major thoroughfares that would have to be crossed. Also the roads are wide enough that they could fit cycle tracks while maintaining space for sidewalks and vehicular traffic. Most of the roads are at least four lanes with parking on each side.

In a Danish report called "Road Safety and the Perceived Risk of Cycle Facilities in Copenhagen" the three authors Niels Jensen, Soren Jensen, and Claus Rosenkilde examine how the people of Copenhagen respond to the presence of cycling infrastructure. In general, they determined that by creating better cycling facilities, people felt much safer when riding and therefore ridership increased tremendously. Jensen, Jensen, and Rosenkilde write that "cycle tracks can increase ridership 18 to 20 percent, compared with

A Cycle Track in New York City



What is good pedestrian and cycling infrastructure?

the 5 to 7 percent increase found resulting from bicycle lanes" (Jensen, Jensen, Rosenkilde, 8). This is very relevant to East Cleveland because it defends that fact that better cycling infrastructure will get more people to ride bikes. Therefore if a network of bicycle facilities were built in East Cleveland, people would indeed use them to get from neighborhood to neighborhood and to get downtown.

Other infrastructural facilities will include things like urban trail heads, various traffic calming measures, on street bicycle parking, and signed bike routes. All of these facilities could be applied at various places in East Cleveland. The key will be applying them in the right places. Good cycling infrastructure does not have to be the flashiest or even newest. The best design comes through when the right design choice is made in the right situation. Every street is different and deciding the best way to design that particular street is where good pedestrian and cycling infrastructure is born. I will use this approach by analyzing site specific cases where particular infrastructural improvements will be made. I will go into great detail when designing these specific sites to show how they work for all road users.

East Cleveland is heavily dominated by cars and is a very daunting place to walk or ride a bicycle. For those that own a car, the road system (although very unsightly and pothole ridden) works relatively well. It is not dif-

icult to drive from place to place. However for those that don't have the option of driving a car, there is very little opportunity, for safe and efficient transportation. The bus system does stretch into East Cleveland, but the routes are often indirect and slow. This network would connect East Cleveland to downtown and the other surrounding neighborhoods from which it is currently isolated. In order to get people walking and on bikes, it is essential to provide safe opportunities for them to do so (Jensen, Jensen, Rosenkilde, 8). Good cycling infrastructure in East Cleveland will provide safe and efficient space for people that rely on a bicycle to get around.

A Bicycle Box in Portland, OR



REVIEW OF LITERATURE

How can a bike-able community be economically profitable?

One way to measure the success of a neighborhood or downtown revitalization is to measure whether or not the design is profitable over time. Countless revitalization projects have been implemented in American towns over the last several decades, but some of the most successful designs are often ones that stimulate economic growth and generate strong local business opportunities. In recent years, certain cities (i.e. Portland, Seattle, Minneapolis, Austin, New York City) have decided to improve upon old infrastructure by taking a more progressive look at how they redevelop their neighborhoods. These cities have taken a non-traditional approach in how they redevelop their downtowns, street systems, and green spaces. Rather than reformatting for the convenience of cars, designs have given priority to pedestrians, public transit, and cyclists. Although a relatively recent phenomenon, this design approach has proven to be incredibly successful in bringing life and activity to neighborhoods that were previously dying. This design approach has also proven to be very economically profitable for the cities that chose to go forward with this more progressive approach. Because of its current state of isolation and need for neighborhood connections, East Cleveland is a perfect candidate for a cycling-based redevelopment.

Some regions have gone to great lengths to research cycling and what sort of impact it can have on local economies. In

January 2010, The Nelson Institute for Environmental Studies, a sustainability-focused research team from the University of Wisconsin, published a detailed economic impact study with the goal of "Estimating the value of bicycling to tourism and health in Wisconsin and reviewing the potential to increase that value in the face of changing demographics, lifestyles, and economy" (Grabow, Hahn, Whited 1). In their report, titled "Valuing Bicycling's Economic and Health Impacts in Wisconsin", Grabow, Hahn, and Whited determined that bicyclists support economic activity through the purchase of equipment, food and drink, entertainment, various government fees, and any kind of retail shopping that is associated with cycling.

To complete a most accurate study, the authors took into consideration all kinds of cyclists that contribute to the economy, including inexperienced and unauthentic cyclists (a majority of the users of a cycling network in East Cleveland would most likely be inexperienced cyclists). "Not all cyclists on roadways can be characterized as "athletic" – many are casual vacationers or locals recreating. The 2005 University of Wisconsin study on Jefferson County estimated that 20% of road cyclists are locals living within the county. These cyclists are typically on short rides and spend an average of \$4 per day" (Grabow, Hahn, Whited 9).

Upon completion of the Wisconsin

A Cycle Track in Copenhagen, Denmark



How can a bike-able community be economically profitable?

economic impact study, the Nelson Institute for Environmental Studies determined that cycling had a tremendously positive impact on the state's economy. It was estimated that bicycle recreation and tourism generated as much as \$924,211,000 at the state level. Also the study determined that increasing non-resident bicycling by 20% could have tremendous impacts on the economy. "Increasing non-resident bicycling by 20% has the potential to increase economic activity by more than \$107 million dollars and create 1,528 full-time equivalent jobs" (Grabow, Hahn, Whited 13).

Another group that completed a similar study was the Division of Bicycle and Pedestrian Transportation from the North Carolina Department of Transportation. The Division completed its case study, "Pathways to Prosperity: The Economic Impact of Investments in Bicycle Facilities", in April of 2004. Similar to the findings of the impact study in Wisconsin, the Division determined that cycling facilities had a tremendously positive affect on the economy, quality of life, and public health of the Outer Banks. This report estimated that cycling tourism contributes about \$60 million annually for North Carolina. This particular study was good because it surveyed the people of North Carolina to obtain detailed answers associated with cycling issues. For instance the study included survey results like "nearly two-thirds of respondents indicated that riding on bicycle facilities made them

feel safer"; or "more than 75% of all respondents indicated that additional bicycle facilities should be built", and "nine out of ten respondents strongly agreed that state and/or federal tax dollars should be used to build more bicycle facilities" (Grabow, Hahn, Whited 13).

Although East Cleveland would not necessarily be attracting tourists the same way that Wisconsin and the Outer Banks do, these impact studies have several principles that are applicable to East Cleveland. For instance, both impact studies site the fact that bike facilities are a main contributor to increasing ridership. By providing opportunities to ride safely and freely, people have a much greater incentive to ride. With more cyclists on the road, a greater demand is created for cycling associated goods and services. This demand translates into new business and more money generated at a local level. Also, both studies cited that significant portion of the cyclists that they studied were not necessarily "athletic types." However because safe bike facilities existed, they were still willing to ride. Many of the users of a cycling network in East Cleveland would most likely be using the network to commute to work or to another neighborhood. However, the reasons for using the network are not exclusive to economic gain. The people of East Cleveland would use bike facilities for practical reasons as opposed to tourism, but these studies prove that facilities increase ridership, and in turn ridership increases business.

Shared Use Path in New Orleans, LA



REVIEW OF LITERATURE

What connectivity problems exist in East Cleveland?

Until the last few decades, East Cleveland was a safe and bustling part of town. However times have changed drastically in recent years leaving the neighborhood in a state of utter disrepair. It all started around the turn of the 20th century when business began to boom, due in large part to the Industrial Revolution. Because of its proximity to Lake Erie and the Cuyahoga River, Cleveland became one of the most important industrial hubs of the Midwest. Goods were either shipped to Cleveland along one of its major waterways or were produced in town then shipped out. For a long time Cleveland was known for the production of cars, electricity, and steel. Slowly, jobs began to move overseas where labor and materials were cheaper. As more jobs were outsourced and the industry in Cleveland began to degrade, the neighborhood of East Cleveland was hit tremendously hard because of its strong dependence on the local industry. East Cleveland gradually lost touch with surrounding neighborhoods and became an area that most people looked down on. After the retreat of industry in Cleveland, the neighborhood of East Cleveland was tremendously set back. Once bustling streets became vacant. Buildings were abandoned and crime rates began to soar. Many of the jobs that were located in East Cleveland moved to downtown and other neighborhoods (5 miles away).

In the scholarly journal, "Where the Jobs Are: Employment Access and Crime

Patterns in Cleveland" the authors, Fahui Wang and W. William Minor, analyze the linkage between the job market in Cleveland and crime rates. They cite the fact that other similar studies had been done previously, but claim that their study differs from others because it focuses on a more specific area rather than studying the relationship at a national, state, or even county level. To complete the study, Wang and Minor used GIS data to determine employment availability and compared that data to crime rates in Cleveland during the year of 1990 (height of economic collapse). When studying the relationship between crime and proximity to jobs, Wang and Minor concluded that most residents of East Cleveland lacked accessibility to jobs and that was the reason that so much crime existed. "To overcome the barrier of physical distance, residents must gain access to jobs either through relocation, or by using any transportation modes that are available to them. For many minority, low income, and less advantaged residents, relocating to gain access to better job markets is not an attractive or feasible alternative. Local family and friendship ties, residential segregation in the housing market, gender and racial discrimination in the job market, imperfect information available to job seekers, and other factors tend to minimize employment based relocation" (Minor, Wang 436). In other words, people don't have good jobs because they are physically incapable of getting to them. As it

Separated Bike Lane in Philadelphia, PA



What connectivity problems exist in East Cleveland?

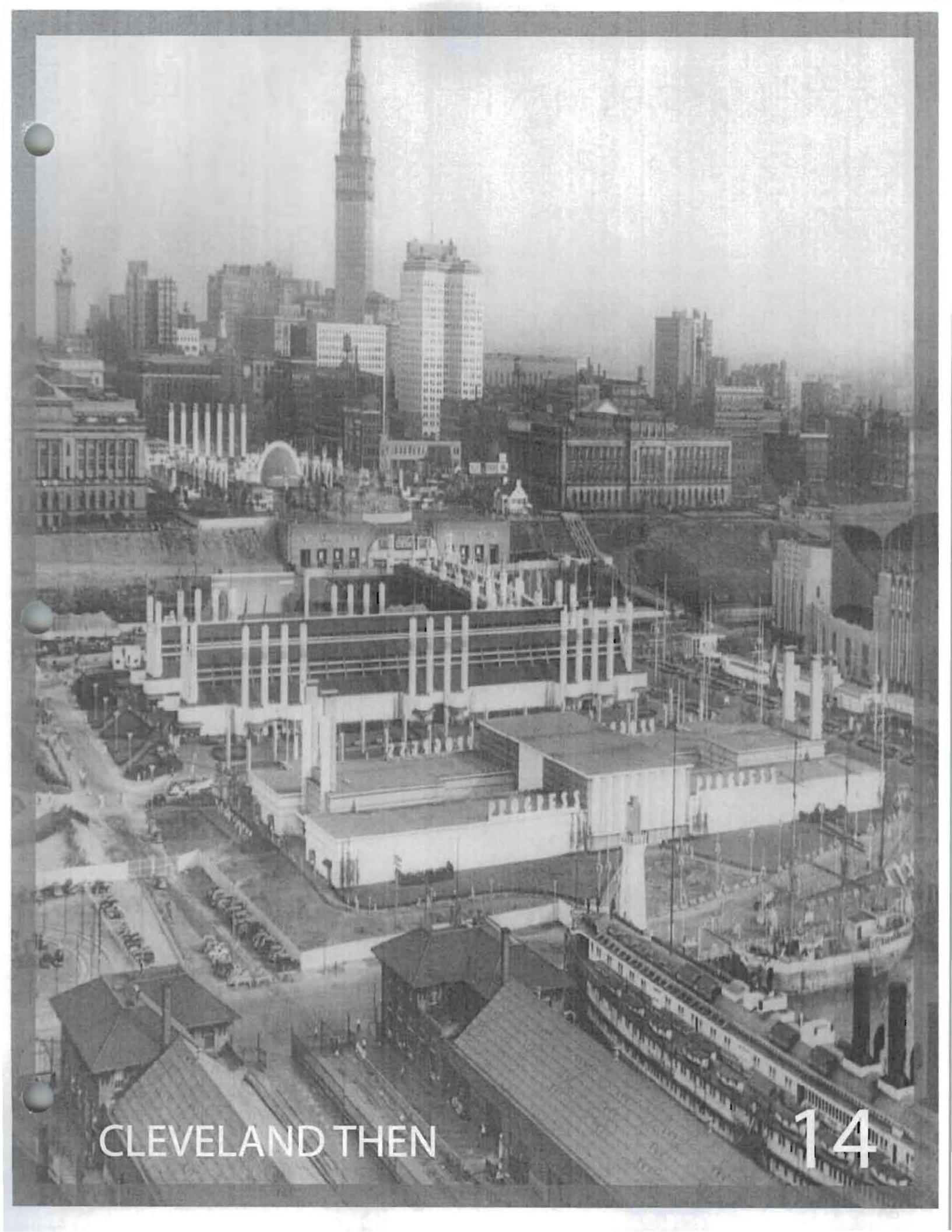
stands, East Cleveland does not have access to jobs. If the residents of East Cleveland were given better transportation options and had the ability to connect to surrounding neighborhoods, they would be able to get better jobs. By understanding principles of neighborhood connectivity laid out by Wang and Minor, it can be said that the physical disconnect is East Cleveland's biggest problem and presents the most important need to move forward with a more progressive transportation network.

Some cities have planned for the connectivity of their neighborhoods and as a result are thriving on issues of public health, environmental quality, and local economics. The city of Austin, Texas has a branch of their public works department that is dedicated specifically to neighborhood connectivity. This branch of the department was established in 1995 and is responsible for pedestrian and cycling planning throughout the greater Austin Area. On the Neighborhood Connectivity Division's website, it is explained how the goal of the Division is to create a city that is equally designed for cars, pedestrians, and cyclists alike. The website explains its dedication to neighborhood connectivity by saying "We understand that to improve the health of Austin, help control air pollution, reduce traffic congestion and allow public access to all, a comprehensive plan needs to be in place" (City of Austin, 1). This comprehensive plan includes a bicycle facili-

ties and sidewalk master plan. Both of these plans work together to create connections from neighborhood to neighborhood throughout Austin. The plans also include future public transportation additions (i.e. the expansion of the newly built light-rail line in downtown Austin). By planning for these multi modal connections, Austin is providing transportation options for its residents. This direction of planning is also setting Austin up to be a future leader when cities call for a greater concentration on people and less concentration on cars.

In-Street Bicycle Parking in San Francisco, CA





CLEVELAND THEN

14

PROBLEM STATEMENT

Problem

I will investigate how the creation of a new "Garden District" can create connections and economic opportunities for the people of the impoverished neighborhood of East Cleveland. I will also look at how innovative cycling and pedestrian infrastructure can be applied in East Cleveland and how that infrastructure can provide opportunities for commuting to surrounding neighborhoods. In order to do so I will look at the obstacles that East Cleveland faces in overcoming its disconnection with downtown and other surrounding neighborhoods.

Sub Problems

How can a "Garden City" be implemented in East Cleveland? – What is a "Garden City" and how can Cleveland implement food production into its current infrastructure?

What is good pedestrian and cycling infrastructure for East Cleveland? - What is innovative cycling and pedestrian infrastructure and what precedents can we look at to determine what works and does not work? Cities are slowly beginning to design for pedestrians and cyclists but often times they end up putting them in more danger because of poor design. Cities will often add bike lanes to segments of busy roads only to leave the cyclists in the middle of speeding traffic when the bike lane ends without notice.

What connectivity problems exist in East Cleveland? - What is the history of East Cleveland and what are the people like? How can the design include the needs and wants of the people who will actually be using the transportation network?

How can a bike-able community be economically profitable? - How can the introduction of transportation alternatives (cycling infrastructure and public transit) stimulate local businesses or create opportunities for new business?



PROBLEM SIGNIFICANCE

This particular topic is significant because when implemented, it re-envision the typical American street as a productive and sustainable entity. This is especially important because this design will map out a framework that can be applied on other "blank canvas" streets elsewhere. This design will also envision the street as a place for all users including cars, cyclists, pedestrians, and transit. It will provide connections to other parts of Cleveland so that the people of East Cleveland can have better access to amenities that are available in other parts of town. These connections will provide, amongst various other things, the best access to jobs in surrounding neighborhoods. For many reasons, more people are riding bikes every day. To keep the roads safe for all users, it is necessary to develop a system that integrates all forms of transportation systems so that all users can exist harmoniously.



PROJECT GOALS / OBJECTIVES

ACTIVE STREET LIFE

FOOD PRODUCTION

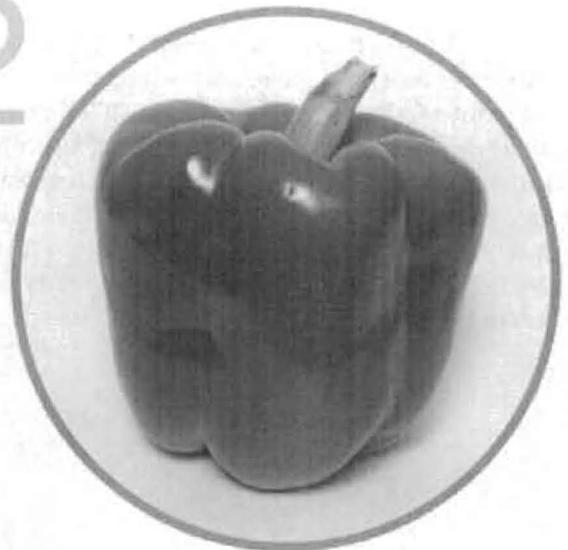
1



Create an Urban Environment with an Active Street Life

- Create distinct environments that are separate in use but similar in character
- Establish a specific commercial area that relates directly to the existing residential area
- Utilize vegetation and infill to create “human scaled” public spaces
- Program Superior to accommodate street closure events such as festivals, art walks, farmers markets, etc.

2

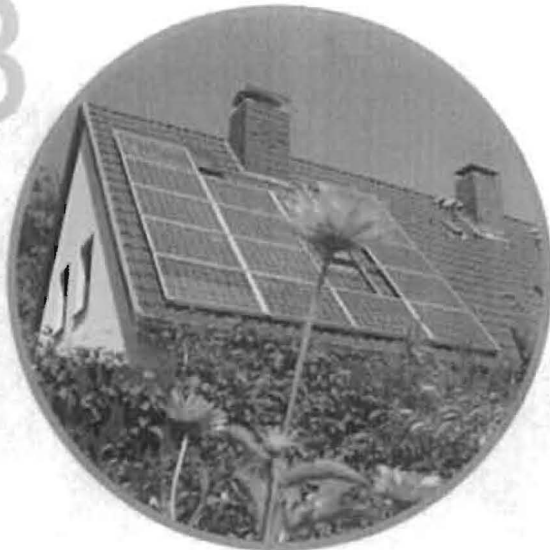


Utilize Wasted Space to Produce Food for the Community

- Utilize abandoned lots for food production in the form of “urban agriculture” (i.e. urban food gardens, urban orchards, and urban farms)
- Design agriculture sites to provide relief from the dense, urban environment. Sites should be spaces for the public and be inviting, attractive, and educational
- Create a sense of community cohesion through the placement of urban agriculture sites in areas where they are both part of the street and part of the neighborhood behind the street

SUSTAINABILITY

3



Integrate Sustainable Site Features that Benefit the Community

- Install living wall systems on unattractive facades to create sculptural elements that also cut down on energy costs for local businesses
- Utilize photovoltaic panels on rooftops to collect energy during all months of the year
- Treat storm water runoff with a swale system that runs for a majority of Superior Ave
- Use compost from urban farms as fertilizer for urban agriculture sites

ECONOMIC STABILITY

4



Create New Economic Opportunities for the Community

- Create programs where community gardeners can sell some of the food they produce in mobile produce trailers
- Revitalize the commercial area and create a "transit hub" that will be home to local bars, restaurants, and other businesses. These businesses will create jobs and help the community's tax base
- Create galleries where local artists can display their work and sell it as well

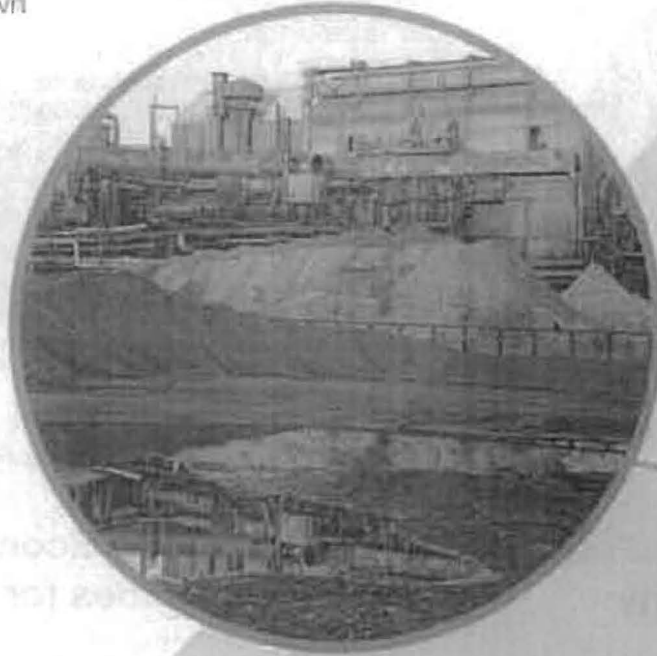
REGIONAL FRAMEWORK

East Side

Severance Hall is home to the Cleveland Orchestra and is a notable East Side Landmark

Industrial Barrier

A swath of dead industry cuts Cleveland directly in half and creates a barrier between the East and West sides of town



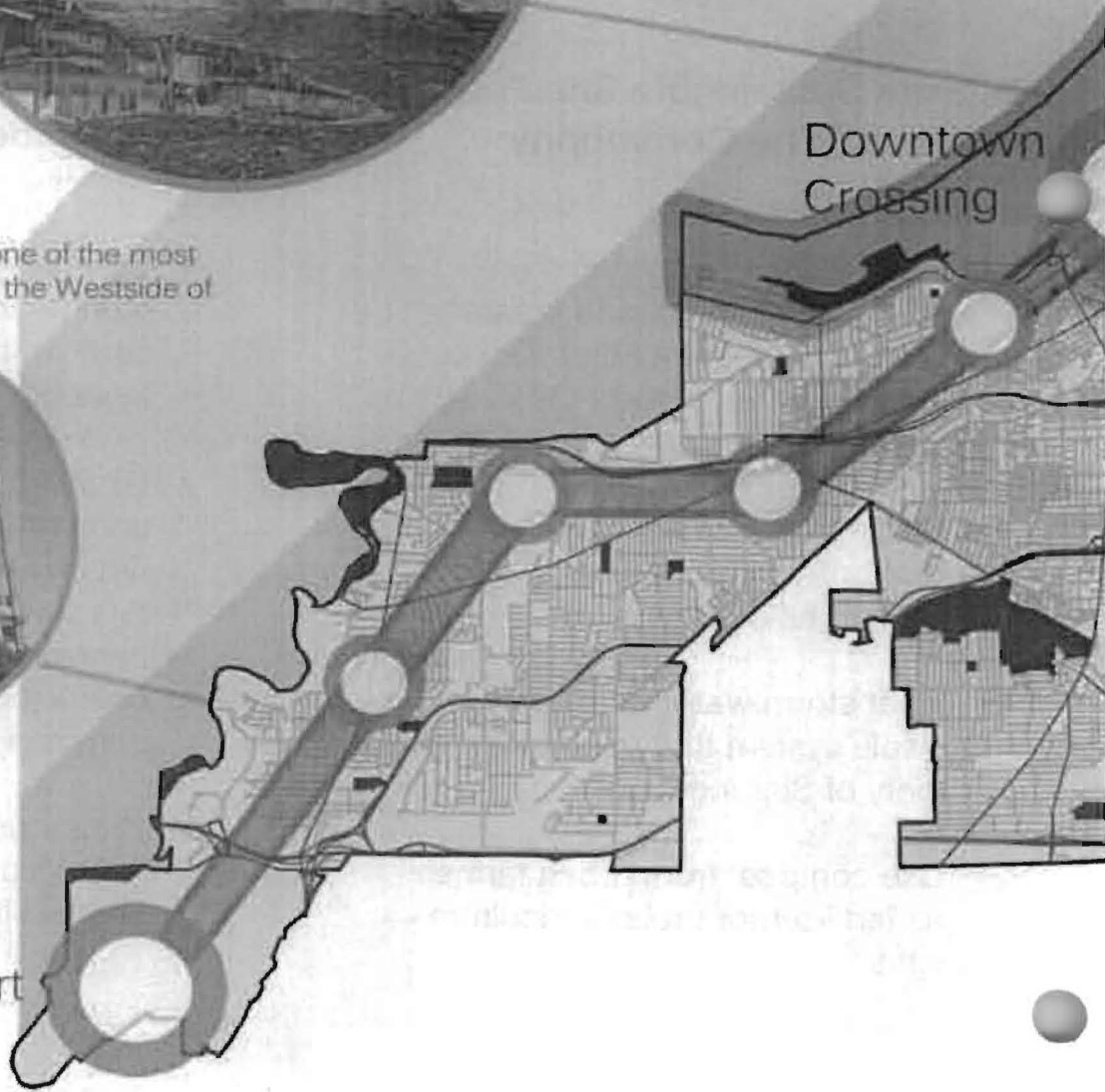
West Side

The Westside Market is one of the most prominent landmarks on the Westside of town

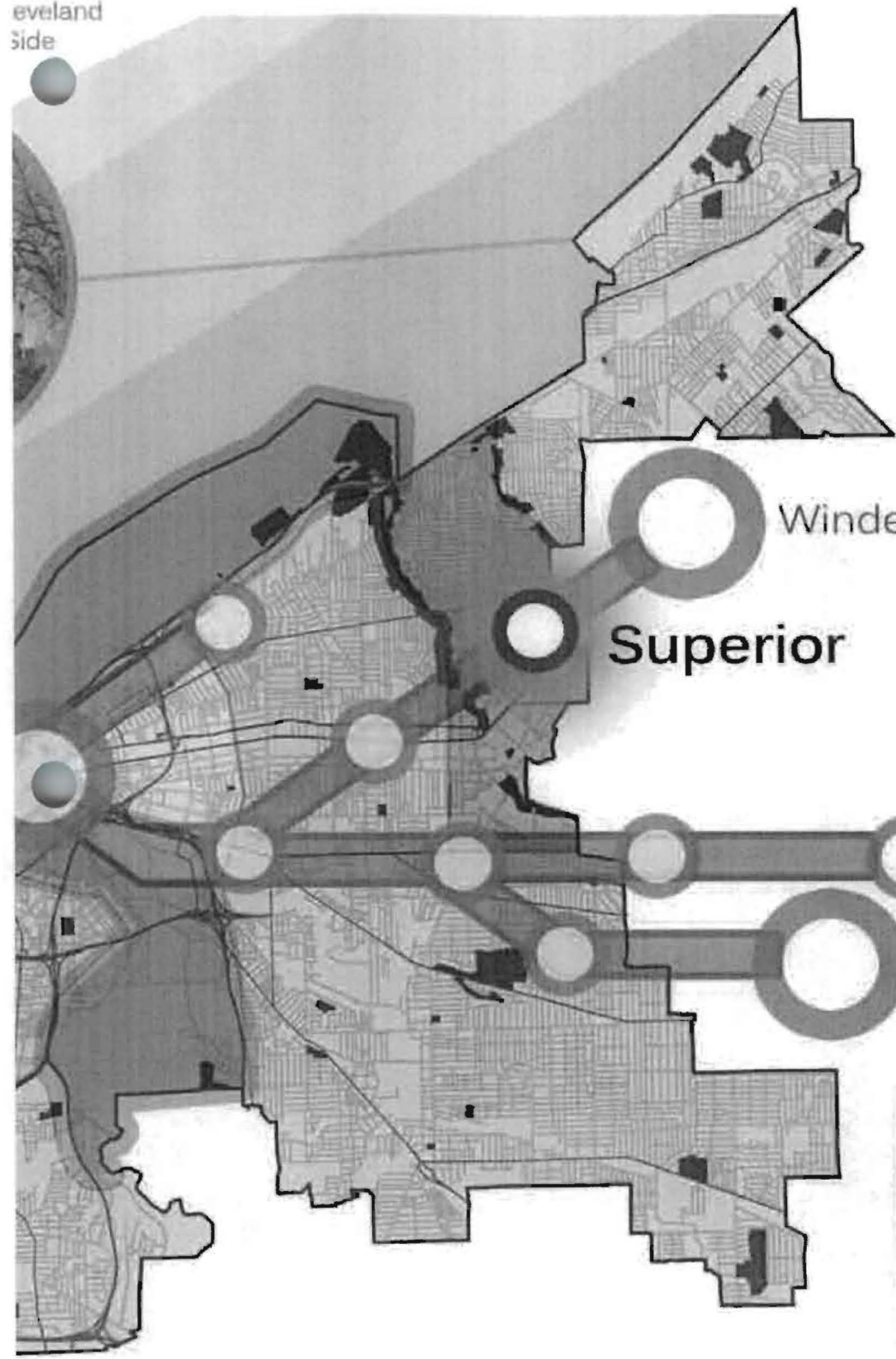


Airport

Downtown Crossing



Cleveland
Side



Windermere

Superior

Green

Warrensville

KEY

-  RTA Stop
-  RTA Network
-  Outer Ring Suburbs
-  Inner Ring Suburbs
-  Industrial Barrier
-  Downtown
-  University Circle
-  East Cleveland

NEIGHBORHOOD FRAMEWORK

Cle
Clevela
Greenw



Burke Lakefront Airport

Cleveland National Air Show . Potential Lakefront
Access . Potential Greenspace . Private and
Commercial Flights . Grand Prix of Cleveland



Downtown

Stadium Districts . Warehouse District . Flats District . Tower
City Shopping Center . Rock and Roll Hall of Fame . Great
Lakes Science Center . Public Square . Medical Mart . Playhouse
Square Theater District . Cleveland State University

Cleveland Cultural Gardens

and National Lakelfront Nature Preserve . Gordon Park . Rockefeller Park .
and Memorial Shoreway Access . Dr Martin Luther King Boulevard
way . Harrison Dillard Trail . Various National Gardens . Rockefeller Park



Glennville Rec

Community Gardens . Glennville High School .
Robert "Bump" Taylor Field . Bratenahl Village
Park . Glenview Park . Forest Hills Park . Pattison
Park . Superior Road Rapid Stop



University Circle

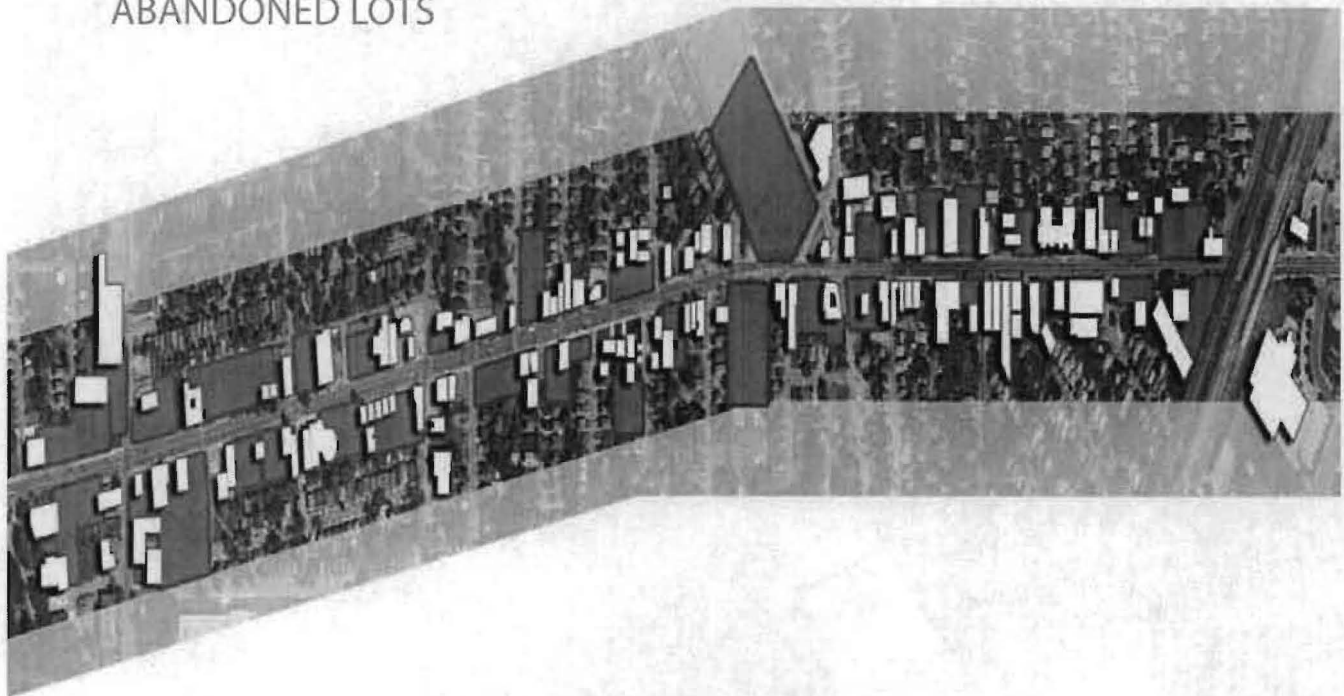
Case Western Reserve University . Cleveland Museum of Art .
Cleveland MOCA . Natural History Museum . The Cleveland
Clinic . University Hospital . Lakeview Cemetery . Little Italy
Neighborhood . Coventry Neighborhood

SITE INVENTORY

FIGURE GROUND

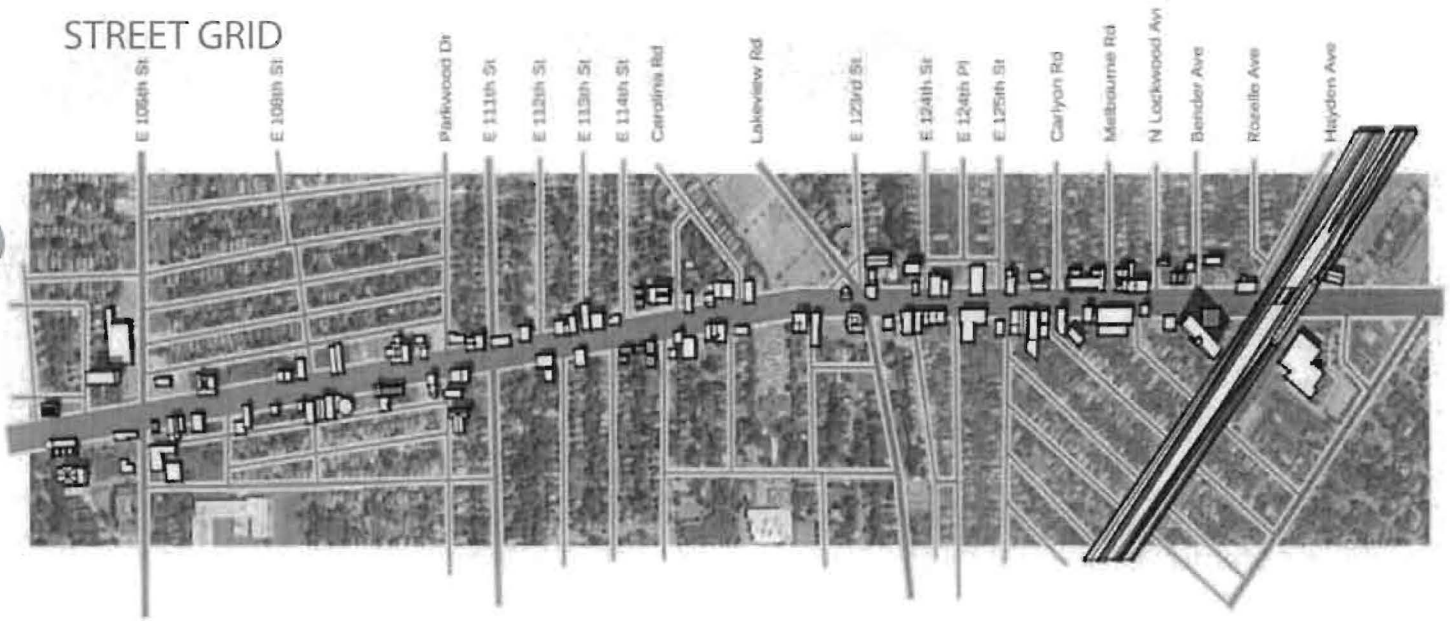


ABANDONED LOTS





STREET GRID



POTENTIAL USERS

STUDENTS / PROFESSORS

DOCTORS



USER NEEDS

Proximity to transit



Bikeable commute



Walkable commute



Proximity to commercial



Studio Space



Proximity to residential



ORGANIC FARMERS

EMERGING ARTISTS



MASTER PLAN

OUTDOOR PERFORMANCE SPACE

COMMERCIAL CORE

ROCKEFELLER PARK ENTRANCE



RTA TRAIN STOP

URBAN AGRICULTURE SITE

URBAN FARM / ORCHARD

OUTDOOR PERFORMANCE SPACE

URBAN REGENERATION

SUPERIOR AVENUE



OUTDOOR PERFORMANCE SPACE

This abandoned lot is located on the east end of the site, very near the Superior Avenue Transit Stop. This space is currently unused. It is located between two historic buildings that would make excellent renovated apartment spaces. Because this lot is located in what would be the future Commercial Area, this space would act as a pocket park for nearby residents as well those people that are just visiting the site. It would also be a space that is used as an outdoor performance space or a movie-watching space.

OUTDOOR PERFORMANCE SPACE

OUTDOOR PERFORMANCE SPACE

RTA TRAIN STOP

COMMERCIAL CORE

ROCKEFELLER PARK ENTRANCE

URBAN AGRICULTURE SITE

URBAN FARM / ORCHARD

OUTDOOR PERFORMANCE SPACE

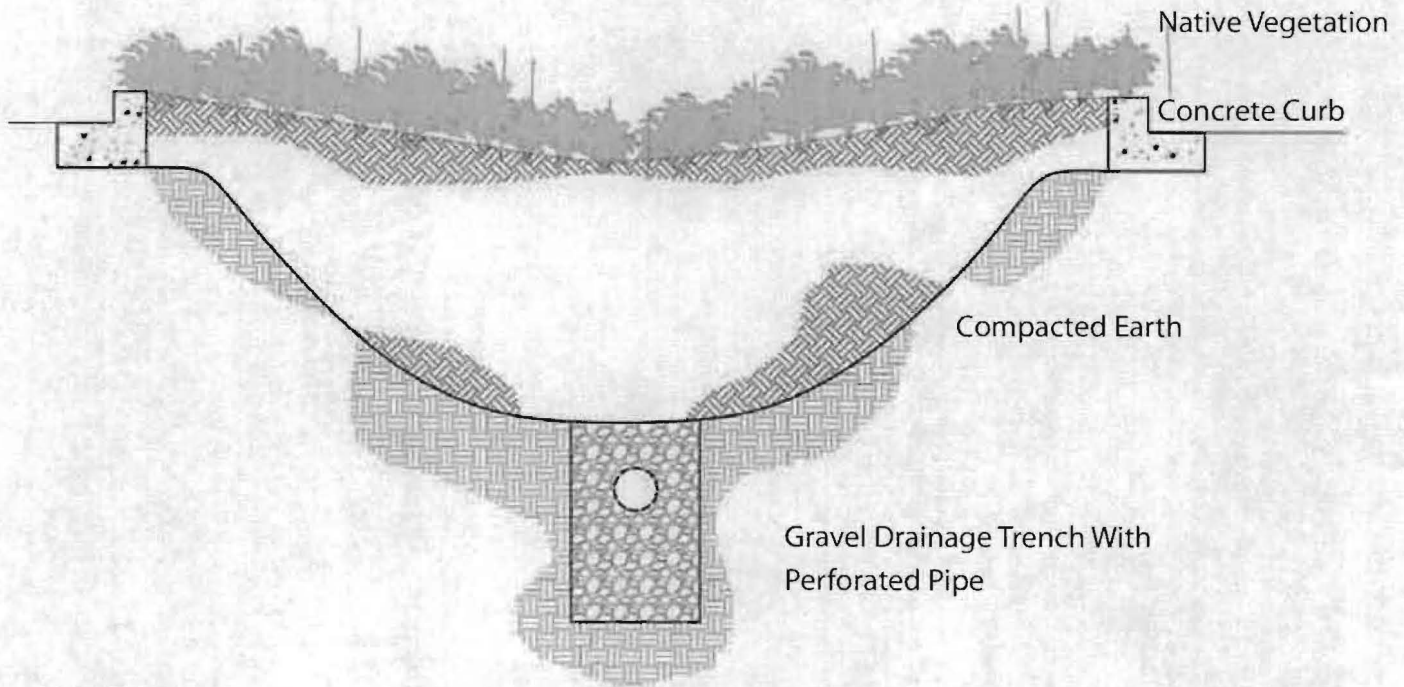




CONSTRUCTION DETAILS

Bioswale System

Currently, East Cleveland operates on a combined sewer system (household wastewater is combined with storm water). During heavy rain events, the system cannot handle the high surges of water and is forced to expel a significant amount of this excess water into nearby Lake Erie. This bioswale system runs throughout a majority of the 1.5-mile stretch of Superior. This swale has two main functions. First it collects and treats the rainwater from surrounding buildings. Second, it acts as a buffer system, creating a separated bicycle lane that protects cyclists from cars.

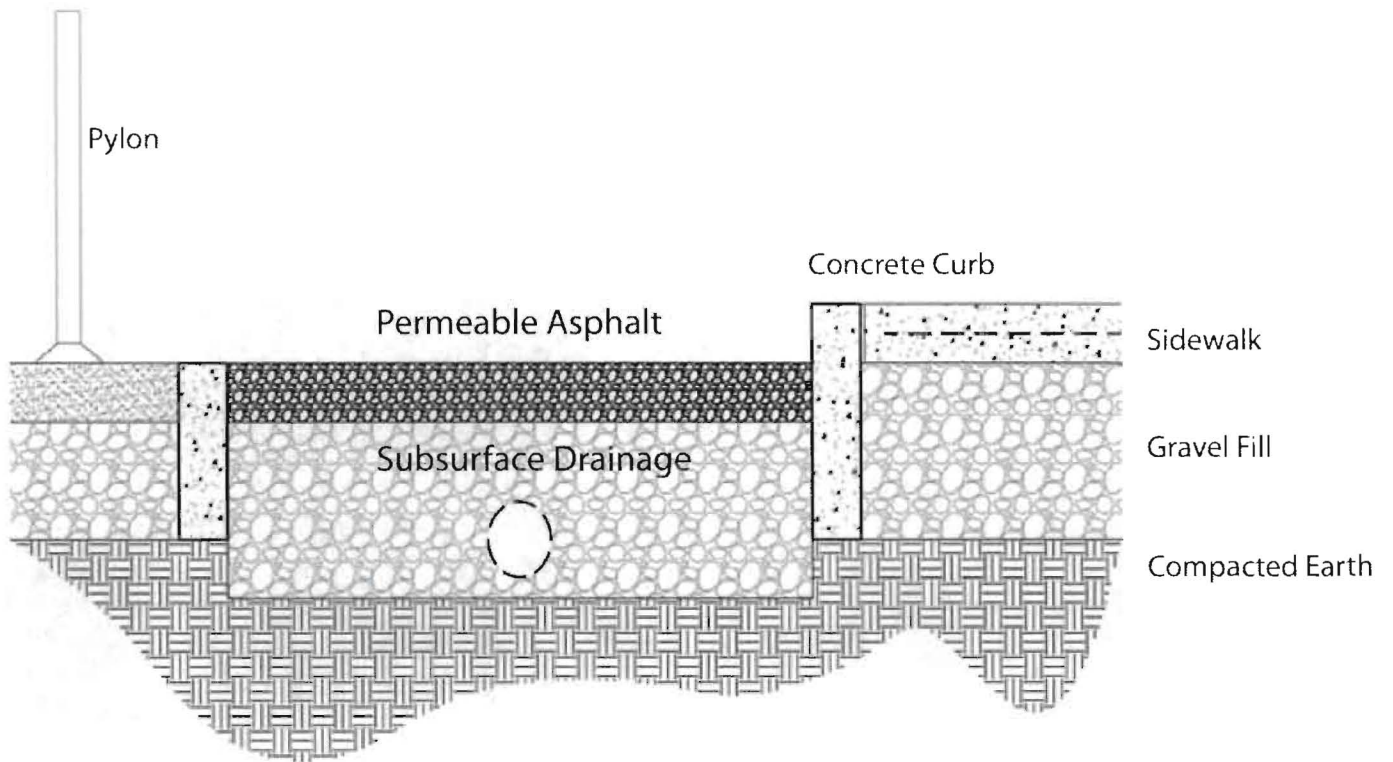


Daylighted Portion of Swale



Permeable Bike Lane

The bioswale system runs for a majority of the street, but in the commercial area the swale goes underground and turns into a permeable asphalt system. The swale goes underground at this point to avoid the inevitable cutting through that would occur given the high foot volume in the commercial area. Because the swale and the bike lane are on the same axis, their utilities could be on a connected system that allows for one flow of water throughout the entire street. Essentially, the permeable bike lane would treat water the same way as the swale except the swale is daylighted and the bike lane system is not.



Permeable Pavement Portion of the Swale



URBAN AGRICULTURE SITE

URBAN REGENERATION

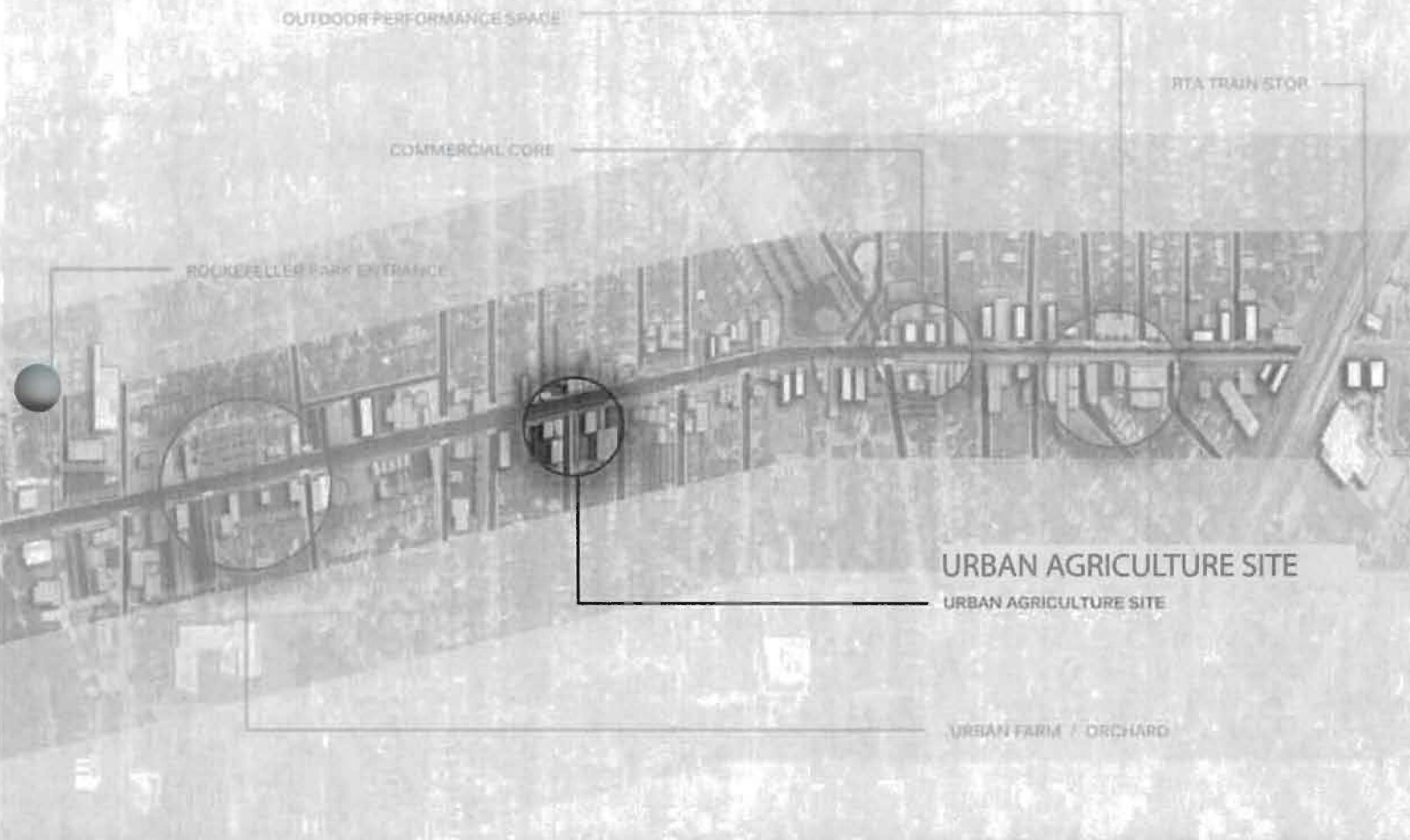
SUPERIOR AVENUE



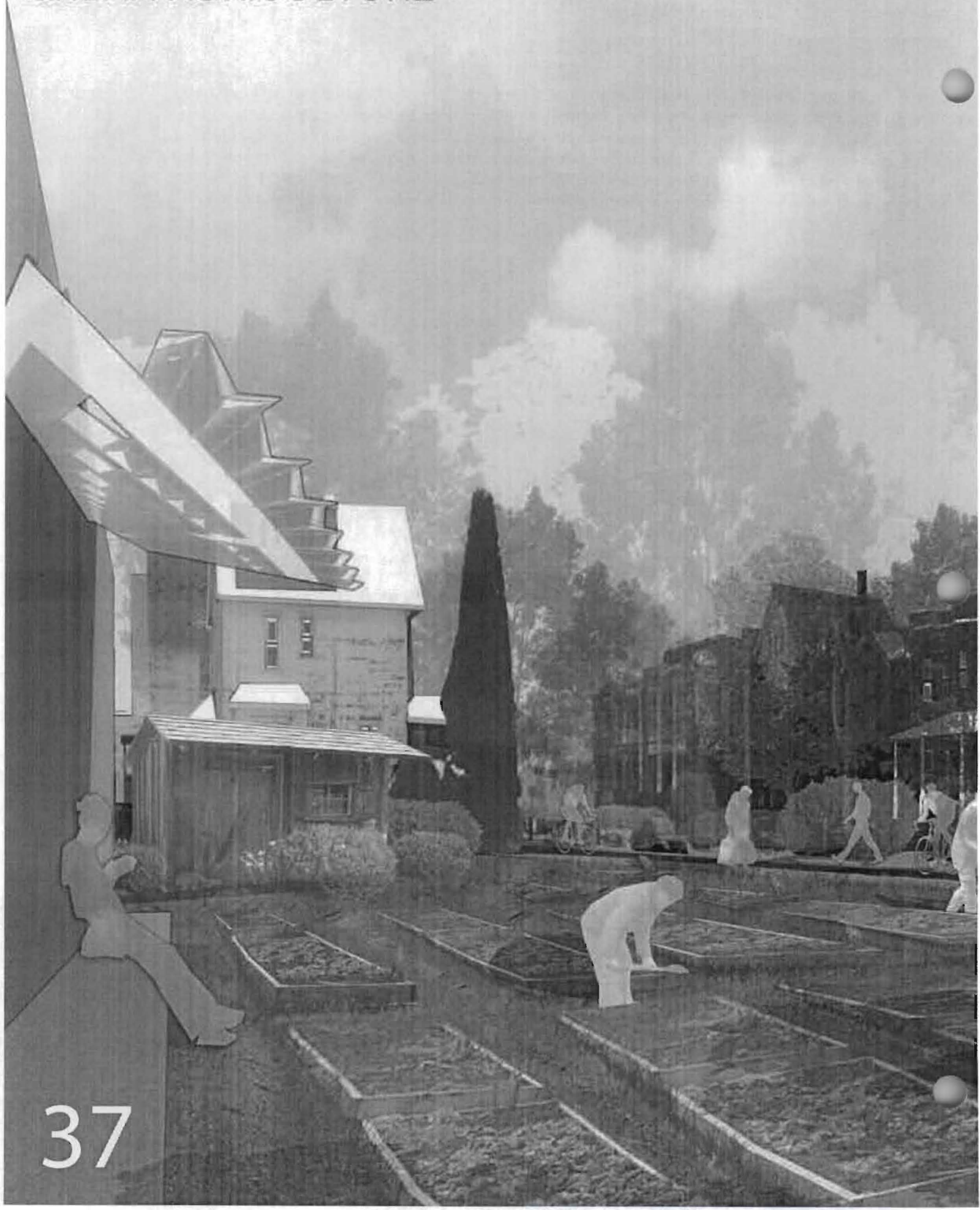
URBAN AGRICULTURE

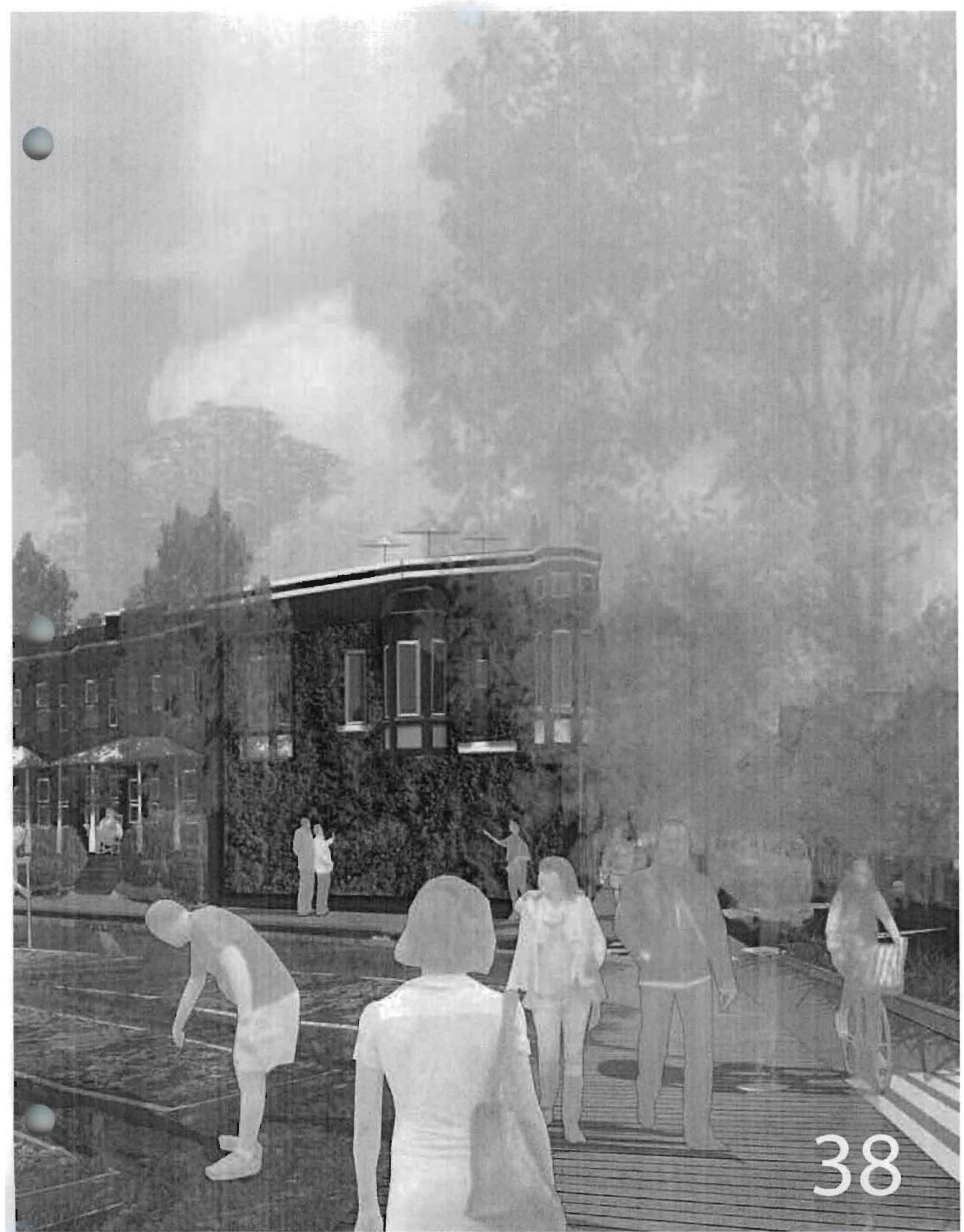
The Western half of Superior is where a majority of the abandoned lots are found. These spaces are primarily full of overgrown vegetation and abandoned buildings. This portion of the site provides enough space to create extensive agricultural systems that would provide the basic amenity of food to the community. Also the introduction of street trees, a vegetated drainage swale, and living wall systems on various facades will give the street itself the feeling of a naturalized green space. It will smell fresh all the time, be lively with pedestrians and organic farmers, and will be a wonderful environment to live.

MASTER PLAN



URBAN AGRICULTURE

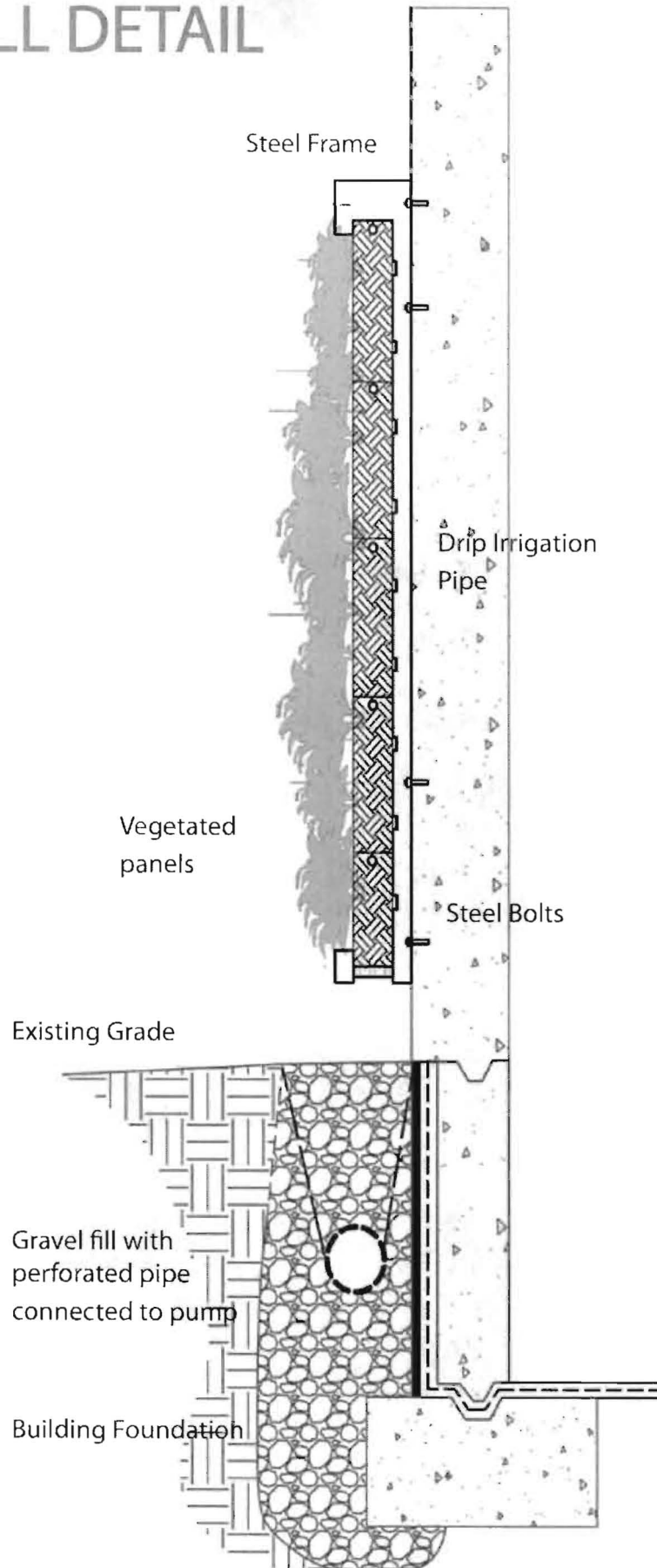






39

LIVING WALL DETAIL



LIVING WALL DETAIL

URBAN REGENERATION

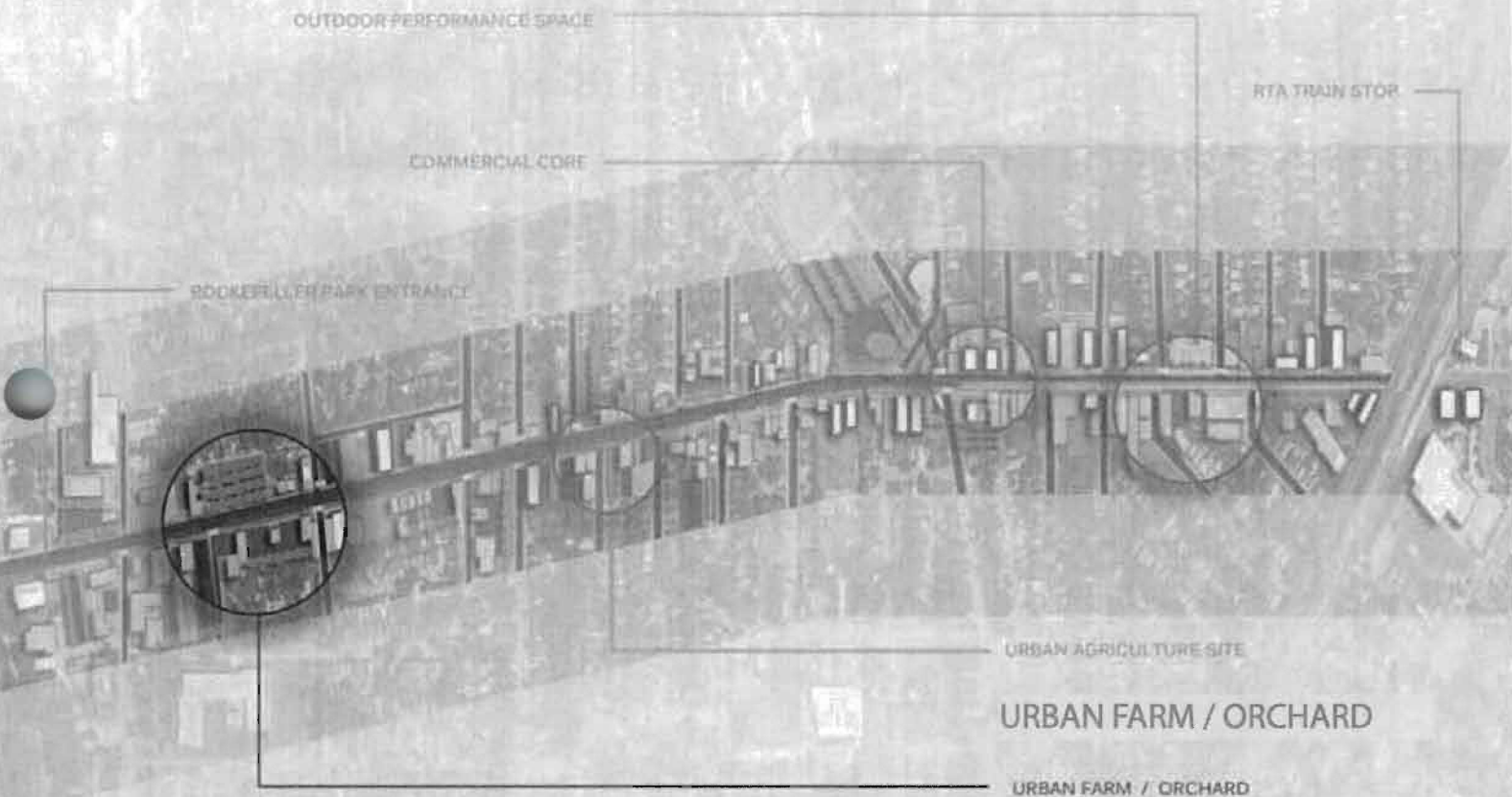
SUPERIOR AVENUE



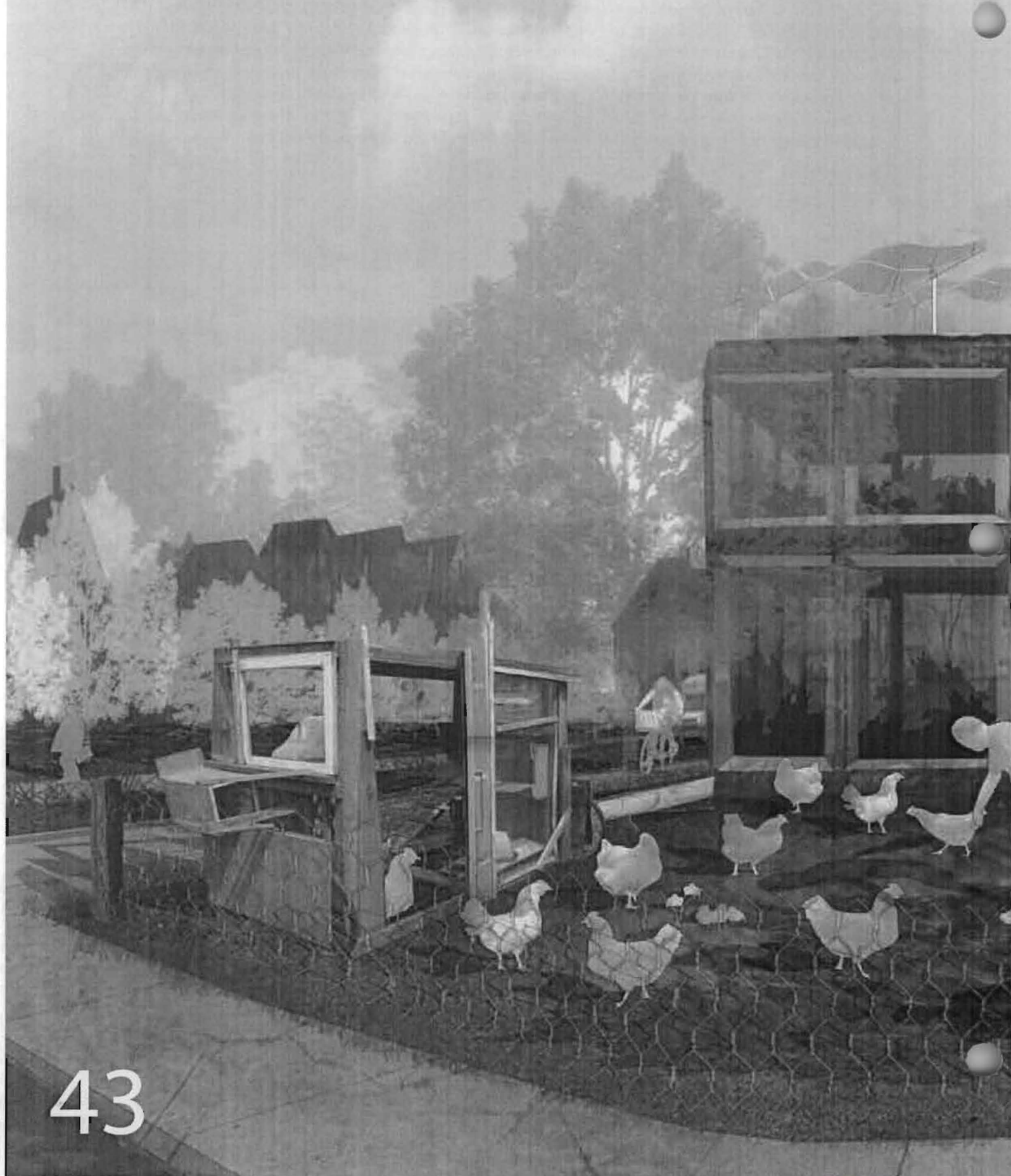
Urban Farming

In the heart of the urban agriculture portion of the site sits a building frame that is full of character and not being used. This building will be converted into a greenhouse and education center for the local schools of East Cleveland. The grounds of the greenhouse will be used for educational urban farming. People from the area will be able to come to this center and learn about how to have chicken coops on their property. Chickens can be eaten or used for organic eggs. People will also be able to buy chickens from this center. Across the street, an abandoned lot is converted into an urban apple orchard. This orchard will be maintained by organic farmers and will help provide food for the community.

MASTER PLAN



URBAN FARMING





COMMERCIAL CORE

URBAN REGENERATION

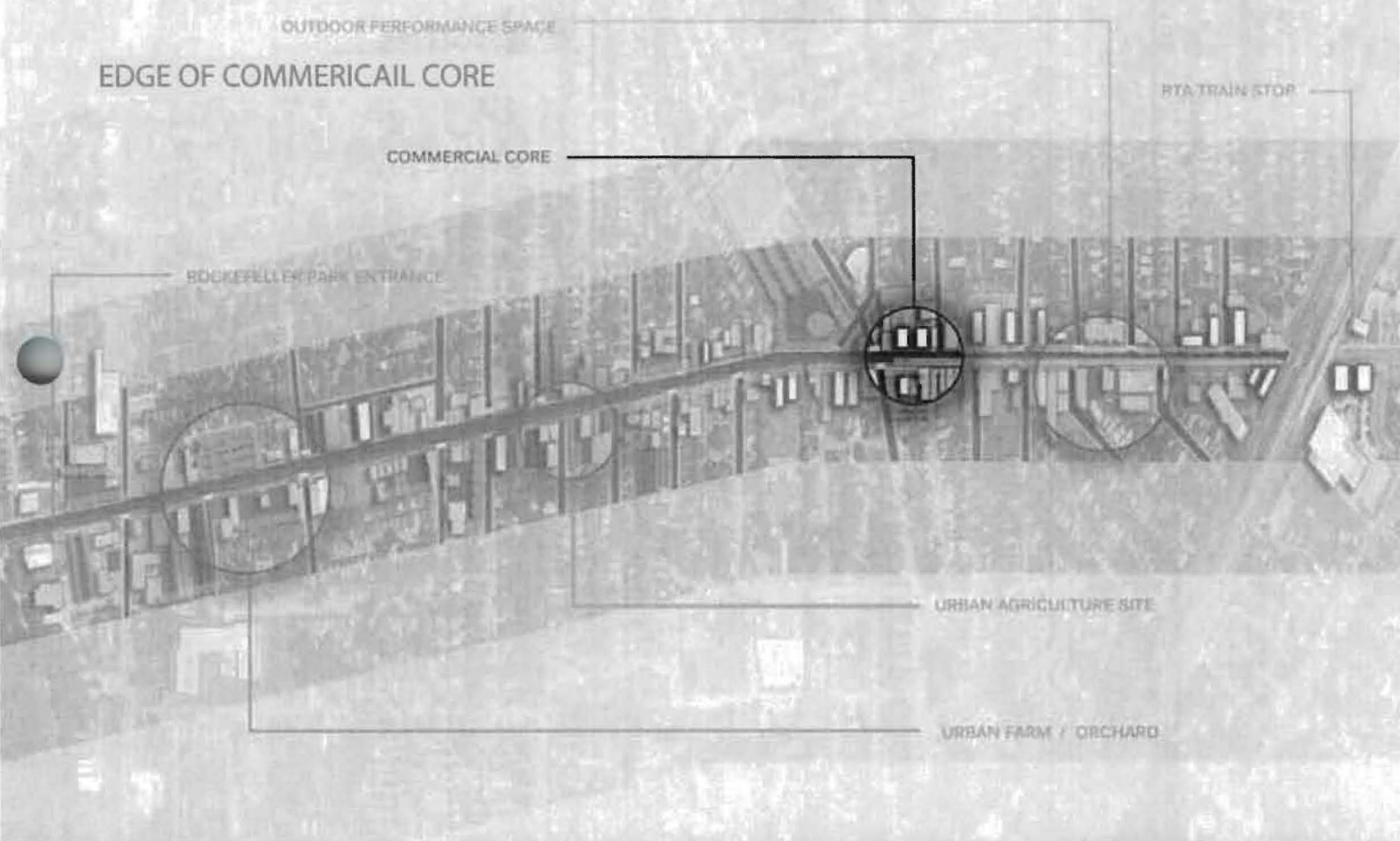
SUPERIOR AVENUE



Commercial Core/ Transit Hub

The commercial core of the site starts at the transit hub and transitions west down Superior. The commercial corridor has a denser, urban feel and is a place where people can take the train and immediately be around bars, restaurants, and art galleries. Artists will be able to live in this section of the site in lofts and walk downstairs to their galleries where they work and display their art. This section of the site required a lot of infill buildings to increase density and minimize wasted space. Although it is dense, the commercial core has several pocket parks that provide areas for passive recreation within the core itself.

MASTER PLAN

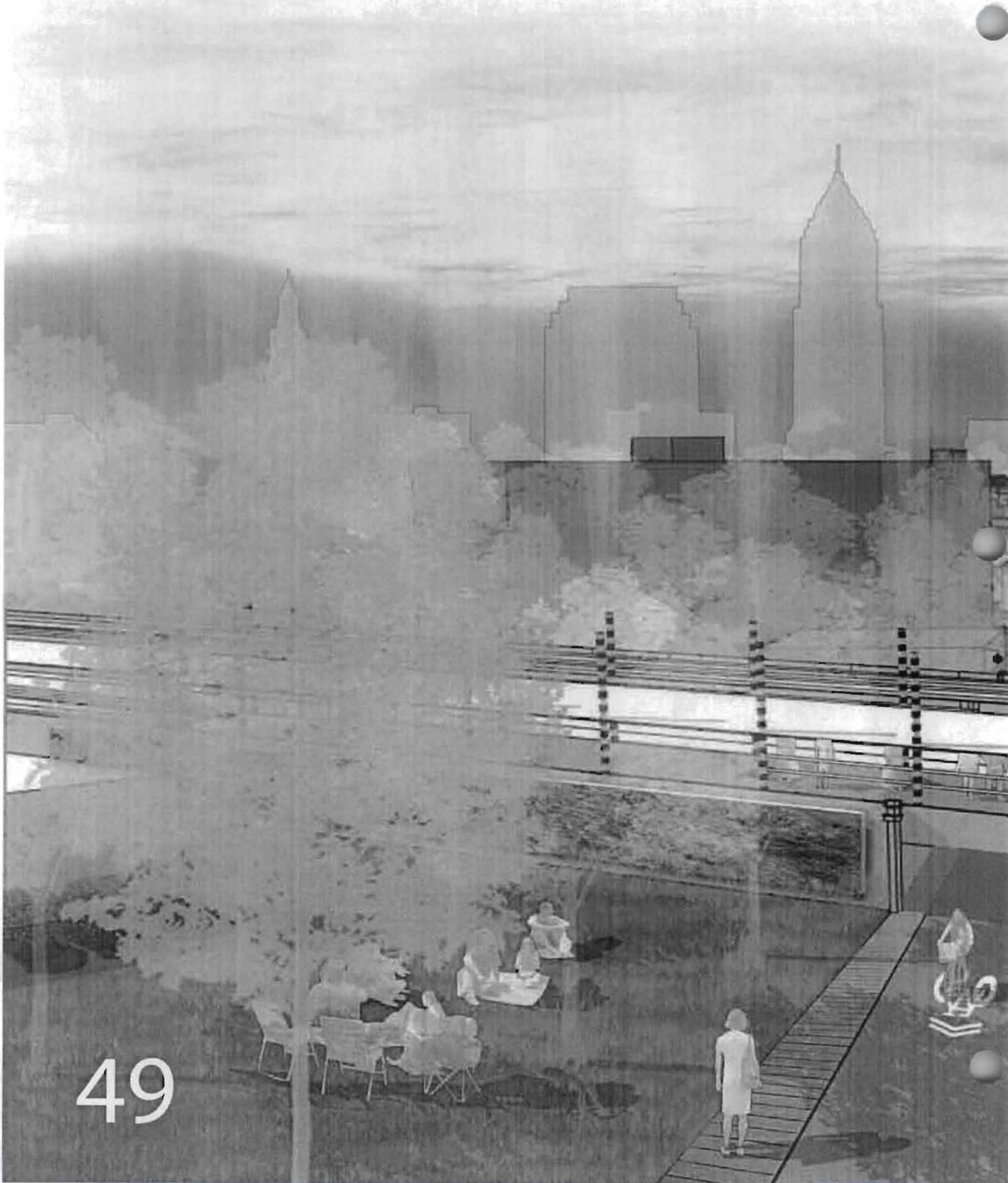


STREET SECTION





TRANSIT HUB





50

WORKS CITED

- "Alta Planning and Design." Alta Planning and Design. Alta Planning, n.d. Web. 26 Sept. 2010. <<http://www.altaplanning.com/default.aspx>>.
- "America's Top 50 Bike-Friendly Cities ." Bicycling Magazine. Bicycling Magazine, n.d. Web. 1 Nov. 2010. <www.bicycling.com>.
- Appleyard, Donald. "Livable Streets: Protected Neighborhoods?" *Annals of the American Academy of Political and Social Science* 451 (Sept. 1980): 106-117. JSTOR. Web. 25 Sept 2010. <<http://www.jstor.org>>.
- "Approved Sidewalk Master plan." Map. Austin Public Works Department. City of Austin, Mar. 2009. Web. 15 Oct. 2010. <<http://www.ci.austin.tx.us/publicworks/pedestrian-plans.htm>>.
- "2009 Austin Bicycle Master Plan Update." Chart. Public Works Department. City of Austin, 11 June 2009. Web. 15 Oct. 2010. <<http://www.ci.austin.tx.us/publicworks/bicycle-plan.htm>>.
- Bannister, David, and Kenneth Button. *Transport, the Environment, and Sustainable Development*. London, England: E & FN Spon, 1993. Print.
- "Barton Creek Greenbelt." *Guide to Texas Outside*. Texas Outside, n.d. Web. 24 Sept. 2010. <<http://www.texasoutside.com/bartongreenbelt.htm>>.
- City of Copenhagen. N.p., n.d. Web. 26 Sept. 2010. <<http://www.kk.dk/english.aspx>>.
- "Cycle Tracks: Lessons Learned." *Alta Planning + Portland City Traffic Engineer*, Feb. 2009. Web. 1 Nov. 2010.
- Dill, Jennifer. "Bicycling for Transportation and Health: The Role of Infrastructure." *Journal of Public Health Policy* 30 (2009): 95-110. JSTOR. Web. 22 Sept. 2010. <<http://www.jstor.org>>.
- www.flickr.com
- Grabow, Maggie, Micah Hahn, and Melissa Whited. *Valuing Bicycling's Economic and Health Impacts in Wisconsin*. Madison, Wisconsin: University

of Wisconsin-Madison, January 2010. <http://www.bfw.org/>. Web. 31 Oct. 2010.

- Jensen, Soren Underlien, Claus Rosenkilde and Niels Jensen, "Road Safety and Perceived Risk of cycle facilities in Copenhagen."
http://www.ecf.com/files/2/12/16/070503_Cycle_Tracks_Copenhagen.pdf
- McCann, Barbara, and Suzanne Susan Rynne. Complete Streets: Best Policy and Implementation Practices. Chicago, Illinois: American Planning Association, March 2010. Print.
- "Milton Keynes Redways." Destination Milton Keynes. Destination Milton Keynes Ltd., 2008. Web. 30 Sept. 2010.
<http://www.destinationmiltonkeynes.co.uk/milton_keynes_redways>.
- Minneapolis 2020 – a clear vision for the future ." Minneapolis Goals and Strategic Directions". City of Minneapolis, n.d. Web. 1 Nov. 2010.
<www.ci.minneapolis.mn.us>.
- "Neighborhood Connectivity Division." Austin Public Works Department . City of Austin, n.d. Web. 12 Oct. 2010.
<<http://www.ci.austin.tx.us/publicworks/ncd.htm>>.
- "Pathway to Prosperity: The Economic Impact of Investing in Bicycle Facilities. Raleigh, N.C.": North Carolina Department of Transportation, April 2004. <http://www.ncdot.org/>. Web. 1 Nov. 2010.
- Pease, Steven. "Winter Cycling." Minneapolis Cycling Observer. Minneapolis Examiner, n.d. Web. 1 Nov. 2010. <www.examiner.com>.
- Pharaoh, Tim M., and John R.E. Russell. "Traffic Calming Policy and Performance: The Netherlands, Denmark and Germany." The Town Planning Review 62 (Jan. 1991): 79-105. JSTOR. Web. 30 Sept. 2010.
<<http://www.jstor.org>>
- "Plenary Speakers." Velo-City Global 2010. European Cyclists' Federation, the City of Frederiksberg and the City of Copenhagen, n.d. Web. 23 Sept. 2010. <<http://velo-city2010.com/>>.

- "Trails." Austin City Connection. City of Austin, 1995. Web. 23 Sept. 2010. <<http://www.ci.austin.tx.us/parks/trails.htm>>.
- Wakefield, Julie. "Fighting Obesity through the Built Environment." *Environmental Health Perspectives* 112 (Aug. 2004): 616-618. JSTOR. Web. 23 Sept. 2010. <<http://www.jstor.org>>.
- Wang, Fahui, and W. William Minor. "Where the Jobs Are: Employment Access and Crime Patterns in Cleveland." *Annals of the Association of American Geographers* 92 (Sept. 2002): 435-450 . JSTOR. Web. 20 Oct. 2010. <<http://www.jstor.org/>>