

(RE)CENTRALIZING FOOD

DESIGNING A BALANCE BETWEEN INDUSTRIALIZATION + FOOD

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To **Mom and Dad**, the biggest foodies I know, thanks for supporting me.

To my **family and friends**, thanks for all the shared meals along the way.

To my **advisors**, thanks for helping me grow.

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0.0 SETTING THE TABLE

“What a person eats says a lot about her.”

- Samantha L. Martin-McAuliffe

0.1 ABSTRACT

From the beginning of human life to present day, civilization and society has adapted based on the need for food. As social beings, people have created a tradition of gathering around food. As people have found easier, more efficient methods of obtaining food, traditions and cultures have adapted. While our customs continue to change, food still holds a place at the center of gathering; however, as society continues to industrialize and people prioritize other aspects of life, such as work, the social value of food has slightly diminished.

However, as industrialization of the food system continues, the gap between producer and consumer widens. The addition of post-harvest facilities and distribution companies create a middleman between producer and consumer. People no longer know where their food is coming from but are hunting for familiar and reliable brands. Convenience foods are often prioritized for their quick and cheap qualities with the consequence of affecting social lives and health and wellness.

The city of Detroit, with its abundance of food swamps, or neighborhoods with an abundance of unhealthy food retailers,¹ and food-related diseases, has many neighborhoods lacking in access to healthy food. By evaluating food's traditional relationship with urbanism and architectural

vessels, one can begin to rekindle a sustainable food culture. Currently, urban agriculture is sweeping the city, but without a connection to the larger food system, little more than those on the hyper-local scale are impacted. What is needed is an agricultural resource center that caters to both farmers and the community alike, providing a place where food once again brings people together.

0.2 INSPIRATION

Food has a wonderful ability to tell the stories of people, places, and cultures. Throughout my life, food has always played an important role in bringing my family together. The traditions created and passed down through the years revolve around eating, sharing, and celebrating food with each other. I firmly believe it is one of the reasons why we are all so close. As my siblings and I grew, gathering at the dinner table became a place to laugh, eat and enjoy each other's company as we talked about the highs and lows of our daily lives. To this day, every Sunday breakfast is spent at Grandma's house, where aunts, uncles and cousins come together to share the week's events and enjoy Grandpa's cooking. Every holiday is an excuse to get together, to eat and drink, whether with huge feasts or casual barbecues, and always with some traditional Filipino food mixed in.

Vacations are more than just experiencing a different city; they are an escape to an entirely different food culture. For every trip, my dad structures our plans around his restaurant reservations. From local delicacies to high end restaurants and everything in between, a destination's cuisine is as important as its local attractions and is worth traveling for.

As I began to study food, I wanted to understand the relationship that we as

people have with food and how it connects us to others. I thought about my family living in Daly City, the Filipinotown on the outskirts of San Francisco, California and how the traditional food there is differs so greatly from here. In America, the melting pot of the world, we are fortunate that we can experience so many different cultures. Traveling abroad, I have experienced an even greater emersion into the very same cultures.

As someone intensely connected to food, I began to recognize a disconnect between the traditional values I hold and the more contemporary values of others, leading me to wonder: how has our food culture changed over time? How has the relationship between food, people, and architecture evolved from the early age of man to the present day?



Figure 1.

0.3

THESIS STATEMENT

Food is a vital part of culture, not only for survival, but also for the social traditions that come with it. As society strives for efficiency, the consequences of industrialization are emerging. By designing a balance between industrial and traditional methods, food can aid people holistically.

Food has always played an important role in society and civilization. In the past, lives revolved around finding and growing food, while socializing around it. The traditions developed around one of our most basic instincts have manifested in the civilizations and structures that make up the world. As time passes, developments in our technology, economy, politics and society influence the way in which we experience food. Over time, the built environment has evolved to accommodate the relationship between food and society; however, in the age of industrialization and convenience, the relationship has altered. While food is still a large part of society, the craft of the food system has transformed. By prioritizing cost and efficiency over quality, our food has become mass produced and modified without people understanding where it comes from or what it is composed of.

Realizing the health consequences of overly processed food, people are beginning to return to the traditional values of organic,

locally grown produce and the farmer's market among other things but harvesting naturally comes at a cost. Lower income families unable to afford healthy food or too busy to cook are left with few options but the cheap industrialized food found in convenience stores and fast food restaurants. A food swamp is one of the identifying factors for high obesity rates in areas.²

Today, urban agriculture initiatives have taken the first step in improving food security in Detroit; however, production alone cannot reach everyone throughout the entire city. In order to bridge the gap between production and consumption, an intermediate entity is needed to connect local growers to the larger food system.

Food hubs are the next step in extending the reach of local growers. According to Nicole Rogers, "they help small farms grow by offering a combination of production, distribution, and marketing services."³ Food hubs serve many people: farmers, residents, local businesses, schools, etc. Not only can they include functions such as aggregation and processing that support those in the food industry, but they can also act as community centers. By providing gathering spaces for public programs, residents will interact with each other while understanding more about the food process.

The purpose of this thesis is to develop a revitalization strategy that harbors community, promotes wellness, and encourages economic development by localizing the food system. As the food choices one makes can affect them in the future, the author is interested in how a food hub can impact people over a lifetime. From infants to seniors, the needs of each age group, the surrounding community, and the context of the neighborhood will dictate the program and design of the food hub. Food is a destination, and this thesis will act as an anchor for a network of food hubs to populate the city and connect people to local, healthy food.





1.0 FOOD CuLTuRE

“Food is the great unifier that connects us across cultures and generations. It can literally propel you to another time, another country, another culture without even leaving your dinner table.”

- Megan Faletra

1.1

FOOD + SHELTER

Food and shelter are among the basic needs for human survival and as social beings, they have been woven together through interaction and gatherings. As time went by, the process of preparing and sharing meals was carried down through the generations. The beginnings of these traditions were founded at the start of human civilization. As one of the crucial requirements for life, the prevalence of food has often dictated where people settle.

In the age of the hunter-gatherer, the abundance of food changed with the seasons and the terrain. The average day of a human revolved around foraging for edible plants, hunting animals, preparing provisions, cooking the meal, and eating as a group. The settlement remained until food became scarce from foraging or the air grew cold. As a nomadic people, architecture was impermanent and mobile, allowing the settlement to travel to new, plentiful lands.

Over time, the technique of cultivation was discovered, and people no longer had to scavenge for their food. Instead, food was grown within the settlement and availability was guaranteed; however, the need to preserve food became the new challenge. In the past, any food found was eaten immediately. In contrast, cultivation reaps an abundance of food within a small period

of time. The need to store and preserve foods became a reality and brought about a rise of new professions. “The farmer, the miller, the potter, the baker, the tinsmith and other occupations connected with food and cooking gradually developed as separate trades, and eventually merchants took over the business of buying up, transporting, storing, and selling food supplies.”⁴ As a new culture emerged, the need to relocate faded and the rise of permanent structures formed the first civilizations.

The refinement of the agricultural process allowed people to specialize in different professions. Able to pursue other interests, life no longer revolved solely around food. Eventually, the process became so efficient that people no longer needed to live where food was produced. People left the small settlements and farms to congregate in high-density cities.⁵ As transportation methods advanced, food was transported over long distances. In complete contrast to the past, food now follows the people.

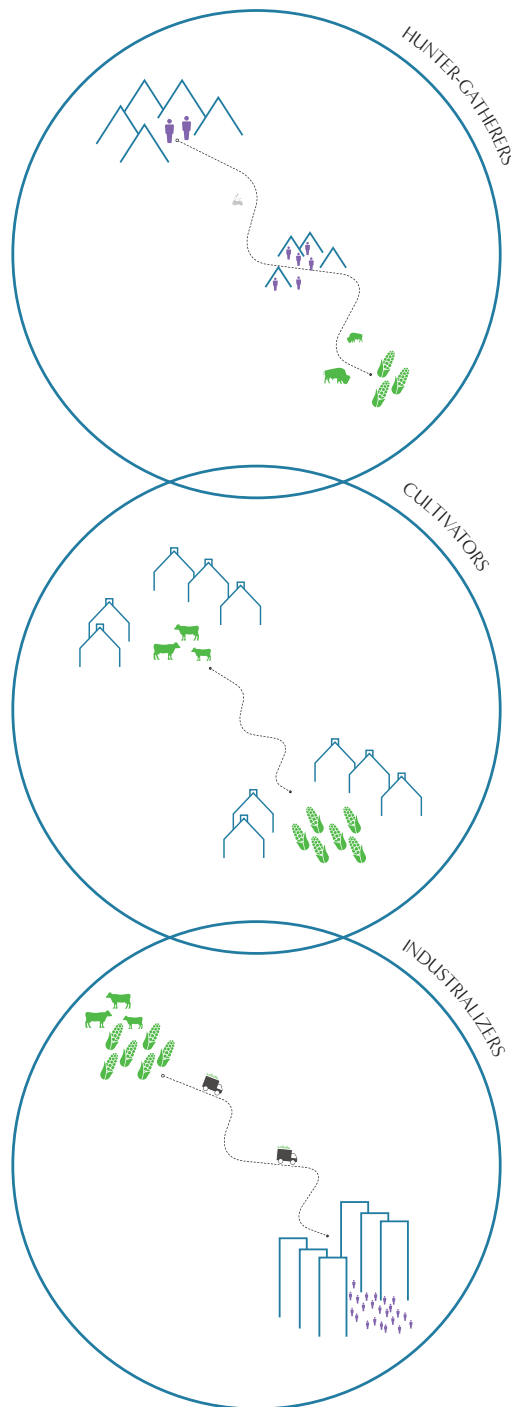


Figure 2.

1.2 FOOD + RELATIONSHIPS

Even though there was a drastic change in society, food is still found at the center of relationships. In the early ages of society, food was scarce, so sharing food meant ensuring survival, obtaining resources, and creating mating opportunities. There are four models of relationships revolving around food: kinship, costly signaling, reciprocal altruism, and tolerated scrounging. The first model, kinship, starts within the home and is the sharing of food among family. Typically found in most societies, this relationship was founded on the idea of continuing the bloodline and providing for young or old kin who cannot provide for themselves. Costly signaling is a status symbol and mating strategy. Men would offer food to women to show that he can provide for her and their future family. Reciprocal altruism is the sharing of food between family and tribes in an act of goodwill. Often induced during times of scarcity, the first negotiation often led to ongoing trade and signified trustworthy relationships. The last model, tolerated scrounging, is giving up food to another without any expectation of return. In many cases, the benefit of giving up food to someone else in need was more important than the need to protect it.⁶

While these models provide an understanding of how relationships with others were formed to seek the survival of the human

race, but the relationship with food is a deeper connection. Food is heavily tied to faith. Eating and drinking is the incorporation of nature into the body, translating to the Catholic tradition of intaking bread and wine as the body and blood of Christ. In other religions, offerings to a greater spiritual body are given to atone for sins or pray for future outcomes. Cultures surrounding the healing qualities of food proliferated among certain peoples.⁷ “Food was celebrated and respected as an essential part of what makes humans human.”⁸ As cultures and customs adapt with advance in society, relationships have less to do with survival and more about socializing with others.

Whether in celebration, good will or friendly gathering, food continued to be a constant among different activities and occasions; the architectural setting simply evolved. Beginning within the home, the hearth is the original center of social interaction. In the nomadic days, with a single pot and flame, food was prepared right at the hearth. The entire family ate, told stories and enjoyed the company of others in the warmth of the fire.

LONG NOODLES FOR LONG LIFE

In the Filipino culture, the whole family and any others in attendance, uncles and aunts included, must eat long noodles to ensure a long life. Because of the simple act of eating long noodles, most birthdays are celebrated at Grandma's house. Dinner usually consists of Chinese food; however, the birthdays in my family tend to overlap. With four birthdays in February, five in July, and three in August, we add variety where we can, alternating between a Filipino noodle dish called pancit, Chinese pan-fried noodles, and Italian pasta. Until recently, the entire family lived within ten minutes of each other, making birthday dinners an easy get together. Today, my cousins, and my uncle and aunt are further out, making it difficult to visit every time. On the birthdays where we do not congregate, we message each other pictures of long noodles to confirm that the tradition has been met.

Whether with a quick pack of ramen or a bite of noodles, the tradition usually reaches everyone, but on some occasions, it simply is not possible, and we need to improvise. One summer, the entire family, except my grandparents, took a trip to Mackinac Island and the driving portion happened to take place over my uncle's birthday. With no place to buy noodles, we settled for twizzlers instead. On my dad's birthday, another of my uncle's got married, and with so many guests, there was no way everyone would have a bite of noodles. Still, we do what we can to stay as true to tradition as possible. It is one of those long-time rituals passed down through the generations, and as our family has expanded, the tradition continues to reach others.



NOMADIC

In the nomadic days, with a single pot and flame, food was prepared right at the hearth. The entire family ate, told stories and enjoyed the company of others in the warmth of the fire.



PERMANENCE

As the home evolved, the hearth transformed. Civilizations became permanent as did the structures people lived in. A single room was now warmed by the fire of the hearth where meals were also prepared.



SEPARATION OF THE KITCHEN

As the ability to heat multiple rooms ensued, the kitchen and living space were separated, making the kitchen the place of gathering.



DIVISION OF FUNCTION

The home was further divided by functions. The dining room was separated from the kitchen, making it the place where food was eaten, and conversation exchanged.



OPEN FLOOR PLAN

Today, the need for space and privacy has dwindled and the open floor plan has once again taken precedence within residences. The island is now the place where social interaction takes place; however, there is also a lack of social interaction and cooking in general.

Figure 3. Evolution of the Hearth from 1-5

As new experiences in cuisine develop outside the home, the use of the hearth has shifted to include many different activities and venues. "Transcended experience not necessarily exclusively belonging to the space of the dinner table, but potentially drifting off the dining room finally merging with the city where it becomes an architectural means; a sensuous impression in combination of food with design and architectural form in scales of both cityscapes, buildings, room, interior, furniture, and tableware, creating a total experience forming social relations among strangers."⁹ Gatherings can take place for any number of different reasons: meetings with friends, business meetings, networking events, a trip to the market, etc. There is no limit to the activities people can engage in where food is a central theme.

With this change in activity, a change in setting also ensues. The organization and contents of a space often influence the activity that takes place. Many arrangements can also be found in various buildings or outdoor settings. Activity and food cannot be limited. As our society grows, we continue to find new ways to share food; however new advances in technology begins to create strains in this relationship as well.

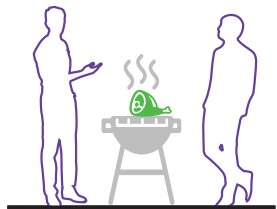
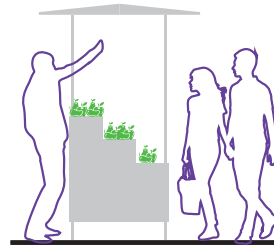
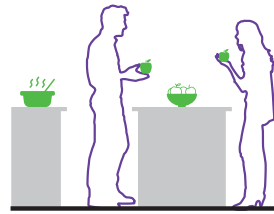
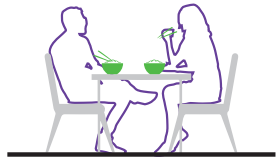
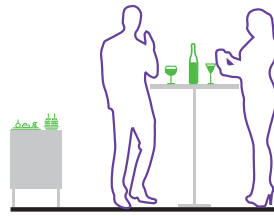
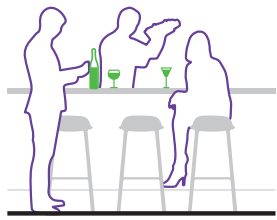


Figure 4.

1.2 INDUSTRIALIZATION

As society continued to evolve, the connection we held with food continued to alter. While food still brought people together, it was no longer all encompassing. Human nature's drive for efficiency changed the food process over time, and while there were many benefits, there were also higher costs.

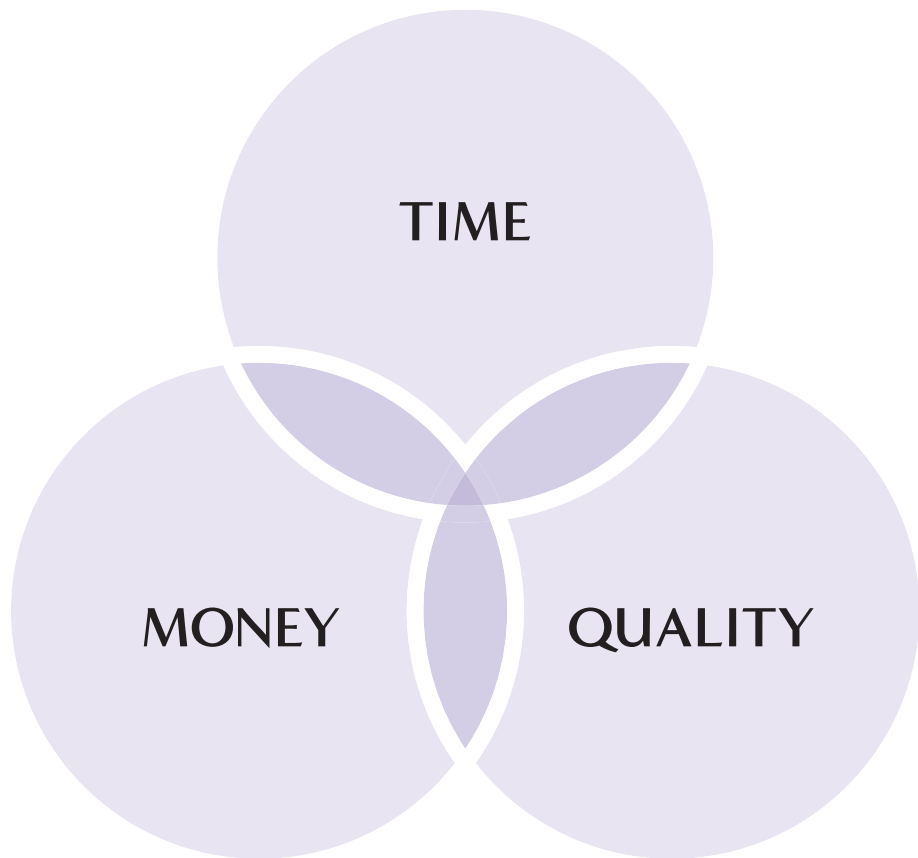


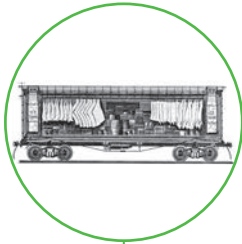
Figure 5.

INDUSTRIALIZATION IN AMERICAN HISTORY

FIRST REFRIGERATED RAILCAR

AMERICA JOINS WWI

TV DINNER
MCDONALD'S



1818

1906

1917

1944

1950



COMMERCIAL CANNING GAINS POPULARITY



HOUSEHOLDS LEASE INSULATED RAILCARS

PROTO-INDUSTRIAL

HYPER-INDUSTRIAL

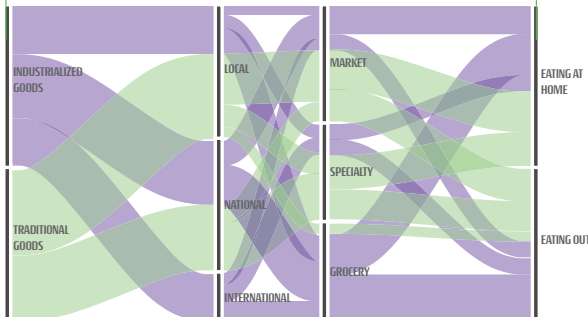


Figure 6.

ERS AND
NALD'S

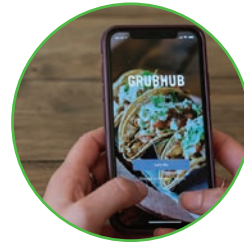


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CREATION OF
GENETICALLY
MODIFIED FOODS



DELIVERY OPTIONS
AVAILABLE



1980



RISE OF DIVERSE
OPTIONS

1995

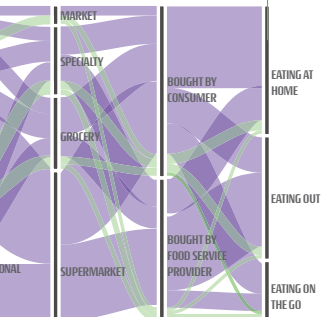


USDA RELEASES
STANDARDS FOR
ORGANIC FOOD

2002

2015

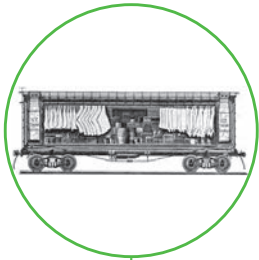
INDUSTRIAL



NEO-INDUSTRIAL



FIRST REFRIGERATED RAILCAR



1818

AMERICA JOINS WWI



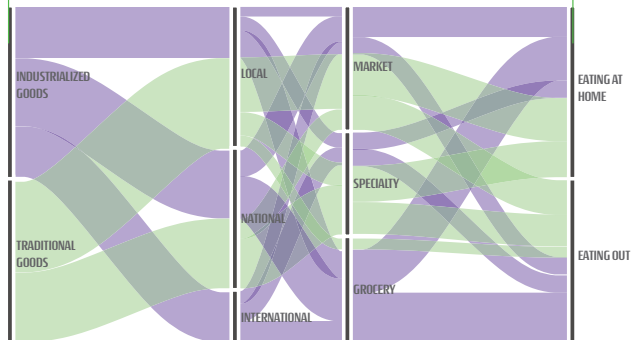
1917

1906



COMMERCIAL CANNING GAINS POPULARITY

PROTO-INDUSTRIAL



PROTO-INDUSTRIAL

Major changes in America's food process can be linked to events in modern history. As the 1800's approached, food was already being produced in mass quantities. By 1878, the first insulated railcar made it possible to distribute produce and other agricultural goods across the country. Soon after the first insulated steamship allowed for transport across seas. With this advancement, there was a more diverse selection of goods and less need during cold seasons. While this was a possibility, canned and other preserved goods were still unable to last very long. It was a common occurrence that bacteria would build up and spoil the contents. It wasn't until the technique was perfected that the preference of canned versus fresh produce shifted.

Once the US joined World War I, Americans were drafted, including many farmers. With a shortage of agricultural workers, there was a shortage of food. To combat starvation, it became a patriotic act to grow your own garden. Any commercially produced or processed food was being shipped overseas to the troops and the only food available for the people at home was what they grew themselves. While this initiative was only meant to last until the farmers came home and were able to produce once again, the initiative lasted longer. After a prosperous period of surplus, a drought that lasted for years ruined crops and created a shortage once again. Whatever food could be produced at home was.¹⁰

TV DINNERS AND MCDONALD'S



1944

1956

1980



HOUSEHOLDS LEASE
INSULATED RAILCARS



RISE OF DIVERSE
OPTIONS

HYPER-INDUSTRIAL



HYPER-INDUSTRIAL

It wasn't until the end of World War II that America learned to effectively mass produce goods. Nitrogen is a key element in soil and agriculture and the traditional method of reintroducing it back to the soil was through legumes and compost; however, it was found that infrastructure to make bombs and gases would also aid in agricultural pursuits. Munition factories were altered to create ammonia used in fertilizers and chemical warfare was directed towards the creation of pesticides, leading to large-scale production with low cost.

America's war on hunger had resulted in an overabundance of industrialized foods, and the age of convenience took hold. "Food had gone from being scarce, expensive, and labor-intensive to becoming a matter of a ten-minute trip by car to a supermarket – cheap and alarmingly conveniently processed and 'prepared.'"¹¹ People had slaved away in the gardens and kitchens for years and now they had the opportunity to relax. When the soldiers came home, it was to processed foods and ready-made freezer meals. There was a lack of thought as to where the food was coming from. People would go to the supermarket, search for the brands they knew and loved, then went home to prepare the meal. Natural was no longer a priority. All that mattered was taste, brand, cost and time.¹² With the push of a button, a meal was made in minutes, making the TV Dinner so popular; however, it would never have been possible if refrigerated rail cars were not leased to households. The freezer changed lives as food could be bought and stored for days. As the need for quickly made food became a must in people's lives, places like McDonald's came into existence. Revolutionizing the restaurant industry, McDonald's opened the first fast food drive-through window so that people could eat on the go without ever leaving their car. While convenience took

hold, there was also the emergence of ethnic foods within society. People were looking to try new, exotic things, and the ability to ship food across nations now allowed for a wide variety of cuisines.¹³

CREATION OF
GENETICALLY
MODIFIED FOODS



1995

DELIVERY OPTIONS
AVAILABLE



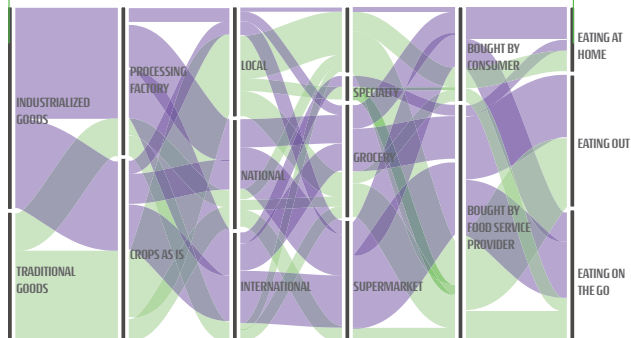
2015

2002



USDA RELEASES
STANDARDS FOR
ORGANIC FOOD

NEO-INDUSTRIAL



NEO-INDUSTRIAL

While America continued to mass produce, farmers were growing and harvesting more than the land could give. The use of chemical fertilizers and pesticides continuously wore out the soil and led to a decrease in crop yields. To combat this, crops and livestock were manipulated at the genetic level. Since 1996, genetically modified crops, or GMs, have been commercially planted, and today, 70% of processed foods have some GM ingredients. Not only are they rapidly infiltrating the agricultural market, but they are also infiltrating organic farms. Seeds from GM crops are cross pollinating with organic crops and ruining harvests for these farmers.¹⁴

In recent years, people have begun to think about what ingredients make up the food we eat, where it comes from, and who is producing it. The drive for organic and farm-to-table goods has become an increasingly popular trend within grocery stores and restaurants. People are beginning to understand the repercussions of our industrialized food system and are working towards bringing back traditional methods.

1.3

THE FOOD SYSTEM

By understanding the processes of our food systems in more detail, the benefits and repercussions can be seen more clearly. As humans, it is vital that food is prevalent. In order to create a world that is food secure, the food systems in place are constantly being industrialized to create more, long lasting food around the nation; however, there is a lack of thought towards how people are affected. Bodily, economically, and socially, people are facing hardships due to the missing human factor within the food supply system.



Figure 7.

PRODUCTION

Traditional farming operates within the bounds of the natural cycle of the earth. Through an understanding of the limitations of the soil, weather, and crops themselves, the farmer takes what the land can give. Farming according to the seasons, seeds are sown in the spring, tended and nurtured through the summer, and harvested in the fall. During winter, the land is left to rest until the spring when the snow melts and ground softens. With only limitations of the land, farmers are free to grow many different varieties, preserving biodiversity of crops.

Even through the natural cycle, the soil can be overworked; therefore, farmers have methods to nurture the soil as they grow crops. Organic fertilizers such as compost help to provide nutrients back to the soil. In the control of invasive species, techniques could include companion planting, crop rotation, use of crop covers, natural pest control, hand weeding and animal grazing.¹⁵

As industrialized farming has replaced traditional farming as agricultural norm, a new trend has emerged. Organic farming is merely a title used to describe the traditional methods. Because industrialized, conventional farming has proliferated throughout the food system, the organic label is the placed to distinguish itself.

As industrialization took hold of our society, the use of chemicals in the production of food became the norm for farming, replacing the traditional methods. Conventional, industrialized farming is the result America's War on Hunger.¹⁶ While the invention and mass production helped to supply a large amount of food to the population, the search for food security came with a cost. Food security "exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences

for an active and healthy life."¹⁷ In order to accomplish this goal, quantity was prioritized over quality.

In order to maximize the amount of goods using as low a cost and resources, commercial farms are specializing in a single crop. By purchasing machinery and resources suited for a single varietal, farms can continuously grow crops in large quantities and sell in bulk to companies. Varietals best suited for transportation are prioritized; therefore, crops are chosen for durability, picking time, and expiration. Because of this, much of the biodiversity of crops has been lost. Other companies are turning to GMOs to alter crops to fit these needs.

Chemical additives used in food production not only changes the make-up of our food, but also affect the environment and people. Not only are chemicals being used on plants, but hormones and antibiotics are given to animals as well. The repeated consumption of these additives can create a build-up of toxic chemicals in the human body. Rain and irrigation can lead to agrochemical run off because of repeated use of chemical fertilizers and pesticides, while the overproduction and overworking of soil can lead to sterility and contamination.¹⁸

The American agricultural landscape has gone from many independent farms to massive commercial farms. Because of the inability to compete with the cost and quantity of goods produce from mass production, many smaller independent farms have been run out of business. Along with the use of machinery, many farmers were forced to find other occupations.¹⁹

While there are advantages and disadvantages within agriculture, there are some farms that use a combination of traditional and conventional methods in farming.

TRADITIONAL VS. INDUSTRIAL

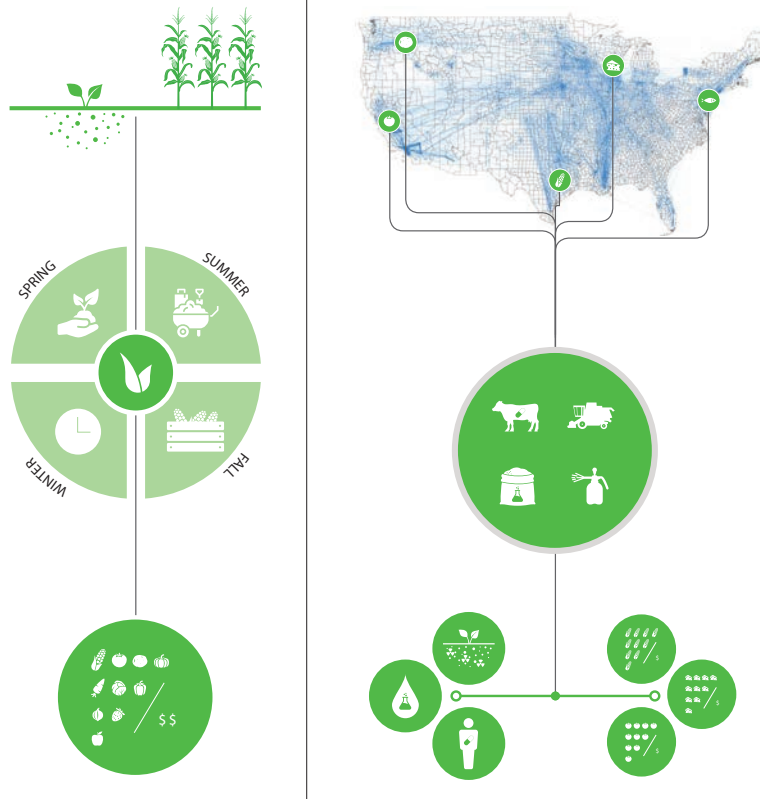


Figure 8.

POST-HARVEST

After produce or animal products are harvested, they are prepared for distribution. This can take place in two types of facilities: aggregators or processors. Aggregation is where fresh food is cooled, washed, and packaged for sale to food. Processing takes fresh goods and turns them into food products, which can include anything from preservation methods of canning or freezing to food preparation involving cooking or baking.²⁰ While processing can be generally hands-off, it can also be highly intensive. Entire meals can be packaged, either whole or which ingredients stored within one box. Produced in mass, preservatives and additives are introduced in order to extend shelf-life.²¹ Because of industrialization, people have grown accustomed to the convenience of having produce pre-packaged and ready for cooking or meat already cooked and prepared to reheat. Not only are the processed goods convenient, they are also cheap. From there, food products are packaged and ready for distribution.

DISTRIBUTION

The introduction of food processors and branding and distribution companies created a middleman between producers and consumers while introducing a new building typology. In the past, centralized markets and specialty shops lined the streets.²² As convenience took precedence and food was mass produced, more and more supermarkets gained a place within cities. Supermarkets began buying by brand and cheapest price. "You go into the supermarket and you see pictures of farmers. The picket fence and the silo and the 1930s farmhouse and the green grass. The reality is...it's not a farm. It's a factory."²³ There was no longer a face selling food as it didn't matter where the food came from as long as the brand was familiar and recognized. Limiting social interaction and creating a maze, the goal was to encourage the shopper to buy as many things as possible, for need or for pleasure.

FOOD MILES

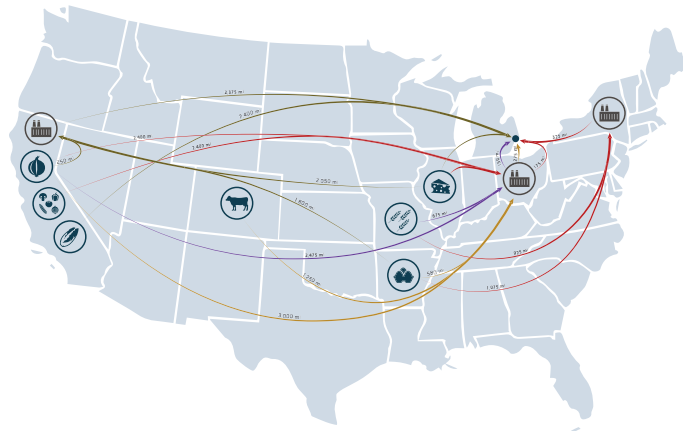
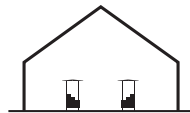


Figure 9.

VESSELS



Broadline Distributor



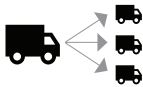
MARKET



Specialty Distributor



SPECIALTY SHOP



Redistributor



GROCERY STORE



Cash and Carry



SUPERMARKET

Figure 10.

CONSUMPTION

With the introduction of new societal norms, trends in consumption have changed, specifically in regard to eating and cooking. People are heavily influenced by family. While genetics and culture are the first factors in the relationships one holds around food, an even greater impact comes from the demographic one is born into. Having a higher education and greater income means that people can be more selective and healthier with their food choices. Children eat the meals their parents provide, and the rituals impressed upon an individual will influence their food preferences in the future. As an infant grows, mealtime is seen as a family ritual where food-related rules are learned. How meals are eaten and served, when to leave the table, what and how much to eat, and wasting food are all things impressed upon a child early on. Mealtime also offers opportunities to talk and provide stability for the family.

As time has gone on, family dinners have declined. One of the main reasons for this is a lack of time. With differences in the average working day, those with low or dual income have less time to focus on family meals. There has also been a change in the family dynamic. Men are no longer the only ones bringing home income. With both parents working and the increase in single parent households, there is less time to make meals. Many people and families are eating more outside the house, preferring the convenience of being served rather than spending time and effort preparing a meal.²⁴ Today, the average American eats out four times a week and 51% of people's food budget is spent on restaurants. In some cases, people are resorting to eating fast food, with 36% of Americans eating fast food every day.²⁵

The need to optimize time, energy, and money became the basis for the fast food

movement. The ability to eat on the go, bring food home, or eat at work began to supplement people's busy schedules. New apps and technology have been developed to make food delivery even easier. Because of the quick pick-up-and-go mentality, people are now choosing to eat alone rather than in the company of others. The health of many has been declining because of the lack of food options available, but there are new healthy alternatives to shopping, cooking and dining. Farm-to-household subscriptions deliver fresh produce to homes for those who don't have the time to shop for groceries. Similarly, mail order meal prep companies provide recipes and fresh ingredients to help those who also want to try new dishes at home. While this begins to address the problem of health, there is an even greater lack of socialization that remains an issue.

LATE NIGHT MEALTIME

Growing up, at least three meals a week consisted of take-out meals, whether pizza, burgers, subs or Chinese. With my dad working nine-to-five as a pediatric dentist and my mom working a combination of open and closing shifts in retail, my parents did not have a lot of time or energy to prepare meals for us. As both worked with kids, some days would be too exhausting to cook and so take-out was ordered. Even still, every meal was shared at the dinner table, except for the days my mom worked the one-to-ten-pm shift. If the shift fell on a weekday, my dad would make dinner, but if it fell on the weekend, we were allowed to stay up and eat a fast food dinner when mom came home. The usual choices were McDonald's or Wendy's, quick and easy. Sometimes up until eleven or twelve, we would stay up and wait until we vaguely heard the garage opening. Knowing she was home we would run to the door to help with the bags and dinner was served at the dining table.

As my dad found a passion for cooking, we stopped ordering so much fast food. Each week was filled with home-cooked meals and the occasionally take-out, considering our love for Chinese food and pizza. While I generally try and stay away from fast food, I have found you never really forget your roots, especially when it comes to the food you grew up on.

WASTE

Many pay little thought to what happens to food after its been eaten. Food waste from cooking, meals and leftovers is often tossed in the trash and not given a second thought. The garbage is then sent to a landfill, where tons and tons of waste is left to rot. What many fail to realize is that food scraps can be used recycled back into the food system. Composting is controlled decomposition and requires a balance of “green” and “brown” organic materials. Through this process, a nutrient mix of nitrogen and carbon is produced, but there needs to be the right qualities. The five characteristics of generating the perfect mix of compost are nutrient balance, particle size, moisture content, oxygen flow, and temperature.²⁶ The ability to compost is possible domestically and commercially.

As simple as it would be to conclude that we should de-industrialize our food system, the fact of the matter is that industrialization also has its benefits. Because of the ability to transport food, we now can experience new cultures through food. “We risk homogenized human landscapes if only global values are pushed, faction and provincialism if only local values are prioritized.”²⁷





2.0 THE FOODSCAPE

“Urbanism’s focus is on human settlement and food is understood as central to supporting vital, well-shaped places that put the public realm first.”

- Susan Partham

2.1 URBANISM

The built environment has often adapted to the evolution of the food system and society; however, without the proper infrastructure, food cannot be sustained. With such a distinct separation between food production and cities, food access is critical to vitality. The foodscape looks at “how food, places, and people are interconnected and how they interact.”²⁸ Understanding the origins of cities and the role of food provides insights into successful urban forms. While the disconnect between production and consumption is much more drastic now than in the past, the marketplace was and still is a central point for food exchange.

Figure 12.



MEDIEVAL TOWN

The early village was self-sustaining, consuming only what the locals produced. In cases of surplus, people would barter with neighbors who grew different kinds of produce. As more food was grown and cities were able to sustain themselves, trade took place across communities to add variety to the average meal. As the idea of money came into existence, merchants began to buy goods and travel large distances to sell in other areas and bring back exotic goods.²⁹

In the medieval era, buildings formed organically, taking precedence over the landscape and leaving irregular shaped voids. These outdoor rooms held public gatherings, including community meetings, political assemblies, and most importantly, the market. "For thousands of years, squares and streets have been enclosed units, and serve as legitimate stages of social interaction."³⁰ The flexibility of these spaces made plazas regular places for locals to gather and socialize. In some cases, entire roads are closed to host the market, displaying its importance. With streets blocked off for pedestrians and stores limited because of the introduction of vendors.

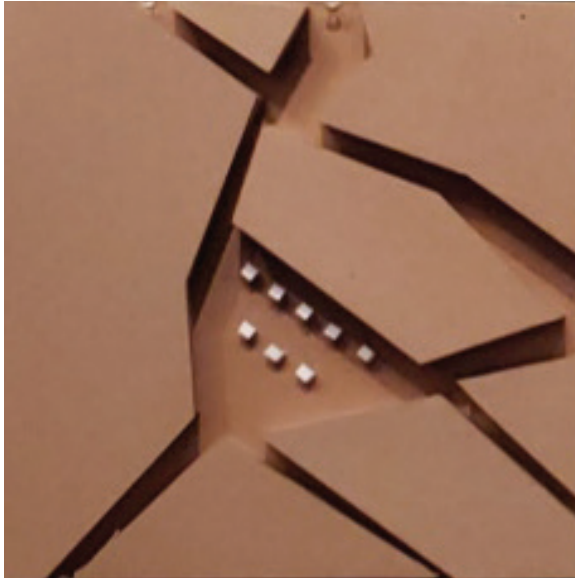
As the centrality of the market was understood by city officials, it became a planned part of the urban fabric, whereas before, they grew naturally. Instead, major roads would lead to the market, with a couple spanning the city and strategically placed to accommodate multiple communities. For a vendor, the best place to sell was in the marketplace. If a merchant was unable to gain a place within the area, any of the roads along the way were also considered prime real estate. Mixed-use buildings were optimal, where merchants lived above where they sold their goods and used the attic as storage.

To government officials, there were some irritants that arose with the open-air market,

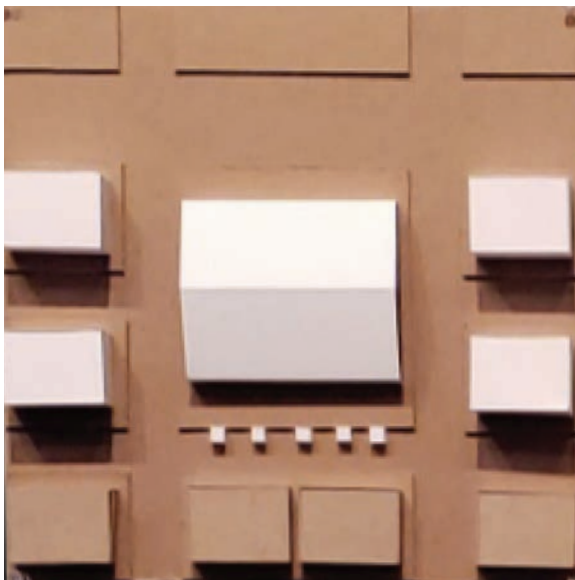
including overcrowding and beggars. Cities enclosed markets, allowing for public activities on the ground floor and government offices above. Meanwhile, they were able to oversee activity, rent space to vendors, and limit lower-income consumers.³¹

In other cultures, the same values hold true. In South and Southeast Asia, floating markets are prominent. In these areas, the first settlements were established along rivers.³² Boats were the easiest mode of transportation for trade as one could reach many communities. In the Middle East and Northern Africa, markets filled the streets and neighboring buildings.³³

As ideas surrounding urban planning have changed, so has the prominence of food within the urban fabric. With the rise of the automobile came the modernist movement, where planners stopped designing for the human-scale. Modernists believed that the perfect city needed order. Where all uses once occupied a single street, they were instead divided into different districts; financial, residential, industrial, and food.³⁴ People were no longer able to walk from place to place and few transit options to connect people to other areas. Without a car, the city becomes a series of islands for the residents who live in it. Many areas became disconnected from food.



- Organic Formation
- Buildings take priority
- Empty space used for public gatherings
- The market becomes weekly function



- As cities were planned, governments created space specifically for the market as a central piece to the design.

Figure 13.

2.2 ETHNIC NEIGHBORHOODS

Within American cities, there is a distinction among the ethnic neighborhoods, closely tied to their relationship with food. As is the case with many smaller areas, there is a main commercial corridor. Depending on what the main attraction to each destination, the foodscape changes. Walking the streets, one will often find a number of specialty shops, whether produce, meat, or fish, on every block in contrast to the supermarket found around America. Within Metro Detroit, Dearborn and Mexicantown, while differing in cuisine, have very similar organization regarding their foodscapes. The same can be said of the ethnic neighborhoods of San Francisco and Los Angeles.

into the fabric of the city.

For most of these neighborhoods, food stores and restaurants line the main commercial corridor. From there, streets branch off with more retail properties, food or other. The Chinatown of San Francisco is the opposite. For many tourists, the souvenirs of Chinese culture are the main drive. Walking the street down the street, one can find clothing stores, antique shops, and souvenir stores along the densely packed street. The culinary scene takes place along the secondary streets.

Many restaurants can be found on the same street. Across California, from San Francisco to Los Angeles, there are many areas where other cultures have integrated their customs

METRO DETROIT, MI

MEXICANTOWN



DEARBORN



SAN FRANCISCO, CA

CHINATOWN



JAPANTOWN



MISSION DISTRICT



Figure 14.

2.3 BLUE ZONES

Dan Buettner conducted a study of the longevity hotspots, or areas with the highest life expectancy rates in the world, to understand what factors lead to living a longer life. Blue Zones “reflects the lifestyle and the environment of the world’s longest-lived people.”³⁵ These five places are: Sardinia, Italy, Ikaria, Greece, Nicoya, Costa Rica, Okinawa, Japan, and Loma Linda, California. Through the study of these five places, they found nine common denominators:

THE POWER OF 9

1. Move Naturally: They do not work-out, but exercise naturally through the environments they live in or the activities they partake in.
2. Purpose: They have a reason to wake up in the morning.
3. Down Shift: They have routines that relieve their stress, whether that means taking a nap or doing happy hour.
4. 80% Rule: They only eat until they are 80 percent full, with their smallest meal in the late afternoon.
5. Plant Slant: They have a primarily vegetarian diet, with beans being the foundation, and meat eaten approximately five times a month.
6. Wine @ 5: They drink one to two glasses of wine per day with friends or food.
7. Belong: They are part of a faith-based community.
8. Loved Ones First: They put family first, meaning taking care of their elders, committing to a life partner, and spending time with their children.
9. Right Tribe: They surround themselves with others that support healthy behaviors.

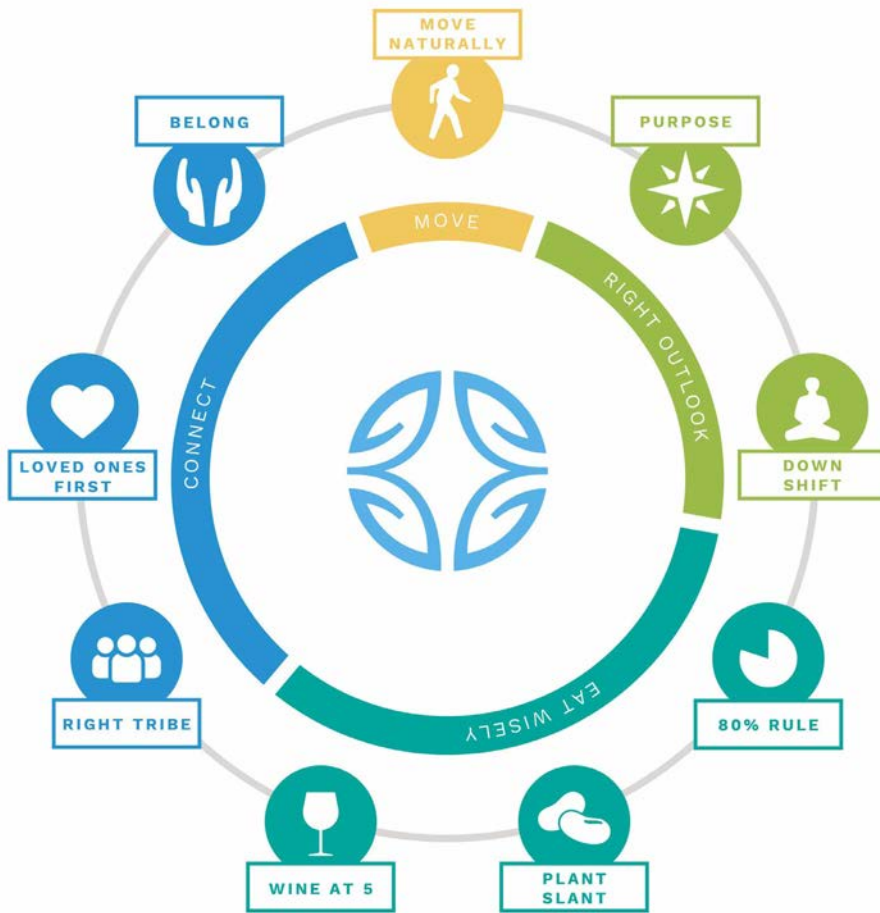


Figure 15.

LOMA LINDA

As the only Blue Zone in the United States, it was interesting to see in person the differences in culture and the residents' points of view. Through conducting interviews and traversing the area, it was clear what distinguished Loma Linda from many other communities. The city itself is a medical campus, with the university and medical facilities providing an anchor for health and wellness.

The main diets of Loma Linda are vegetarian and vegan, clearly translated within the grocery stores. Owing to the lifestyle, no meat could be found within the grocery store, only plant-based alternatives. Walking the aisles, it seemed many of the food products were local, with few national or international brands. Christine, a resident of Loma Linda, also indicated that many of the restaurants around comply with the lifestyle and offer many vegetarian and vegan alternatives on their menus.

Talking with other residents, it was clear that the community was very close, though not incredibly health conscious. The only thing they said they did to maintain their health was eat healthy, but that seemed to be more of a culture of the place rather than a driving factor in their lifestyles. Other than that, they simply walked around for exercise.

Through first-hand analysis of a Blue Zone, ways to implement a healthier food culture within neighborhoods was ascertained. Having healthy options available in stores and simply having the community aspect are two ways in which a healthy lifestyle can be achieved.

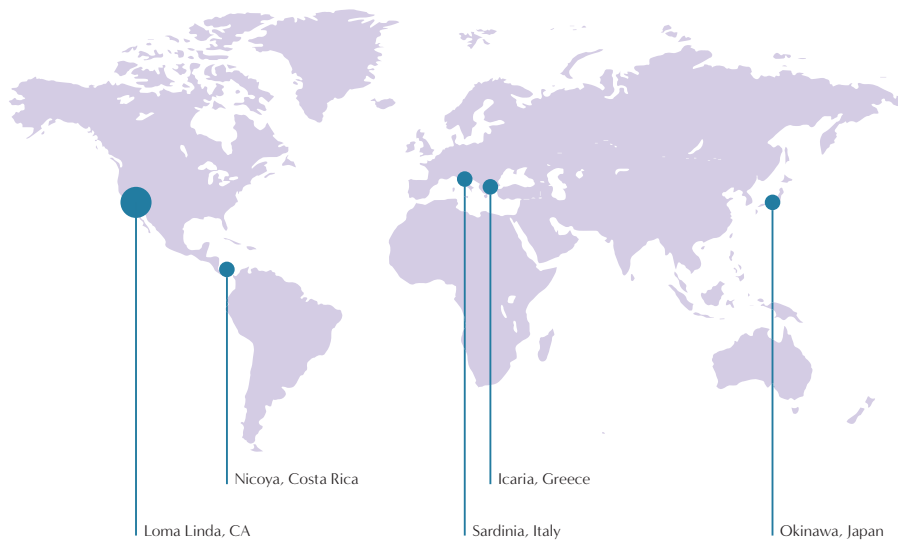


Figure 16.

SURVEY

QUESTIONS:

1. Regarding health, what makes Loma Linda different from other places?
2. Do you usually make your own meals or eat out?
3. What do you do to stay healthy?

SUFANADO

1. I don't know about healthiest, personally. The hospital is a very good place, staff is perfect. It's comfortable and different.
2. We don't really go to restaurants.
3. Eat vegetables. I cook for my family.

RAKESH

1. It's quiet and clean.
2. I eat at home.
3. Eat healthy.

DARAN AND CHRISTINE

1. There's a small town feel with the Cali vibe, but you know where to shop. Everything is close proximity in the city. And it's a close community. If you don't know someone, someone you know does.
2. I eat at home, but when I do eat out, the restaurants actually account for the vegetarian or vegan lifestyle here.
3. Eat healthy and walk.





3.0 THE VESSEL

“...a sensuous impression in combination of food with design and architectural form in scales of both cityscapes, buildings, room, interior, furniture, and tableware, creating a total experience forming social relations among strangers...”

- Anna Marie Fisker

3.1

VESSELS

The foodscape is made up of a multitude of vessels, open or enclosed. A vessel is a space activated by people: a destination where lives play out, conversation is exchanged, and memories are made. From the home, to the store and even the public plaza, people travel from one place to the next. Each vessel holds a different atmosphere and purpose, both influencing and influenced by the activity within, and food is no exception. Within every stage of the food system, food travels from vessel to vessel, changing form through each station.

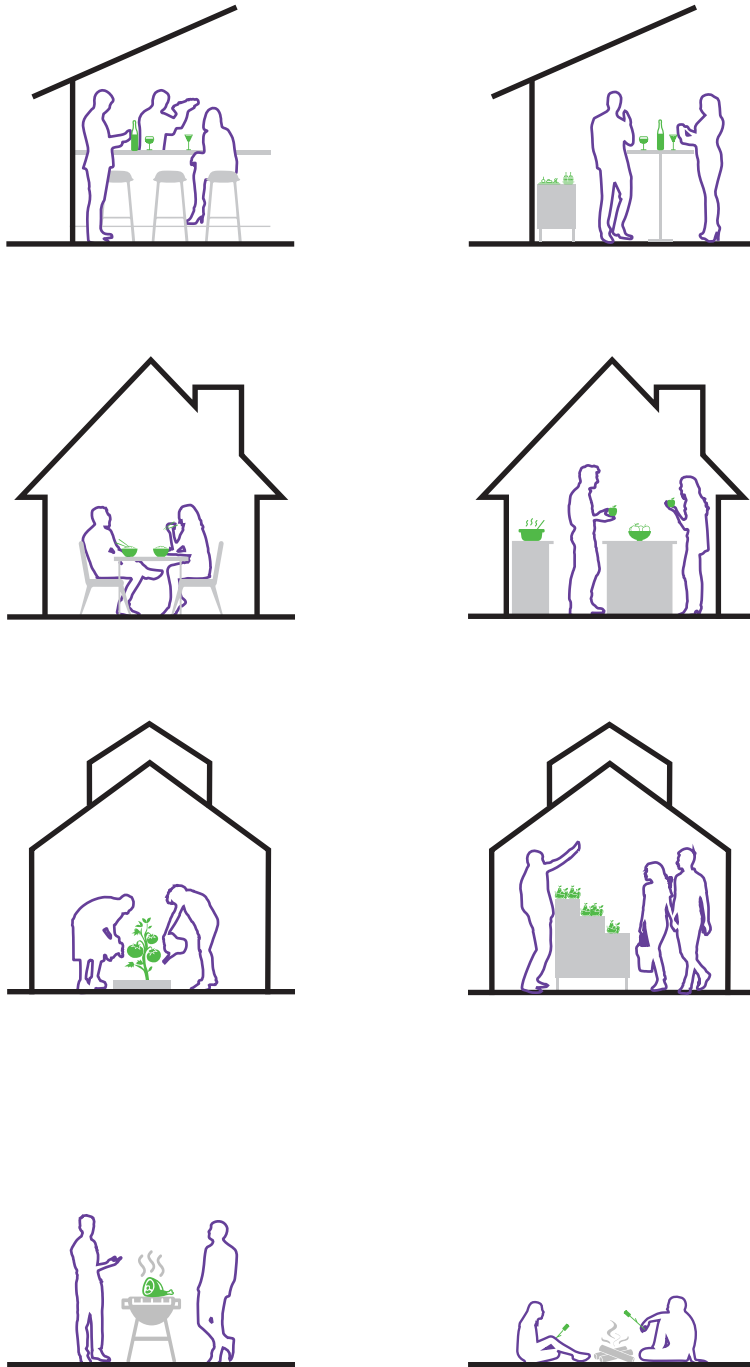


Figure 17.

3.2 THE MARKET

The marketplace is often seen as a gathering place within communities, yet as our societies values have shifted, so has the evolution of the market. With many different levels of food retailers, the physical and mental differences exist, creating different atmospheres and expectations.

Currently, the main destination for grocery shopping is the supermarket. In the past, grocery runs consisted of trips to the general store for dry goods, the farmer's market for fresh produce, and the butcher shop for fresh meat. A list was given to the shop keeper to collect the items and the bill was paid. With mass production taking precedence among farmers, surplus created a need for packaged goods, long shelf-lives, dropped prices and increased consumption. Thus, the supermarket was born, where everything could be found in the same place and always stocked. In order to keep prices low, the place was made as self-service. Customers could choose their own groceries, and the maze-like design made certain that shoppers browse every aisle before completing their list. Walking through, it seems that there are many choices available, yet that is not the case. 75% of biodiversity of foods is lost in order to accommodate the need for consistency, uniformity, and durability. For example, apples are picked before ripening and shipped. After traveling long distances,

they are ripe for consumers.³⁶ Open seven days a week and sometimes twenty-four hours a day, a trip to the supermarket is consistent and cheap.

Figure 18.



3. THE VESSEL

Paper & Cleaning

Thousands of
ROLLBACKS
across the store.

#1
in
RICE
LEADER

- Paper & Cleaning
- Groceries
- Home Improvement
- Electronics

Price
1.99

Price
1.99

Price
1.99

PHENOMENOLOGICAL ANALYSIS

THE SUPERMARKET

The most common grocery shopping trip is that of driving to the supermarket. The task of going to the supermarket constitutes an errand. Open every day and offering every kind of food available, the supermarket is the embodiment of convenience. In the center of an island of concrete, the supermarket is surrounded by parking. Very few are likely to stroll in unless in need of something. The store itself is huge, with no windows other than the glass doors allowing entry. The only sign that this place sells food is the large logo visible a far distance across the parking lot and occasionally the seasonal goods just outside the doors. Walking through the parking lot and across the avenue reserved for vehicular circulation, shoppers battle cars for dominance over the vast concrete landscape to the sidewalk signaling the pedestrian domain.

Passing through the first set of doors, one enters the vestibule where an array of shopping carts awaits potential shoppers. The shopping cart makes it easy to transport goods through the store and back to the car, allowing consumers to buy in large quantities. Entering through the next set of doors, one is finally within the actual supermarket. The supermarket is laid out into multiple aisles, often with the most nutritious goods – fresh produce, dairy, meats, etc. – lining the perimeter. Within the center is a series of packaged goods, not entirely necessary within the human diet, but helpful in adding pleasure to consumers. Walking through the store is similar to walking through a maze, traversing down one aisle to the next and so on until the list of goods you were searching for has been completed; however, often times, the cart is not only filled with the set items you originally came to the store for, but also a number of different goods that caught your eye on the path through.

Along the way, there is very little interaction with anyone. No one wants to spend time at the supermarket, knowing that more will be bought than expected. Any disruption in this goal often leads to irritation. People often know exactly what they want to buy and the general location. The inability to find something is irritating for the mere fact that it goes against the tenet of the supermarket: convenience. Even having others in the way of circulation is a hinderance. People will try at all costs to avoid people when shopping, with a higher density of people becoming an annoyance rather than a benefit. Edging around an ignorant shopper; asking an employee for assistance in finding something; waiting in line for the cashier; people dislike the thought of interacting with others. Even going as far as waiting in line for self-checkout rather than going to an open human cashier. The very idea of the supermarket suggests a quick and easy trip, yet every little disruption is an inconvenience.

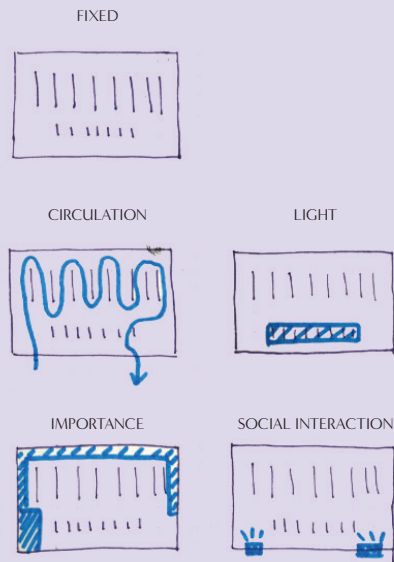


Figure 19.

THE FARMER'S MARKET

An occasion far less common is that of making a trip to the farmers market. Typically held once or twice a week, a trip to the farmers market is often seen as an occasion rather than a chore. As a weekly occasion, crowds of people travel to the market to buy goods, by car, foot or other mode of transit. Approaching the market, one encounters the sight of people congregating, often bringing their own reusable grocery bags and, sometimes, rolling carts. Knowing that they will have to haul back any goods they buy, people are able to limit their shopping to the list they have, perhaps with room for a little extra.

The market itself is typically a series of tents with fresh produce, artisan goods, and food vendors lining the street. Highly visible, people are attracted to the activity and density of people that radiates from the farmers market. Walking through, stalls on either side, one walks a slow, leisurely pace, looking back and forth between the different goods. As every vendor sells similar or different goods, one is likely to traverse all the stands and narrow down certain vendors to buy from. The first pass through consist of leisurely browsing, taking in the sights, smells and people around. The colors, sizes and textures of food beckon to consumers along with prices and deals. Occasionally, something will stand out and be bought immediately upon sight. As one nears the end of the market, it is time to make a selection. Turning around, one heads back through with more purpose, stopping to buy and barter with vendors. With many vendors, the tradition of cash only remains a constant, so understanding how much money you have at all times is important and another limiting factor. The exchange of paper for goods holds more weight than buying through credit. Instead, one can see

the cash depleting and know when enough has been spent.

As people frequent the market more often, vendors and customers start to become more familiar. Vendors are at first associated with quality and price until a repertoire forms between them and the shopper. People are also likely to see other friends or family that may frequent the market, leading to more social interactions. In this way, people look forward to the weekly occurrence, elevating the trip to the market to an event.

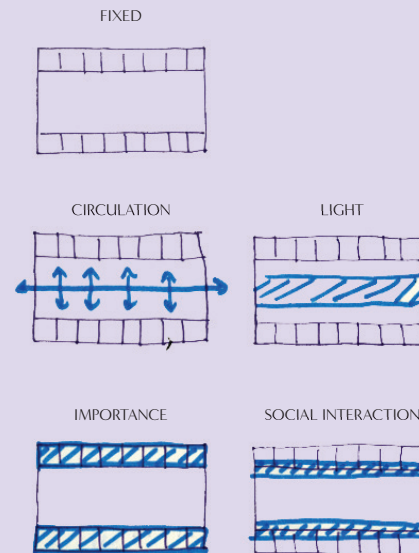
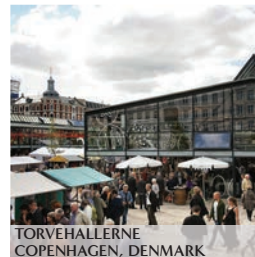
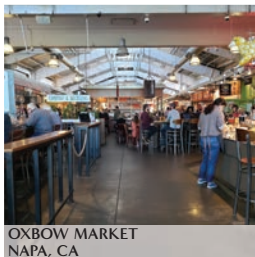
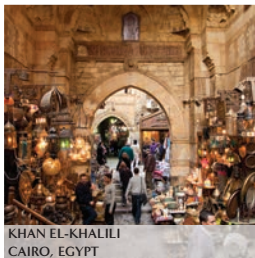
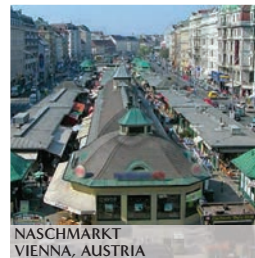
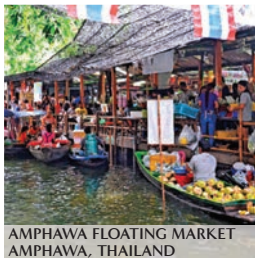


Figure 20.

COMPARING THE MARKETS

Looking at the two opposite ends of the spectrum, what is it that makes the farmers market what it is? The farmers market creates structured chaos over an idealistic, yet sterile order that resonates from the supermarket. There are a couple things that directly set the two entities apart. The first is temporary activation. By limiting hours of operation to a day or two, visiting the market becomes more of an occasion rather than an errand. It also leads to the congregation of more people, creating the next quality: density. The more people involved, the greater likelihood of social interaction among friends, family, and strangers. The next quality, visibility, allows activity to permeate the boundaries of the market and is key to inviting people to gather.

The farmers market, in essence, is the temporary activation of a market that facilitates social interaction through transparency and a high density of people. In order to better understand the complexities of all markets, I conducted an analysis of various markets around the world to find the defining characteristics of these spaces. Through the study of different cultures, architectural spaces, and modes of operation, I was able to determine characteristics within the economic or political realm, the physical aspects, and the social impacts that markets can have.



Figures 21-32

MARKET CHARACTERISTICS

ECONOMIC/POLITICAL

GOODS



Local



Non-Local

REGULATION

Formal



Market Hall



Street Market

Informal



Pop-Up

- Are goods supplied by local businesses or transported from elsewhere?
- Who is the market supporting economically?
- Is someone regulating the vendors and activity within the market?
- Is the city needed for the operation of the market to happen?
- Are vendors governing themselves and setting up shop where convenient?

COST



For Profit



Aid Programs



Non-Profit

ACCESS



Pedestrian Friendly



Vendor Access



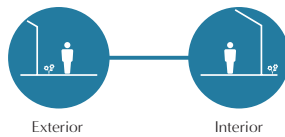
Multiple Transit

- What payment is taken?
- Are goods commodified?
- Is everything non-profit and goods given for free?
- Is there assistance for low-income consumers?
- How accessible is the market?
- Is it easily reached by pedestrians and neighbors?
- How are vendors transporting goods?
- Is it well-connected to transit systems?

Figure 34.

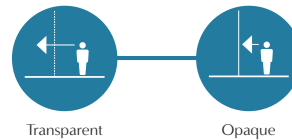
PHYSICAL

ENCLOSURE



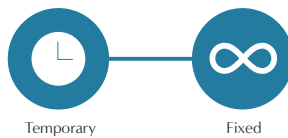
- Is the market indoor or outdoor?
- Are occupants protected from external conditions?
- Is there a physical barrier indicating the boundary of the market?

VISIBILITY



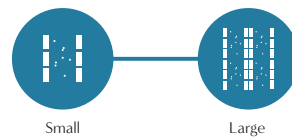
- Can activity within the market be seen by passersbys?
- Is there any connection outside of the boundaries of the market?

PERMANENCE



- Is the space temporarily activated or open daily?
- How often does the market operate?

DENSITY

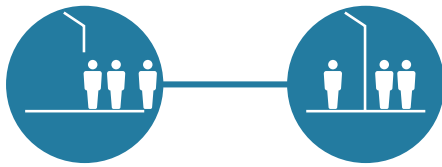


- How many people are visiting the market at once?
- Is it a hassle that people are running into each other?
- How many vendors are available? How large is the space?

MARKET CHARACTERISTICS

SOCIAL

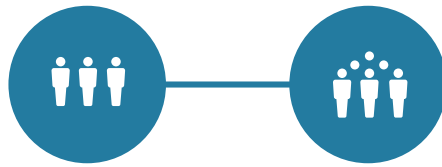
INCLUSIVITY



Public

Private

VISITORS



Intimate

General

- Who is welcome at the market?
- Is the market accessible to everyone or meant for certain people?
- Does the market serve locals or tourists as well?
- Are people interacting within the market?
- How do people view the market?
- Do visitors see the market as an event or an errand?

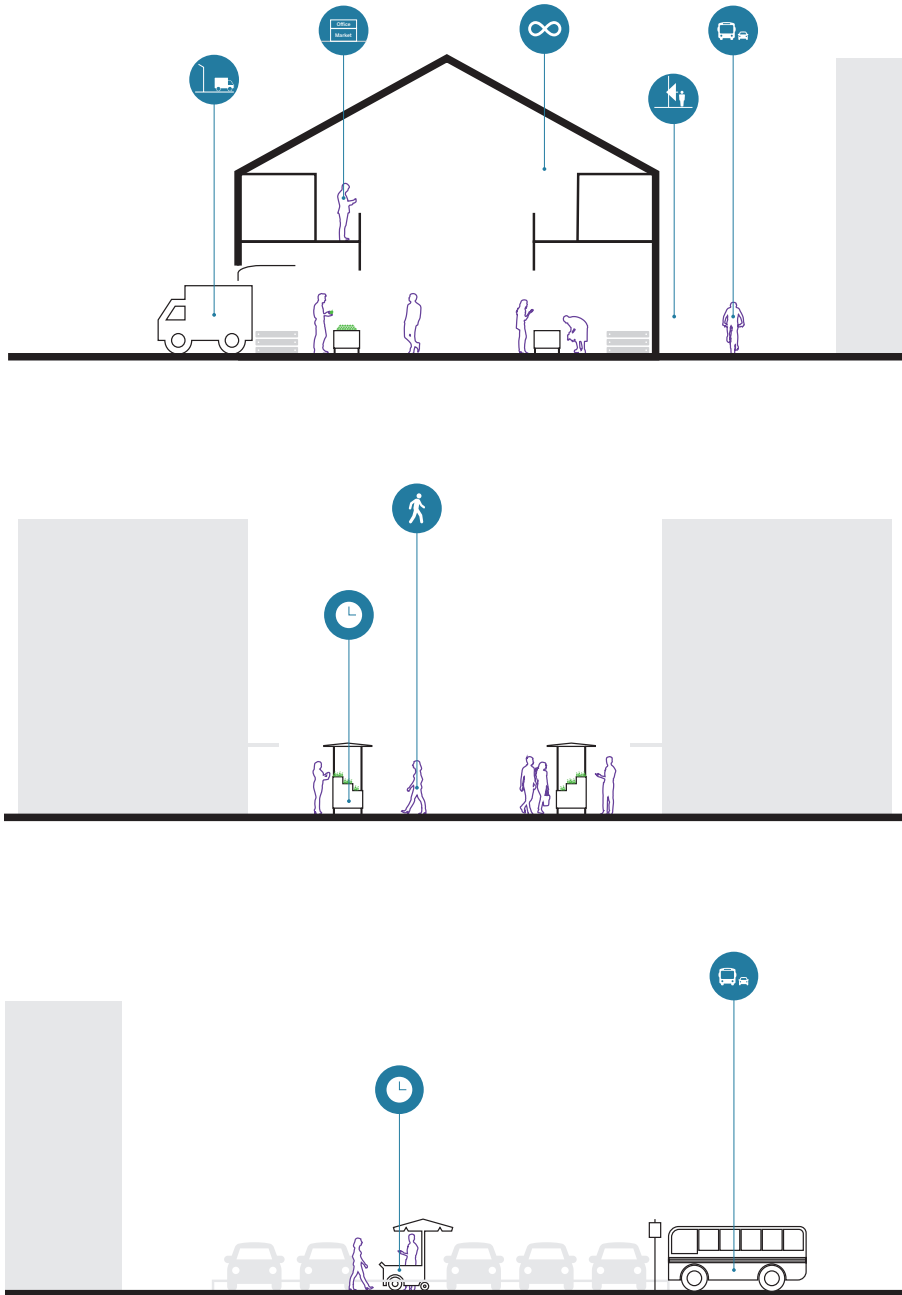


Figure 35.

CASE STUDIES

FERRY BUILDING MARKETPLACE



Figure 36.

The Ferry Building Marketplace serves as a community hub for the city of San Francisco. The building used to be the ferry terminal that went out of commission. Instead of tearing it down, it was reused as a market, selling fresh produce and artisan goods. It is open daily with permanent vendors, but three times a week, a farmer's market is held where the plaza surrounding bustles with activity.³⁷ Also, because of its historic routes as a ferry terminal, the market acts as a central point for many major transit lines.

NASCHMARKT



Figure 37.

Naschmarkt serves as an international market where people of all cultures come to exchange food. As a former bridge, a market was the only function that could be built on the infrastructure.³⁸ Highly accessible by foot, car or transit, the market is densely packed with people and market stands. Even through its popularity among tourists, the market remains cheap and affordable for all.





4.0 DETROIT

“Food is the great unifier that connects us across cultures and generations. It can literally propel you to another time, another country, and culture without even leaving your dinner table.”

- Megan Faletra

4.1

FOOD + HEALTH

In 2017, Detroit was named as the top unexpected food city in North America by National Geographic.³⁹ With every passing year, diners to fine dining restaurants are opening along the streets, providing American favorites as well as ethnic delicacies; however, development is limited to certain areas of the city. Downtown, Midtown, and Corktown continue to boom while neighborhoods suffer from a lack of economic prosperity. The city is taking action to revitalize Detroit, but the plan only targets areas with potential market demand. While there are many neighborhood plans completed, in the works, and pending, there are still a greater number that are neglected. Many of these areas also have limited access to healthy food and suffer health problems as well.

Currently, Detroit is ranked within the top ten cities in the country with the highest rates of food-related diseases, attributing to the existing food system. Out of 500 cities, Detroit is ranked second for both obesity and diabetes and tenth for heart disease. In many cases, processed and unhealthy foods are cheap, quick to get, and easy to prepare, making low income areas a target for obesity among other food-related diseases. It is no surprise that the food we eat affects our health, but there's more to health than dieting. There are a few aspects of life that

affect health: health behaviors, physical environment, socioeconomic factors, and health care.⁴⁰

For a few years, food deserts, or residential areas with limited access to affordable nutritious food, were able to predict high rates of disease and food insecurity; however, more recent studies show that a more effective way of determining these ailments is by identifying food swamps. A food swamp is a spatial metaphor to describe neighborhoods where fast food and junk food inundate healthy alternatives.⁴¹ These retailers include fast food, liquor stores and convenience stores, where the cheaper and faster food products are more easily accessible.

While these areas exist, Detroit's history of industrialization has lent to a unique situation. 16% of Detroit's land is industrially zoned. 10% of that land is vacant. From the late 1800s to the 1960s, the automobile industry; however, as racial tensions arose and the automobile industry de-industrialized, many Detroit residents fled for the suburbs, leaving many homes empty. Only those without the financial means stayed. As they deteriorated, homes were razed, and vacant lots littered many neighborhoods. 38% of Detroit's total land area is vacant.⁴² Among these areas, many are sites of industrial

HEALTH

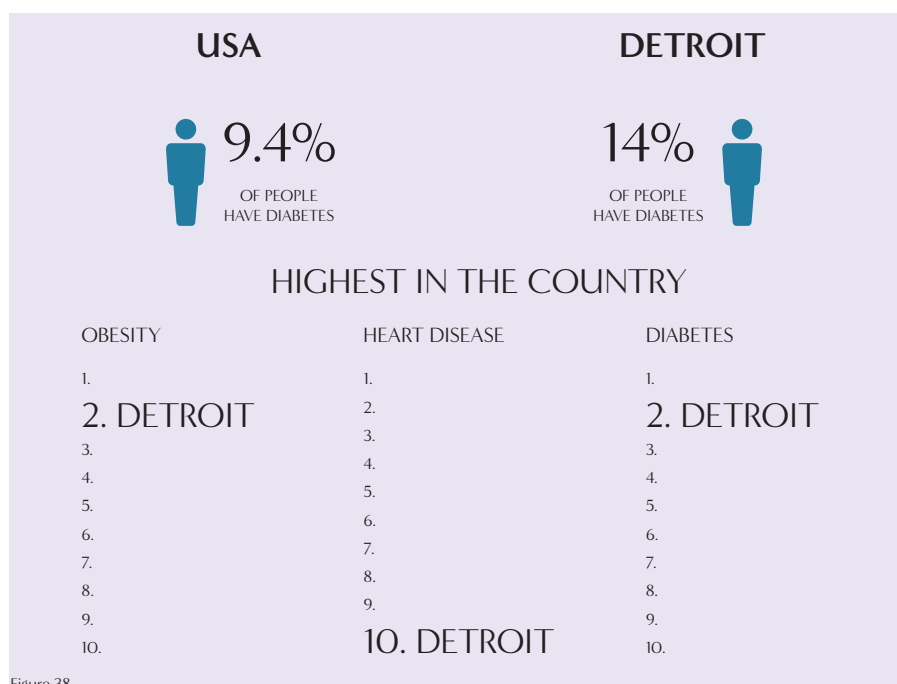
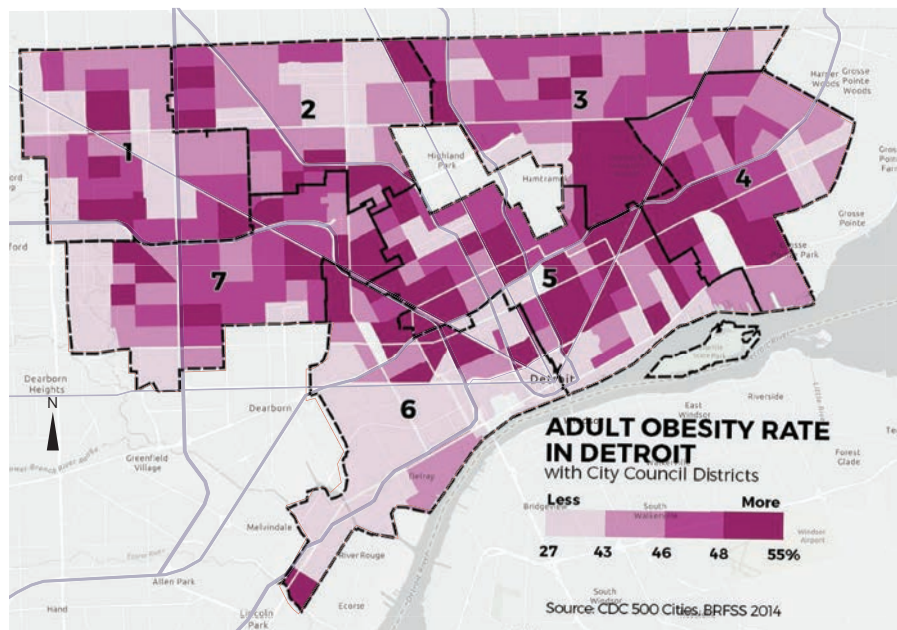


Figure 38.

FOOD SWAMPS

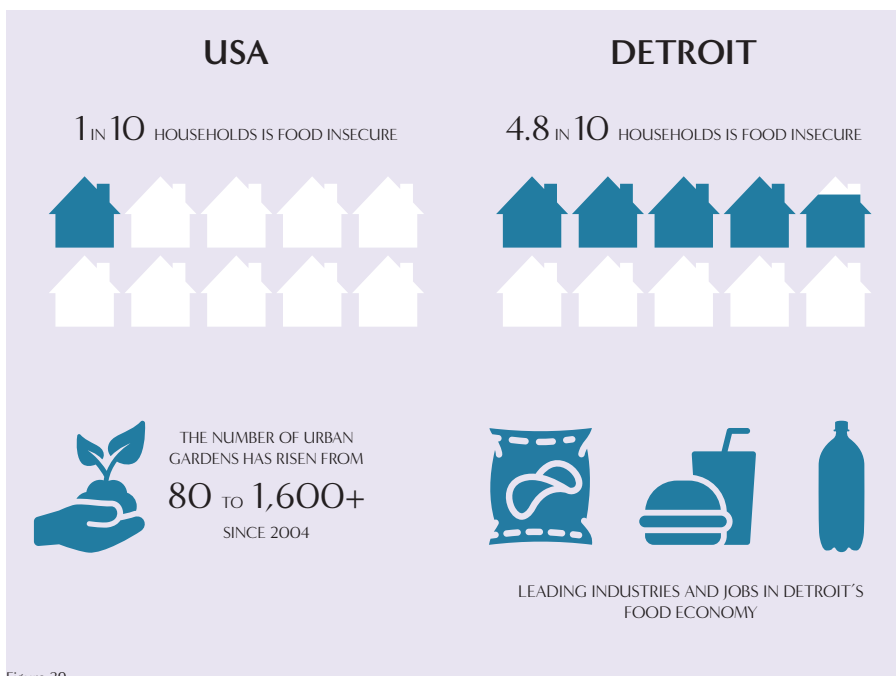
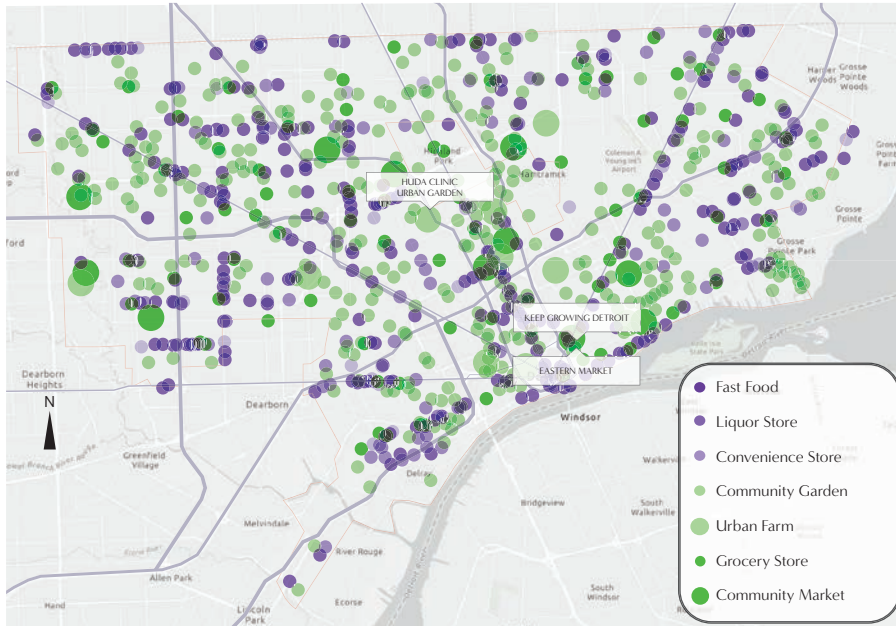
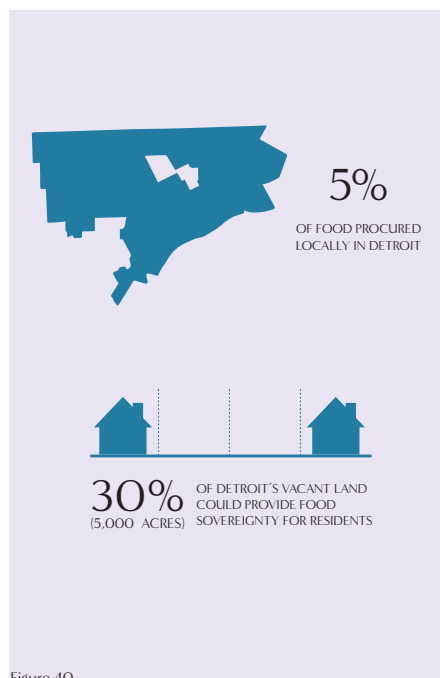
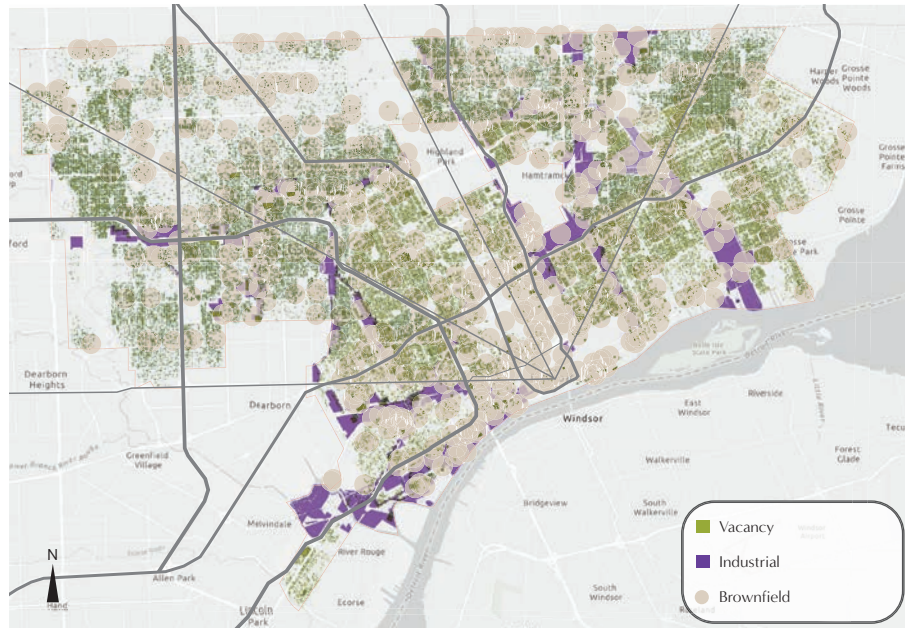


Figure 39.

INDUSTRIALIZATION



activity or brownfields that have left the soil with high levels of lead, rendering the soil toxic. “A brownfield is a site or property that has been abandoned or unutilized because they may be contaminated or thought to be contaminated.”⁴³ The presence of brownfields hinders the revitalization of Detroit because nothing can be done with the site while there are environmental contaminants. Fortunately, BSEED-Environmental Affairs has continued to redevelopment across the city. As soils are tested for toxicity, those that are clean can serve a new purpose as sites for urban agriculture

Figure 40.

4.2 CURRENT INITIATIVES

With residents and organizations utilizing vacant lots for food production, the empty space that fills neighborhoods are beginning to be filled with life and purpose. These gardens help to fulfill health needs and social needs at the same time. They provide areas where communities can come together to fill a common need and help those who need it the most. Organizations such as Keep Growing Detroit, the HUDA Clinic, and the Michigan Urban Garden Initiative (MUGI) have helped not only in creating singular access points, but also networks of resources and healthy food across the city.

While these organizations help to alleviate the issue, food insecurity is still a constant struggle for many residents, especially those in neighborhoods outside development areas.

MICHIGAN URBAN FARMING INITIATIVE



Figure 41.

The Michigan Urban Farming Initiative (MUFI) is a large-scale urban farming complex in the North End. With a lead organization, the farm mainly operates through volunteers and everything grown benefits the community. They eventually hope to grow into a campus, complete with a community resource center. Being a non-profit, they've found it difficult to grow and expand. For now, they are content with being a place that inspires the community. They are primarily concerned with the general neighborhood where they are located rather than adding to the network of organizations that exists within Detroit.⁴⁴

KEEP GROWING DETROIT

Keep Growing Detroit is an organization that strives to create a network of access to nutritional foods. They aid others by providing opportunities, resources, workshops and guidance in growing and maintaining urban gardens. They serve a variety of different people, ranging from families, schools, communities and markets all across the city.⁴⁵

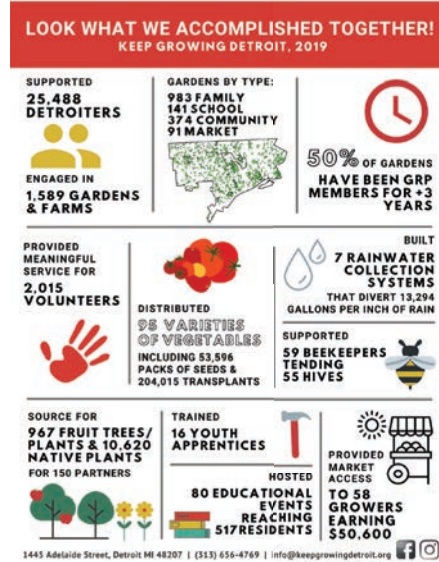


Figure 11: Infographic illustrating the progress Keep Growing Detroit has made.



Figure 42.

HUDA FREE CLINIC URBAN GARDEN

The HUDA Clinic is a non-profit clinic that assists in all medical fields. Babar Qadri, a physician assistant at the clinic, was one of the co-founders of HUDA Urban Garden (HUG) in order to treat patients in a holistic way. He found that many diseases stem from poor nutrition. Working at a non-profit clinic, his patients were typically low-income and only had access to fast food in the area. When prescribing a treatment plan, he found that he was taking all their food options off the table. Instead, he formed HUG so that patients would have access to nutritional foods that would directly treat their ailments. From this idea, he helped to grow other urban gardens around the city so that no matter where a patient came from, they would have access to the foods they needed. On top of that, everything from the garden, patient or not, is free.⁴⁶

“Food is given for free, crops and seeds are free. No one can ever charge their friends because everything is free. Nothing that is from this garden will ever cost anything.”

- Babar Qadri



Figure 43.





5.0 DESIGN INVESTIGATION

“These spaces have moved beyond mere containers for trade and commerce in a shared space; they are more than just consumption of food, and the services and branding that surrounds this.”

- Jason Hilgefert

5.2 CONCEPT

While urban agriculture initiatives are aiding in the problem of food insecurity and health, the area of influence reaches little further than those within the immediate surroundings. Without the resources to connect to Detroit's larger food system, only those on the hyper-local scale can be helped. Recently, many states have been turning to food hubs. According to the USDA's Regional Food Hub Resource Guide, a food hub is a "business or organization that actively manages the aggregation, distribution, and marketing of course-identified food products primarily from local and regional producers to strengthen their ability to satisfy wholesale, retail, and institutional demand."⁵⁰ Food hubs help allow local farmers, not large enough to sell goods commercially, to pool together goods that can be sold to wholesale and institutional buyers.

Food hubs can serve more than just the farming and gardening community. By providing education and resources, food hubs can also serve as social gathering places. Through an understanding of how food affects people over a lifetime, the main study of the design investigation was to create a program that could aid people of all ages, from infants to seniors. The inclusion of multiple programs transcends the traditional food hub and becomes a Food Integration Campus. A Food Integration Campus is a

hub that centralizes the food system while bringing people together for education, career opportunities, and to reintroduce the traditions of food. Through an analysis of context and demographics, different programs are included or excluded based on the needs of the specific community.

LOCAL AND REGIONAL PRODUCERS

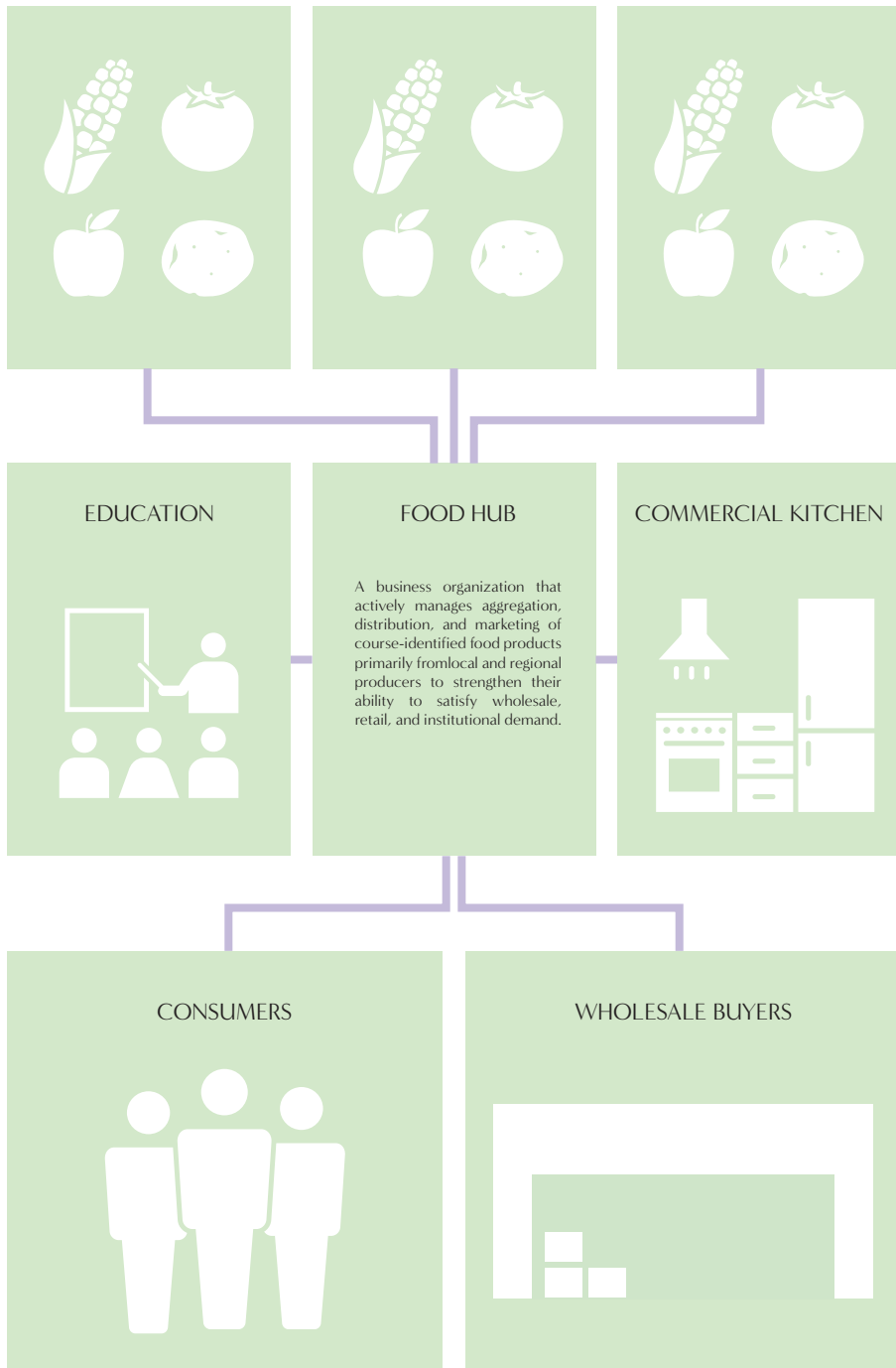


Figure 44.

EASTERN MARKET



Eastern Market is the major food district in the city, with food retailers across the area. As the first food hub in the city, the Eastern Market is taking steps towards food security. Grow Eastern Market is the aggregation center, Kitchen Connect is a food incubator for local entrepreneurs, and the market itself brings people across Metro Detroit together.⁴⁷

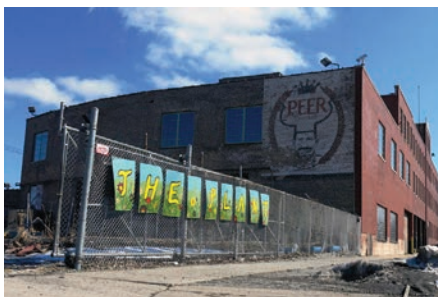
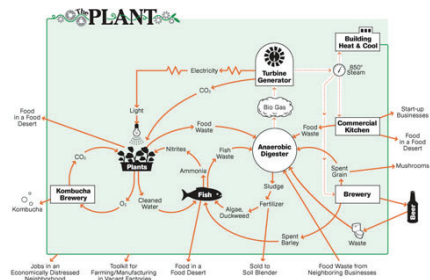
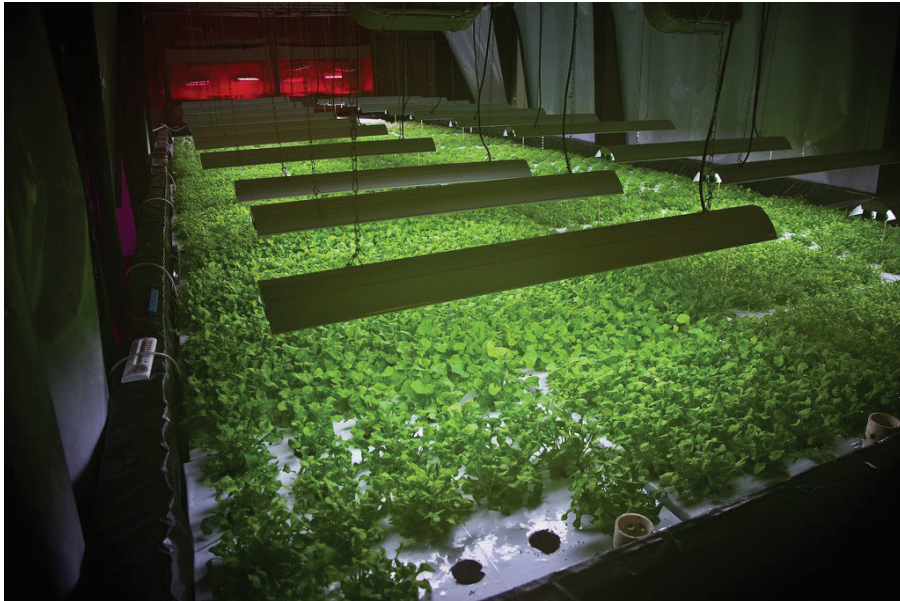
PROGRAMS

- Food + Health Fellowship
- Farm Stands in locations around Detroit to promote wellness
- Tasting Stations are nutrition education tables inside grocery stores
- Allow payment through Bridge Cards, Double Up Food Bucks, and Project FRESH



Figure 45.

PLANT CHICAGO



The Plant is a food hub that utilizes a hydroponic greenhouse for food production. In order to find more effective methods, research is conducted in house. Other secondary programs include commercial kitchens and a brewery. The building itself was adapted from a former tobacco factory.⁴⁸

Figure 46.

PROGRAM BY AGE NEED

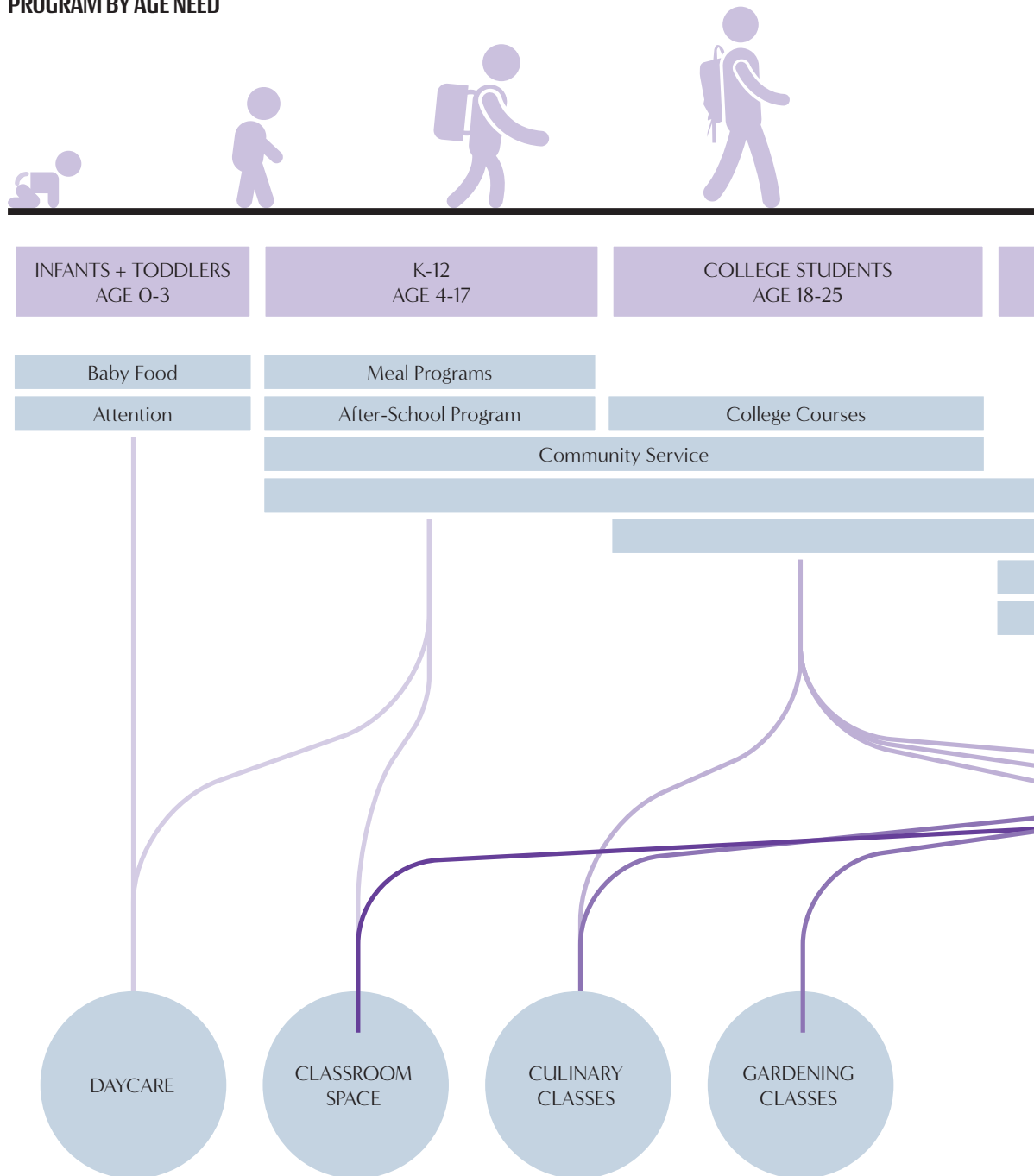


Figure 47.



ADULT
AGE 26-60

SENIOR
AGE 61+

Employment

Sense of Belonging

Facilities

Purpose

Culinary Classes

Physical Activity

Gardening Classes + Resources

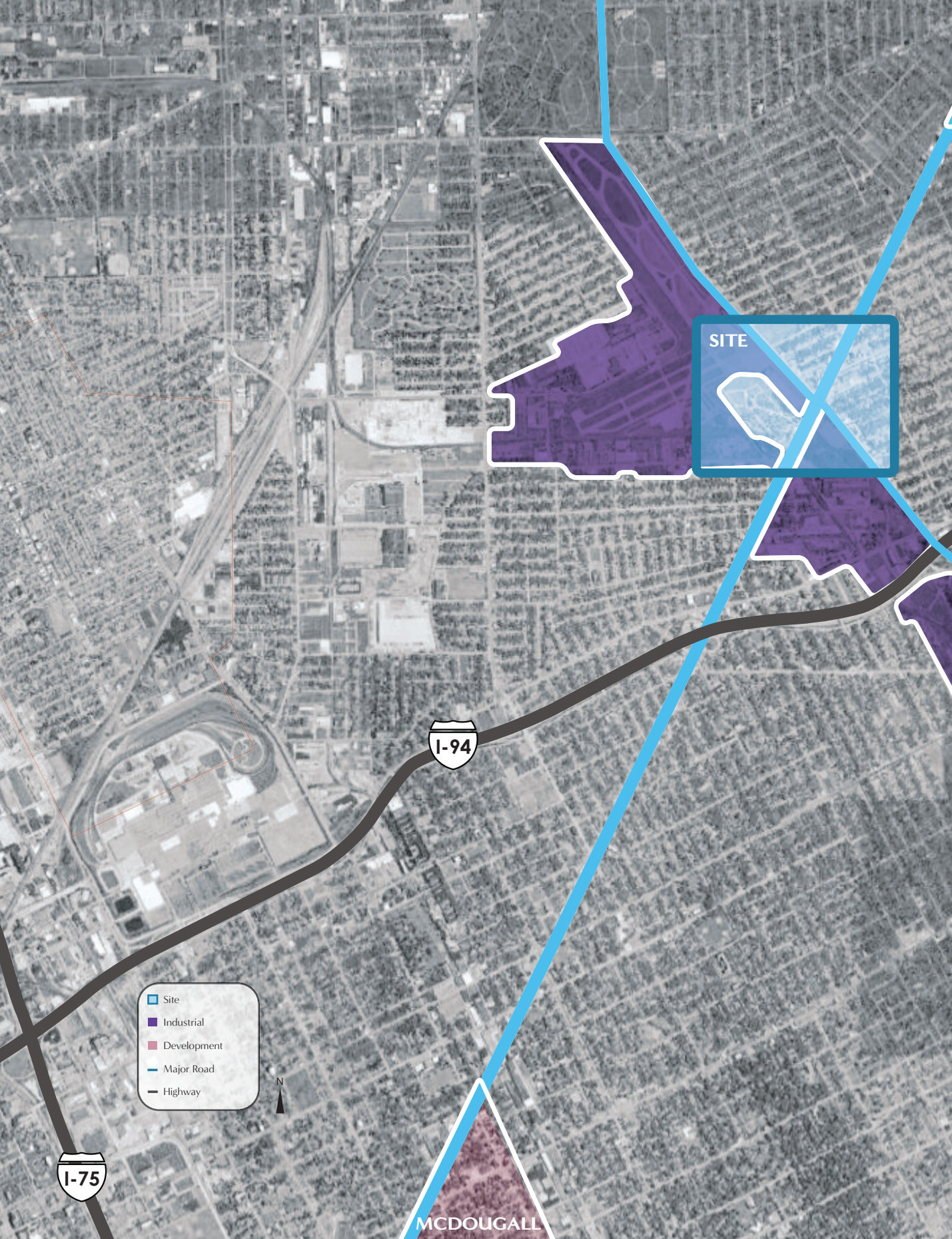
Treatment

LABORATORY

WELLNESS
CENTER

GROCERY
STORE

RESTAURANT
/CAFE



SITE

I-94

I-75

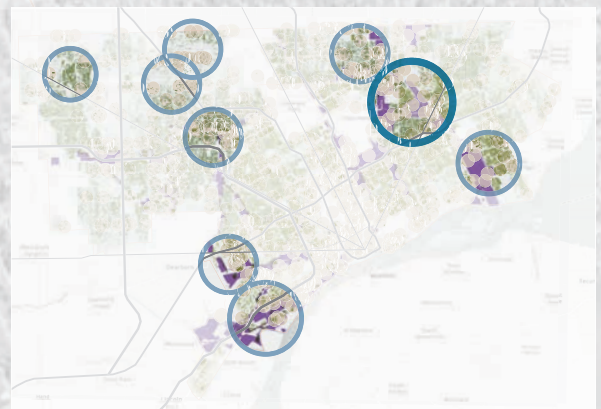
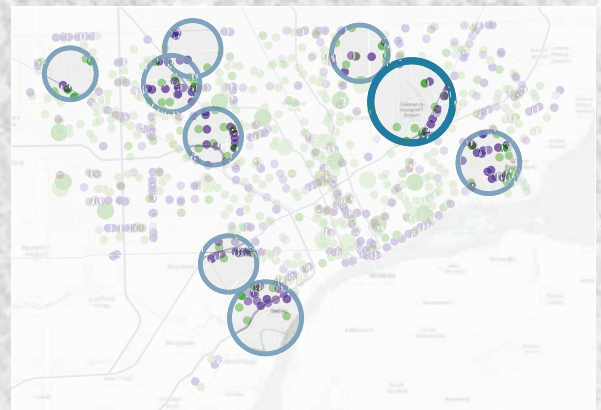
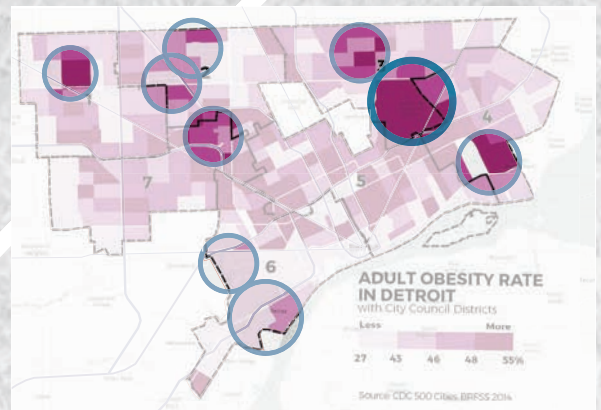
- Site
- Industrial
- Development
- Major Road
- Highway



MCDUGALL

7 MILE-GRATIOT

SITE SELECTION



Criteria for identifying potential sites included analysis of food swamps, obesity rates, and effects of industrialization within Detroit. Ideal building selection includes an existing vacant building, preferably industrial as many of these sites have few programs for adaptive reuse. Implementing a food hub in these spaces not only reactivates them with a lighter industrial footprint but also has the potential to revitalize them as community gathering sites.

Figure 48.

5.2

GRATIOT + CONNER

Cut off by a major industrial belt, many of Detroit's east side neighborhoods lack both attention from the city and access to healthy foods. Only neighborhoods that show a potential for market demand, such as Jefferson-Chalmers and Seven Mile-Gratiot, are undergoing development while others are left to fend for themselves.⁵¹ The Eastside Community Network (ECN) is a non-profit organization that aids in the redevelopment of neighborhoods on the east side of the city, but their influence does not extend north of I-94. Some of the largest areas of neglect are located around the Detroit City Airport, just north of the freeway.

The area around Gratiot Ave. and Conner Rd. were once prosperous. Gratiot served as a popular commercial corridor with businesses lining the street. A majority of the residents worked in the auto-industry, and as Detroit de-industrialized, many were left without jobs. Crime increased and the businesses along Gratiot were left vacant.⁵² The residents located between the Detroit City Airport and Van Dyke Rd. were either bought out or forced out of their homes because of a plan called the French Road Mini-Take. As a safety precaution for the residents of the area, the city wanted to create a buffer between the airport and the residences. The plan was to buy out the residents in lots adjacent to the airport;

however, having lived for years next to the operating airport, many residents did not want to sell out. Ultimately, the plan took over twenty years to accomplish as homes that were left vacant deteriorated. Those who were not bought out were forced out from the neglect of the city.⁵³ Still, people look back on the area with fond memories

MEMORIES – DETROITYES FORUM

“My dad bought the business after WWII and we closed the store in 1972.

I went to St. David’s Elementary school from 1964 through 1972.”

- Maxine1958

“My dad was a cop at the 15th (on Gratiot at Conner). We used to go to Haas Roast Beef a lot.”

- lafontaine

“I lived about 3 1/2 miles from there in the ‘50s. I went to the Conner station a couple times to check out the bikes at the bike auctions and to get my own bike registered.”

- Olddetroiter

“I used to hang our and cruise through the A&W and Woods Drive-Inns. One of my friends was a car hop at A&W.”

- eriedearie

“I lived on Sanford between Gunston and Elmo from Hallowe’en ‘76 until spring ‘82. The neighborhood was transitioning by then and I was part of it, from homeowners to rentals.”

- diver1369

“I remember back in the 80’s a party store named Karmo’s which might have been in the building that your parents used to own. A buddy of mine went to DeLaselle and we used to frequent the place.”

- Detroitj72

“I grew up on the west side of City Airport, the Six Mile and Van Dyke area, which presently is now a wasteland and all but a memory.”

- Sludgedaddy

“I remember eating ribs at the Happy Landing Restaurant on Conner across from the City Airport....best in town. The slabs were huge, cole slaw, french fries, the sauce was great!”

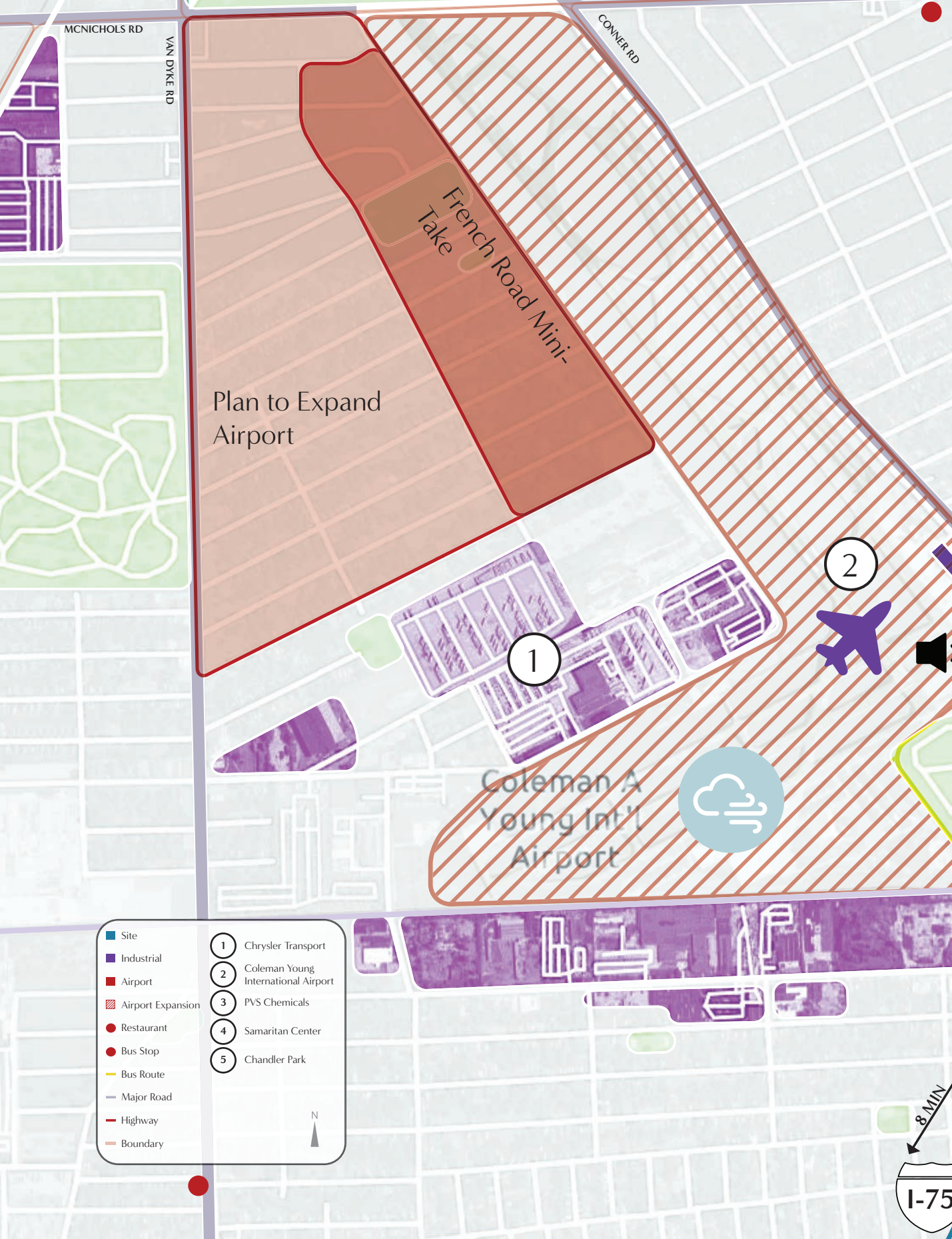
- Buy American

“I believe Heyn was the place in the neighborhood to buy Stroh’s Ice Cream. Closing the store in 1972 was probably a good move looking back even though the neighborhood was still okay. A good number of businesses stayed too long into the 1980’s and paid for it.”

- IrishSpartan

“I was too young to see the changes going on at the time. But I just find it strange that every person who used to live there, to a T, says that was the greatest neighborhood to live and raise kids. Yet, within 10 years, everyone was gone.”

- Frankg



MCNICHOLS RD

VAN DYKE RD

CONNER RD

French Road Mini-Take

Plan to Expand Airport

1

2

Coleman A Young Int'l Airport

| | |
|--|-------------------|
| | Site |
| | Industrial |
| | Airport |
| | Airport Expansion |
| | Restaurant |
| | Bus Stop |
| | Bus Route |
| | Major Road |
| | Highway |
| | Boundary |

| | |
|--|---------------------------------------|
| | 1 Chrysler Transport |
| | 2 Coleman Young International Airport |
| | 3 PVS Chemicals |
| | 4 Samaritan Center |
| | 5 Chandler Park |

N

8 MIN

I-75

CONTEXT + DEMOGRAPHICS

AGE DISTRIBUTION

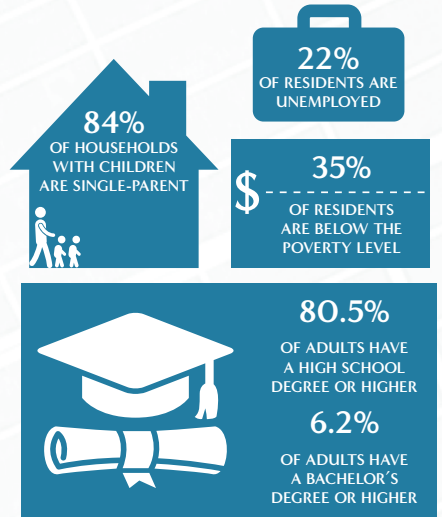
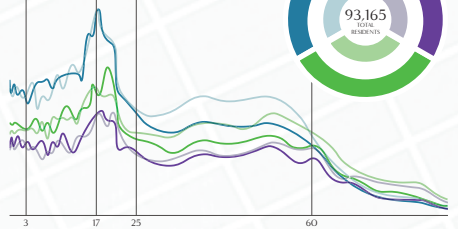
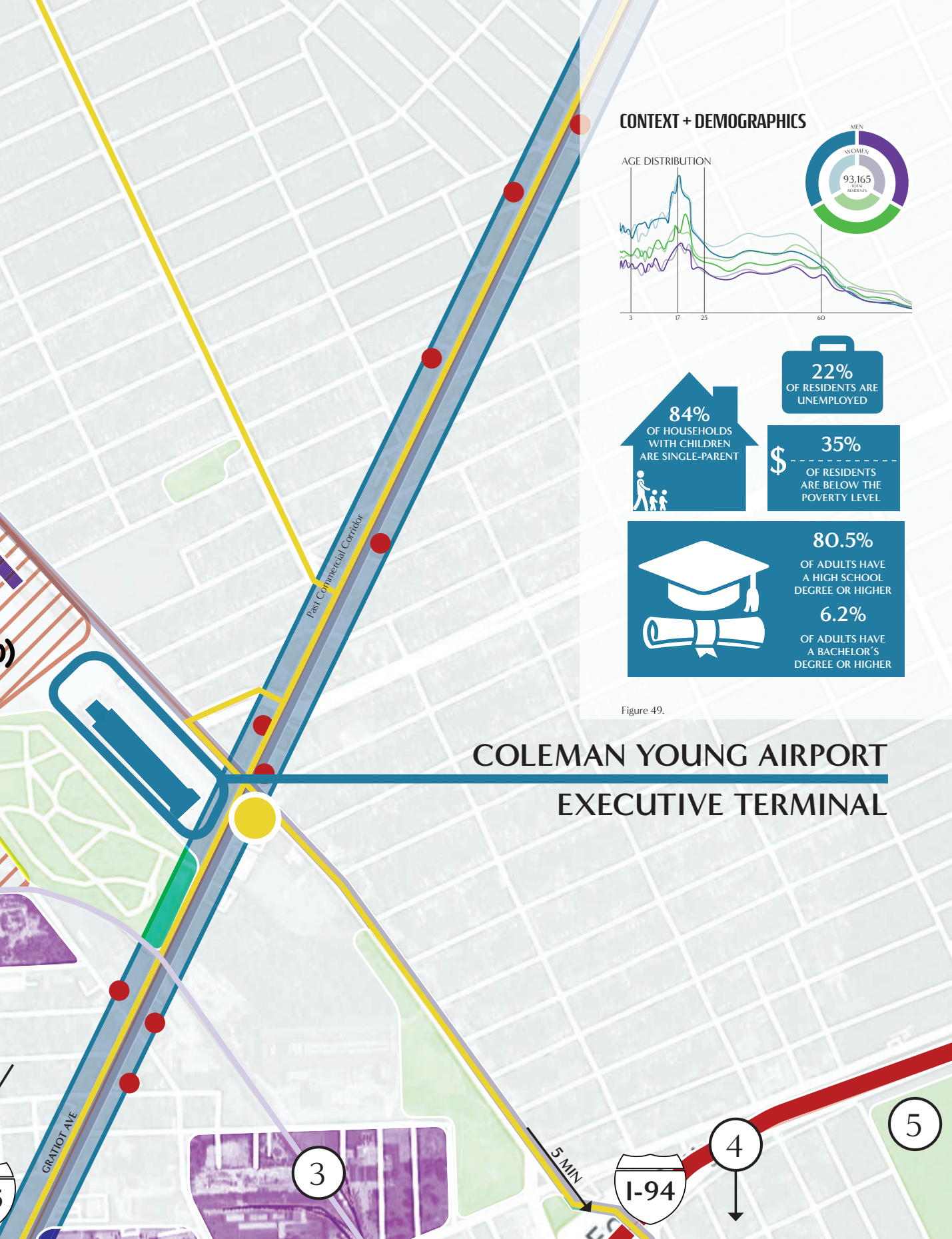


Figure 49.

COLEMAN YOUNG AIRPORT EXECUTIVE TERMINAL



COLEMAN YOUNG INTERNATIONAL AIRPORT EXECUTIVE TERMINAL

Today, the intersection of Gratiot and Conner serves as a place of opportunity, with the Detroit City Airport, now the Coleman Young International Airport, acting as the potential gathering place. At the west corner of the intersection, the airport is underutilized. Built in 1927, the Detroit City Airport served as the primary airport for Detroit for over 20 years. As other airports Willow Run and Wayne County Metro were developed, airlines began to transition outside of the city.⁵⁴ As technology advanced, the Detroit City Airport was no longer able to accommodate commercial aircrafts, servicing only corporate and private flights. While the main terminal is still being utilized, the larger Executive Terminal is utilized at approximately 50% of its potential as storage, offices, and the occasional workshop for children.⁵⁵ The Executive Terminal has the potential for so much more. With its visibility and volume, it is a prime location for food access and social gathering.

The adaptive reuse of the airport terminal would retain the character of the area while converting to a newly functional building. The building itself is gutted, but the shell and structure are well intact. The building stands at approximately 1,000 feet long and 200 feet wide, the terminal retains a great presence on the corner of Conner and Gratiot. Built during the 1920s, the building was designed in the art deco style. The extruded brick bays have concrete capstones that step back. The geometric detailing around the doors and windows is also executed in the architectural style. The steel structure is erected from curved trusses to allow for large spans with few structural bays. Large operable doors, currently used to permit entry to aircrafts, create opportunities to blend the edge defining indoor and outdoor space. Clerestories wrap the entirety of the building, allowing light

to illuminate the space within. As a highly prominent structure, maintaining the street-facing facades is important.

While the majority of the building is very uniform and rigid, the main entrance deviates from the design and holds a more refined presence. Adorned with plaques on the exterior, the interior still retains some of the wood framing. Entering a large atrium, one can see the potential and historical use of the space. The layout of the framing denotes archways along the second floor and two intact stairways remain intact.

Working with the existing conditions of the building, there are both constraints and opportunities. Through analysis of the building and the site, the Executive Terminal can be realized to its full potential.



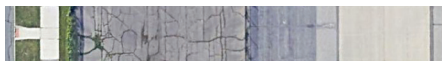
Figure 50. Images 1-5

Figure 51. Image 6

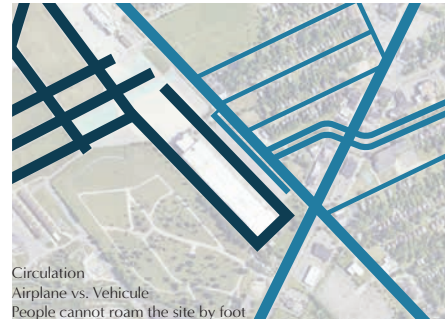
EIDETIC MAP



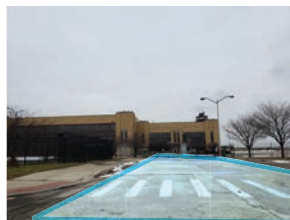
Indoor/Outdoor interaction



Gradients of Pavement
Does the paving add character to the building?



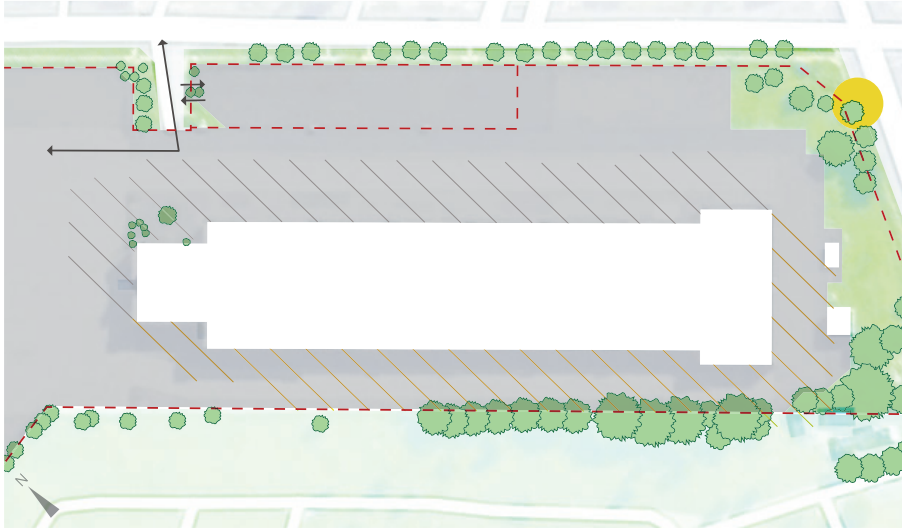
Circulation
Airplane vs. Vehicle
People cannot roam the site by foot



Access
Entire building is surrounded by fence
Limited pedestrian access



Figure 52.



Cemetery, Airport Greens and Vacant Land

| | |
|--|----------|
| | Building |
| | Pavement |
| | Grass |
| | Tree |
| | Bus Stop |
| | Vehicle |
| | Fence |
| | Runway |
| | Sun |
| | Shade |



Contamination
Brownfields vs. Industrial Land

5.3 FOOD INTEGRATION CAMPUS

Based around the context and community of Gratiot and Conner, the Food Integration Campus includes the following program:

1. A food hub that includes an aggregation center, commercial kitchen, distribution services, and a compost center that connects the urban agriculture network to local institutions and businesses.
2. A hydroponic greenhouse that supports the local agricultural production while utilizing an alternative method of food production that considers soil toxicity.
3. An education center that provides a Detroit Center for colleges with nutritional science or agriculture programs.
4. An aviation museum that maintains the history of the Executive Terminal and showcases aviation regarding the food process.

Figure 53.





TARGET USERS



Figure 54.



USAGE OF PUBLIC SPACE

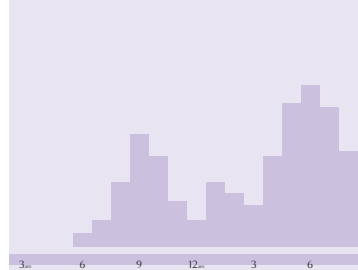


PARENTS

AGE

25-50 years

PEAK OCCUPANCY HOURS



USAGE OF PUBLIC SPACE

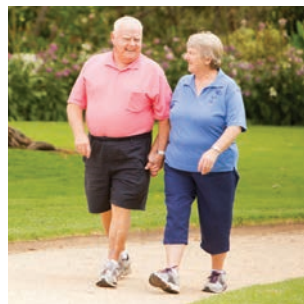
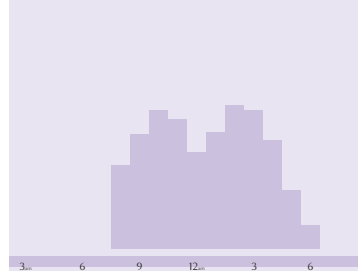


NOVICE GARDENERS

AGE

20-40 years

PEAK OCCUPANCY HOURS



USAGE OF PUBLIC SPACE

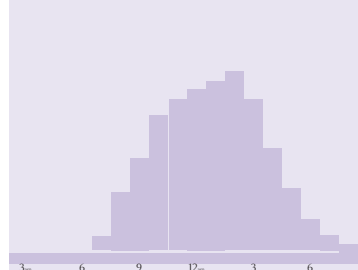


SENIORS

AGE

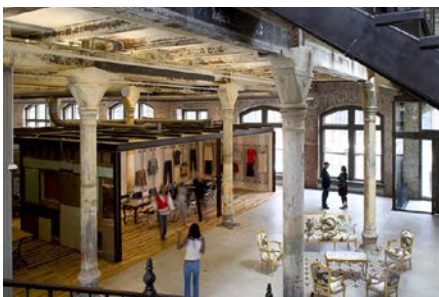
65+ years

PEAK OCCUPANCY HOURS



DESIGN PRECEDENTS

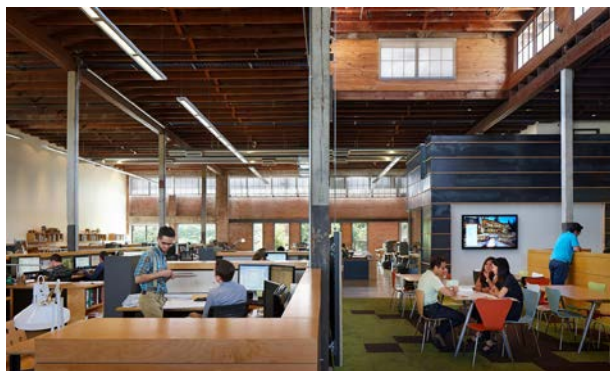
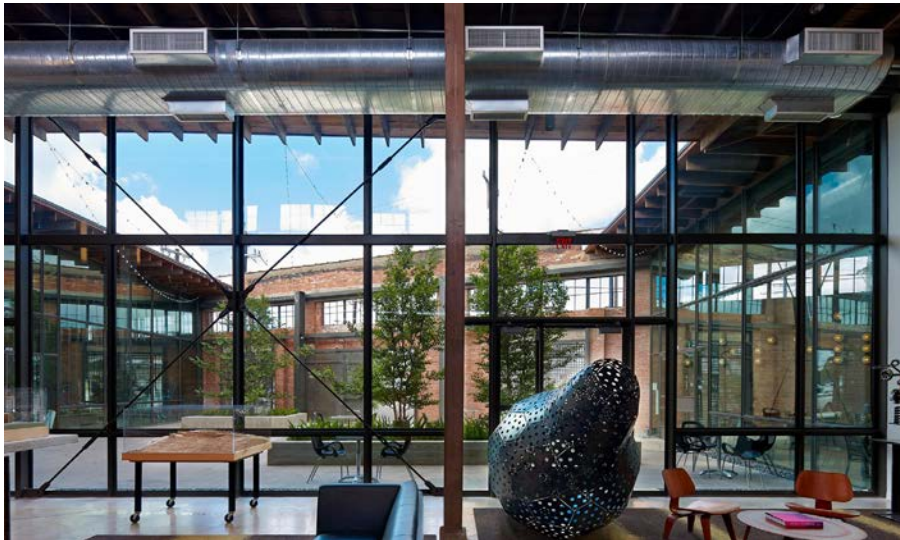
URBAN OUTFITTERS HQ



The Urban Outfitters HQ is a design precedent to address the adaptive reuse of a large vacant industrial property. The scale of the project is similar to that of the Coleman Young Executive Terminal. Techniques used to divide space within the building and landscape the site were referred to when design the Food Integration Campus.

Figure 55.

HUGHES WAREHOUSE



The Hughes Warehouse is a design precedent to address how light and courtyards could be carved into the space. As an adaptive reuse of a vacant industrial warehouse, the techniques used to retain the character of the building while implementing a new function were referred to throughout the design phase.

Figure 56.

DESIGN STRATEGY

By pinpointing certain target users and understanding how they will interact within the building and site, design considerations were made to enhance the experience.

Designing the overall form, the main technique is to reduce the volume of the building and connect people from one end to the other. By starting with the shell and dividing it into the four different sectors, large avenues are carved to create public circulation and gathering spaces. In order to bring light into the center of the massing, voids are created as skylights and courtyards based on the needs of those using the spaces. Finally, large industrial adaptive reuse precedents are referred to for designing the spaces.

When designing the site, the main priorities are providing access and visibility from the street, reducing the amount of concrete and remediating the soil, and managing stormwater.

The former terminal was set back a great distance from both Gratiot and Conner. In order to make the Food Integration Campus highly accessible, large pedestrian avenues are differentiated from the regular paving. These pathways will be activated with small scale seating and pergolas and occasionally a larger farmer's market or other community activities. With a corner market stand on intersection, a couple vendors will be able to sell on the high traffic corner, allowing for visibility to the new function of the terminal.

To address soil toxicity, specific species of remediation plants will populate the site. By absorbing hazardous materials from the soil through the roots and holding them in their bodies. Trees like poplars and willows absorb lead from the soil as they grow.⁵⁶ Flowers, such as lavender, yarrow, and goldenrod, have similar properties and can also be sold and distributed to people. Gardens can be

tended by workers and residents alike.

As the site is primarily paved, stormwater management is a large issue, especially as a flooding issue currently exists in Detroit. To combat this, much of the site will be returned to greenery, while other pavement will be changed to permeable pavers or crushed limestone depending on the function. Also, as food production and processes require large quantities of water, the implementation of rainwater collection cisterns is a necessary addition.

PARTI AXONOMETRIC

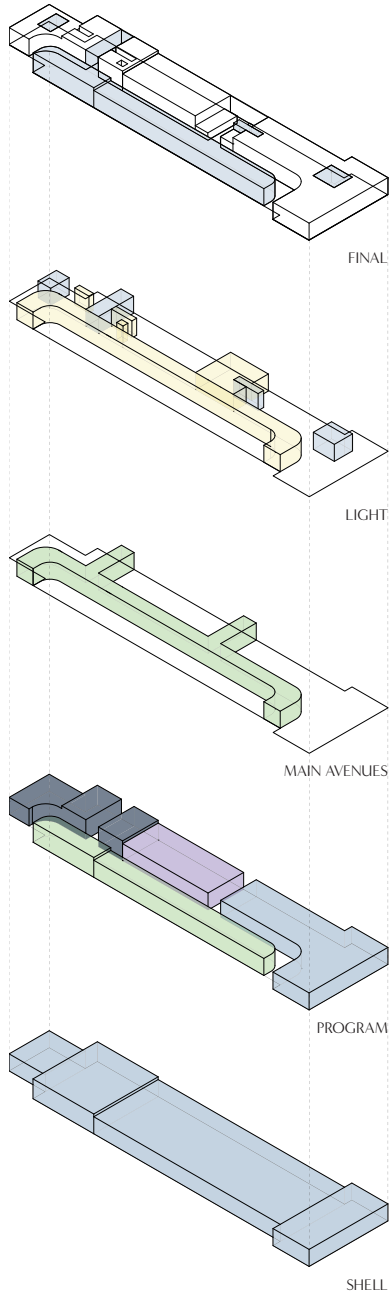


Figure 57.



FIG.
SOIL REMEDIATION

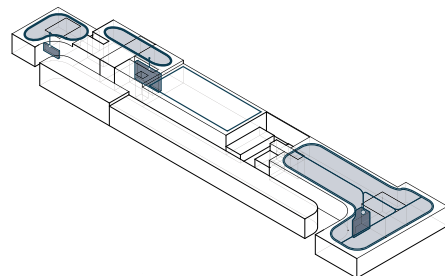
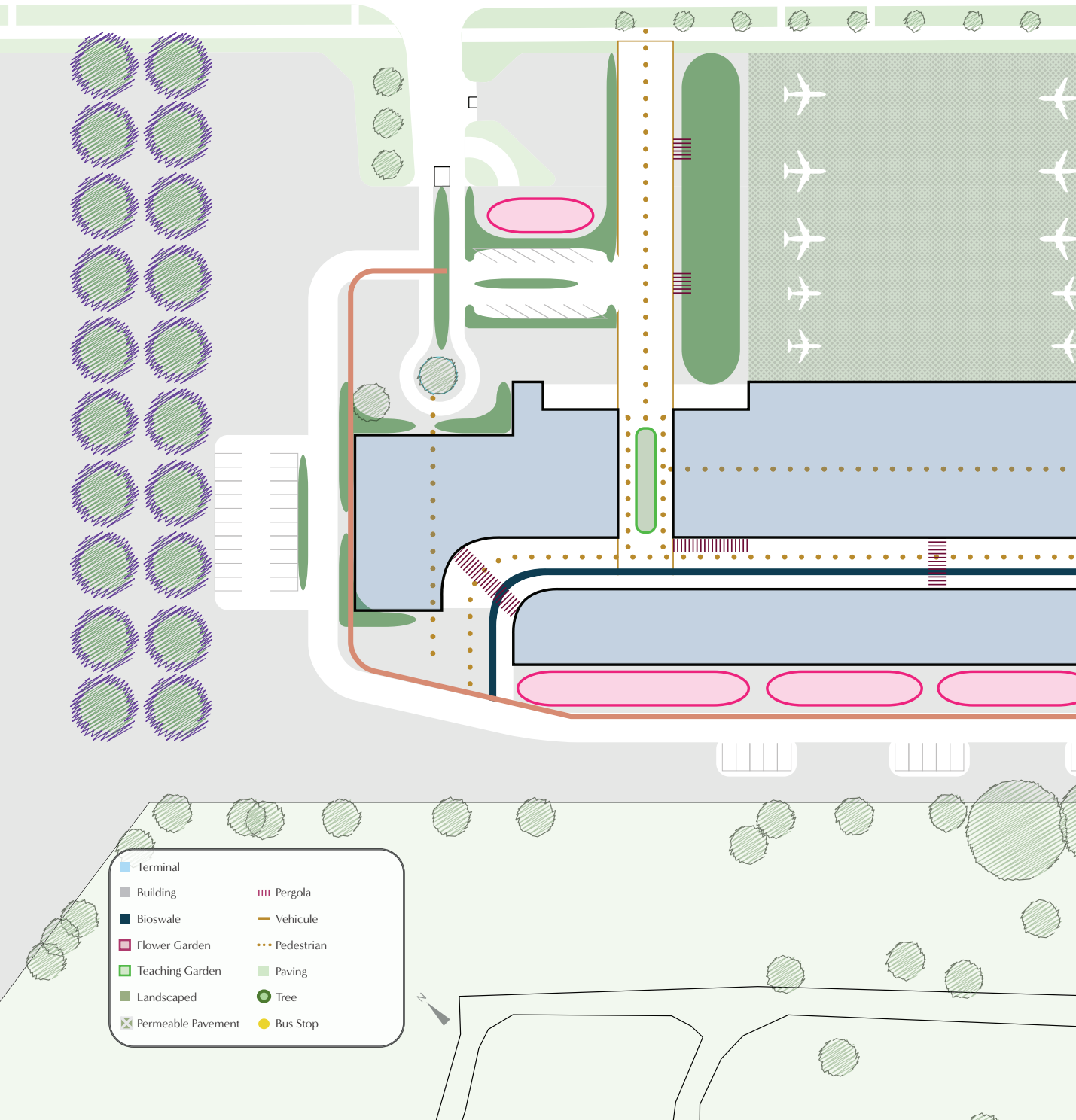


FIG.
PERMEABLE PAVEMENT

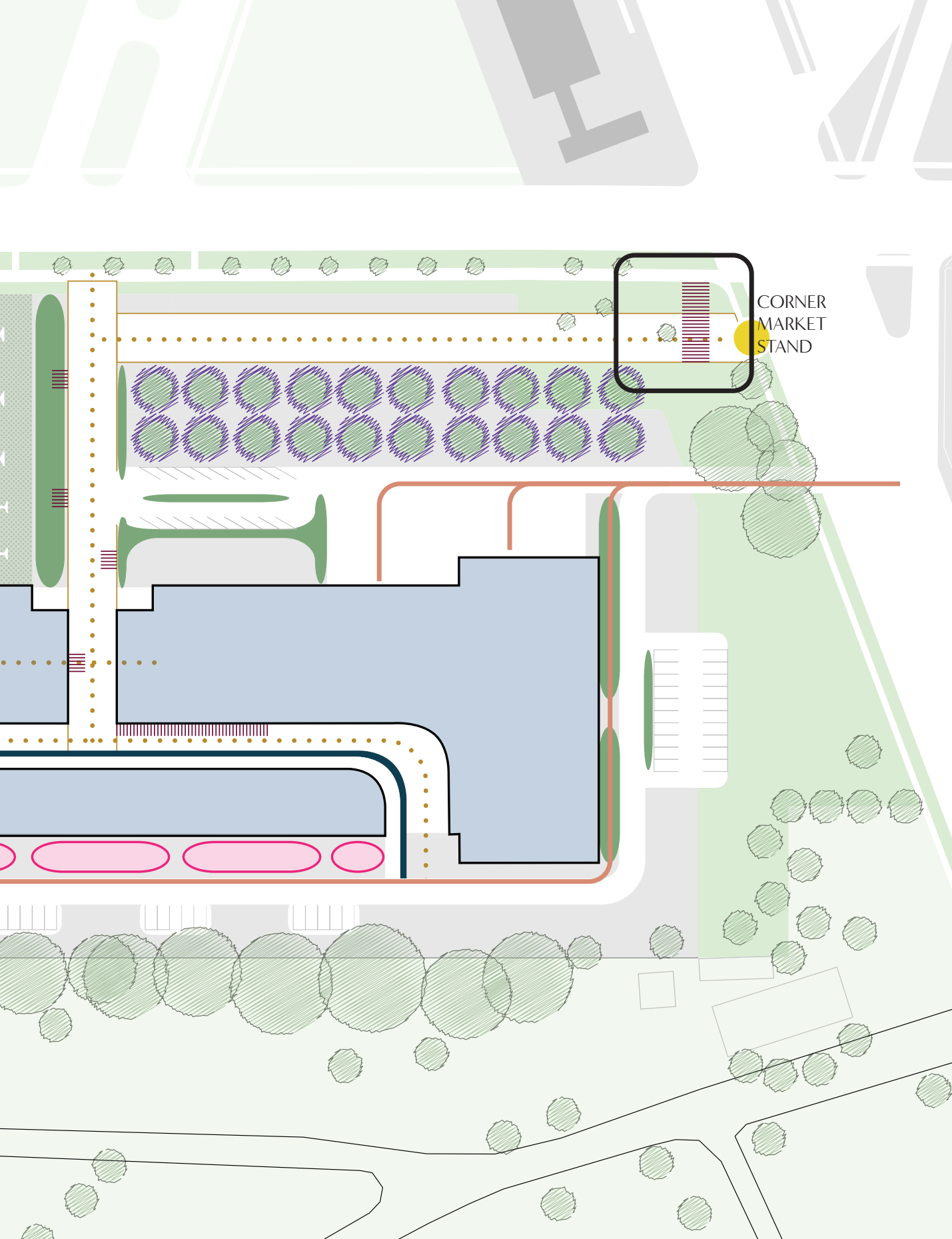
Figure 58.

SITE PLAN

Figure 59.



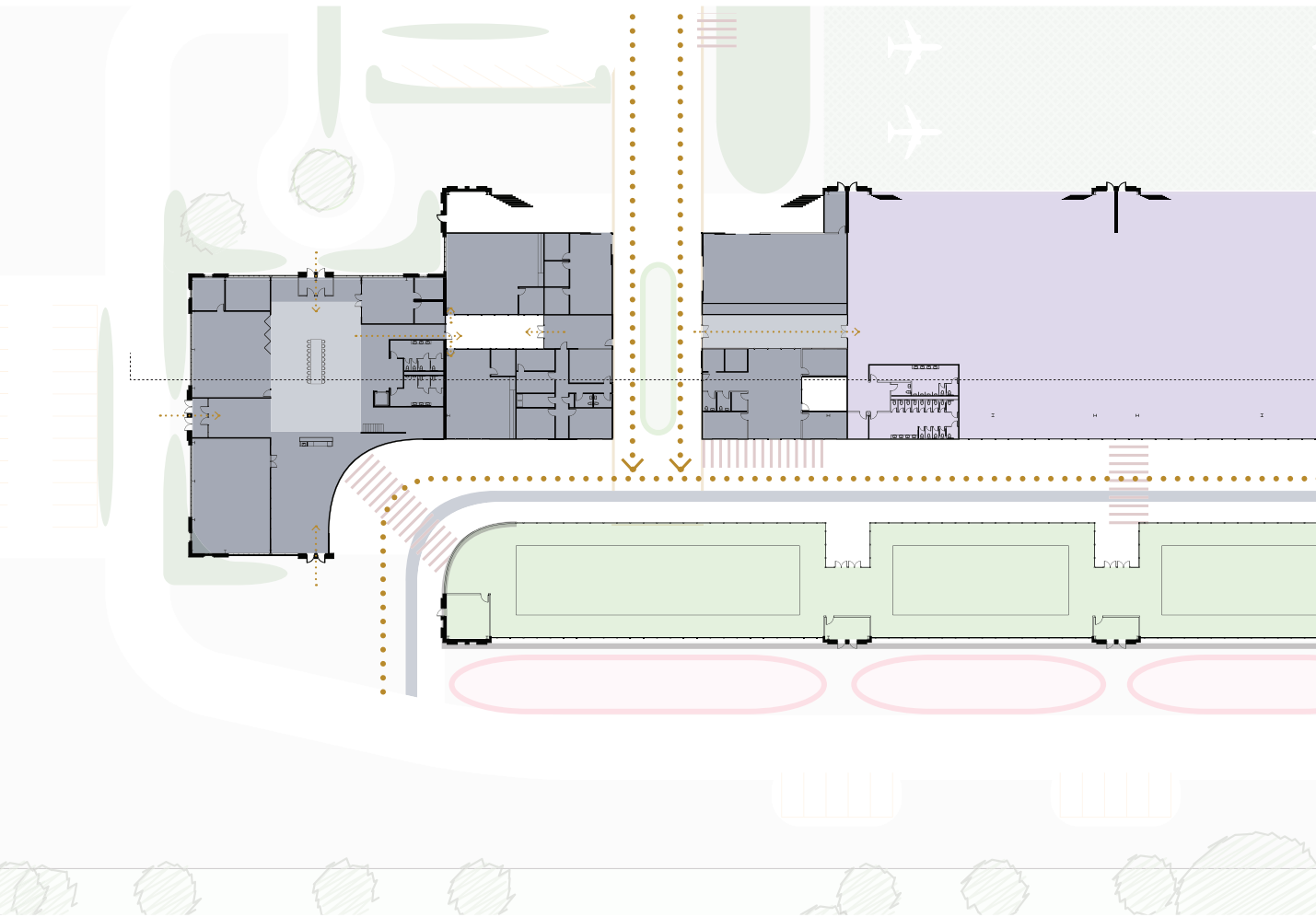
- | | | | |
|--|--------------------|--|------------|
| | Terminal | | Pergola |
| | Building | | Vehicle |
| | Bioswale | | Pedestrian |
| | Flower Garden | | Paving |
| | Teaching Garden | | Tree |
| | Landscaped | | Bus Stop |
| | Permeable Pavement | | |



CORNER
MARKET
STAND

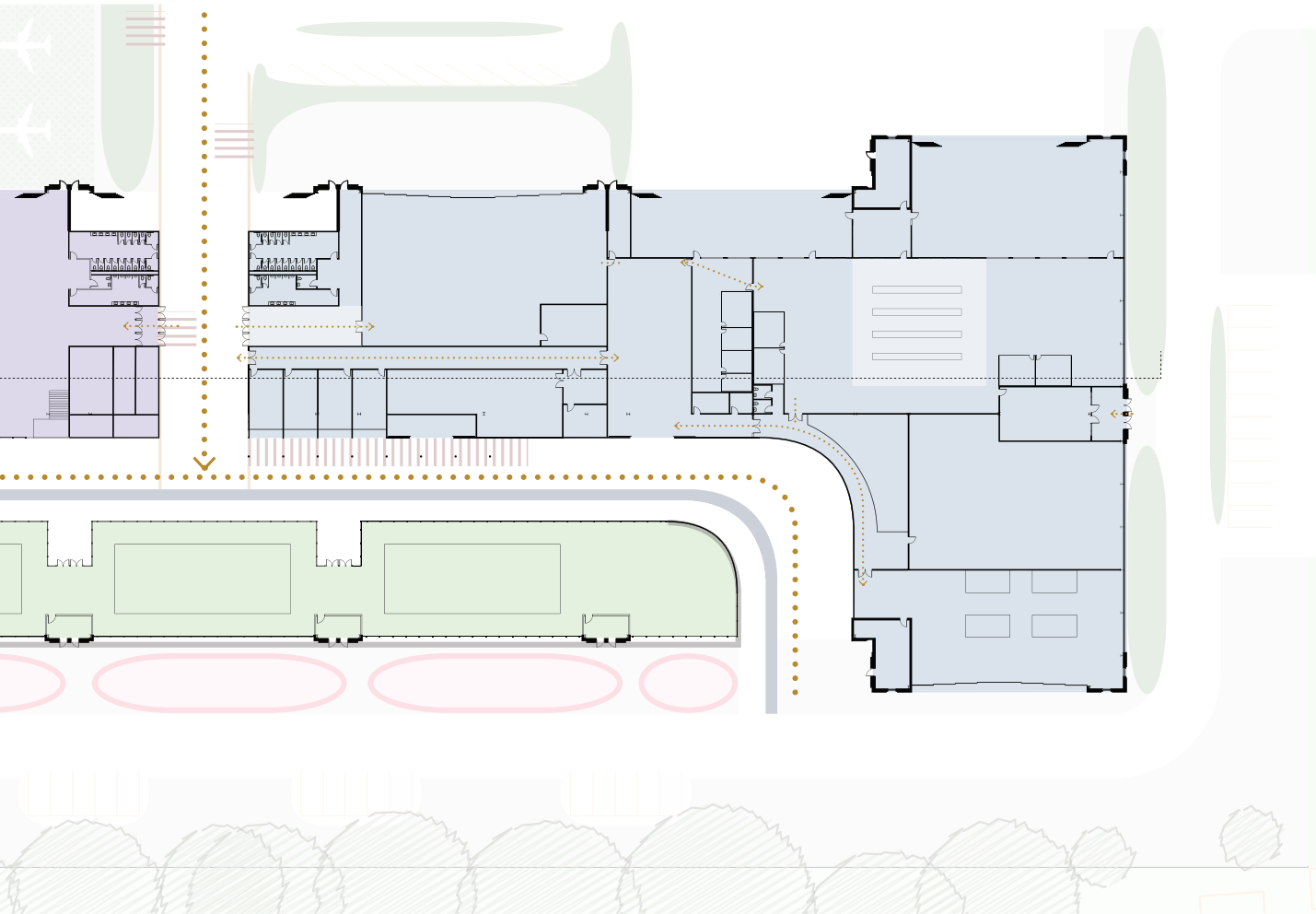
LEVEL 01 FLOOR PLAN

Figure 60.



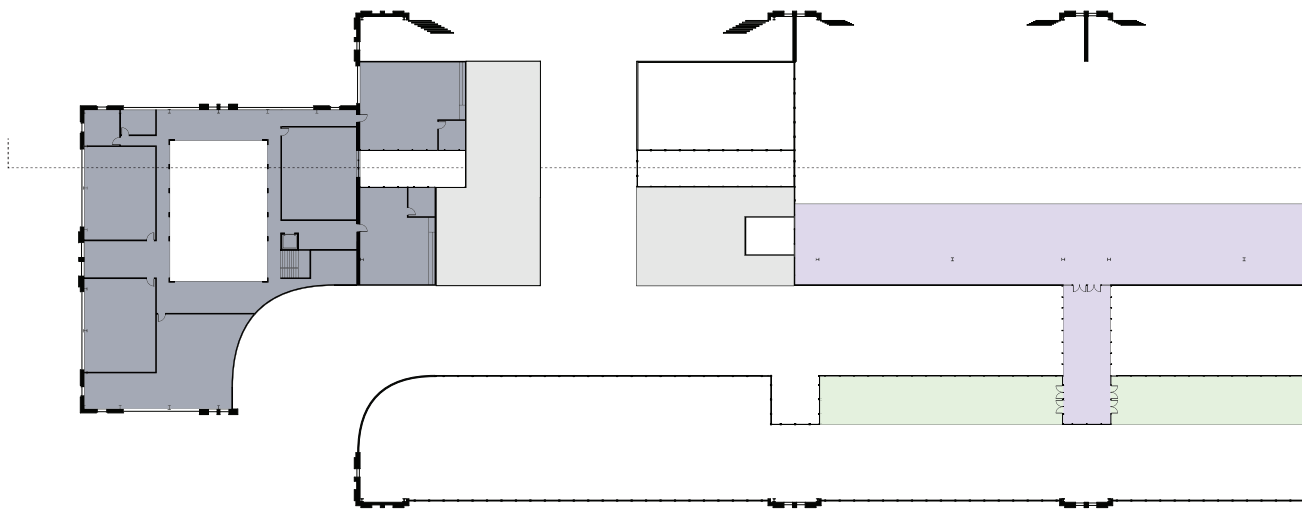
- Food Hub
- Greenhouse
- Education Center
- Museum
- Circulation





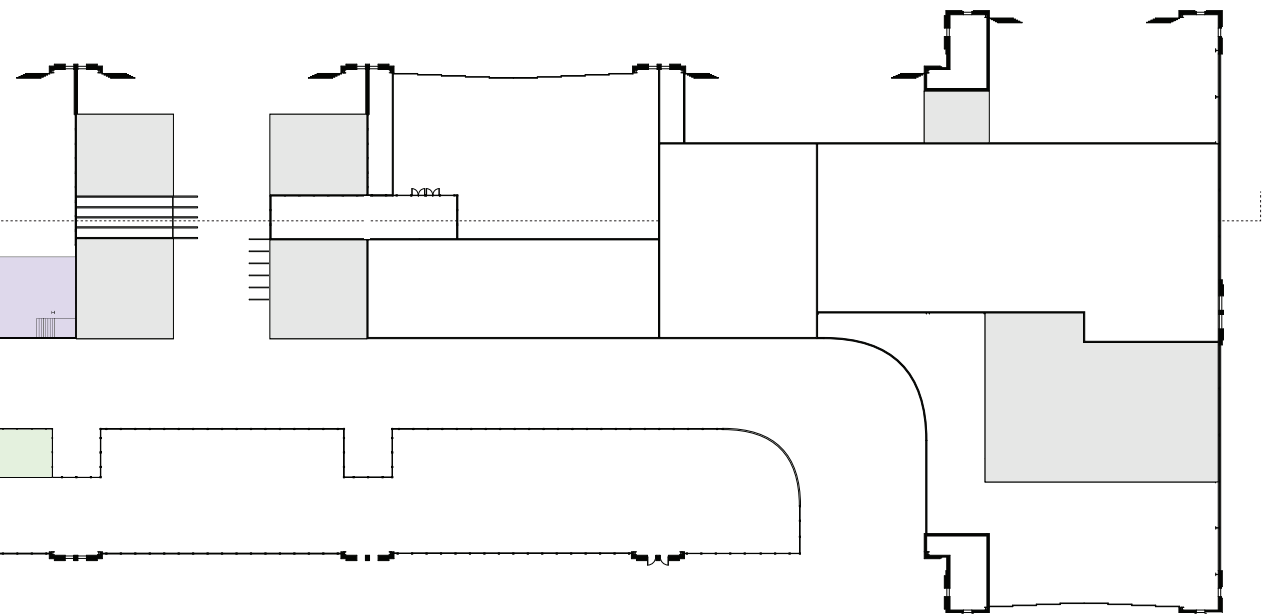
LEVEL 02 FLOOR PLAN

Figure 61.



- Food Hub
- Greenhouse
- Education Center
- Museum
- Circulation





FOOD HUB

Because of the processional operations of the food hub, the need for efficiency is very important in the design of the spaces. Featuring the aggregation center, commercial kitchen, compost center and greenhouse, the diagram shows how each area integrates with each other and to the additional areas as well. The commercial kitchen provides public amenities as well, including cooking classes, a grocery store, event space, and vendors.⁵⁷

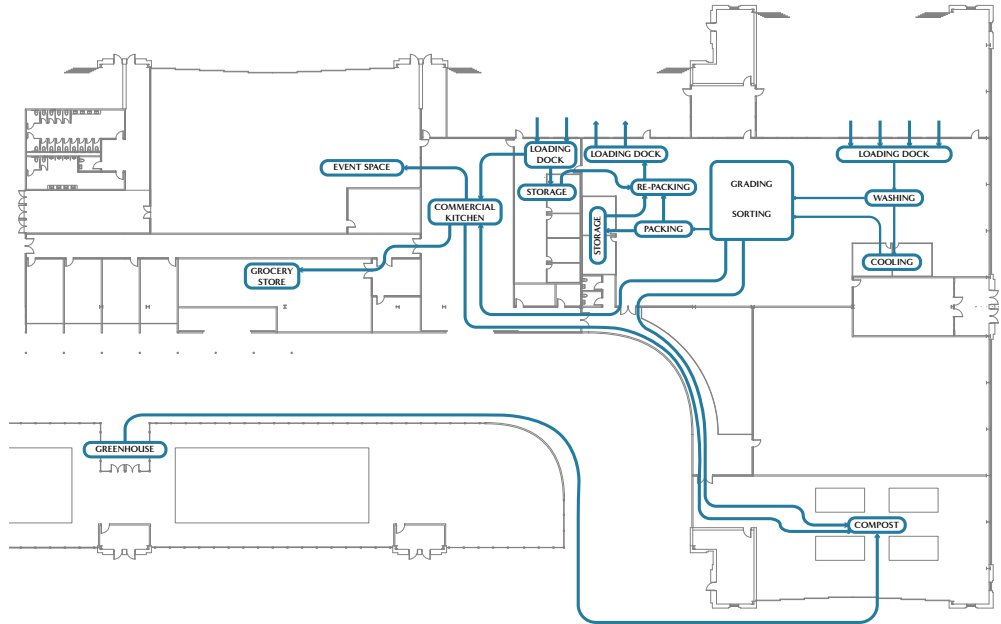


Figure 62.

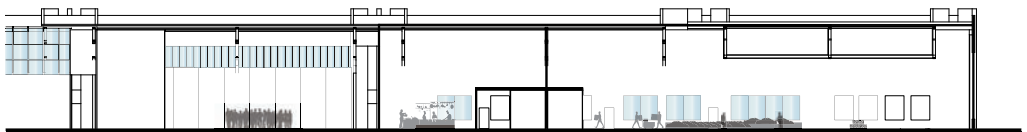
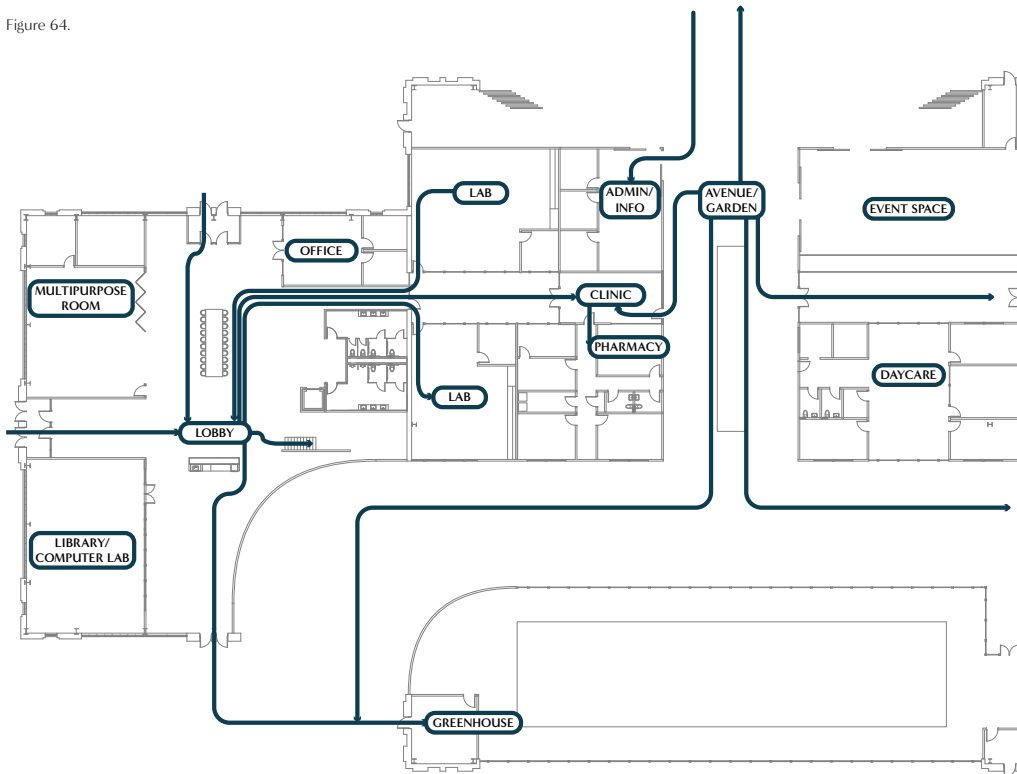


Figure 63.

EDUCATION CENTER

LEVEL 01

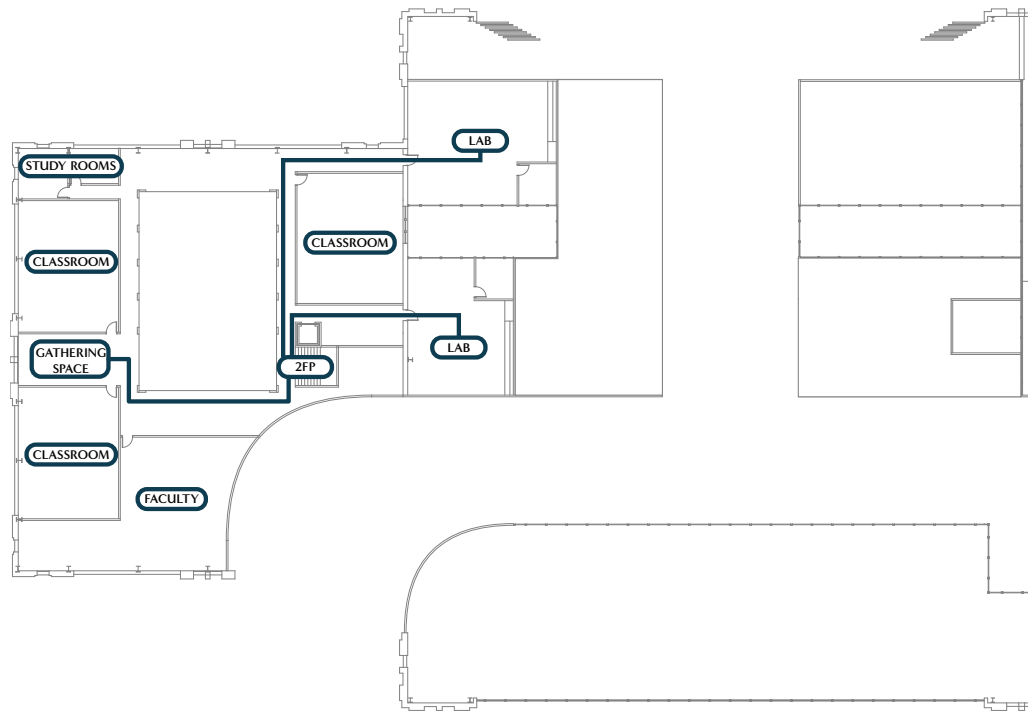
Figure 64.



Held in the former terminal's main entry to maintain the prestige of the outside ornamentation, the education center provides classrooms, laboratories, faculty and shared spaces for partnering colleges. The education center connects to the public areas of the Food Integration Campus through a student run wellness center and a raised-bed community garden. The rest of the public area houses a daycare and event space.

LEVEL 02

Figure 65.





EDUCATION CENTER

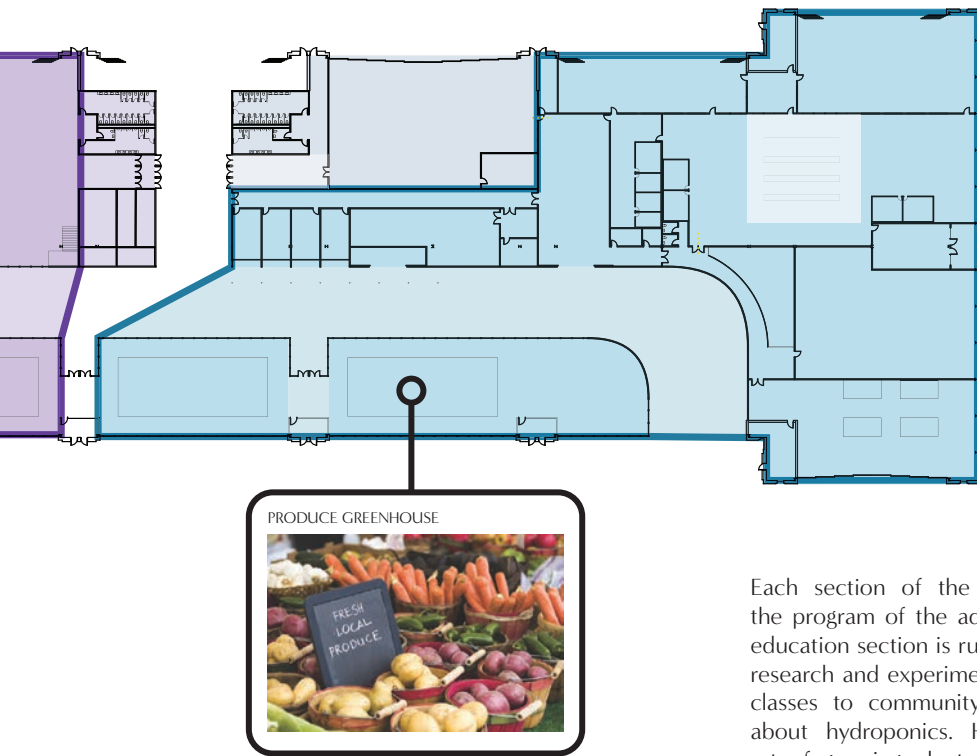
Figure 66.



GREENHOUSE



Figure 67.



Each section of the greenhouse reflects the program of the adjacent function. The education section is run by the students for research and experimentation and provides classes to community members to learn about hydroponics. Hydroponics is “the art of growing plants without soil.”⁵⁸ The middle portion aligned with the museum is the remediation section, where remediation plants are grown and distributed around the site and to other brownfields and contaminated sites in Detroit.



OUTDOOR CORRIDOR

Figure 68.

Figure.



MUSEUM

The museum keeps alive the history of the Coleman A. Young Executive Terminal. Spanning from inside to the edge of property, the museum houses the history of the terminal and also the history of aviation in respect to the food system. The are also bridges across to the greenhouse, showcasing the new program of the terminal and how it is being used to aid other industrial sites in the renewal of land. The museum shows the before and after, as well as what can be.

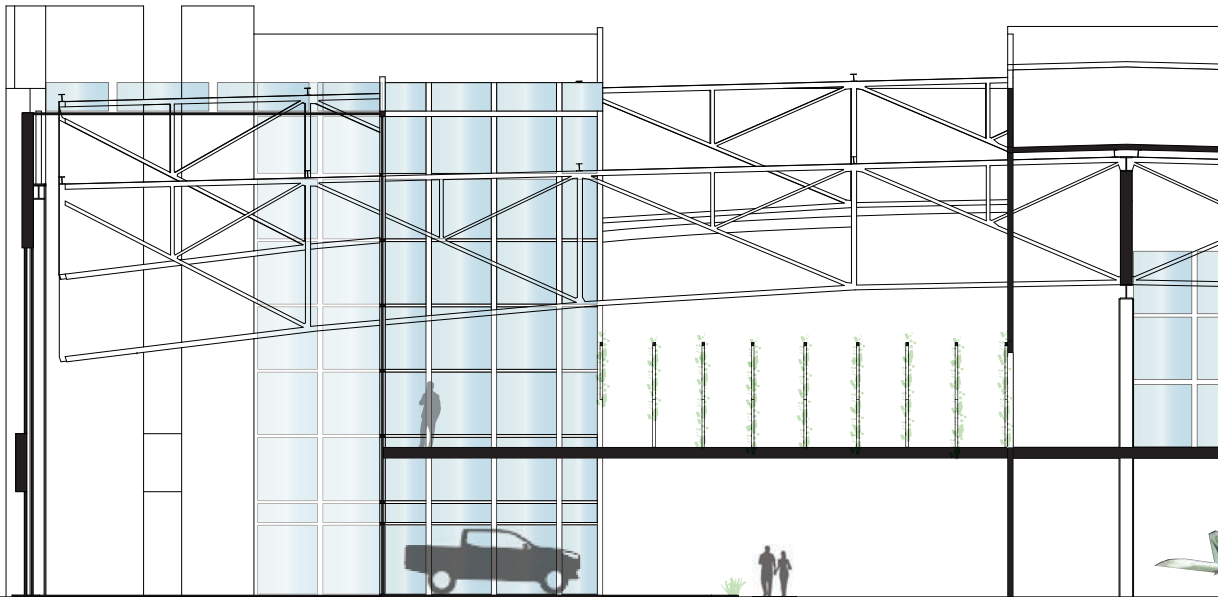
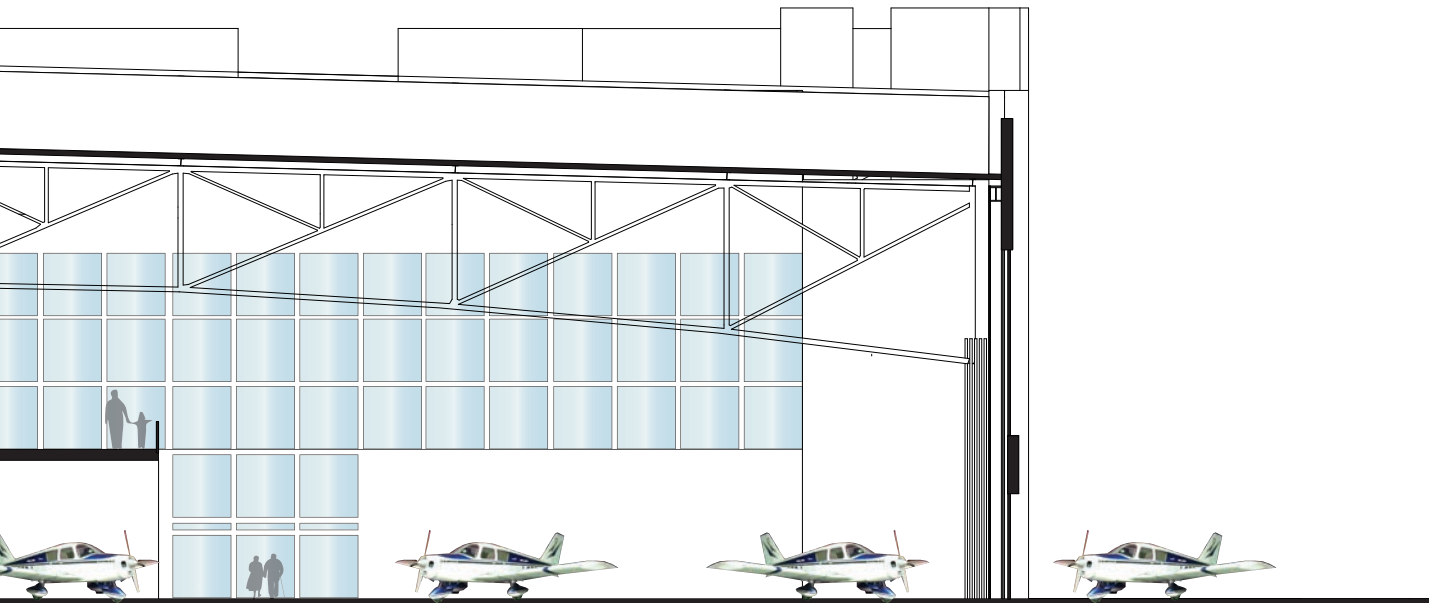


Figure 69.





MAIN ENTRY AVENUE

Figure 70.

CITY AIRPORT



5.4

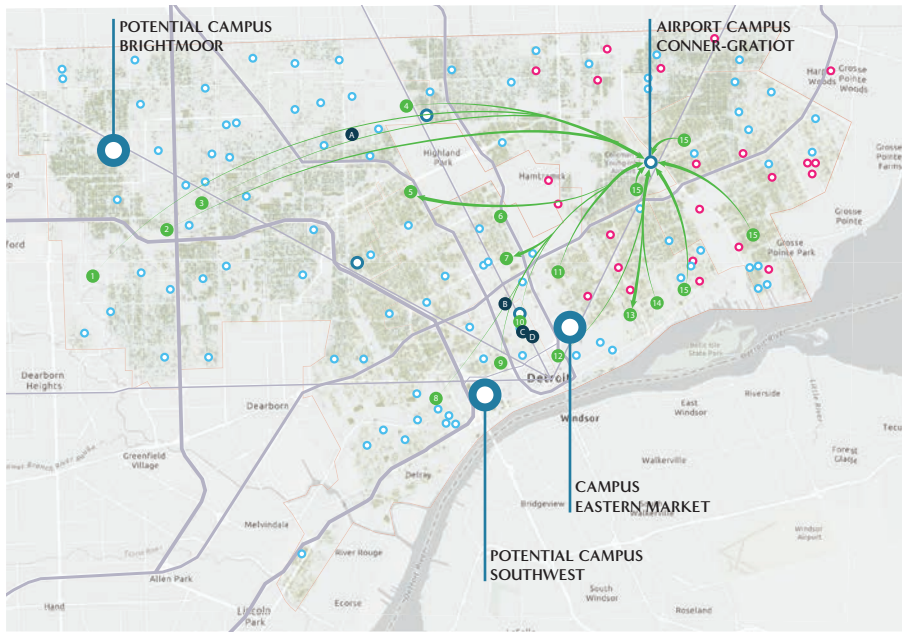
VISION

The Food Integration Campus provides more than just a point of access for its surrounding community; it can also serve as a resource across the city of Detroit. Other urban gardens, large or small, would have the opportunity to utilize the programs in place. Colleges and universities have a unique prospect for an agricultural education in an urban center, while integrating with the surrounding community. Goods produced by other organizations and within the campus can be distributed to influence other institutions, including K-12 schools and senior homes. Remediation plants grown within the greenhouse can be spread to other contaminated sites to clean the soil and beautify the city.

But this is just one single campus. With the Food Integration Campus on Gratiot and Conner and the Eastern Market, there is the potential for other locations within Detroit and further beyond the city limits. Areas of interest include Brightmoor, where a strong urban agriculture community exists, and Southwest, where a strong food culture is present.⁵⁹

Food Integration Campuses allow opportunity to spread across the residents of Detroit. Each center can connect the people of one community to another through food. By providing community members a place

of belonging and purpose and those part of the food system a place of economic opportunity, more people can gain access to healthy food and lower the rates of food insecurity while simultaneously bringing people together.



URBAN AGRICULTURE

- 1 D-Town Farm
- 2 Artesan Farms Detroit
- 3 Brewer Academy
- 4 Palmer Park Urban Educational Garden
- 5 HUDA Clinic Urban Garden
- 6 Oakland Avenue Urban Farm
- 7 The Michigan Urban Farming Initiative
- 8 Cadillac Urban Gardens on Merritt
- 9 Ronald Brown Academy
- 10 East English Village Preparatory Academy
- 11 Detroit Lions Academy
- 12 Keep Growing Detroit Farm
- 13 Earthworks Urban Farm
- 14 Fisheye Farms
- 15 Hantz Farms

COLLEGES

- A University of Detroit Mercy
- B Wayne State University
- C University of Michigan Detroit Center
- D Michigan State University Detroit Center

LEGEND

- FOOD HUB
- K-12 SCHOOL
- SENIOR HOME
- GARDEN
- COLLEGE
- VACANCY
- COLLABORATION
- BOUNDARY
- MAJOR ROAD

Figure 71.





6.0 LAST BITES

“Food is about community. It’s a social glue, and that’s never going to change.”

- Landini

6.1 CONCLUSIONS

To this day, food is still the thread that unites people of all ages, cultures and economic backgrounds even as our relationship with it becomes strained. Because of globalization, people can connect to and experience different cultures without every leaving the table. Not only is food imported from all over the world, but recipes and traditions are shared as well. Unfortunately, people can only consume the quality they can afford, and while limited time and money hinders this relationship, many are turning to quick and cheap alternatives. As a consequence of industrialization, the human factor has receded from the food system; however, people are realizing the negative effects that come with industrialized food.

People are already pursuing natural goods, and as more people realize the negative health effects that come with industrialized food, there will be an even greater push for a return to locality and traditional goods; however, there is little being done to balance the social side effects. While obtaining fresh produce is more attainable through online delivery methods, the convenience of the process leads to less interaction within the foodscape. To find a balance between the benefits of industrialization, health, and social interaction, a centralized community center must be introduced to communities.

By connecting the local farmers of Detroit to the larger food system, more residents can find food security while realizing the social traditions of food within a central gathering place. This design investigation serves as a model for designing Food Integration Campuses that address the needs of the community and overall context while also pursuing the utilization of vacant industrial land. Meant to be more than just a single intervention, this thesis provides a link in a growing network.

6.2

CLOSING THOUGHTS

Food is a need, a joy, a movement, but for me and many others, it is a journey toward a destination. The relationship that my family and I have with food is a conscious and subconscious drive. Throughout my education, many of my architecture studio projects were centered around the idea of food: a culinary school, a market with student housing, and a market within a library. It wasn't until I was deciding on this topic that I realized the implications of food and the affect it can have on people and economies.

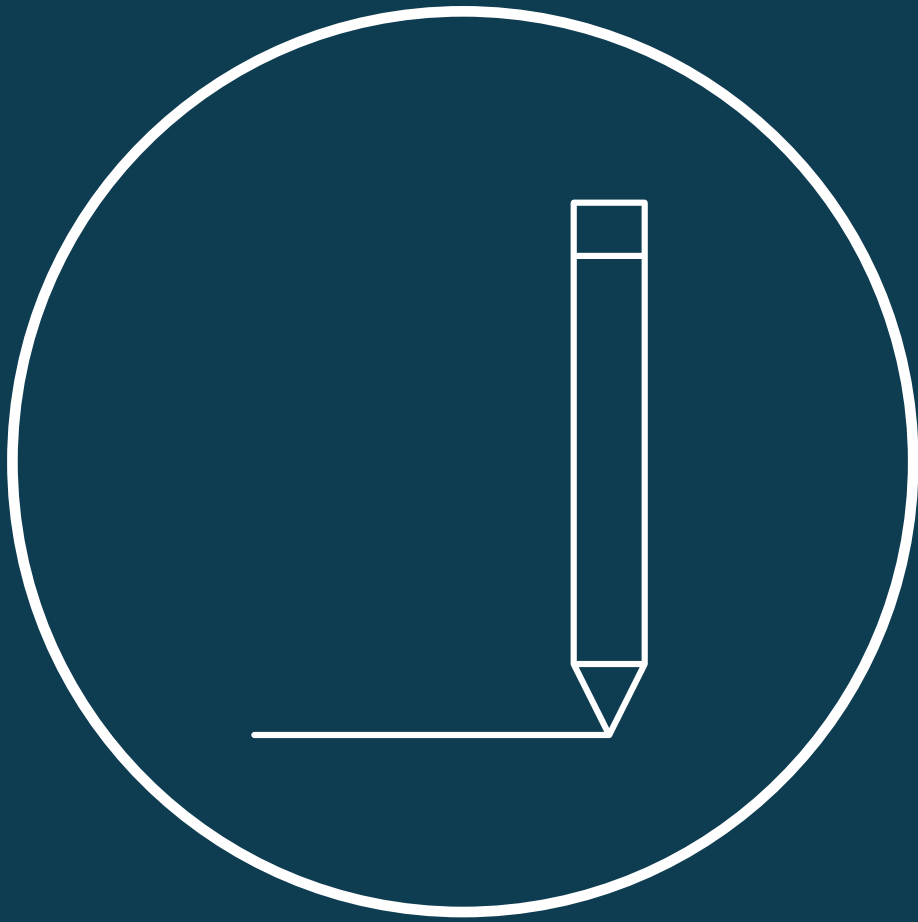
In the beginning I was interested mainly in the social interaction that takes place around food. As I dove deeper into the process of industrialization, I became more interested in how society has been affected on multiple levels. Socially, economically, and bodily, we are affected by industrialization. Over the years, I have learned to think more about what I am putting into my body, but until now, I had never understood exactly how many people are impacted.

Researching the food system has deepened my understanding of what food is, what it could be and what it should be. Through these studies, I have learned how it can affect people for better or for worse. Knowing what I do now and being in Detroit, this is relevant information that can serve to aid in

the city's revitalization.

As a designer, this thesis has taught me that architecture is more than just a reaction to the context of a site. It is how people interact with each other and within a place is that is most important. The deeper I dove into the process of industrialization and the advantages and disadvantages that surrounds it, the harder it was to keep social interaction as the central aspect. Just as food brings people together, so does architecture when designed right. Together, they can do great things.

Food has a way of connecting people, physically, socially, and culturally. This thesis is only the tip of the iceberg toward a broader initiative.





7.0 WORKS

“Food is about community. It’s a social glue, and that’s never going to change.”

- Landini

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7.3 FIGURES

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