Supermarket Departure

An Urban Community Center for Food Education

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A thesis
submitted in partial fulfillment of the
requirements for the degree of

Master of Architecture

University of Washington

2013

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Program Authorized to Offer Degree:

Architecture

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ACKNOWLEDGEMENTS

First and foremost, thanks go to my family and to my partner, for supporting me through this experience. I would like to thank Allison Eddy, Sakshi Gupta, Ryan Jorgensen, and Samantha Surath for their constant examination and critique throughout our meetings, both scheduled and spontaneous. Finally, thanks goes to Louisa Iarocci for planting the seed of this investigation and providing invaluable insight and assistance through the research it involved.

SUPERMARKET DEPARTURE

An Urban Community Center for Food Education

Figure 1. Typical American supermarket aisles at a Fred Meyer Supermarket in Portland, Oregon. 2004. (Wikimedia Commons)

A wall of ignorance intervenes between consumers and producers, and that wall fosters a certain carelessness on both sides… In a long food chain, the story and identity of the food disappear into the undifferentiated stream of commodities, so that the only information communicated between consumers and producers is a price.

– Michael Pollan, *In Defense of Food*, 2008.

INTRODUCTION

OVERFED YET UNDERNOURISHED The Inequalities of American Food

The global food system is riddled with inequality. Hunger and malnutrition affect individuals in nearly every country. In 2006, over 13% of the world population suffered from malnourishment due to food insecurity – a simple lack of food (Wright, and Middendorf 5). As in most developed countries, this figure is slightly lower in the United States, although malnutrition is still a pressing issue. Ironically, what these figures fail to capture is the malnutrition that Americans face due to overconsumption of a poor diet. The ease of access to calorie-rich foods, along with a powerful food-marketing industry, has led to a system of excess; vast quantities of food are wasted while our nation battles a staggering obesity epidemic. Americans are increasingly overfed, yet a great number of individuals, especially children, do not receive proper nutrition. Numerous studies have shown that lack of proper nutrition through the consumption of calorie-rich, nutrient-poor food products is the direct cause of countless health problems including diabetes and heart disease (Wartman).

The changes that occurred in the American food system that have fueled this epidemic have taken place in an incredibly short period of time when compared to the millennia of traditional food consumption. Only in the last century has western society moved from a system of real food to one of manufactured and processed food products. This dramatic shift in the food chain of the developed world is primarily the result of the industrialization of our food system – a system that drives a now 32 billion dollar food-marketing industry (Pollan, *In Defense of Food* 4). Over the last century, the industrialization of the American food system has resulted in a dramatic increase of the scale of food production and distribution. The buildings that were constructed to store, market, and distribute processed food products have played a key role in the development and proliferation of the industry. This increase in scale is reflected not only the constructed spaces that house the stages of our food chain, but also in the deleterious effects of the industrial food system. As participants in this chain, we propagate the significant impacts it has on the environment, the economy, and - most importantly - our own health.

COMMUNITY EDUCATION A Seed for Change

This thesis proposes an architecture for understanding food in the urban environment, manifested through a community center for food education. Real food is dependent on season, place, and time. Reuniting city residents with traditional methods of food production, processing, and distribution in an community setting serves to remind the urban population that all food has an origin. By restoring the lost intimacy between city residents and the foods they eat in the modern supermarket, consumers can begin to make educated choices that shorten the food chain and break the wall of ignorance that resides in our current food system. While a new attitude towards the architecture of urban food distribution can not solve all of the problems of the industrial food system, a visible center for urban food can serve as a seed for change - empowering individuals to make educated decisions that benefit both personal and community health.

Figure 2. Seeds growing (Wikimedia Commons)

BACKGROUND

FROM ACCESS TO EXCESS The Advent of the Supermarket

The development of the modern American grocery store is one built primarily on capitalism. As cities grew and consumer populations increased in scale, methods of food production and distribution evolved. The purpose of the industry shifted from production for use to production for the purpose of sale and profit. Prior to the twentieth century, city dwellers would buy most of their food directly from individual producers, purchasing meats from the butcher and vegetables from farmers at the public market (Mayo, 1). In the early 1900s, grocery stores were more utilitarian in nature, a storehouse of dry goods and non-perishables staffed by one or two local residents. Patrons arrived at the store with a list of needed item that the grocer would assemble by personally sorting through their on site stock. The majority of the store interior was dedicated to storage, with floor to ceiling shelves of products lining the walls, accessible only to the staff. Only a small area near the entry was set aside for patrons to sit or stand while waiting for their package of goods. Shopping at the grocery store was an entirely pre-planned endeavor, to the extent that many patrons even sent in their orders to minimize the time spent waiting for the goods to be collected (Tolbert, 179).

The opening of the first Piggly Wiggly store in Memphis, Tennessee, in 1916 signaled a change that would come to define American grocery stores as they are known today. Clarence Saunders, the founder of the Piggly Wiggly chain, is widely credited with inventing the self-service grocery store. In his store, the balance between the layout of storage and sales, and the roles of clerk and customer were completely reversed. Patrons were able to access the majority of the floor plan, while employees were more confined to their role as cashiers, working a small space behind the cash register. Saunders developed a clearly defined circulation pattern for customers, with highly organized shelving lining either side of the aisles. With this newly defined user experience, shoppers would enter an orderly maze of goods, emerging on the other side with baskets full of products not on their original shopping lists. By allowing patrons to physically

enter the storage space, and thereby view every item in the store, Saunders introduced impulse shopping to the American food system (McNamee).

Within just a few years, the Piggly Wiggly model became astoundingly successful. By introducing customers to the power of choice, Saunders was able to sell greater quantities of brand name goods, at a higher price than unbranded versions. As patrons became empowered, producers began to focus on advertising, and product branding became an essential part of the grocery system. This phenomenon quickly made its way from the small scale of individual products to the larger scale of the store premises in their design and planning. The Piggly Wiggly became a chain of stores, many individually franchised by private owners. As a condition of carrying the store name, these owners were required to follow prescribed store layouts, use specific fixtures, and adopt the company's branding strategies in signage and displays (Tolbert, 185). Other grocers were quick to utilize the new store method. Over the following decades, traditional small grocers were all but eradicated in major cities, with numerous self-service chains opening in central urban locations across the nation.

Figure 3. Baier Grocery in Juanita, Washington. 1938 (UW Digital Collections)

Figure 4. The first Piggly Wiggly self-service grocery store in Memphis, Tennessee. 1918 (University of North Carolina History Department)

As early as the late 1920s, the chain grocery store was commonplace in the urban United States. As chain stores grew in scale, acquiring independent grocers, and other smaller chains, the urban grocery store system shifted from a collection of small business to a few major corporations. In an effort to hold onto their dwindling share of the market, many of the remaining small grocery stores began to sell fresh items like produce and meats. In the 1930s the major chains caught on to the idea of diversifying their range of products, consolidating their smaller stores into larger "super" markets that sold a wide variety of food and household products. During the late 1930s, the number of physical grocery stores in the country actually declined, but overall grocery sales went up (Gwynn). These larger self-service stores tended to cater to the automobile, with a new focus on accessibility, efficiency, and the volume of goods being sold. Sylvan Goldman invented the shopping cart during this time, offering consumers a new way to easily transport even more goods for purchase, echoing the shift in architectural scale (Grandclement, 235).

By the 1950s most urban grocery stores had become supermarkets – self-service stores with a wide range of fresh and processed food products, as well as basic household and kitchen items. While supplying the population to support the new scale, the urban locations often lacked the space to accommodate the buildings and associated parking lots. With the increasing migration of American society from urban to suburban living, the supermarket followed suit, moving into the periphery. With fewer constraints on their size, these stores soon became ostentatious neighborhood landmarks. The opening of a new suburban grocery store was promoted as the occasion of a great celebration, that residents viewed with pride (Bendick, 2) (Figure 5). While retailers still focused on efficiently delivering large quantities of brand name products to consumers, a new priority was emerged – attracting customers through the user experience. Serving a now more affluent suburban clientele meant stores could spend more time and money on creating a distinctive brand experience, focusing on the identity of the store as much as the different products within it. Chain stores made an effort to develop distinctive exterior architectural forms, often focusing on signage and entry elements. Others focused on interior furnishings, with signature displays and checkout areas. These details sought to differentiate stores to consumers, but behind Safeway's large glass arch, or A&P's "colonial" style gables, the same big box envelope and standardized layout prevailed. Barbara Kahn and Leigh McAlister observe: "In the years following World War II, packaged goods manufacturers developed truly innovative products, sold them to consumers through mass media, and delivered them to consumers through a fragmented and essentially undifferentiated collections of retail outlets." (215) Supermarket stores were typically large

Figure 5. A spread from a children's book about supermarkets, published in 1954. (Bendick)

warehouses, with embellished with standardized fixtures and detailing intended to create a distinctive image in order to entice customers. But with a downturn in the economy and the consumer's continual search for a bargain these architectural embellishments came to be seen as a costly extravagance rather than an attraction. The advent of the "discount store," brought about an even more simple basic box stripped down to the bare essential of signage and furnishings. These stores catered to clients who associated cost savings in food buying with a no-frills shopping experience.

Again, the difference between the architecture of these stores was purely superficial. The public perception of individualization in building facades and interior decoration masked the fact that overall store architecture, planning, and layout were nearly identical. The public areas of the typical supermarket were large, brightly lit, open floor spaces lined with a rectilinear maze of shelves filled with an abundance of goods. Back of house areas contained receiving, storage, food preparation, waste disposal, and store management, all hidden from public view. For the typical supermarket, the border between served and service spaces was defined by a barrier of opaque walls.

Just as the planning of food stores had become nearly indistinguishable, the products on the shelves had become identical. By the end of World War II, the American food system had become one driven by mass production and consumption. Government subsidies

enacted during the war resulted in impossibly inexpensive meats, dairy, and grains (Pollan, “Power Steer” 50). These basic foods, as well as manufactured products made from the same ingredients, became everyday staples. While the chain, brand, or packaging may have differed slightly in appearance, the store and the product were the same; food, as well as the spaces of distribution, were becoming homogenized. In the following decades, the concept of false variety continued to prevail. With the globalization of food production, produce lost its connection to its origins. Fruits and vegetables previously seen only locally and seasonally became available year round. The character of the products inside the store increasingly came to reflect the image projected by the façade. Although individual chains sought to brand themselves as unique, the truth was that the American supermarket had become completely homogenized in its products and its places.

Invented Individuality The Modern Supermarket

The modern grocery store is a building type that is familiar to any shopper in the United States. Whether it is a discount store or a high end supermarket, the building typology remains relatively constant in its function and form. Although ranging in size, the stores are very similar in layout and construction. The basic building envelope is typically designed for quick, inexpensive construction from prefabricated structural systems. With discount stores, signage is applied and the building is complete. These warehouse retailers, like Wal-Mart, continue the no-frills aesthetic developed as an appeal to bargain-shoppers. For other, higher-end supermarkets, additional expense is put into the selection of internal fixtures and displays, and exterior ornament. While the treatment of the façade and interior may differ, the layout

Figure 6. Three supermarkets with varying exterior facades. (vintageseattle.org; Joe Epsin; flickr.com)

of these stores is remarkably similar – just like the products they sell. While store planning is dictated by service and support to some degree, it is largely driven by research into consumer shopping habits in an effort to maximize sales (Hageman). Stores place bakery and produce sections close to the entry, in the aim of enticing consumers with fresh smells and brightly lit displays of fresh fruits and vegetables, stimulating hunger and desire that results in impulse purchases. Other essential departments such as meats and dairy are purposefully placed in the far corners of the store. In order to reach these frequently accessed sections, customers are forced to traverse the middle of the store, where branded, packaged, dry goods are displayed (Figure 7).

The layout of supermarkets is an extensively researched science in marketing. The current standard is extremely successful at achieving its sole purpose: to keep customers in the store longer, exposing them to more items to eventually checkout with a larger bill. According to the a survey conducted in the *Chicago Tribune*, about 60% of the items in a current consumer's grocery bags are impulse purchases (Hageman). This system, although highly profitable for supermarket owners, is highly inefficient, leading to major losses of food. In 2010 Americans produced over 34 million tons of food waste, making up the largest percentage of material going into municipal landfills (US EPA). Supermarkets keep their shelves well stocked with appealing displays, as consumers relish in the illusion of choice. This abundance is transferred directly to the home. A fully stocked refrigerator and a plentiful pantry maintain the illusion for the consumer that they will not go hungry. Unfortunately, a large majority of this food goes uneaten, expiring before it can be consumed.

The image of abundance presented by the American supermarket type is at once comforting and alarming. Beyond its utilitarian function of storage and display of products for sale, the supermarket serves a larger role as the most visible symbol of urban food. The architecture of this building type needs to be reconsidered – both in its physical form and its function. Some American cities, Seattle included, have seen a return to vernacular food systems, with farmers markets and local purveyors offering an increasingly popular alternative to the supermarket. In response to this

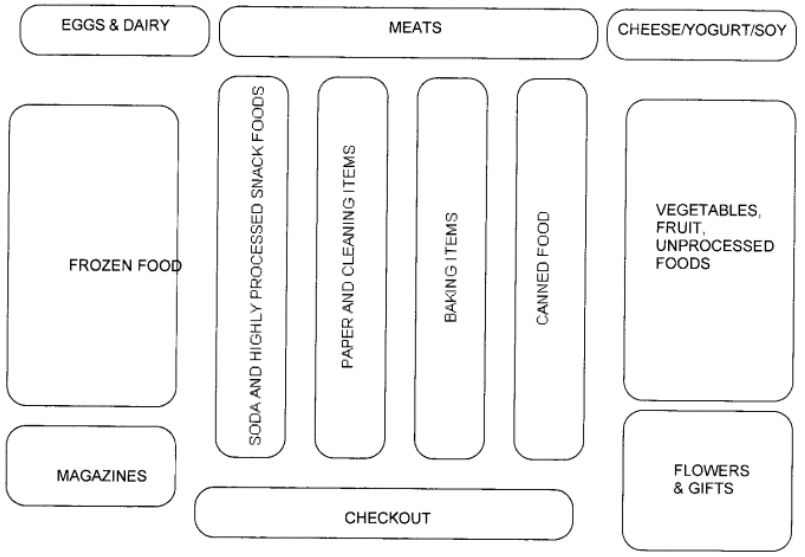


Figure 7. A typical supermarket organization plan.

trend, some stores have merely adopted the market aesthetic, but retain their function as a traditional supermarket.

In its evolution from the small grocery store, the supermarket has retained its function as a utilitarian tool for the storage and delivery of food. In the century since its inception, it has also become the most pervasive vehicle for the dissemination of homogenized food-like products created at an industrial, global scale. The poor nutrition in products offered by the modern supermarket and the waste produced by the current system are issues that have arisen in hand with the explosive growth of the building type – in terms of proliferation and of actual building scale. The built environment of the food industry has become increasingly segregated and opaque. Less than 100 years ago consumers had direct contact with farmers and their food. Today, they have little knowledge of who grows their food, how it was processed, or where it comes from - other than knowing its appearance on the shelves of the neighborhood supermarket. The architecture of the supermarket has helped to fuel this lack of connection and visibility in the modern American food system (Figure 8). This thesis responds to the dramatic increase in the scale of food production and distribution that resulted in the evolution from market to supermarket. It proposes a new center for urban food that seeks to reunite food production and distribution, to bring an understanding of food and its origins back into the hands of the urban consumer.

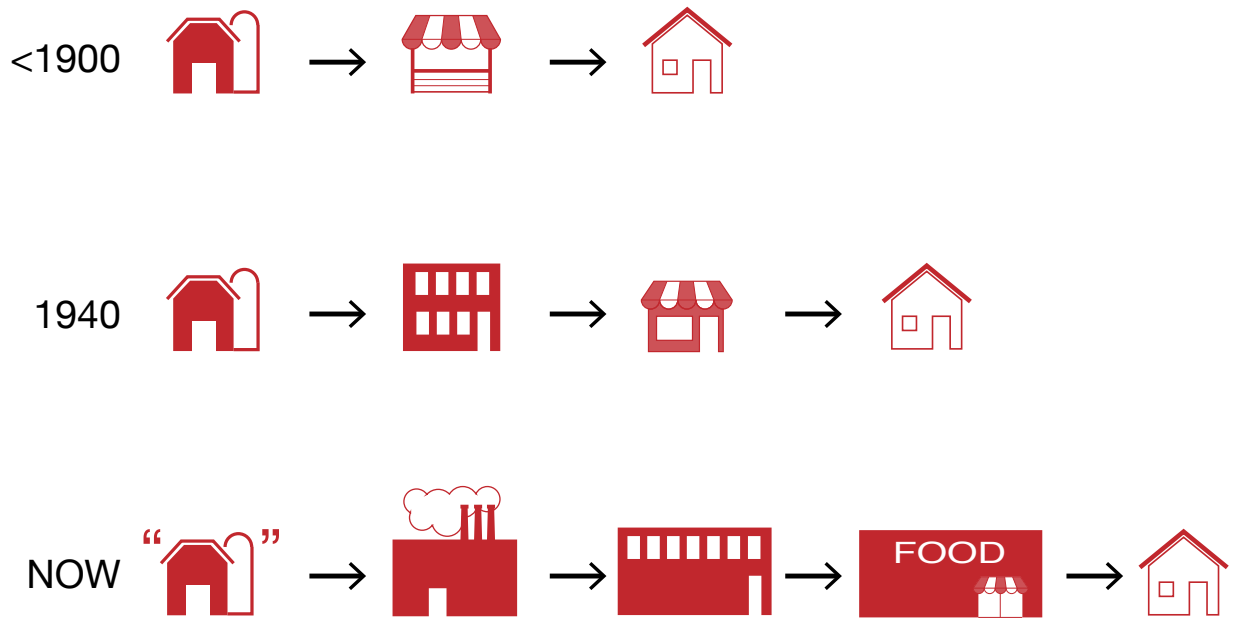


Figure 8. The evolution of the architectural spaces of the American food system. (Author)

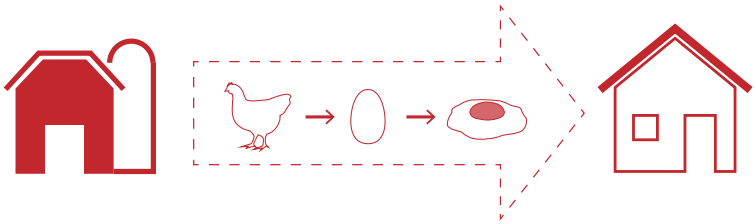


Figure 9. Creating a transparent food system, from production to consumption. (Author)

Figure 10. Uniting the disparate aspects of the modern food system into one cohesive building. (Author)

FROM COMMODITY TO COMMUNITY Bringing food back to the people

Our food begins with nature. It is driven by and dependent on cycles – of plants, animals, and most importantly, seasons. That items readily available in today's supermarket were once dependent on local environment is a concept lost on most consumers. For a market to truly communicate the phenomenon of seasonality that is so crucial to the local food movement, it must convey the dynamic nature of food production in its native environment. The market will reflect the periods of planting, growing, harvest, and storage with a return to vernacular food principles.

Most importantly, the building will emphasize transparency. Walls between program elements will dissolve as spaces for cultivation, dissemination, and the community overlap and intertwine. The elements of food production, distribution, sales, and consumption will all be visible and open to the community. Visitors will be encouraged to take part in the understanding of every portion of their food chain – from seed to table – and to share it with their friends, family, and neighbors.

The program will be centered around spaces supporting the sale of local goods and numerous aspects of food education. The physical architecture of the current American food system is rooted in a separation of steps, created for the sake of efficiency. The scale of supermarket growth is the direct cause of the advent of production and distribution facilities. In the 1900s, farmers sold directly to consumers through public markets. Through the rise of the supermarket, the steps of growing, processing, storage, and dissemination have separated into distinct physical facilities – each creating another opaque barrier on the path between producer and consumer.

With a greater understanding of the immense scale of the industrialized food system, including the physical separation of spaces dedicated to cultivating, processing and distributing food, people can begin to understand the importance of breaking away from corporate, mass-produced food products, and focus on the benefits of supporting a sustainable food system. The building program will help users to understand each of these benefits, including human health, economics, and biodiversity. With a reduction in the scale of the complex, and a return to regional production, educated consumers can begin to break down the chain of buildings that veil the hidden flaws in our current food system, and return to relationships based on transparency.

SHED Highlighting Local Producers

Northern California is home to many proponents of the SLOW foods movement. The affluence afforded to Sonoma County by numerous vineyards and wineries has led to an oasis of boutique restaurants and stores in the small city of Healdsburg, California. Here, in early 2013, Jensen Architects completed a project known simply as “SHED”. It is equal parts restaurant, market, and general store. Organic and natural dry goods from local producers are sold alongside produce from nearby farms. The restaurant and café use only seasonal products foraged from these same producers. The local community and wine-tourists who frequent the building are shown a clear picture of where each ingredient originated, and the steps it took to reach their plate or shopping bag. Overall, SHED functions as a diagram of the recently bygone food system.

The building itself is a nod to modern American agriculture; the structure chosen by the architect is one frequently used in industrial farming, commonly known as a butler building. The simple structure allowed for construction efficiency and reduced costs. The entire building was given an elevated-industrial look, with a mix of prefabricated insulated metal panels and custom curtain wall glazing. This structural approach creates a casual elegance; column-free spaces create an open and transparent environment, allowing programs to flow into one another and overlap (Hanley).

SHED has been successful in demonstrating the merits of a transparent, sustainable food system to its target audience. Unfortunately, many members of the affluent clientele it attracts are already privy to this information. Because of the high-end, boutique nature of the building and its site, the program is unavailable for community members who would benefit most from a deeper food education.

Figure 11. SHED dining/cafe area. (Architectural Record)

Figure 12. SHED market area. (Architectural Record)

Figure 13. SHED exterior, with Butler Building structural framework. (Architectural Record)

MELROSE MARKET Highlighting Local Producers

Seattle's Melrose Market, on the western border between the Capitol Hill and downtown neighborhoods, serves as an example of a permanent local food market within the urban core. When developers Liz Dunn and Scott Shapiro purchased the two properties occupying the triangular block, they envisioned a unique space. Rather than maintaining the 6,500 square food space as two volumes, Dunn and Shapiro adaptively reused the existing auto garages, creating a large hall, reminiscent of a nineteenth century public market. The design by Graham Baba Architects broke the existing space down into 12 smaller units for individual purveyors, creating a new indoor market. Various producers sell locally sourced foods, including meats, cheeses, and pantry goods. A sandwich shop, café, and bar share the space as well, focusing on transparency in their food products. The cornerstone of the project is chef Matt Dillon's restaurant, Sitka and Spruce. Here, a few small tables line the walls in a space completely open to the chef's kitchen. A grand table in the center of the room serves not only for food preparation, but also as bar seating for additional diners. Laurie David of the Huffington Post writes, "Chef Dillon's corner spot is like eating in your own kitchen, only better… I think that sort of sums up where the new food movement is headed." Both Melrose Market and Dillon's restaurant have been the subject of a great deal of press, locally and nationally, for their use of local, sustainable ingredients. The Melrose Market space is successful through its community environment. As James Mayo writes, "The social life of public markets has always been colorful, active, and a political reflection of America's economic life. Social and economic influences were interwoven in the creation of the public market as a meeting place in the city" (17).

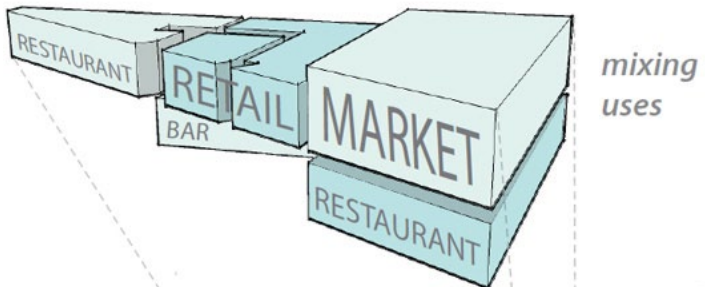


Figure 14. A diagram depicting the mix of food uses in the Melrose Market project. (Graham Baba Architects)

Figure 15. An image of the interior of the main market space. (Graham Baba Architects)

Figure 16. Melrose Market's urban location in Seattle, Washington. (Graham Baba Architects)

Figure 17. The rural location of Pie Ranch on the California coast. (Google)

Figure 18. Community education outreach. (Pie Ranch)

PIE RANCH Rural Youth Education

Pie Ranch began in 2002 as a 14-acre farm founded by three partners, Nancy Vail, Jered Lawson, and Karen Heisler. Located on California's San Mateo coast, the ranch has been active as a working farm since 2005. The vision of its founders was to create a "model center of sustainable farming and food system education." On their website, the founders elaborate on this goal:

> *Our mission is to inspire and connect people to know the source of their food, and to work together to bring greater health to the food system from seed to table… Pie Ranch is a unique sustainable food system education and advocacy organization. We seek to inspire and create a new generation of farmers, educators, entrepreneurs, and advocates with the knowledge and the skills to work together to build a healthy, sustainable, inclusive food system. Our work is based on the assumption that a sustainable food system can only emerge when both rural and urban communities understand and are accountable to each aspect of the system.*

Today, the farm operates on 27 acres primarily as an educational facility, producing and growing and running camps for urban youth, in an effort to bring them closer to their food. The students grow, harvest, and process the ingredients necessary to make their own meals, and to create truly made-from-scratch pies. Throughout this process they are able to develop an understanding of the merits of a local, sustainable food system. Pie Ranch has been very successful in educating program participants. Although the food production and education aspects of the program operate only in a rural environment, goods produced at the ranch are sold at a nearby farm stand, and their pies are sold at an urban retailer in San Francisco.

In 2009, a group named Nomadic Green created a community garden project in Berlin Kreuzberg, Germany, known as Prinzessinnengarten. The concept is explained on their website:

> *Imagine a future where every available space in big cities is used to let new green spaces bloom. Green spaces that local residents create themselves and use to produce fresh and healthy food….The spaces would promote a sense of community and the exchange of a wide variety of competencies and forms of knowledge, and would help people lead more sustainable lives.*

The site, an empty 20,000 square foot plot in the heart of the urban neighborhood, had been vacant for over 50 years. The group sourced help from neighbors to clear away the debris and replace the vacant lot with a fully functional raised-bed garden. Using inexpensive containers, such as discarded rice bags, plastic crates, and milk containers, they quickly created a mobile, adaptable garden. The site now includes a café and a plant shop, both housed in recycled shipping containers (Alperovich).

Prinzessinnengarten has been very successful due to its inclusive and adaptable nature. Planters can be moved to adjust to seasonal and programmatic changes. The garden welcomes community members, inviting them to take control of a container plot, or just to assist with tasks in return for discounts at the café. For others who prefer a leisurely visit, the restaurant and plant shop offer an educational experience, demonstrating the benefits of understanding food origins.

Figure 19. Prinzessinnengarten. (Alperovich)

Figure 20. Prinzessinnengarten. (Nomadic Green)

Figure 21. Prinzessinnengarten. (Alperovich)

PROGRAM

The proposed program of this thesis builds on ideals presented in the previous case studies, with the intent of adapting them to better suit an inclusive, community center in an urban American neighborhood. The primary goal of this program is to demonstrate the benefits of a transparent, locally and seasonally based food system, through an educational community environment.

The building program spaces can be broken down into three main categories of activities connected to a sustainable food system. The first element is Cultivation. Users will have the ability to participate in the growth, production and selection of their food. The foods grown and produced in-house will be supplemented with products from like-minded, seasonal, local producers. This literal cultivation of the goods to be consumed will lead to a cultivation of knowledge, acting to nurture, promote, and educate the users. As community users learn about food production, they will take part in the second category of use: Dissemination. The building will act as a device for distributing these food products for consumption on-site in dynamic dining spaces and off-site as retail goods – both those produced on-site and those offered through temporary farmer's markets. In this case as well, the literal dissemination can lead to the figural – spreading the knowledge and understanding of food as more than commodity to the neighborhood community. The final aspect of the program acts as the vehicle for Cooperation through community involvement, with spaces for community events, classes, and meetings. Because of the center's secondary use as a general community space, local residents who choose not to use the building for its primary functions will be exposed to the food programs, and be invited to participate. The classroom spaces will be used for after school programs in cooperation with neighborhood schools and clubs, teaching local youth about urban agriculture, and the benefits of a transparent food system. The inclusive nature of these community spaces and programs will allow for the involvement of all residents, regardless of demographics. As these programmatic elements are broken down into physical spaces, the distinctions will begin to blur. Program goals overlap, and the architectural spaces mitigate the transition from one element to another (Figure 24).

Figure 22. Cultivation. (O'Connor)

Figure 23. Dissemination (justfood.org)

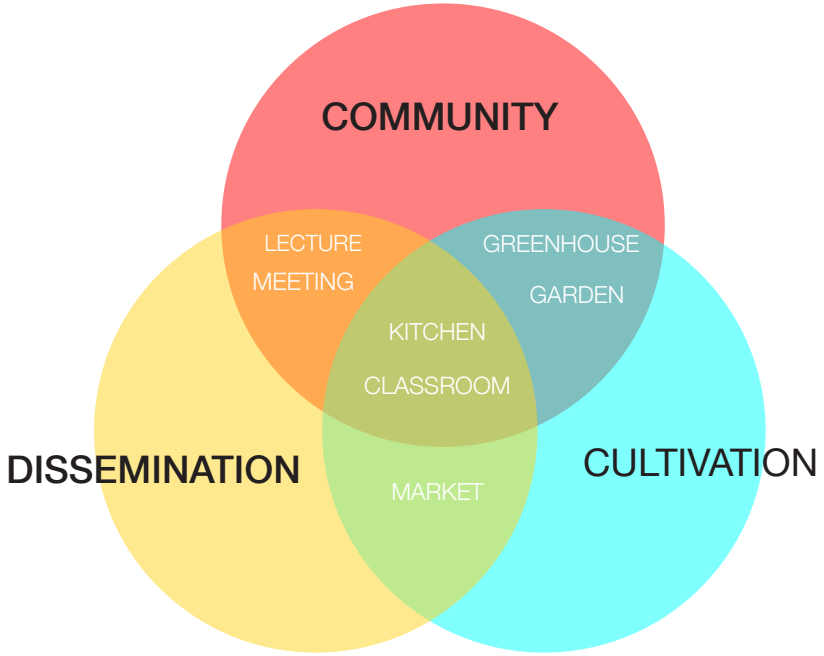
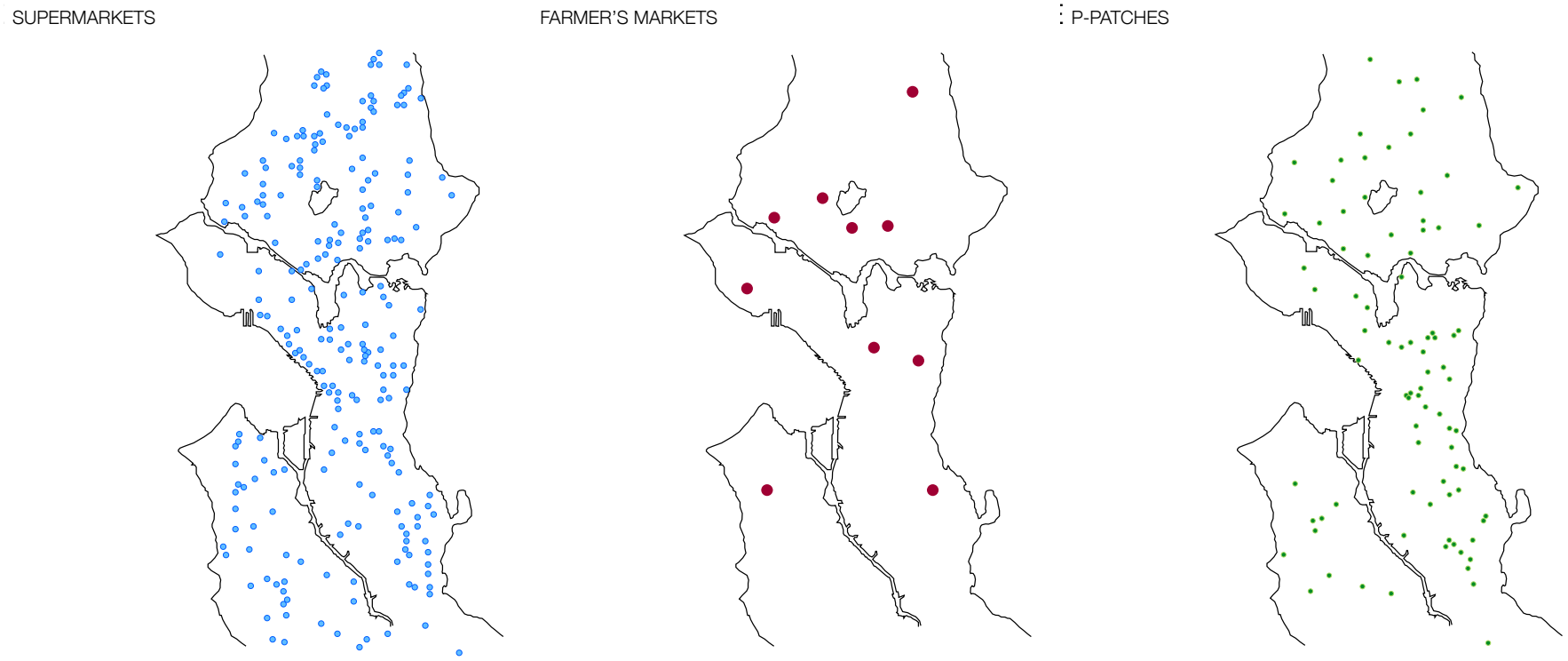


Figure 24. Program goals overlap to create shared program spaces. (Author)

SITE

A community education center of this program and typology would be beneficial in any American urban area, where citizens have become increasingly disconnected with the sources of their food. This thesis tests the ideas of an urban food center at 23rd Avenue East and East Union Street in the Central District neighborhood of Seattle, Washington. The history of agriculture in the Pacific Northwest reveals a diverse range of growing conditions, related to a variety of climatic and geological regions. Because the abundant natural resources in the state of Washington have remained intact there is a broad awareness and sensitivity to the environment in the region. This is reflected in public advocacy and widespread organic and sustainable farming.

Historically, the city of Seattle developed to serve as a port town for the distribution of the region's goods, including its farming



Figures 25, 26, & 27 Diagrams of the supermarkets, farmer's markets, and p-patches in the city of Seattle. (Author)

exports. Seattle is a city with a great number of traditional supermarkets (Figure 25). It is also a city with a strong foundation in understanding the need to shorten our food chain, with multiple weekly farmers markets to serve distinct neighborhoods (Figure 26). Some residents have taken food production literally into their own hands, evidenced through a growing number of neighborhood p-patches (Figure 27). The goal of this project is to collaborate with these existing beginnings of supermarket alternatives, offering a built center with permanence and a focus towards community inclusion to demonstrate the intimate links between the production and exchange of food.

Seattle is a city composed of distinct neighborhoods, each with its own urban core. They serve similar functions, providing a central zone that caters to the pedestrian. These walkable centers are defined by their local retail, dining, and community establishments, allowing neighbors to interact with one another at a smaller scale. Numerous urban Seattle neighborhoods would benefit from a food community center focusing on the production and distribution of local, sustainable food. This thesis will focus on one neighborhood in particular – the Central District.

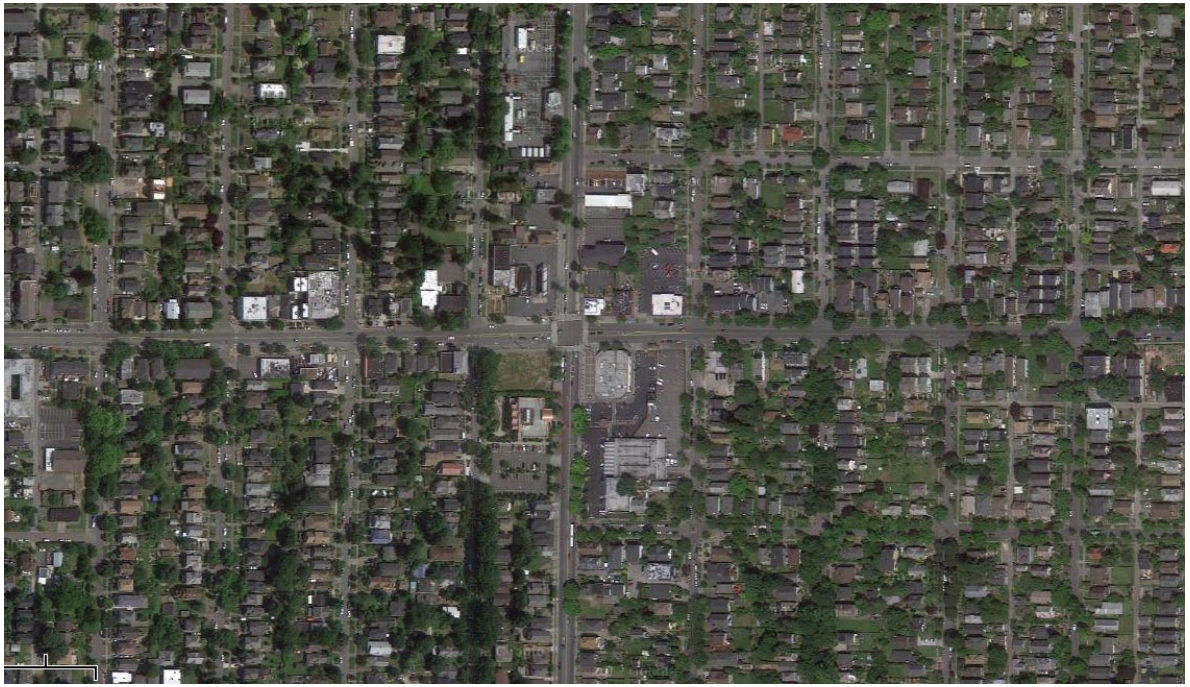
While its borders are not clearly defined, the Central District has a strong identity, with a colorful history. At the turn of the 20th century, the Central District was a predominantly Jewish neighborhood. Numerous Jewish community centers, schools, and religious structures were erected over the following decades – many of which still remain today. The International District, located to the south and west of the Central District, experienced a sharp incline in population during the 1920s. Due to the overpopulation of the International district, a great number of Asian immigrants began to settle in the Central District. The Japanese-American population of the Central District dropped during World War II, as many residents were forced out of their homes and into internment camps. During this time, the neighborhood became home to a growing African-American community. This trend continued after World War II due to housing discrimination and restrictive covenants (Henry).

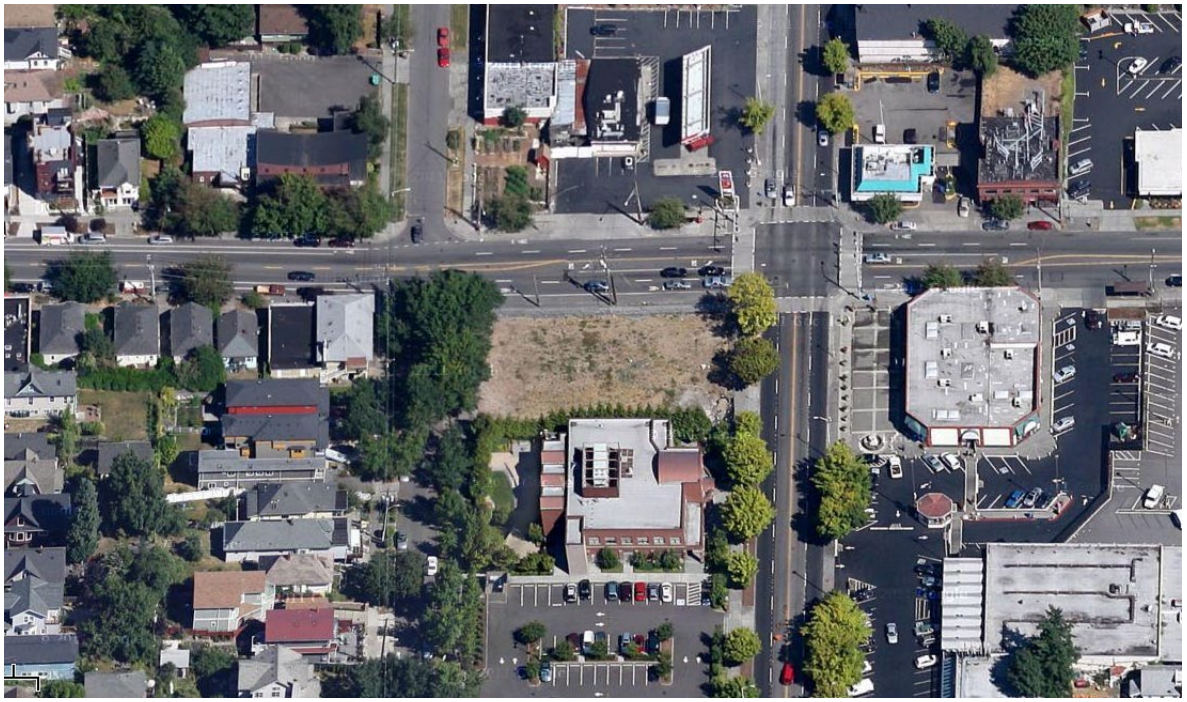
As it stands today, the Central District is a mixing pot of diverse inhabitants. With remnants of each of the historical cultures and the institutions they created, there is a strong sense of community. As adjacent neighborhoods to the north and west are now experiencing increases in rent and cost of living, the Central District is becoming home to an influx of young people and new families. Some long-time residents have expressed concerns regarding the gentrification of their neighborhood, and are upset at the loss of community establishments (Hansen).

Due partly to the neighborhood scale and partly to its diverse population, there are multiple retail areas in the Central District. Unlike many other Seattle neighborhoods, the scale and density of these cores has remained closer to that of the surrounding single-family fabric, at one to two stories. A main north-south arterial, 23rd Avenue serves as one of the neighborhood cores, offering a range of commercial and retail establishments as well as restaurants and convenience stores. The intersection of 23rd Avenue and Union Street is a key intersection, connecting people to the adjacent Capitol Hill and Madrona neighborhoods. The intersection is transitional in terms of its location, but also regarding its history, current state, and future. In the past decade, businesses have moved in and out of buildings at the intersection due to economic difficulties and criminal activity, but some staples remain. In recent years, the intersection has seen an influx of new tenants attempting to revitalize the corner.

With this new growth, the southwest corner of the 23rd and Union intersection has become an area of contention. In the early 2000s the Seattle Central Area Chamber of Commerce occupied a brick building on the parcel. The 2001 Nisqually earthquake caused irreparable damage to the unreinforced masonry structure, and the building was eventually demolished. In 2008, plans arose for a six-story housing development that caused controversy among the community. The Seattle Department of Planning and Development had zoned the area as Neighborhood Commercial 2 (NC2P-40), with a 40 foot height limit. The NC2 zoning is defined as a, “moderately-sized pedestrian-oriented shopping area that provides a full range of retail sales and services to the surrounding neighborhood... Building types are single-purpose commercial structures, multi-story mixed use and residential structures. Non-residential uses typically occupy the street front.” Although it fit the zoning definition, the proposed structure exceeded the height limit by two full stories, and many neighbors feared that it would be out of place against the adjacent one to two story buildings. After numerous design review board meetings, the city rezoned the parcel in an effort to include more affordable housing options to the neighborhood. The project was eventually put on hold, as the market collapsed in late 2008. Since that time, the site has remained as a vacant lot surrounded by a chain-link fence.

The site at 23rd and Union offers a prime location for an urban food center, both in terms of pedestrian activity and neighborhood ideals. It is at the center of a small, historically important but challenged neighborhood core that has is receiving attention to increase walkability. Public transit to the site via the Seattle Metro Bus system is plentiful (Figure 30). Later this year, the Seattle Department of Transportation plans to break ground on a new project to revitalize 23rd Avenue, and further promote a mix of right of way uses (Figures





Figures 28 & 29. Maps of 23rd Ave E and E Union St in Seattle, WA. (Google)

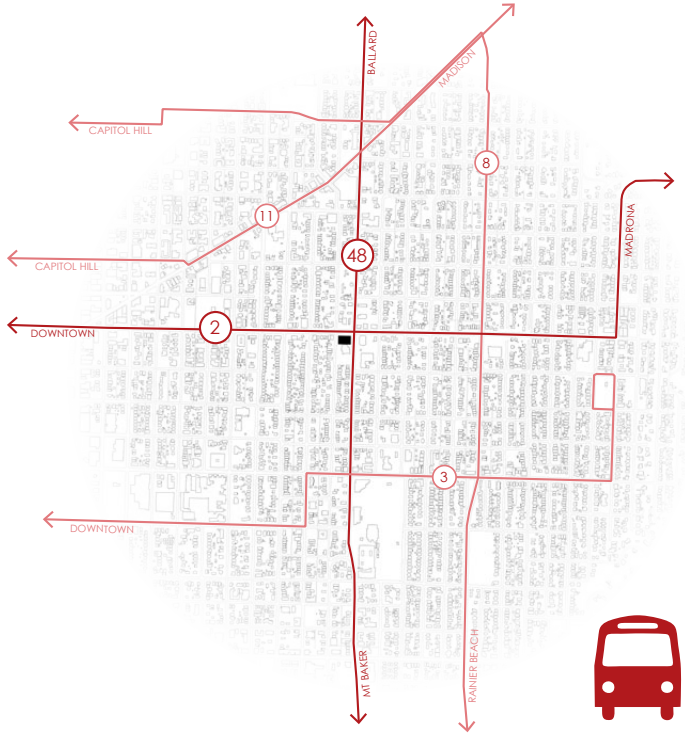


Figure 30. Seattle Metro Transit connections to site. (Author)

Figure 31. Street view of site from 23rd Avenue East. (Author)

Figure 32. Site elevation across 23rd Avenue East. (Author)

Figure 33. Street view of site from E Union Street. (Author)

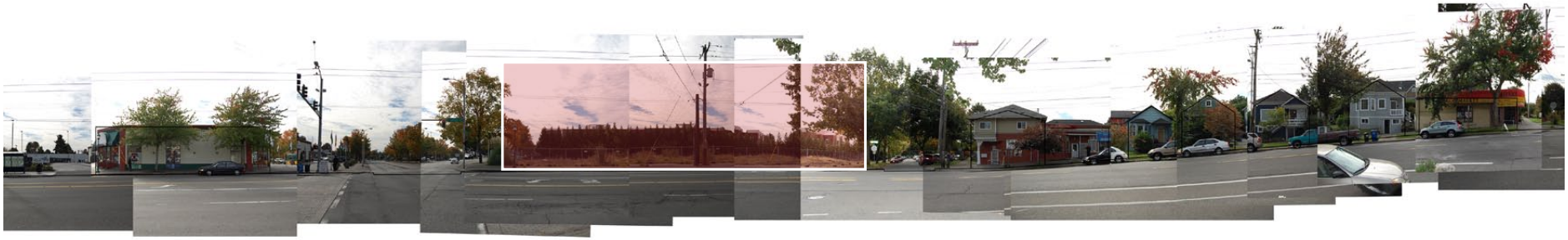
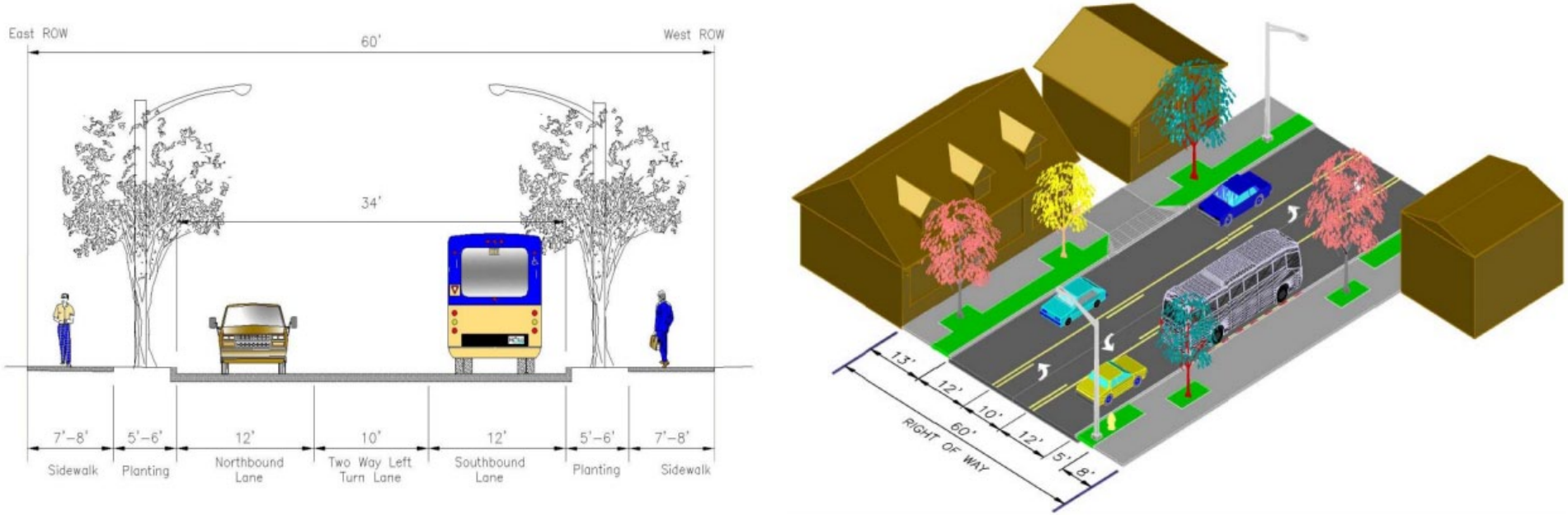


Figure 34. Site Elevation across East Union Street. (Author)

35-36) (SDOT). The plan includes a reduction in automobile traffic and an increase in bike and pedestrian safety. These proposed improvements will result in an influx of non-vehicular users, necessitating buildings and a street front that cater more directly to the pedestrian.

The program of the building will provide opportunities to make connections to established local food sites in the neighborhood, including multiple p-patches – one directly across Union Street on 22nd Avenue and another two blocks away at 25th and Spring (Figure 37). The site sits between (and is nearly equidistant to) the Capitol Hill and Madrona farmers markets, both operating seasonally on a weekly schedule. The urban food center will collaborate with these already-established local food entities to increase community interest and involvement. The strong presence of multiple cultural groups in the Central District is represented in churches and community organizations (Figures 38-39). The addition of a neighborhood community center focusing on the sharing of food and its embedded culture will be an appropriate fit for this diverse community.



Figures 35 & 36. Proposed 23rd Avenue street improvements. (SDOT)

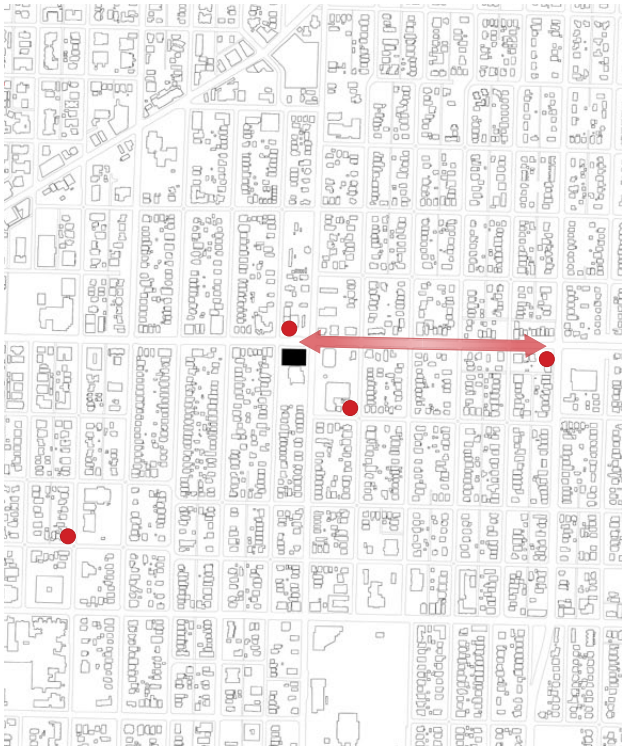


Figure 37. Existing p-patches near site. (Author)

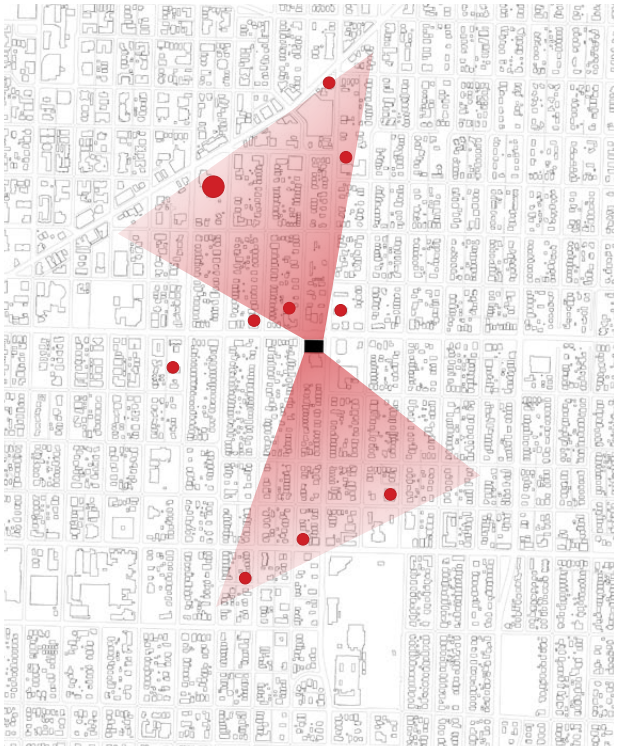


Figure 38. Existing churches near site. (Author)

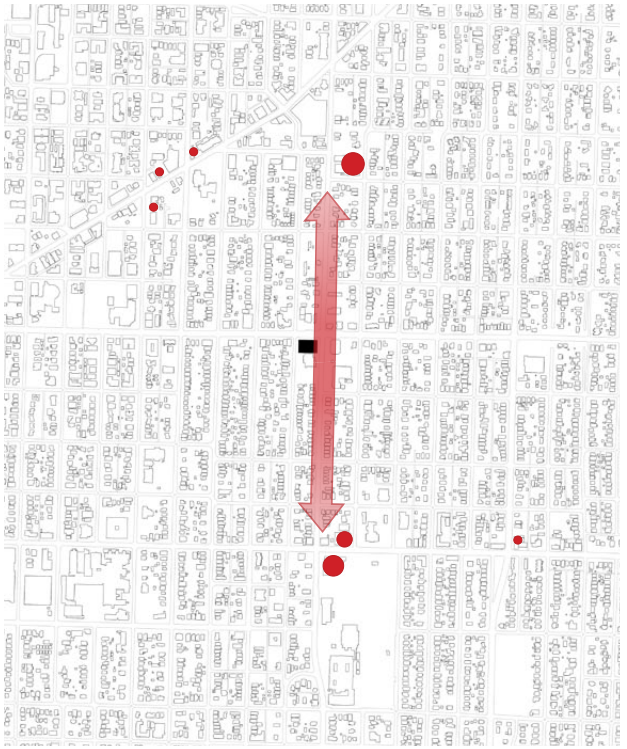


Figure 39. Existing community centers near site. (Author)

BUILDING CONCEPTION

The building program proposed in this thesis is one that is dependent on site constraints. These include relationships to pedestrian activity, attention to neighborhood scale, and visibility to the community. However, the most important constraint is daylight – a necessity for spaces dedicated to growing. For this reason, the building massing begins as a volume with a courtyard cut to the south, to allow for maximum sunlight growing spaces. There is a major difference in character between the west and east sides of the site, with single family residential to the west and a major neighborhood arterial to the east. The building height is adjusted accordingly to better match the character of each elevation. A path is then cut through the remaining volume to allow for circulation and to further expose programmatic elements to the community (Figure 40).

In this building site, all of the growing takes place in moveable containers. As in the Prinzessinnengarten case study, this allows for a dynamic environment, where planters can be adjusted to adapt to seasonal changes. The neighboring building to the south shares a 30-foot tall party wall with the courtyard. Due to the height of the party wall and Seattle's northern latitude, growing conditions are dramatically different between summer and winter months. The ability to move planting spaces will provide greater flexibility between seasons and the consequent courtyard uses. Raised bed planting offers a number of additional benefits.

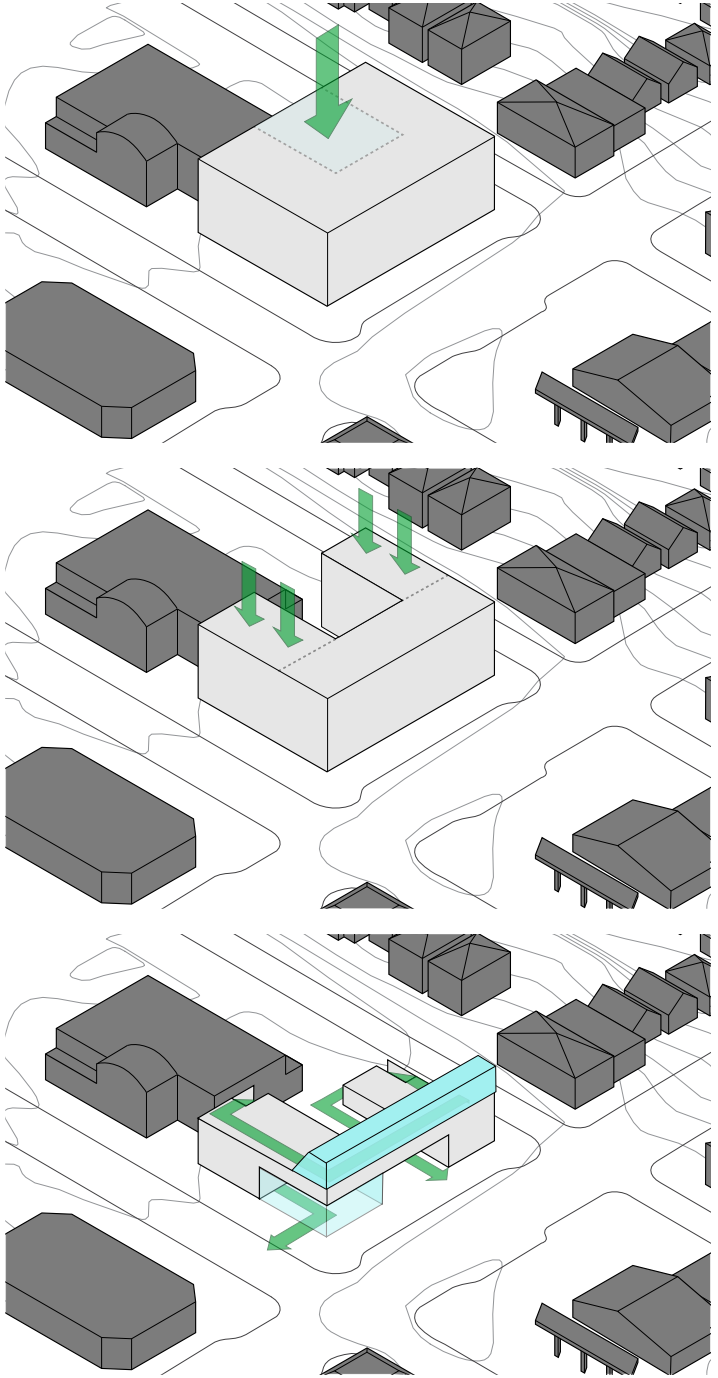


Figure 40. Building massing. (Author)

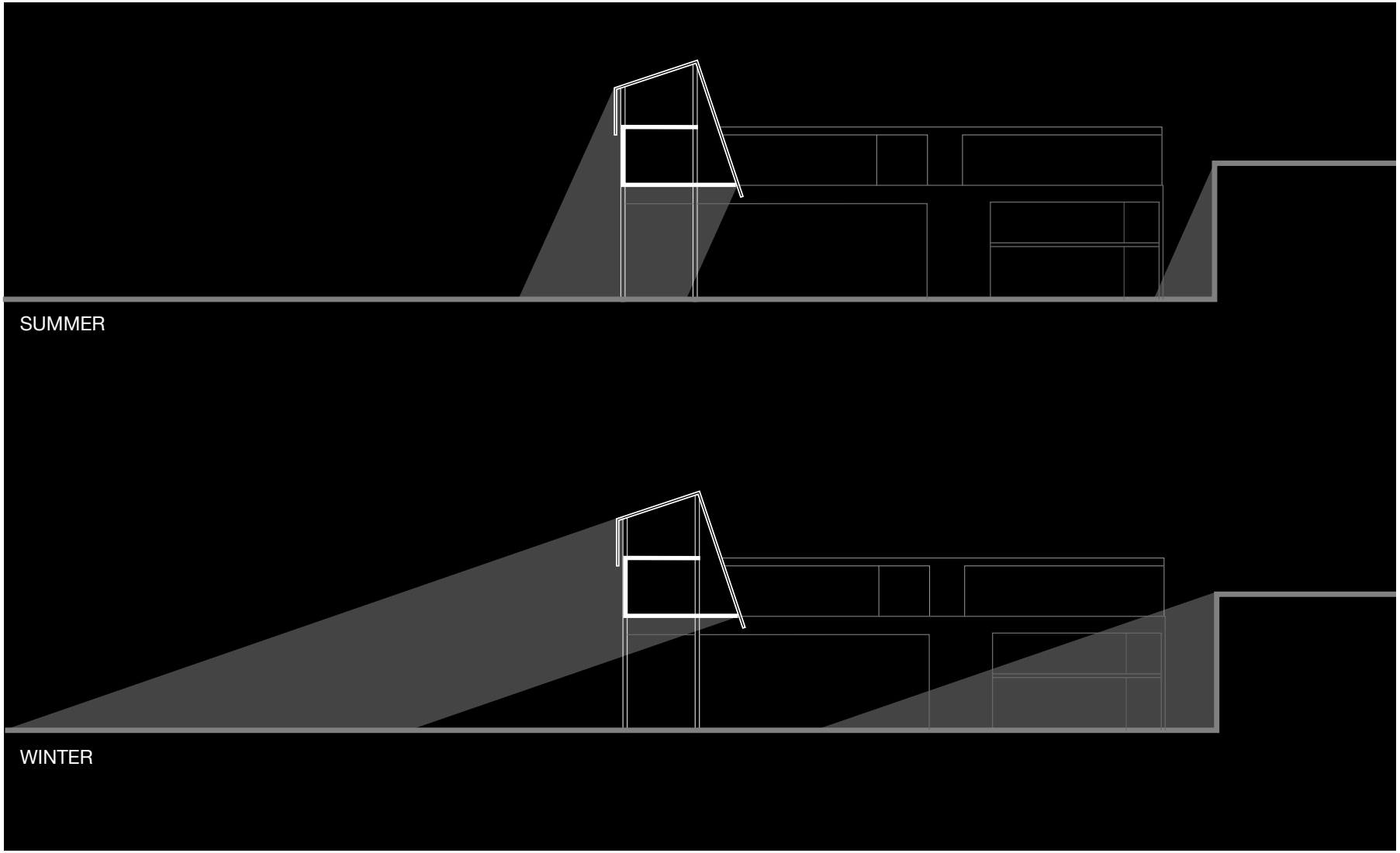


Figure 41. Seasonal courtyard shading. (Author)

Containers can be moved to allow for changing courtyard program or community events. Raising the beds also increases accessibility, as persons with limited mobility and the elderly can better reach the gardening substrate without needing to bend down. Finally, container gardening allows for growing in locations where soil conditions may be less than ideal due to remnants of the previous structure.

DESIGN RESPONSE

The ground level plan (Figure 42) is separated into two major elements, with community oriented spaces occupying the pedestrian frontage along 23rd Avenue East, and unconditioned re-use program spaces across the courtyard. Throughout the courtyard and the re-use spaces, the ground surface is composed of a permeable paving system to allow for natural drainage of rainwater and runoff from the portable planters.

The conditioned building volume at ground level is broken down into two main elements: a flexible, double-height, column-free community space, and a production kitchen. Between these two elements, basic building support functions provide the framework for smaller scale entry vestibules. The kitchen space can be opened or closed off to the community zone. To the west, the kitchen has large garage doors that can be opened during summer months, allowing the courtyard to flow directly into the production spaces. To the east, floor to ceiling glazing allows pedestrian passersby to view the production activities from the main 23rd Avenue arterial. The glazing of the community space is also dynamic, with upward acting garage doors that allow the space to open onto either or both the courtyard and the 23rd Avenue pedestrian right of way.

External circulation on the courtyard side of the kitchen brings users up to a half-story located directly above the kitchen space (Figure 43). Here, a classroom is used for after-school programs with local youth, as well as smaller community functions. Building staff have a shared office on this level that overlooks both the classroom space and 23rd Avenue. Above the re-use bar on the west end of the courtyard is additional space for placing the moveable planters that can be raised and lowered via a large service elevator.

On the third floor (Figure 44), a large, two-level greenhouse spans between the two building volumes. This creates a framework for large pivoting doors that allow to courtyard to be opened or closed to Union Street as season and program needs change. The greenhouse opens to additional growing and teaching space above the community bar.

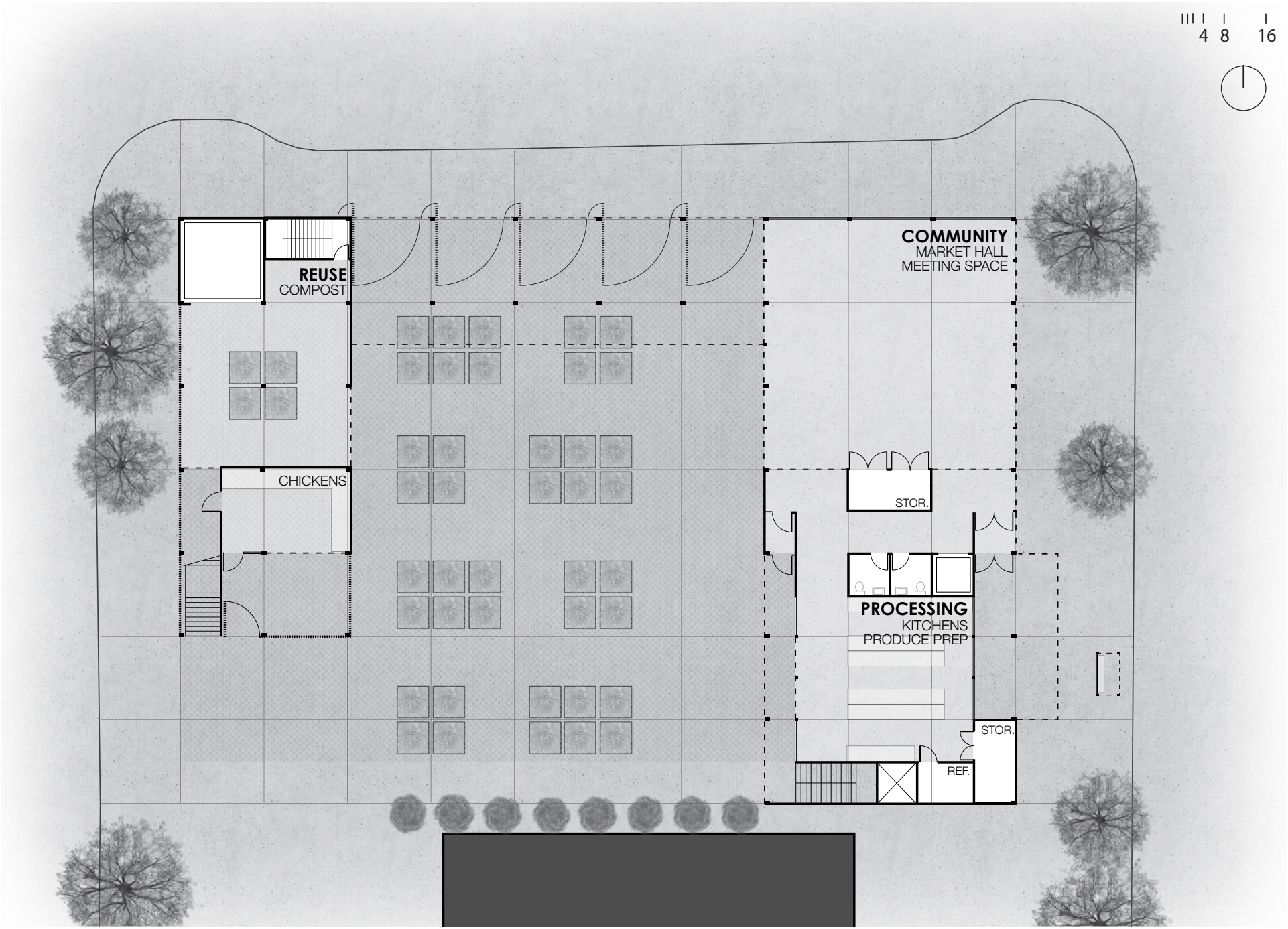


Figure 42. Level 1 floor plan. (Author)

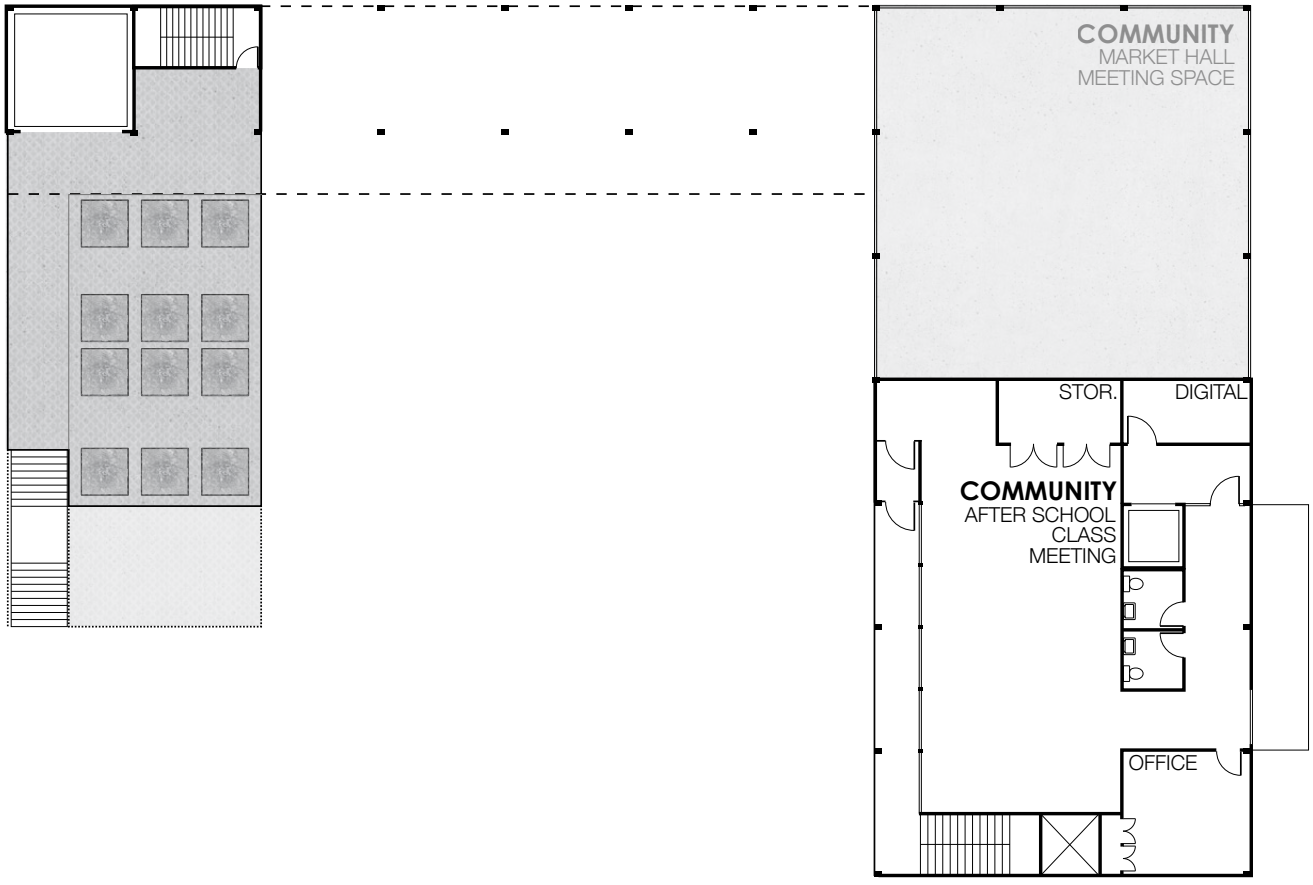


Figure 43. Level 2 floor plan. (Author)

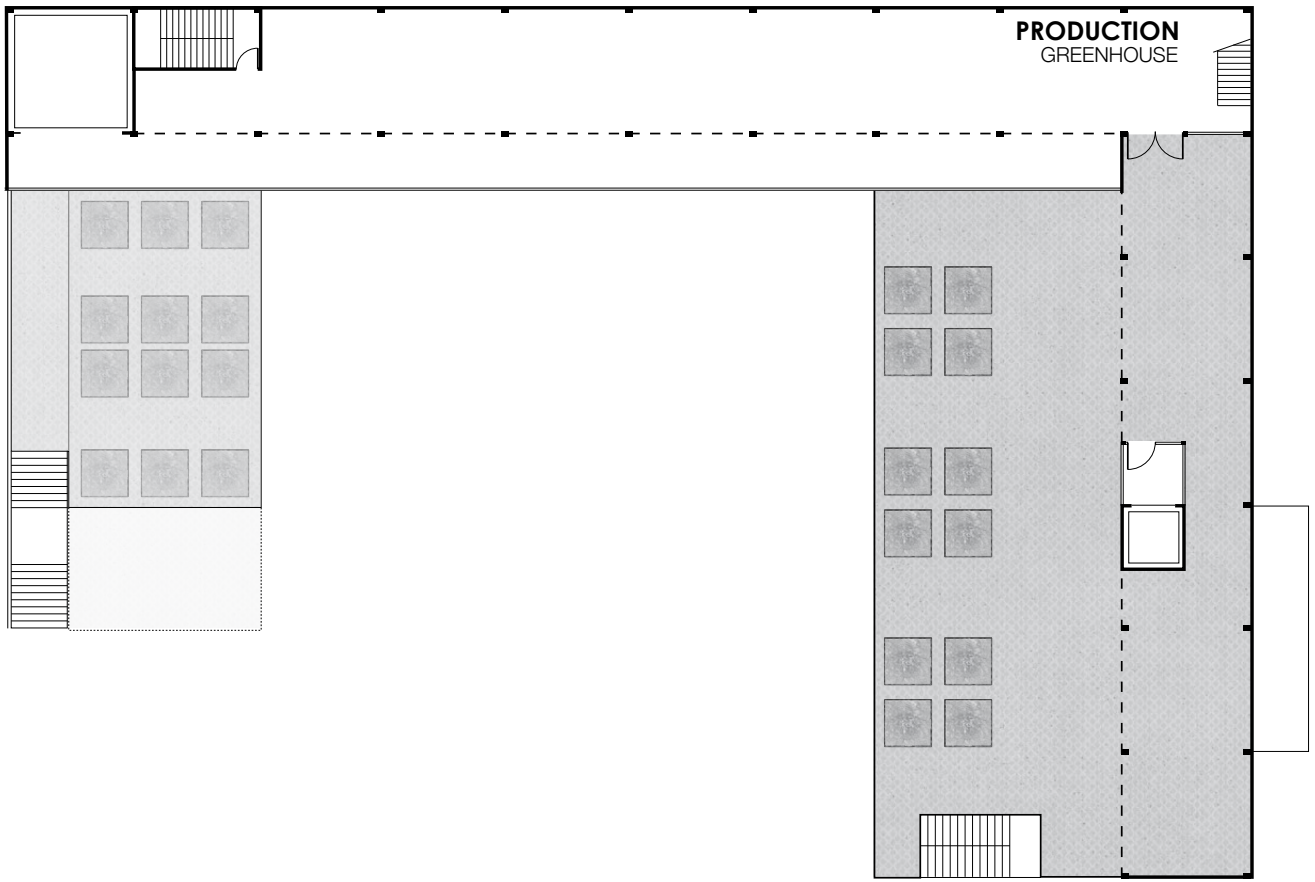


Figure 44. Level 3 floor plan. (Author)

MATERIALS

Simple, inexpensive building construction is conducive with the program of the community center. Sustainability and environmental impact are also important factors, and play a key role in material selection. For this reason, the majority of the proposed structure is wood – a sustainable, local resource that is abundant in the pacific northwest. The building structure is based on a simple 16 foot square grid. Wood columns and laminated beams form the primary structure, with structural sizes relative to their tributary loads and spans. Cross-laminated timber bridges the secondary spans, providing a rigid diaphragm. The 16-foot grid allows for the use of off the shelf products in the creation of the building envelope, including structural insulated panels (SIPs). A rain screen of wooden slat cladding completes the building façade. The greenhouse cladding is translucent polycarbonate – an inexpensive material that efficiently provides ideal growing conditions. It is framed within a light steel structural system that rests on top of the primary timber structure, extending past the walls and floor-plates that it intersects.

Figure 45. Typical summer container layout. (Author)

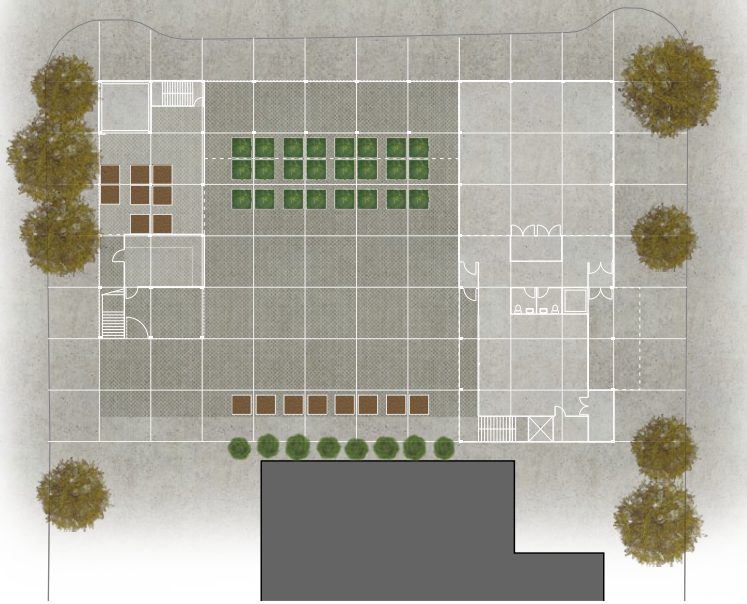


Figure 46. Typical winter container layout. (Author)

SEASONAL FLEXIBILITY

During summer months, the majority of the courtyard receives direct sunlight, offering ideal growing conditions. Activities spill out onto the courtyard as produce moves in and out of interior program spaces. The courtyard doors are open, inviting neighbors into the space and providing a rest from the activity of the busy intersection. The moveable planting system allows for a multitude of configurations based on program need. Summer Farmer's Markets abound with produce and other locally produced goods. As producers find the need for more retail area, the community space can open to the outside and planters can be consolidated to one end of the courtyard (Figure 47). Local neighbors use the production kitchen as a teaching and gathering space, using goods produced at the center as an educational cooking experience. During events that require additional production or dining space, the kitchen doors can be opened and the planters used to form an al fresco community dining room (Figure 48).

During late fall and winter months only the northernmost portion of the courtyard receives direct sunlight. Here, frost resistant plants are grown in a smaller number of containers while the greenhouse is utilized to its full potential. The majority of activities are confined to indoor spaces, and program shifts to focus on storage and processing. Reuse spaces become active during this season, as organic waste from previous months is composted. Heat from the compost bins can be harvested and used to offset the energy necessary to keep the chicken coops warm.

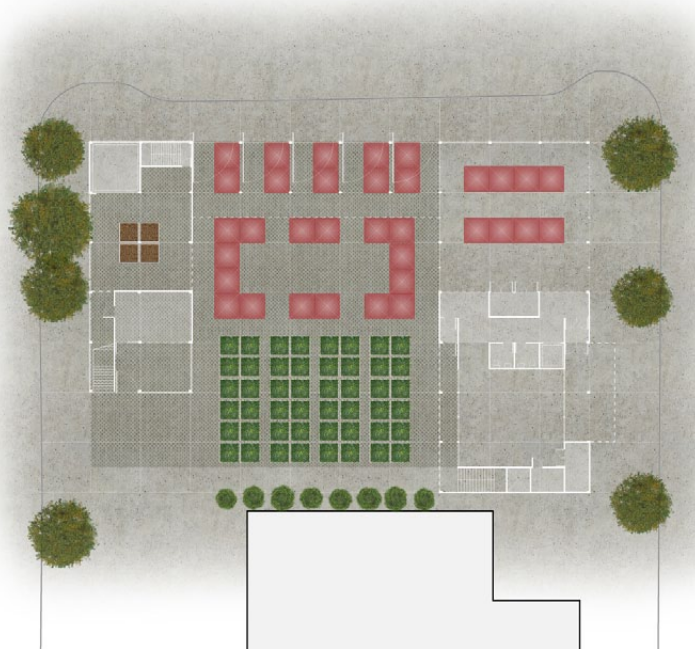


Figure 47. Courtyard layout - market event. (Author)

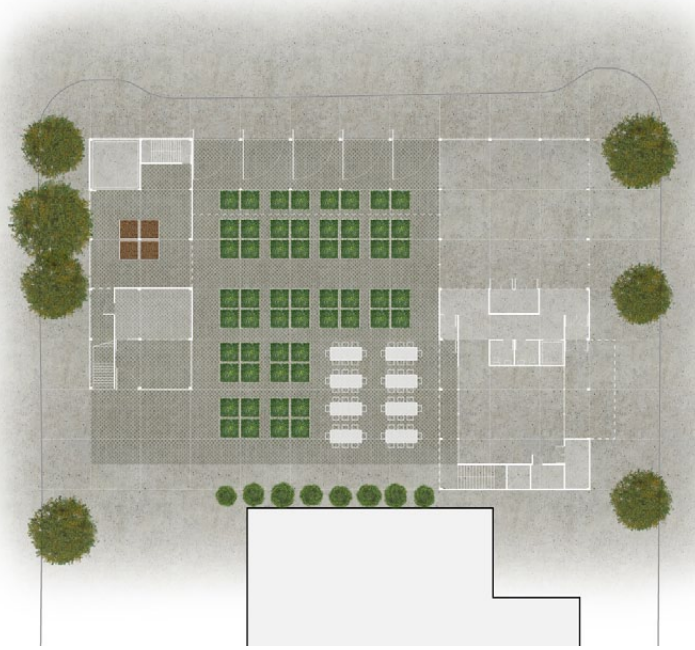


Figure 48. Courtyard layout - dinner event. (Author)

Figure 49. Courtyard section during summer mode. (Author)

Figure 50. Courtyard section during winter mode. (Author)

Figure 51. Interior rendering depicting greenhouse space during winter mode. (Author)

Figure 52. Interior rendering depicting kitchen space and the connection to courtyard gardens. (Author)

CONCLUSIONS

A SUSTAINABLE FOOD SYSTEM

Overall, the building functions as a diagram of a sustainable food system. Growing spaces, both internal and external, serve for production. The community kitchen spaces educate visitors about responsible and natural food processing and storage. Community meeting spaces provide a venue for the sale and consumption of locally produced whole foods. Re-use spaces show building users that the natural waste from a responsible food system can be directly recycled to nurture future plantings and to provide energy to the cycle (Figure 53). Each of these components serves as a key part of a healthy, sustainable, responsible food system.

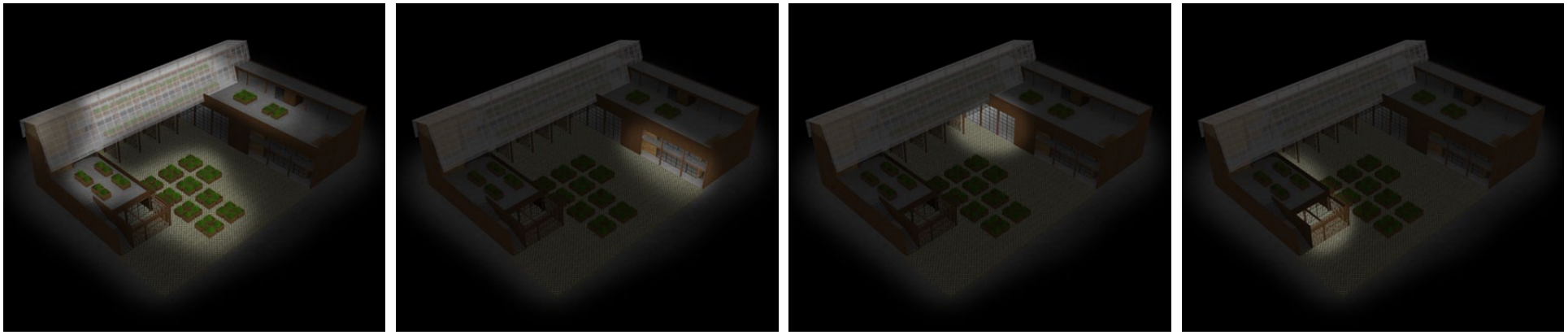


Figure 53. Highlighting spaces left to right: Production, Processing & Storage, Sales, Reuse. (Author)

Figure 54. Rendering depicting the building from the corner of 23rd Avenue East and East Union Street. (Author)

A RESOURCE FOR KNOWLEDGE The Seed that Grows

The problems inherent in the American food system are too large for any one structure or building typology to solve completely. As the connections between urbanites and the origins of their food have become weaker, residents of the American city have lost touch with an understanding of the processes that go into food production. This lack of knowledge has led to the vast majority of citizens making uneducated – and therefore generally unhealthy – decisions at the supermarket.

Prior to the advent of industrial food production and processing, people in cities still maintained direct contact with the individuals who grew their food. A return to this ideal is next to impossible due to the scale and density of the modern American city. Farmer's markets and some boutique grocers have provided a return to vernacular methods, but are unfamiliar or inaccessible to much of the urban population.

What this thesis offers is not a replacement to the modern supermarket, but rather a resource for understanding food choices and the significance they have. As users of the building program interact with demonstration spaces, growing and creating food in a community environment, they can begin to understand both the merits and complexity of natural, transparent food system.

The production of food is a slow, seasonal process, and should be appreciated as such. The dynamic nature of the community center's spaces and program activities conveys the seasonality of growing. The building shifts in unison with periods of planting and users experience the process from seed to table. When the fruits of their labors are picked, it is different than the picking than they have come to understand in the supermarket; the missing fruit is not immediately replaced for the next customer.

With a resourse for direct, community-driven interaction with these processes, residents of neighborhoods like the Central District can become active members in facilitating an understanding of a sustainable, responsible, and healthy food system. The illustration of a sustainable food cycle can empower urban citizens to understand the gravity of the choices they make regarding food, and to comprehend the implications of what can happen to the well-being of a community when people make a return to honest food.

Figure 55. Fruits of labor. (eatyouryard.com)

LIST OF FIGURES

SOURCES

Alperovich, A. L. (2011, December 18). *Mobile urban agriculture blooms in Berlin's Prinzessinnengarten*. Retrieved from http://inhabitat.com/mobile-urban-agriculture-blooms-in-berlins-prinzessinnengarten/

Belasco, W. J., & Horowitz, R. (2009). *Food chains: From farmyard to shopping cart*. Philadelphia: University of Pennsylvania Press.

Bendick, J. (1954). *The first book of supermarkets*. New York: F. Watts.

Deutsch, T. (2010). *Building a housewife's paradise: Gender, politics, and American grocery stores in the twentieth century*. Chapel Hill: University of North Carolina Press.

Fair, S. W. (January 01, 1997). Story, Storage, and Symbol: Functional Cache Architecture, Cache Narratives, and Roadside Attractions. *Perspectives in Vernacular Architecture, 7,* 167-182.

Grandclement, Catherine. "Wheeling One's Groceries around the Store: the Invention of the Shopping Cart, 1936-1953." *Food Chains: From Farmyard to Shopping Cart*. Eds. Warren Belasco and Roger Horowitz. Philadelphia: University of Pennsylvania Press, 2009. 233-251. Print.

Griffioen, J. (2011, January 25). *Yes there are grocery stores in detroit*. Retrieved from http://www.urbanophile.com/2011/01/25/yes-there-are-grocery-stores-in-detroit-by-james-griffioen/

Gwynn, D. (n.d.). *a quick history of the supermarket*. Retrieved from http://www.groceteria.com/about/a-quick-history-of-the-supermarket/

Hageman, W. (2010, October 13). *Supermarket science: stores use many strategies to sell you their products*. Retrieved from http://articles.chicagotribune.com/2010-10-13/features/sc-food-1008-supermarket-20101013_1_supermarket-science-dairy-case-bakery

Henley, W. (2013, July). The modern grange: A San Francisco firm turns a workaday agricultural building into a gleaming display case for locavore living. *Architectural Record*, *201*(7), 27.

Henry, M. T. (2001, March 10). *Seattle neighborhoods: Central area - thumbnail history*. Retrieved from http://www.historylink.org/index.cfm?DisplayPage=output.cfm

Hansen, B. (2013, Feb 18). Changing face of the central district. *The Seattle Times*. Retrieved from http://seattletimes.com/html/picturethis/2020379686_changingfaceofcentraldistrict.html

Kahn, Barbara E, and Leigh McAlister. *Grocery Revolution: The New Focus on the Consumer*. Reading, Mass: Addison-Wesley, 1997. Print.

Mayo, James M. *The American Grocery Store: The Business Evolution of an Architectural Space*. Westport, Conn: Greenwood Press, 1993. Print.

McNamee, G. (2013, Feb 13). *The geography of the supermarket*. Retrieved from http://www.britannica.com/blogs/2013/02/geography-supermarket/

Nomadic Green. (2013). *Prinzessinnengarten: About us*. Retrieved from http://inhabitat.com/mobile-urban-agriculture-blooms-in-berlins-prinzessinnengarten/http://prinzessinnengarten.net/about/

O'Connor, M. (2010, April 29). *Burpee promotes kids' gardening*. Retrieved from http://www.alternativeconsumer.com/2010/04/29/burpee-promotes-kids-gardening/

Pollan, M. (2008). *In defense of food: An eater's manifesto*. New York: Penguin Press.

Pollan, M. (2002, Mar 31). "Power Steer." *New York Times Magazine*. 44-77

Rajendran, K. (1989). *A psychological study of consumer behaviour towards super-markets*. Annamalainagar: Annamalai University.

Seattle Department of Transportation, Maribel Cruz (Chair). *23rd ave corridor project*. (2013). SDOT joint community workshop and open house, Seattle, WA. Retrieved from http://www.seattle.gov/transportation/docs/FINAL_June2013_23AveCorridor_WebUpdate.pdf

Taylor, Q. (1994). *The forging of a black community: Seattle's Central District, from 1870 through the Civil Rights Era*. Seattle: University of Washington Press.

Tolbert, L. (2009). The aristocracy of the market basket: self-service food shopping in the new south. In W. Belasco & R. Horowitz (Eds.), *Food Chains: from farmyard to shopping cart*Philadelphia, PA: University of Pennsylvania press.

United States Environmental Protection Agency. (2013, March 01). *Resource conservation - food waste*. Retrieved from http://www.epa.gov/foodrecovery/

Wartman, Kristin. "The Obesity Paradox: Overfed But Undernourished." *Huffington Post*. 28 Jun 2012: n. page. Web. 24 Apr. 2013. <http://www.huffingtonpost.com/kristin-wartman/the-obesity-paradox_b_1632862.html>.

Wright, Wynne, and Gerad Middendorf. *The Fight Over Food: Producers, Consumers, and Activists Challenge the Global Food System*. University Park, Pa: Pennsylvania State University Press, 2008. Print.