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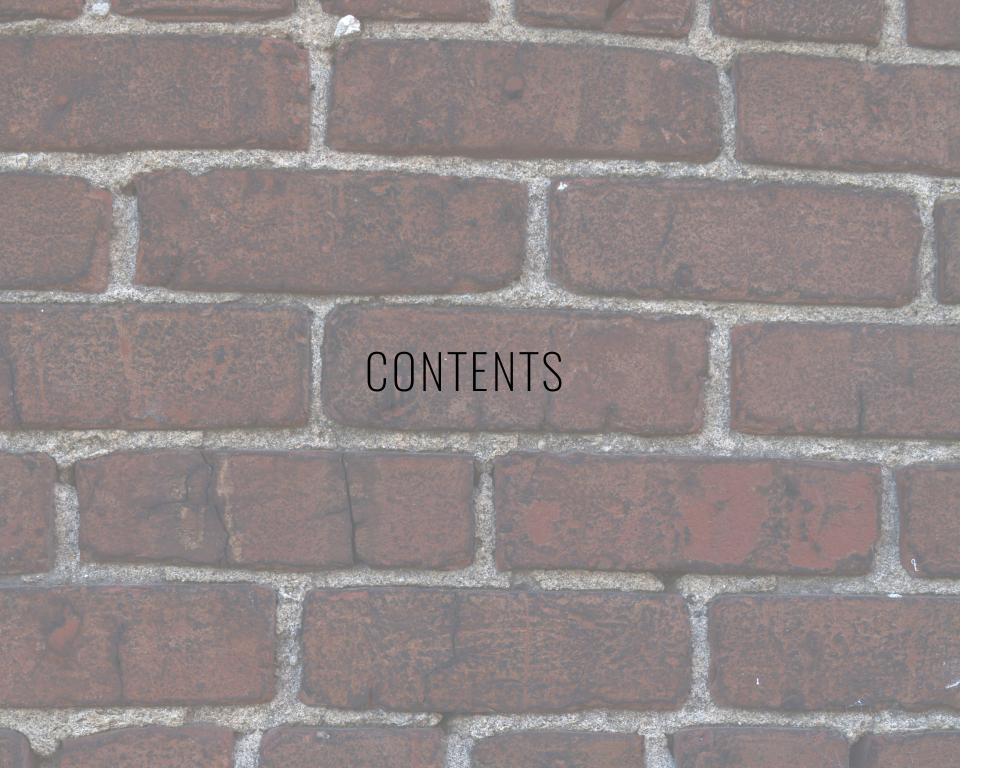
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CULTIVATING COMMUNITY AND HEALTHY LIVING URBAN GROCERY + GARDEN



I believe that interior spaces can be powerful facilitators of goodness and positive social change. Design is one of the most functional manifestations of creativity. I believe that design, at its best, is fun, life-changing, fulfilling, and challenging work. Interior designers have the power and the tools to influence social change and improve the well-being of the human race. It is my goal to create change and beauty in the world, for the under-served communities, those who have many resources, and every person or community in between.



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MOTIVATION

Today 49 million individuals in the US are affected by food insecurity (Whittle et. al., 2015). Low-income populations tend to depend solely on convenient stores for calorically-dense, nutrient poor sustenance, and suffer from health problems that drastically shorten or debilitate lives (Dhurandhar et al., 2016). In Richmond, Virginia there is a dramatic divide between wealthy and low-income communities in terms of the accessibility as well as the types and quality of foods available. Several communities in this city meet the characteristics of a food desert.

PROBLEM

Grocery store chains typically avoid building in low-income communities for fear of low profits (Wright et al., 2016). The need exists for a market that sources fresh and affordable produce in an accessible location to those living in food deserts. Research has shown that in addition to product quality and price, aesthetics are a critical component of the shopping experience (Webber, Sobal & Dollahite, 2010). This store should provide an aesthetic experience that cultivates strong community by attracting users to spend time and socialize in the store. Design can have a strong positive impact on food desert communities. By designing an aesthetically pleasing, well-stocked grocery store along with community gathering and learning spaces, food shopping is elevated from a mundane task to an experience that cultivates a thriving community.

METHODS

Research will include case studies of community gardens and farms as well as markets. Interviews with area natives that provide insight on the community needs within the food desert will be conducted. An understanding of the current food sources within the food deserts will be gathered. A literature review about how design and marketing techniques influence the shopping carts of consumers will provide value in understanding the strategies behind grocery design.

RESULTS

Studies of community gardens show that autonomy over the garden keeps participants invested in their community (Hondagneu-Sotela, 2017). Preliminary observation of the community reveals the presence of several convenience stores. Store design and marketing strategy research reveal that the marketing of nutritious foods is not as ubiquitous as packaged foods (Caspi et al, 2017), but that there is promise in marketing fresh produce to children at point-of-sale kiosks (Holmes et al, 2012). Priming shoppers to make health-conscious choices also influences the shoppers' selection in the grocery store (Papies et al, 2014).

CONCLUSION

This research will lead to the exploration of an urban community garden and grocery store that exists to bring community together as well as provide food. A café that doubles as a nutrition education space could build connections and knowledge within the community. A kitchen could house high-quality equipment used to produce food for the store as well as teach cooking classes to the community. A community garden could engage the neighborhood in the process of growing produce for the store and offer dynamic health benefits including increased physical activity, gardening skills, and strengthened community ties. By engaging with all age groups and crafting a pleasant grocery experience that makes the shopper feel valued, design could begin to address food insecurity, dependence on nutritionally inadequate convenience store food, and health problems that many urban neighborhoods face.

ABSTRACT 7



FOOD INSECURITY, FOOD SWAMPS, AND COMMUNITY HEALTH

Today food insecurity, or the inability to consume an adequate quality or quantity of food in socially acceptable ways (Dowler, 2012), affects 49 million individuals in the United States (Whittle et. al., 2015). Many families and individuals living in low-income communities face food insecurity due to their neighborhood's status as a food desert. A food desert is a low-income area in which healthy foods are expensive, of poor quality, or inaccessible (Shannon, 2014). Today supermarkets are the main provider of groceries in the United States. When low-income neighborhoods lack supermarkets, the negative impacts can be far-reaching. In addition to being a reliable source of a variety of healthy food, supermarkets provide job prospects and community ties (Thibodeaux, 2016). Without the benefits of supermarkets, social capital and physical health of communities suffer.

Populations that lack supermarkets and have an abundance of convenient stores are typically called food swamps. Without easily accessible supermarkets to source groceries, individuals living in low-income food swamps typically depend heavily on convenient stores for calorically-dense, nutrient poor sustenance, and suffer from health problems that can drastically shorten or debilitate lives (Dhurandhar et al., 2016). Families suffer from food insecurity for a variety of reasons, many of which are strongly related to low income levels. Surviving on a low household income forces families into the few neighborhoods that they can afford, which are often food swamps. Research has drawn strong links between food insecurity and obesity in the United States, among other chronic health issues.

When family diets become built around energy-dense convenient store foods, the health of children is negatively affected in profound ways. The presence of convenient stores is linked with a higher incidence of childhood obesity, while the presence of supermarkets is associated with lower incidence of childhood obesity (Alviola et al., 2013). Rising obesity

among children is a major public health concern in the United States. One huge factor leading to obesity is the extent to which the commercial food environment provides affordable healthy food to a community (Thomsen, 2016). Food insecurity does not simply leave people hungry or unhealthy; it piles on a whole host of issues. Adolescents who experience food insecurity are more likely to face academic struggles, poor health, and behavioral problems (Bruening et al., 2017). Research has found that males who live through insufficient or inconsistent food supply in childhood tend towards misconduct in adolescence (Jackson, 2017), which can perpetuate issues within low-income communities.

Research has shown that per capita, grocery stores and obesity are inversely related (Jilcott, et. Al, 2011). A major health concern related to obesity is the rising prevalence of diabetes. Low-income immigrant groups experience worse health when compared with white people, including higher rates of Type 2 Diabetes. Type 2 Diabetes is typically associated with poor diet and, therefore, strongly connected to a lack of access to healthy food environments. Suffering from poor diet induced health issues is especially concerning for low-income communities because of the expensive nature of treating diabetes and healthcare in general, which places more of a financial burden on families who already struggle with money.

Food deserts exist for a variety of complex and interconnected reasons. Grocery stores chains typically avoid building in in low-income neighborhoods for fear of low profits, which is a significant factor that perpetuates a community's food desert status (Wright et al., 2016). Research has shown that supermarkets are less common in areas with higher rates of poverty and higher proportion of African Americans (Thibodeaux, 2016). Supermarkets can inadvertently perpetuate the problems that many families in food deserts face by continuing to build outside of communities who desperately need access to fresh foods.



FOOD DECISION INFLUENCES

Many factors influence the food decisions shoppers make. One crucial concern for shoppers is transportation, which has a profound impact on which stores are accessible to people. Today, access to a car is almost a prerequisite for grocery shopping, as American infrastructure is adapted to car use (Nilsson et al., 2015). When grocery stores do not build in certain neighborhoods, access to a car or bus route becomes necessary to access fresh produce.

One study revealed that one third of Supplemental Nutrition Assistance Program (SNAP) users did not shop in their neighborhood stores, due to the fact that the smaller neighborhood convenience stores find it difficult to acquire the SNAP authorization which requires a variety of staple foods in four categories: dairy; breads/grains/cereals; fruits/vegetables; and meat/fish/poultry (Rigby et al., 2012). This means SNAP users are forced to find a form of transportation to a supermarket, most likely farther than a reasonable walking distance, to be able to reap the benefits of their food assistance program. Public transportation through bus routes or subways, or gaining access to a car is therefore a necessity to get groceries, or consumers will continue shopping at convenience stores.

Price is another crucial piece in food decisions. One study showed that if consumers in food deserts are given access to produce of acceptable quality at a normal price, they will buy it. In fact, food desert consumers were found to be more price responsive than the average consumer (Weatherspoon et al., 2013). Price is often the limiting factor that deters shoppers from purchasing fresh produce and persuades them to buy cheap, processed packaged foods. Although some studies have hypothesized that the presence of a farmers' market in metro counties would impact the health of the community, it has been shown that price is a factor that inhibits the efforts of infusing more accessible fruits and vegetables into communities (Jilcott et al., 2011). One survey found that cost is the most significant predictor of dietary choices, making both location and price substantial influencers in where and how low-income community members shop (Morland, Wing & Poole, 2002). Therefore,

where transportation is not an issue, price becomes the major limiting factor in what foods shoppers feel they have access to.

An interesting factor tied to food assistance program users is the time of the month. Since food stamp assistance arrives once monthly and most of the benefits are typically spent soon after receiving them, time of the month influences the way that families in low income neighborhoods shop. This can cause individuals to seek out emergency food sources, such as soup kitchens or food banks, or spend money out-of-pocket, which once again relates back to the issue of higher costs limiting shopper willingness to purchase fresh foods (Widener & Shannon, 2014)

One study revealed that the food environment in low-income neighborhoods greatly shaped children's food preferences, which caused conflict between mother and child about what to purchase in the grocery store. These findings are significant because the mothers often reported purchases that stemmed from avoiding conflict with children, suggesting that directing information about nutrition to children can be just as powerful as directing information to adults (Colón-Ramos et al., 2017). Overhauling a community food environment is no simple task, but targeting every age group is crucial to influencing the types of foods in which shoppers invest in.

Food quality is a critical factor that influences food choices. One study in Hartford, Connecticut found that both produce quality and store appearance were lower in inner-city supermarkets when compared with suburban areas. These factors motivated shoppers to avoid produce, in turn leading to the purchase and overconsumption of packaged foods (Martin et al, 2014). Although sourcing high-quality foods is a primary concern, the role that aesthetics plays in the shopper experience should not be downplayed. A well-designed grocery store provides shoppers with an overall sense of value. The design and upkeep of the store is an indicator to customers of the quality of the environment and produce, and additionally indicates that the grocery store is willing to invest in the customer experience because customers are of great value.

Marketing has a powerful influence over what shoppers buy. Studies on store design and marketing strategies reveal that the marketing of nutritious foods is not as ubiquitous as packaged foods (Caspi et al, 2017). Food giants that produce processed packaged foods spend millions of dollars exercising their influence in the grocery store and studying how consumers respond to their advertising and products. Beyond the dollars funneled into marketing, processed food companies have the power to manipulate the placement of their products on the shelves in the grocery store, attracting customer attention from the caps of aisles as well as maximizing their visibility at eye-level on the shelves (Moss, 2013). Surprisingly, research has revealed that while marketing, food quality, price, timing, conflict avoidance and transportation have large impacts on food selection in the grocery store, a lack of education is not the driving force behind the selection of processed foods.

EFFORTS TO ALLEVIATE FOOD DESERTS

With the countless issues surrounding food deserts, food insecurity, and inequalities in the food system in general, and the factors that influence low-income shoppers, it is essential to investigate and evaluate what initiatives are being implemented to aid communities. One major initiative to alleviate hunger and food insecurity in neighborhoods is the development of community gardens. Studies of community gardens show that autonomy over the garden keeps participants invested in their community (Hondageneu-Sotela, 2017). The sense of ownership and social capital helps fight against the transience of the populations that often characterize low-income neighborhoods.

The benefits of community gardens go beyond strong community ties and development of skills. Many dynamic health benefits, including physical activity and time spent outdoors, are important to improving the health of the participants. Gardens in urban communities have been shown to have huge impacts on the food system. However, knowledgeable and skilled gardeners need to guide the project for it to be a viable source of food (Codyre, Fraser, & Landman, 2015).

Generally, lower-income communities consume less fruit and vegetables than recommended. By supplying existing neighborhood convenient stores with support, supplies, and branding materials, one research study aimed to increase access to and interest in fresh fruit and vegetables in low-income urban communities. While the targeted community expressed support for the initiative, produce prices were about 10% higher than at major supermarkets, which is likely a reason why the intervention had little effect on customer consumption of fruit and vegetables. Inadequate availability of replacement materials and poor communication between the delivery team and retailers also made it difficult to keep the store continually stocked with fresh produce. This indicates a need to provide a sustainable, affordable intervention that is more sustainable than simply sourcing produce to convenient stores, and inventing marketing programs to advertise fresh fruits and vegetables (Adams et al, 2012).

While a lack of education is not a major player in food choices, marketing healthy foods to children can have a profound impact on what shoppers buy, as illustrated by the previous mention of the study of mothers who wanted to avoid conflicts with their children. One study showed that there is promise in marketing fresh produce to children at point-of-sale kiosks (Holmes et al, 2012). Children, when exposed to fresh produce in the supermarket, will gravitate towards it. Marketing efforts that prime people to make health-conscious choices as they enter the grocery store have also been shown to influence the shopper's selection in the grocery store (Papies et al, 2014). Appropriate marketing strategies will give consumers equal access to products and relevant information for educated choices (Osorio, Corradini & Williams, 2013).

Government intervention can also be used to influence shopper choices in the grocery store. Some argue that to correct consumer misunderstanding about what foods comprise a nutritious diet, foods poor in nutrition should be taxed, while nutrient-dense foods should be subsidized (Hebda & Wagner, 2016). Another proposed method of government intervention are local food initiatives that could substitute for more traditional policy-approaches (Hebda & Wagner, 2016).

10 RESEARCH ✓

Food stamp regulation has also been proposed, with legitimate concern surrounding the purchasing of beverages sweetened with sugar or high-fructose corn syrup, such as soda. Aside from the health implications, tax dollars are currently being used to subsidize the purchasing of these non-nutritious items that are linked with Type 2 Diabetes and obesity. Research shows that low-income Americans consume more sugar-sweetened beverages than other consumers; at one supermarket chain, food stamp users bought 4.3% of carbonated soft drinks, even though they only represented 1.8% of total transactions. A number of nutritionists are pushing for junk foods to be excluded from purchase with food stamps, as tobacco and alcohol already are (Shenkin & Jacobson, 2010).

PROPOSED APPROACH

Food insecurity in a food desert is a complex issue, and keeps neighborhoods poor and unhealthy. Simply building a brand-new grocery store chain without acknowledging and engaging the community could likely lead to gentrification as well as fragmentation of the suffering neighborhoods. By examining the factors that influence shoppers as well as the implications of a low-quality food environment, a well-designed and carefully crafted program can be implemented to give tools and resources so the community can be invested in affordable, community-grown produce and education.

Supermarkets, which continue to be the place that most Americans get their food, have an important role in fighting against obesity and health-related illness. As research has shown, good design can have a profound impact on the decisions consumers make in the grocery store as well as the stores they choose. From a design perspective, an aesthetically-pleasing, high-quality community space that includes a garden, café, grocery, and education centers for shoppers of all ages could provide tools to low-income food deserts to lead healthier lives without crippling costs.

In this space, a community garden could engage the neighborhood in the process of growing produce for the store and offer dynamic health benefits including increased physical activity, gardening skills, and strengthened community ties. Employment opportunities could help offset the cost of fresh foods and time volunteered in the garden could be exchanged for food. A grocery store with high-quality, affordable, fresh foods sourced from the neighborhood could alleviate price and quality concerns that low-income shoppers typically face. Additionally, shoppers would not be forced to find transportation out of their neighborhood to shop, which would give them a stronger connection to the store.

A café that would double as a nutrition education space can build connections and knowledge within the community. Adult education in both food preparation and gardening would help sustain the community garden. Gardening education could occur both outside in the garden and in the café education space. For children, education and play areas for children could develop fundamental nutrition knowledge as well as support a pleasant shopping experience for parents and caregivers. A kitchen with high-quality equipment could be used to produce food for the store as well as teach cooking classes to the community. By engaging with all age groups and crafting a pleasant grocery experience that makes the shopper feel valued and carefully presents nutritious foods, design could begin to address food insecurity, help low-income communities break from their dependence on nutritionally inadequate convenience store food, and reduce health problems that many urban neighborhoods face.

The proposed pilot location for this community garden and grocery project is Richmond, Virginia. Richmond is home to several neighborhoods that meet the characteristics of food deserts and food swamps. The Manchester District lacks access to fresh produce at supermarkets, and has an abundance of convenient stores. There is a dramatic divide between wealthy and low-income communities in terms of the accessibility as well as the types and quality of foods available in Richmond.

Just south of the James River, Manchester will be home to this proposed garden and grocery store. Manchester merged with Richmond city in 1910, and was home to the tobacco industry before the Revolutionary War. In more recent history, Manchester has been defined by high levels of crime and drugs, but has been going through a massive cultural overhaul. Developers have been re-purposing old factory buildings into lofts and demolishing other existing buildings to create brand-new apartments. However, Manchester lacks the abundance of restaurants and grocery stores that the city north and west of the river has. Manchester is also along a bus route that could bring in shoppers from the East End.

This proposed grocery store and garden could dramatically change the culture of food deserts. Instead of letting families progress deeper into financial and health issues, a project such as this could empower families and provide food desert neighborhoods the tools to be self-sufficient communities rather than food deserts and food swamps. By alleviating some of the effects of food insecurity and providing community-strengthening activities and spaces, social capital can be built and low-income families can thrive rather than merely get by.

ESEARCH 13

PRECEDENTS

WAKUWAKU HAMBURG, GERMANY IPPOLITO FLEITZ GROUP, 2012

WakuWaku, a fast food restaurant and organic food store, exemplifies both the spirit and program that the proposed grocery store and garden aims to achieve.

The space is designed almost exclusively with solid, untreated wood paneling, emphasizing the chain's dedication to ecological sustainability. By treating the majority of the space with one material, the products displayed take center stage along the built-in shelves that span the entire length of one wall. Glass-front refrigerators are integrated into the shelving unit as well.

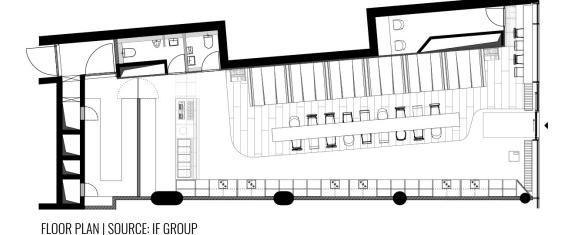
Different seating options run the length of this narrow space. Booths line the walls to accommodate groups and more intimate communication, while a bar-height community table can accommodate individuals and groups in a less formal setting. Along the back wall within a break in the shelving unit, there is a counter where food can be ordered. Guests navigate to this counter along the one strip of concrete flooring that is exposed amidst the almost entirely wood interior.

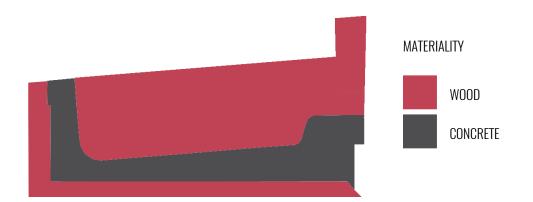


PERSPECTIVE FROM ENTRY | SOURCE: IF GROUP



SHELF DISPLAY | SOURCE: IF GROUP





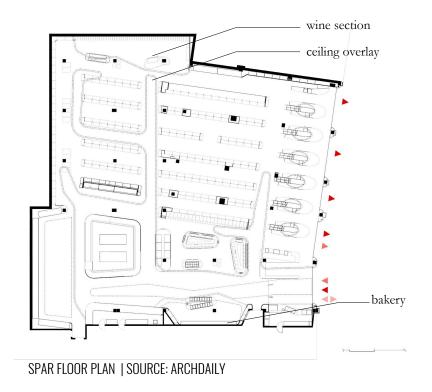
SPAR BUDAPEST, HUNGARY LAB5 ARCHITECTS, 2013

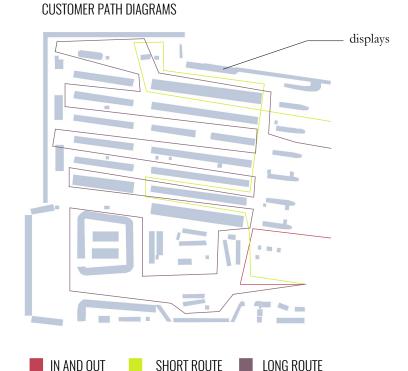
SPAR is an excellent precedent of a supermarket for a variety of reasons. The interior architecture is a departure from the traditional language of supermarkets. The undulating wood architecture is used throughout the space – the ceiling, walls, shelves, and produce display flow seamlessly. This store was designed with consumers in mind, laying out the store according to 3 types of consumers, with different routes tailored to different kinds of shoppers. The first type of customer simply runs in for a movie theater snack, the second type of shopper requires a short route for quick daily shopping, and the third type follows a long route for weekend shopping.

This design creates an environment that is distinctly different from any other grocery shopping experience. Research indicates that aesthetics are critical to consumers, enhancing their shopping experience and creating a feeling of importance or value. This project is successful in its ability to establish a space that consumers will find aesthetically pleasing and enjoyable to shop in.

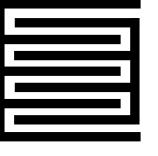
Identifying and understanding consumer types will guide design decisions to tailor the experience to the community. Interior architectural language and attention to details across the store are impressive – the elements that break boundaries between wall and ceiling and furniture elements are especially interesting. The wooden slatted ceiling is visible from every part of the store, and the architects paid special attention to places where the wooden slatted ceiling could flow down to the ground, producing warm feelings at the bakery and creating a space that capture the feeling of a cellar at the wine display. This ceiling indicates the quality of product and experience, as it so greatly departs from the economic, plain ceiling and walls seen at typical grocery stores.











LONG ROUTE

RECEDENTS 17

QIMEN BLACK TEA HOUSE SHANLI TOWN, HUANGSHAN, ANHUI, CHINA SU ARCHITECTS, 2017

When considering how to re-purpose a building with a highly specific history, such as a train station, a precedent such as this provides deep insight. This tea house exists in an old house with a long history within an ancient village; the architects took special care to preserve the past while adding modern touches. Certain aspects of this structure were retained, such as the four facades, while the wooden structure and roof were reconstructed.

From the outside the new roof's separation from the existing facades creates a reveal that appears to glow. The singular material emphasizes the people and activity that occurs within the space, while directing attention outward to the surrounding buildings. The lights that shine from the structural elements further the flowing feel that the upper level achieves. This is a space that draws in community to celebrate a tradition of tea and respects the history and past lives of this building, while adding modern touches that make the space comfortable.

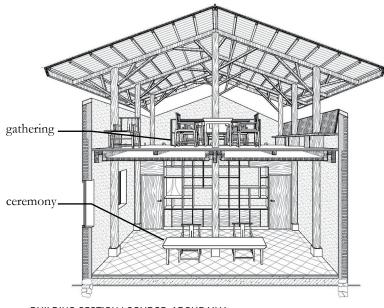
The ground level is a tea tasting room, where the focal point is a walnut tea table for gathering, which sits among fir beams, columns, and built in shelving units.

Upstairs, the fir covers the entire space, floor, ceiling, columns, furniture, and structural elements. The focal point becomes the view created from lifting the roof away from the walls, to create a crown atop the old house. The builders built with an old look in a traditional method in order to support both locality and modernity.









BUILDING SECTION | SOURCE: ARCHDAILY



With the roof lifted off, the Tea House becomes like a lantern at night, shining light from its open spaces.

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PRECEDENT TAKEAWAYS

One unifying factor that ties together these 3 projects is a focus on one materiality that takes hierarchy over any other finishes in the space. In WakuWaku, untreated wood speaks to the company's dedication to sustainably sourced products. The wood panels dominate the interior and are used in flooring, seating, shelving, and tabletops.

In the Qimen Black Tea House, fir wood is prominent across the small space. The upper level utilizes fir on every surface - flooring, seating, walls, and ceiling are crafted out of fir, while the first level incorporates fir beams, columns, and built-in shleving.

In SPAR, the undulating wood slats that dominate the interior architecture form the walls, ceilings, and displays.

The deliberate use of limited material allows the product and the program to shine in each of these precedents. By committing to a dominant material and language, each space allows products to become the focal point among a singular material, or elevate the participants in the program to the visual diversity in the space.

Although these spaces span a large spectrum in terms of square footage, each offers important information on how space can be utilized.

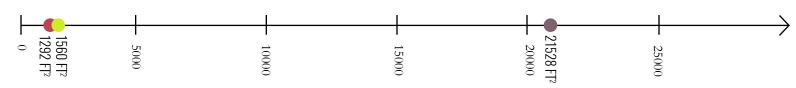
Each space uses built in shelving to display products. In WakuWaku, product display shelving and refrigeration spans an entire wall and wraps onto the back wall. In the Tea House, one wall is also dedicated to built-in shelving, with lights incorporated into the architecture to illuminate the items on the shelves. In SPAR, the wine section is particularly interesting, as ceiling slats come down to form built-in shelving in regular intervals.

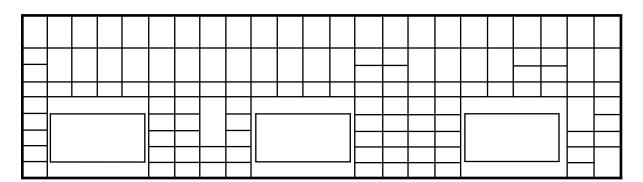
WakuWaku is the most similar to the thesis building selected, in terms of space and the footprint of the space. Both spaces are long and narrow. WakuWaku provides insight in how to provide circulation, seating, and display space within a narrow space.

SPAR provides insight in how to create pockets of space that fit into the language of the overall space, but feel distinctly different from one another.

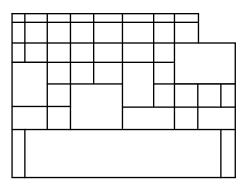
SOUARE FOOTAGE

- QIMEN BLACK TEA HOUSE
- WAKU WAKU
- SPAR





BUILT IN SHELVING AND REFRIDGERATION | WAKU WAKU



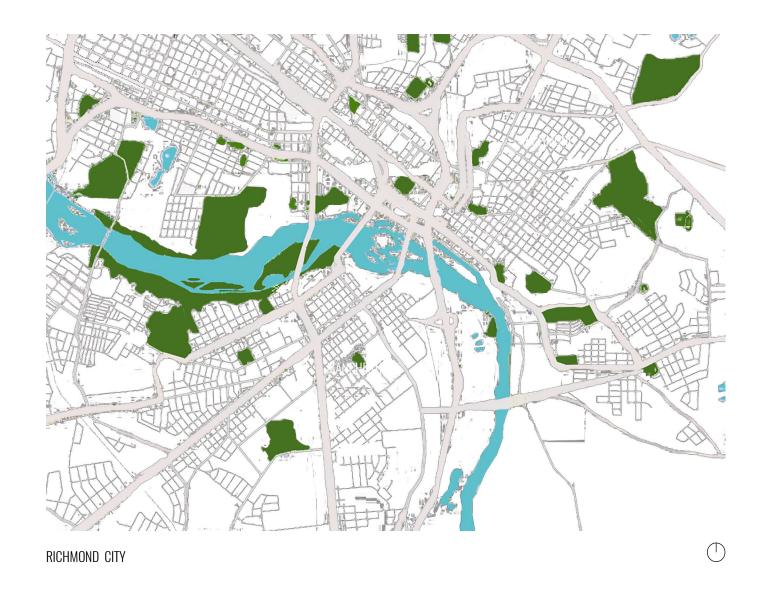
BUILT IN SHELVING | TEA HOUSE

20 PRECE

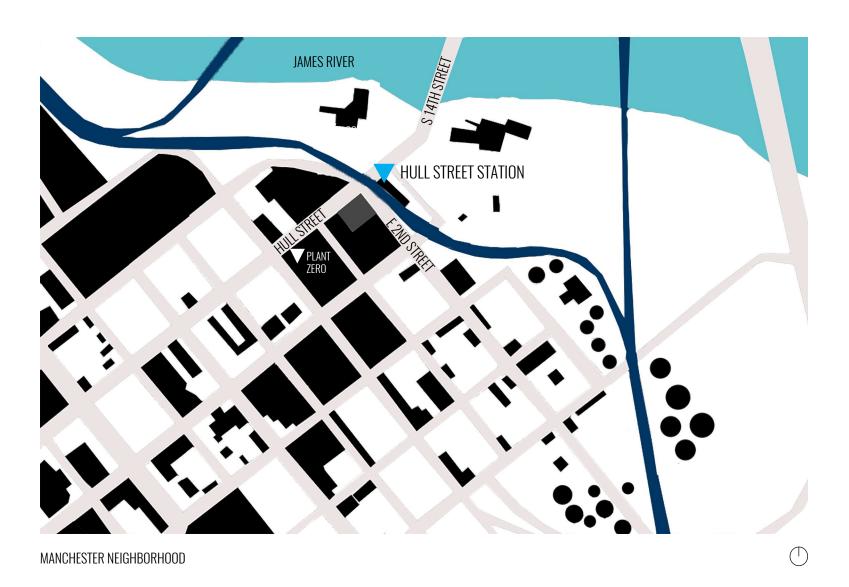


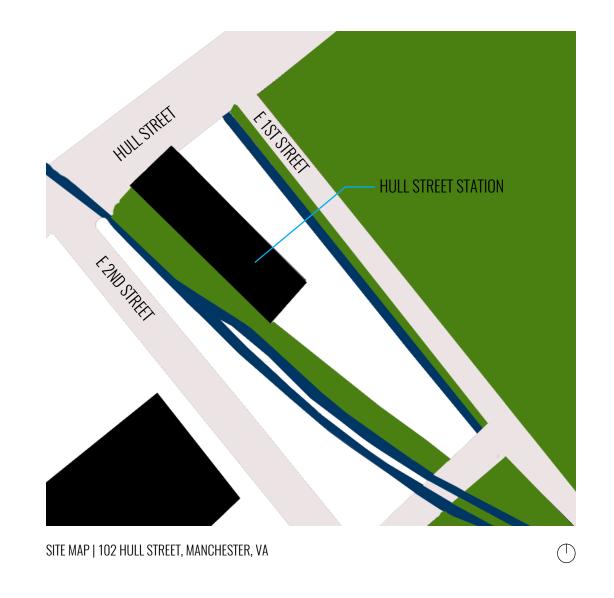
SITE DOCUMENTATION

22



SITE DOCUMENTATION 23





24 SITE DOCUMENTATION 25



MANCHESTER DISTRICT

The native name of the Manchester District land was Manastoh, but was renamed Rocky Ridge by the English. In 1769, the area was named Manchester when it was incorporated as a town. In 1874, Manchester was incorporated as a city, and it was merged with Richmond city in 1910.

This district was home to the tobacco industry before the Revolutionary War, then known as a major slave market. It was a successful dock city from the 17th through 19th centuries.

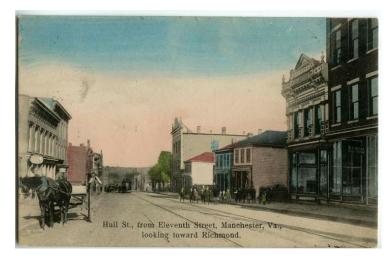
In more recent history, Manchester has been defined by high levels of crime and drugs, but has been going through a massive over-haul. Developers have been re-purposing old factory buildings into lofts, or demolishing existing buildings to create brand-new apartments. Manchester is lacking the abundance of restaurants and third spaces that the city north of the river is known for. However, art galleries, festivals, breweries, and other small businesses have been steadily cropping up.

Manchester is considered a neighborhood of Richmond, with a number of historic buildings and landmarks, including the Slave Trail, the Manchester Courthouse, and a number of historic houses. It is industrial, with many large, old factories and warehouses defining the area. The skyline is dominated by the Southern States silos. The district is bordered by Perry Street, the James River, Mayo Bridge, Maury Street and 10th Street.

US Routes 1, 60, 301, 360, and Interstate 95 cross the James from Richmond into Manchester. The Lee, Mayo, and Manchester bridges connect Manchester and the financial district of Richmond. Belle and Mayo Isles, Floodwall Park, and Ancarrow's Landing are a few nodes defining this district.



MANCHESTER | SOURCE: SOUTHSIDERICHMOND.ORG



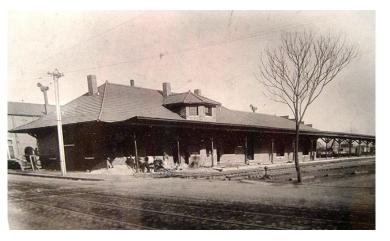
HULL STREET, MANCHESTER | SOURCE: SOUTHSIDERICHMOND.ORG



HULL STREET STATION

The Hull Street Station was built in 1915. It is a 5,346 square foot single-story brick building located at the end of the 14th Street Bridge. It once served as one of three major train depots in Richmond. The Hull Street Station saw its last passenger train leave in February 1957.

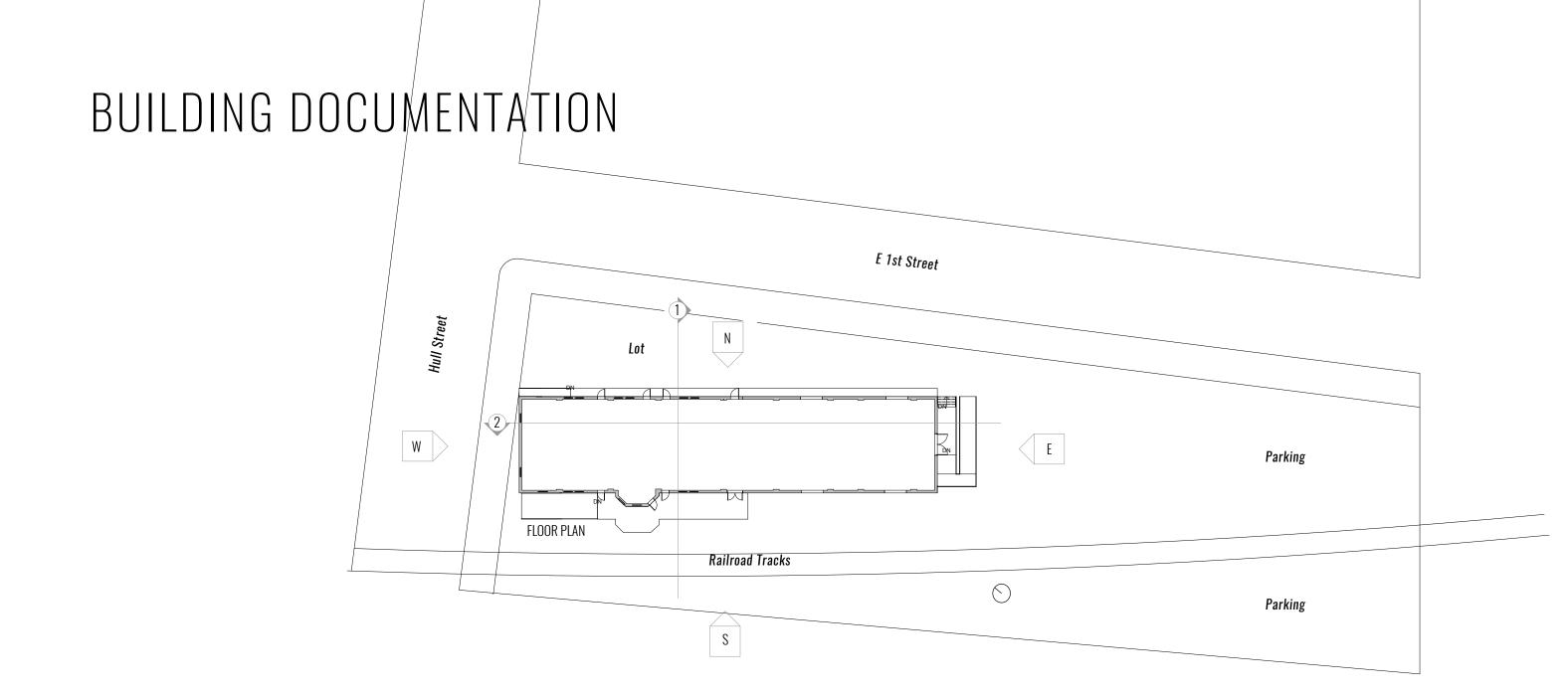
After closing down as a train station, the depot was used for storage space and experienced much damage due to flooding of the James River. It has since been protected by the flood wall. In 1982, the Southern Railway donated the building to the Old Dominion Chapter of the National Railway Historical Society. The ODC renovated the building and opened it as the Richmond Railroad Museum event space in 2011.

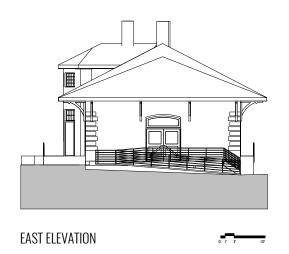


HULL STREET STATION | SOURCE: RICHMONDRAILROADMUSEUM.ORG



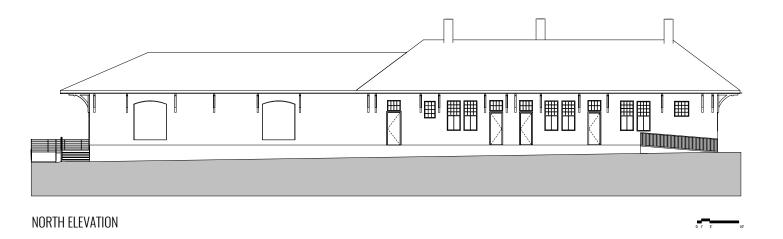
RICHMOND RAILROAD MUSEUM

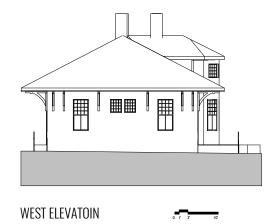




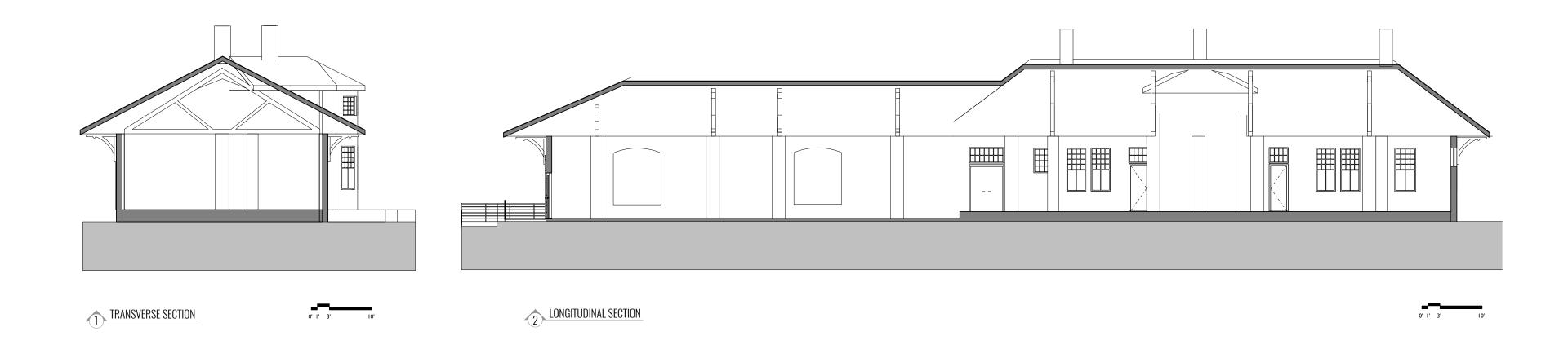
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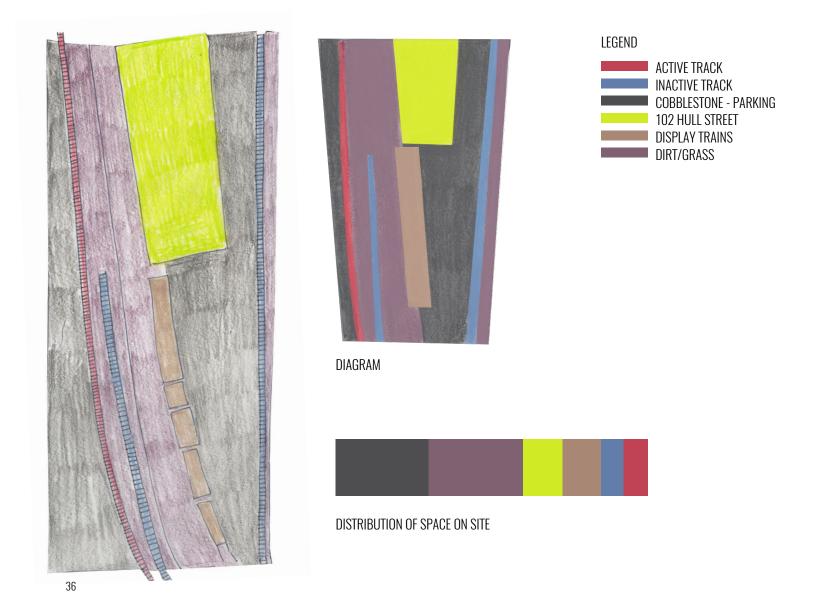


BUILDING DOCUMENTATION 33

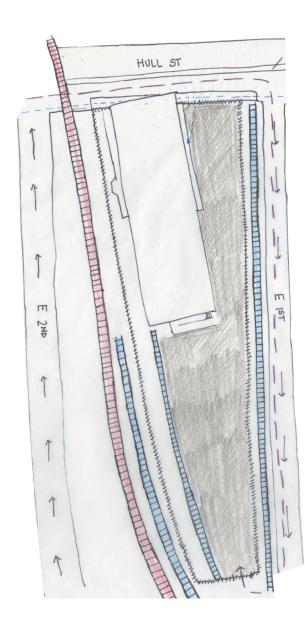


34 BUILDING DOCUMENTATION 35

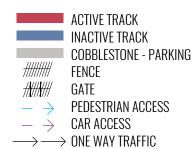
BUILDING CONTEXT



BUILDING ACCESS



LEGEND



PHOTOGRAPHIC STUDIES





AUTUCE STITUTES 30





EXISTING EXTERIOR + SITE MATERIALITY











EXISTING INTERIOR MATERIALITY









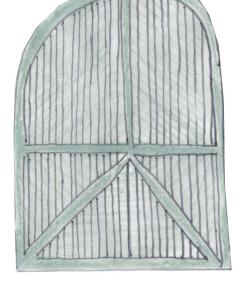




ROOF SHINGLES







PAINTED WOOD DOORS

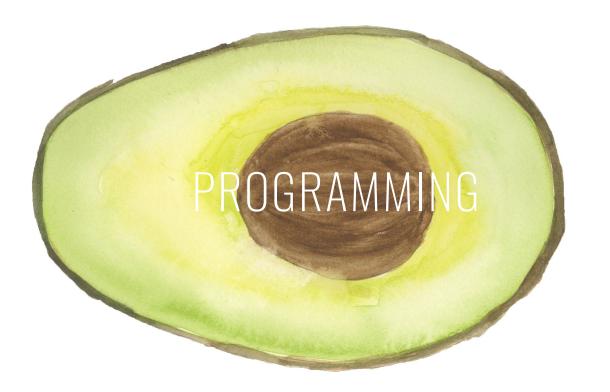


BRICK WALLS INTERIOR + EXTERIOR



ORIGINAL WOOD FLOORING

44 BUILDING DOCUMENTATION 45



COMMUNITY GARDEN

Purpose: Grow food for sale in the store; Teach gardening skills to community; Provide social opportunities

Description: An urban garden fostered by community members and expert gardeners to provide social opportunities, food, and physical activity

When is it used: During daylight hours for educational and gardening purposes

Adjacencies: Kitchen

FF&E: Gardening equipment; Gardening beds; Benches; Shelves; Locking outdoor storage

Visual privacy: Very little visual privacy (outside, no fence); Visible from inside of

Acoustic privacy: Very little acoustic privacy

Physical privacy: Very little physical

privacy

Who uses the space: Community members who want to garden; Gardeners on staff

Ideal number of occupants: 10 participants; 1 staff member

COMMUNITY CAFE

Purpose: Eating space; Social space; Education

Description: A social space where shoppers can relax, eat, socialize and enjoy educational events

When is it used: During the day and evening as both a cafe and an education space.

Adjacencies: Prepared foods

FF&E: Tables; Chairs; Counter; Trash Cans

Visual privacy: Little visual privacy

Acoustic privacy: Somewhat private

Physical privacy: Minimal physical privacy from the rest of the store

Who uses the space: Community members

of all ages

Accessibility: Accessible

Occupancy type: A2

Ideal number of occupants: 83

Net area: 1295 ft² Number of exits: 2

KITCHEN

Purpose: Prepare foods for consumption; Provide a cooking education space

Description: A commercial-grade kitchen that doubles as a teaching kitchen

When is it used: During store hours for preparation; after store hours for education

Adjacencies: Prepared foods; Garden; Cafe

FF&E: Commercial-grade equipment; Table and stools for education

Visual privacy: Almost completely private from the rest of the store; Window on door to kitchen

Acoustic privacy: Acoustically private from the rest of the store

Physical privacy: Physically private from the rest of the store

Who uses the space: Education

participants; education staff
Accessibility: Accessible
Occupancy type: A2

Ideal number of occupants: 1-2

instructors; up to 18 participants.

Net area: 1050 ft² Number of exits: 1



MARKET [FOOD AISLES]

Purpose: Provide food for purchase

Description: Aisles that provide sight lines across the store house packaged and dry foods, produce, meat, diary, and frozen goods

When is it used: During store hours Adjacencies: Check out; Customer service

FF&E: Shelves; Display cases

Visual privacy: Little visual privacy **Acoustic privacy**: Little acoustic privacy

Physical privacy: Somewhat physically

private between aisles

Who uses the space: Shoppers, the staff

Accessibility: Accessible

Ideal number of occupants: 34

Net area: 2030 ft² Number of exits: 2

Occupancy type: M

PREPARED FOODS

for purchase to consume later

Description: Two bars provide both hot and **Description**: 4-5 check out lanes house cold convenient, healthy food that is ready to eat in the cafe or take home

When is it used: During store hours

Adjacencies: Food aisles

FF&E: Hot bar; Refrigerated bar

Visual privacy: Little visual privacy **Acoustic privacy**: Little acoustic privacy

Physical privacy: Little physical privacy

Who uses the space: Shoppers; Kitchen

Accessibility: Accessible

Occupancy type: M

Ideal number of occupants: 3

Net area: 175 ft² Number of exits: 2

CHECK OUT

Purpose: Food for consumption in cafe.; Food **Purpose**: Main station for staff; Customers purchase food; Customer service center

> the main station for staff and a place where customers can purchase food and ask questions

When is it used: During store hours

Adjacencies: Food aisles

FF&E: Check out counters; phones; cash

registers

Visual privacy: No visual privacy

Acoustic privacy: No acoustic privacy

Physical privacy: Physical separation between staff members and public.

Who uses the space: Shoppers; staff

members.

Accessibility: Accessible

Occupancy type: M

Ideal number of occupants: 3 people

Net area: 145 ft² Number of exits: 2

CUSTOMER SERVICE

Purpose: Customer questions or concerns directed here; Central information

Description: A desk area where customers can direct questions, make returns, or get information about the store and educational activities; Volunteers or community members use this as a starting point to gain information

When is it used: During store hours

Adjacencies: Administrative offices, check out

FF&E: Chair: Built - in desk

Visual privacy: No visual privacy, very evident

Acoustic privacy: Not acoustically private

Physical privacy: Person(s) behind the desk has a bit of physical privacy, certain drawers can

Who uses the space: Store staff; Volunteers:

Customers: Community members

Accessibility: Accessible Occupancy type: M

Ideal number of occupants: 2 staff

members at a time, 3 shoppers

Net area: 145 ft² Number of exits: 2

BACK ROOM

Description: A warehouse type area where **Description**: Office space that houses incoming foods can be organized and kept at ideal conditions to avoid spoiling

When is it used: During store hours

Adjacencies: Food aisles FF&E: Shelves, refrigerated area

Visual privacy: Completely visually private

Acoustic privacy: Completely acoustically

Physical privacy: Physically private from the rest of the store.

Who uses the space: Staff members

Accessibility: Accessible Occupancy type: M (Storage)

Ideal number of occupants: 3 people

Net area: 300 ft² Number of exits: 2

Purpose: Store food supplies to be sold in the **Purpose**: Space to manage operations; Space for staff to take breaks

> operational staff and provides a place for staff away from customers, for meetings or taking

When is it used: Standard business hours Adjacencies: Customer service desk

FF&E: Desks; Chairs; Table

Visual privacy: Completely visually private Acoustic privacy: Completely acoustically

private

Physical privacy: Physically private from the rest of the store.

Who uses the space: Staff members **Accessibility**: Accessible

Occupancy type: B

Ideal number of occupants: 7

Net area: 656 ft² Number of exits: 1



SENSORY EXPERIENCES

MARKET [FOOD AISLES]

Linger; Explore; Intuitive Path

Visually captivating displays cause lingering; Interesting construction of shelving; Signage incorporated into language of market; Well lit through large windows and artificial lighting.

CUSTOMER SERVICE

Welcoming: Approachable
Immediately apparent where to walk; Sight lines from market to customer service; Sculptural counter; Well-lit.

CHECKOUT

Welcoming: Approachable
Immediately apparent where to walk; Sight lines from market to checkout; Sculptural check out counter; Well-lit.

COMMUNITY CAFE

Feelings: Cozy; Welcoming; Relaxed; Informal; A Meeting Place
Warm wood tones; Soft fabrics; Intimate seating options; Furniture
that can be easily moved and rearranged to accommodate different
groups; Casual seating options as well as cafe chairs and tables; Views
into kitchen.

COMMUNITY GARDEN

plates, forks, serving spoons, lids).

PREPARED FOODS

Feelings: Approachable: Sight lines from the areas that approach into the garden.

Enticing; Aromatic; Clean; Straightforward; Organized

Custom food displays; Path encourages a walk by this area through

place specially designated for each utensil and material needed (i.e.,

materiality and layout; Durable and easily cleaned materials; A specific

ADMINISTRATIVE OFFICE

KITCHEN

Clean; Organized; Quiet; Formal

Built-in shelving, drawers, furniture; Lots of natural light; Comfortable furniture with support and soft fabric; Deep colors; Easily cleaned and durable materials.

Bright; Clean; Approachable; Discovery
Reflective surfaces; Reveals into Cafe; Intuitive information about where items and ingredients are stored; Cool metal work stations; Well-lit through windows and artificial lighting.



CODE SUMMARY

PLUMBING + RESTROOMS

Women: 74 women occupying building
Accessible restroom fixtures: 1 watercloset

Lavatories: 1

Men: 74 men occupying building

Accessible restroom fixtures: 1 watercloset

Lavatories: 1

Water fountains required: 1 standard height, 1 ADA

BUILDING + OCCUPANCY

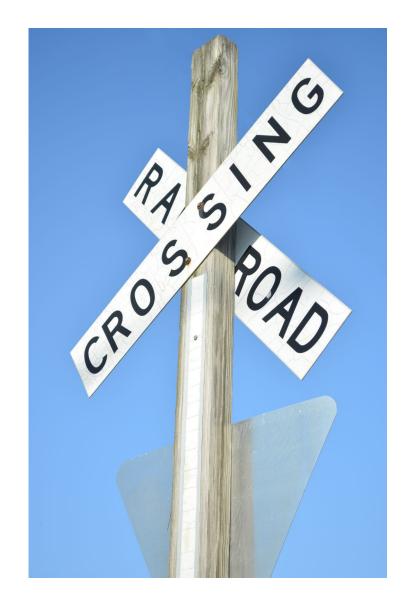
Type of construction: Type III

Total gross area: 5346 square feet

Efficiency ratio to be used: 90%

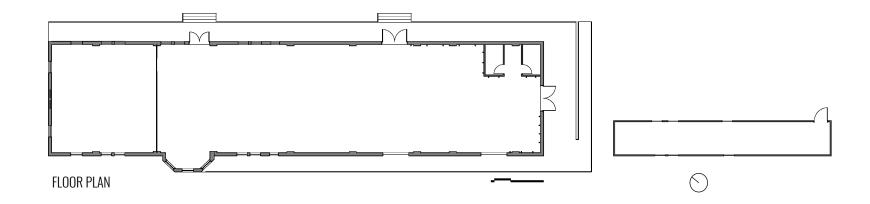
Total net area: 4725 square feet

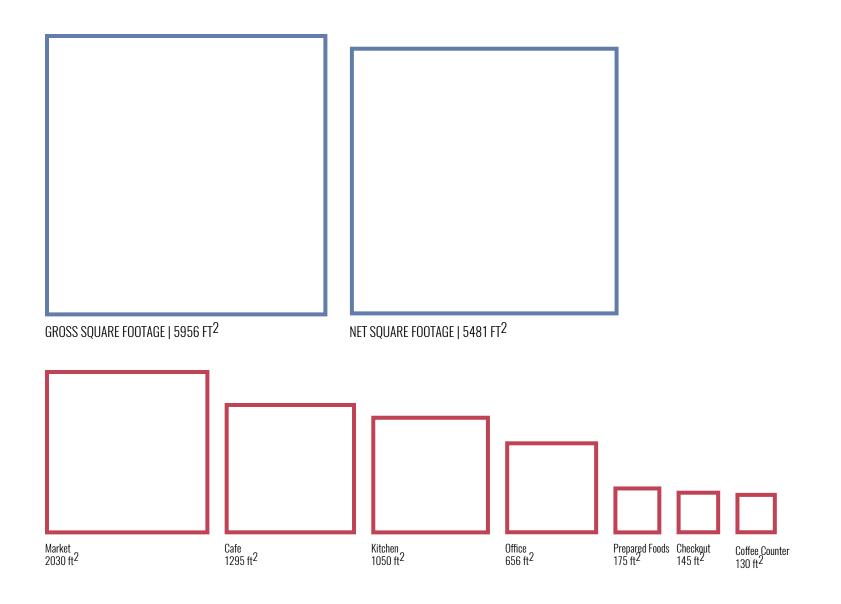
Total number of occupants: 148



52 CODE SUMMARY 53

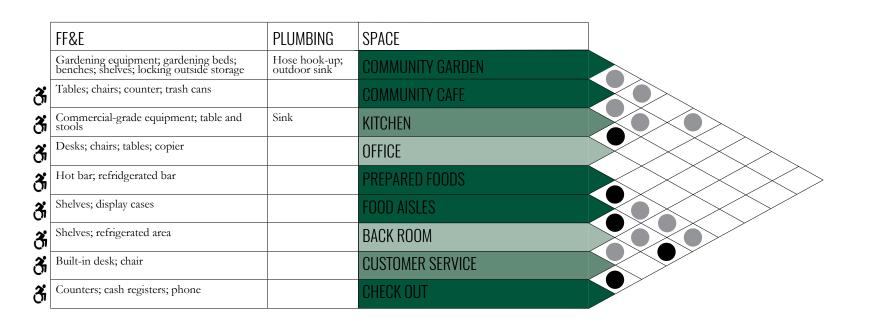
GRAPHIC PROGRAM

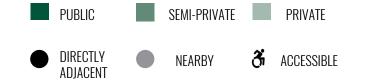




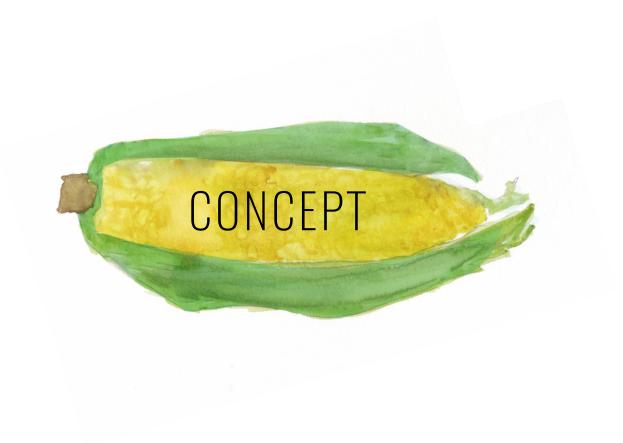
54 GRAPHIC PROGRAM 55

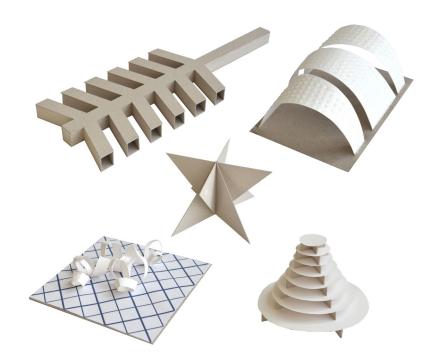
ADJACENCY MATRIX





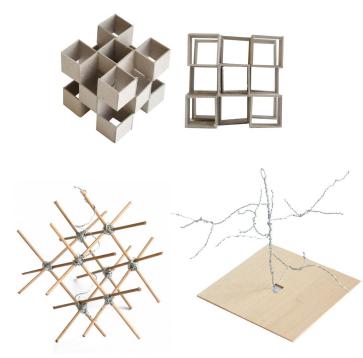
56 ADJACENCY MATRIX 57





FIRST STEP OF CONCEPTUAL INVESTIGATION: LIFE THRIVES IN A DESERT

The beginning of the concept work drew a connection between food deserts and the desert ecosystem. Despite being a harsh environment, plants and animals that live in the desert use specific strategies to thrive. The survival strategies of various animals, insects, and plants were used as inspiration to guide the concept work.

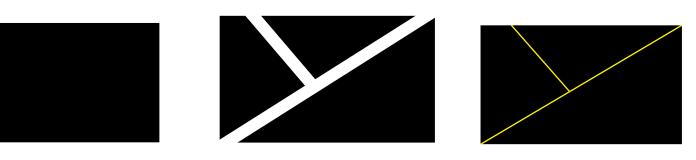


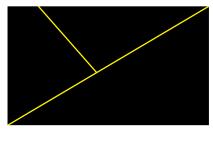
NEXT STEP: LIFE THRIVES BECAUSE OF CONNECTION

As the desert was studied, it became clear that specific structures and systems were crucial to survival. The next iteration of concept work honed in on root systems that nourish plants, as well as webs. The language of delicate strength in webs was of particular interest.



AN OBJECT





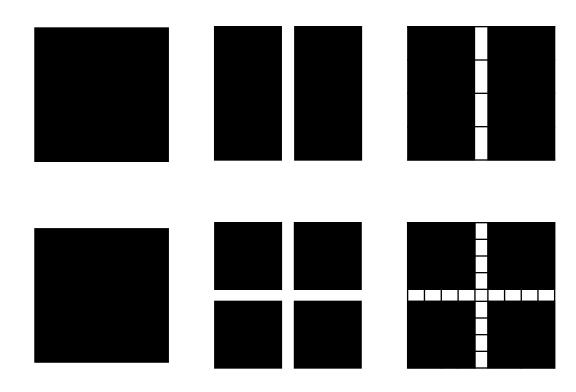
A BREAK

A HEALING

FINAL STEP: KINTSUGI

As the connective system concepts were more deeply explored, an emphasis on the connection rather than the system was important. Kingsugi is a Japanese method of repairing broken objects, and reflects a broader philosophy of treating breakage and repair as an important part of the history of an object, rather than something that must be hidden.

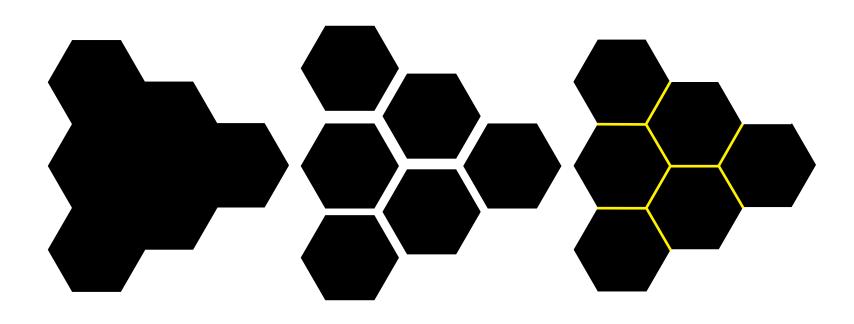
What becomes celebrated is the connection that repairs broken pieces of pottery, so rather than diguising damage, a lacquer dusted or mixed with powdered gold highlights exactly where breakage has occured. This mending process tells a story, and showcases the connection that brings the pottery back together.



DIAGRAMS: EMPHASIS ON THE CONNECTION POINTS IN REPAIR

CONCEPT STATEMENT

This project celebrates connections, with an emphasis on the philosophy behind the Japanese mending technique Kintsugi, in which broken items are repaired with a gold-dusted lacquer. Rather than concealing, the connections that bring things together are revealed.



BREAK

HEALING

OBJECT



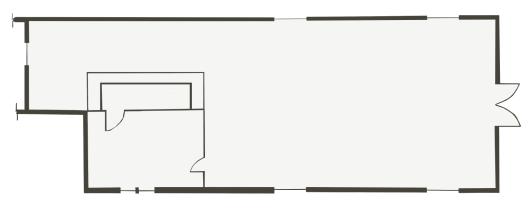


Kintsugi Concept Models

Exploring the way that separations or breaks create new connection points and provide opportunities for light, a change in materiality, and visual interest.

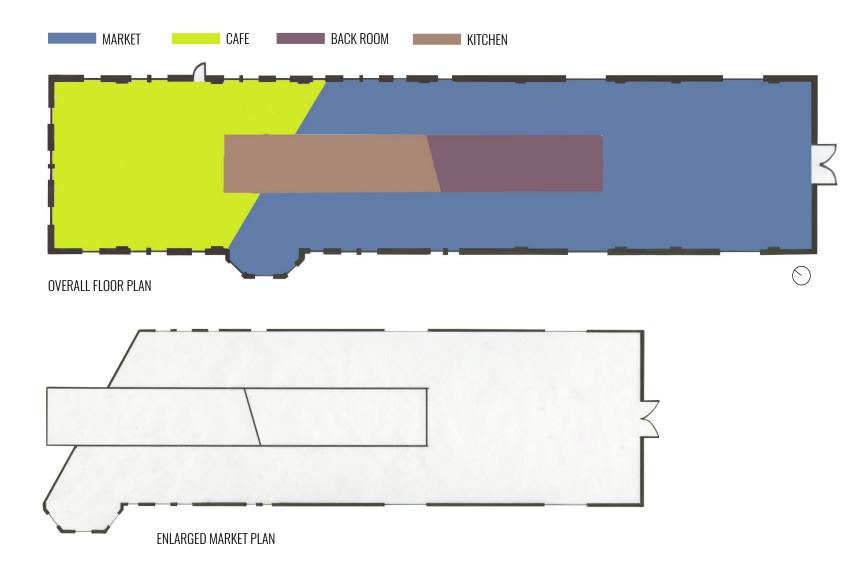
SCHEMATIC DEVELOPMENT: MARKET FEBRUARY 19





These first two iterations of market design experimented with the relationship between the market and the back room. In the plan on the left, the back room was integrated with the check out counter. On the right, the market surrounded the back room, which also connected to the kitchen.

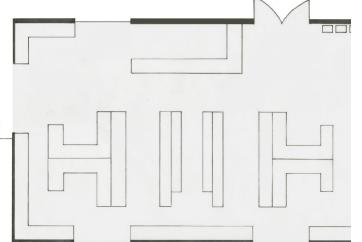




SCHEMATICS 67

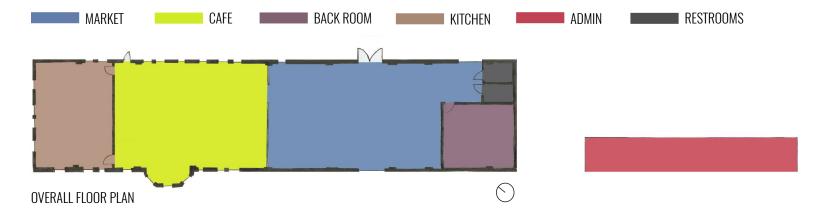
MARCH 19 MARCH 26

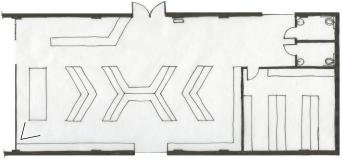




ENLARGED MARKET PLAN

At this stage, shelving design became a critical factor in the market plan. At first, on the left plan, the shelves were arranged orthogonally, which then developed into the diagonal shelving seen on the right plan. The intent of the angeled shelving was to create a rhythm and a sense of exploring throughout the market.





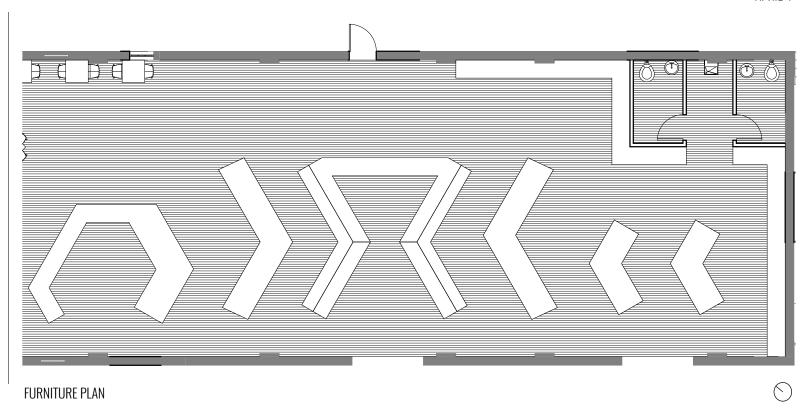




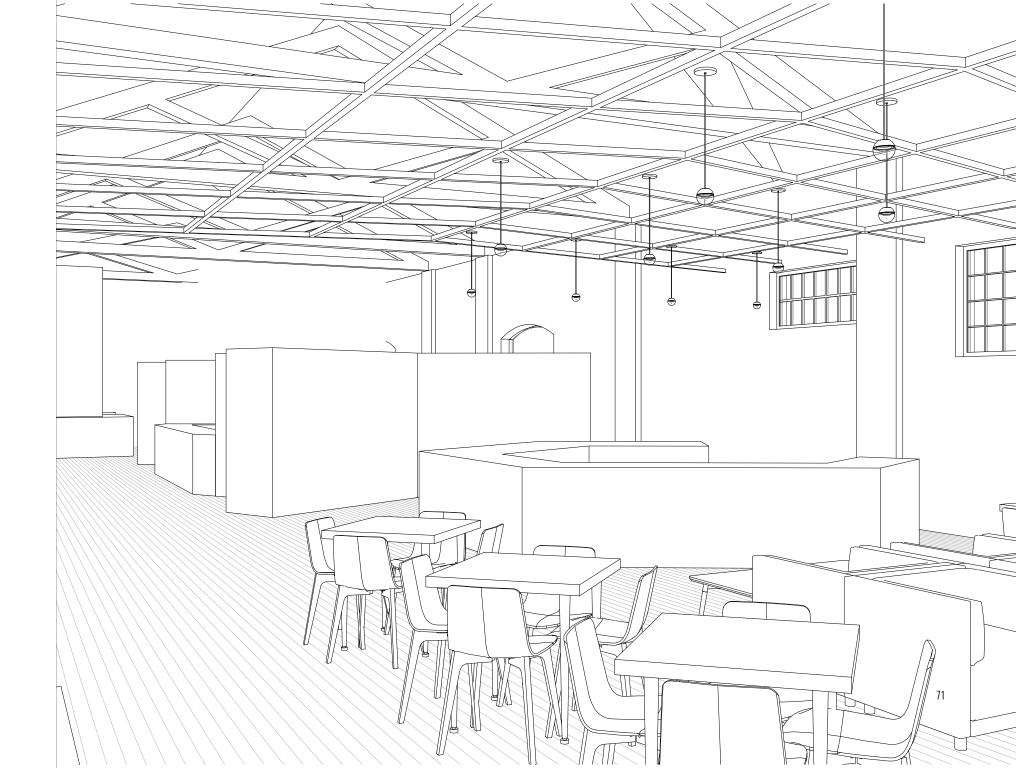
MARKET PERSPECTIVE

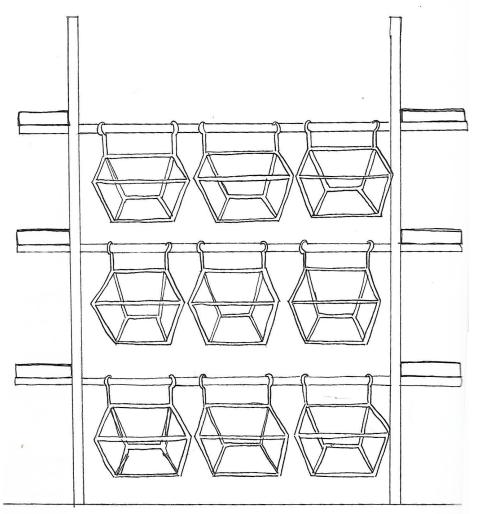
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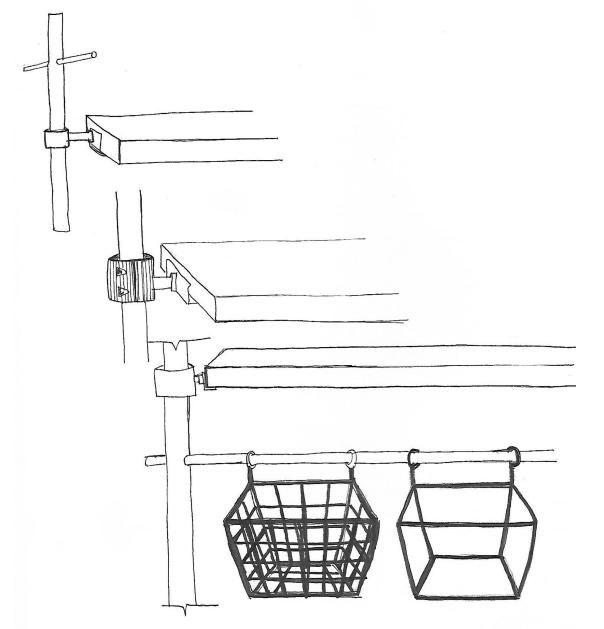
This design continued using the diagonal shelving units, with the checkout counter centered within shelves, and directly across from the entry into the market. The coffee counter straddled the connection between the cafe and the market, and also followed the same angle as the shelves. Produce display wrapped around the outer walls to provide as much storage as possible. The perspective on the right shows the view from the cafe, past the coffee counter, into the market.





These preliminary shelving design sketches emphasized

connection points. Every point that connected was highly articulated, including the shelves connections to the vertical rods as well as the basket's connection to the horizontal rods. The overall design in plan was orthogonal, with the shelving running parallel and perpendicular to the existing walls of the building.



SHELVING DETAIL ELEVATION

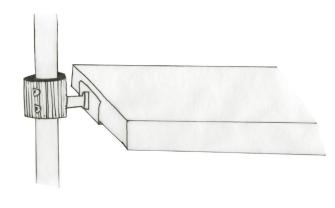
72

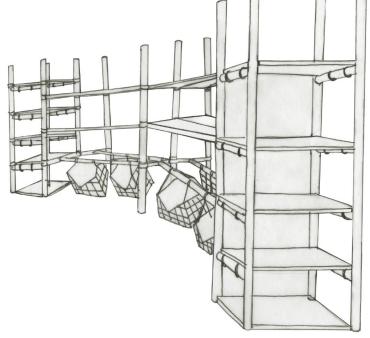
MARCH 26 MARCH 26

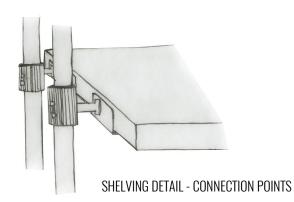


SHELVING DETAIL - PLAN VIEW

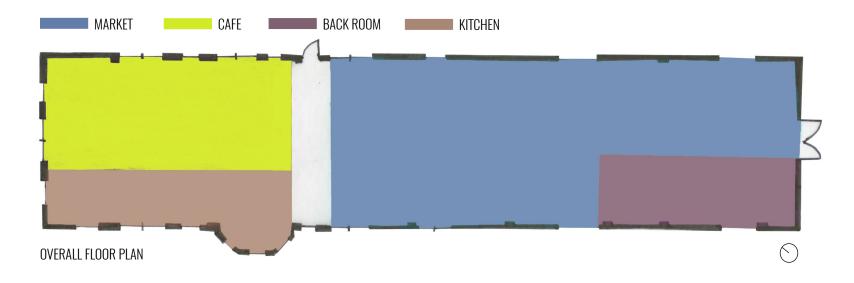
This next iteration of shelving design broke away from the orthogonal layout of the previous sketches, instead forming diagonals to introduce a new rhythm and path in the space. The highly articulated connection points remained constant.

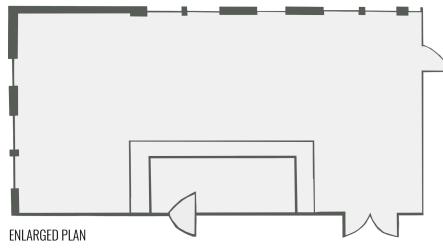




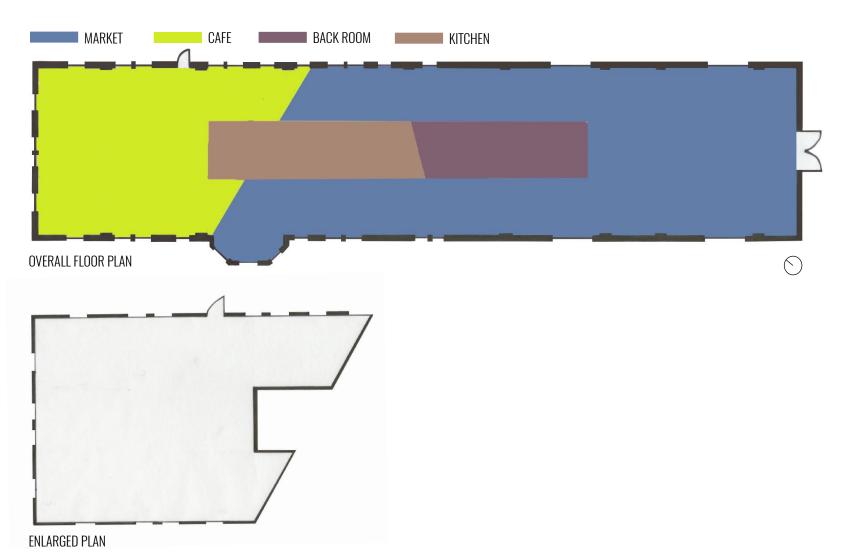


SCHEMATIC DEVELOPMENT: CAFE FEBURARY 19





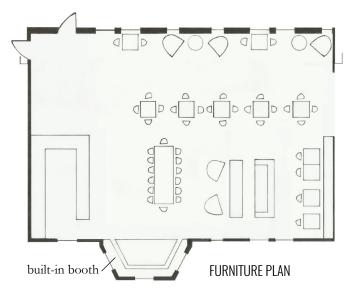
The cafe design began with experimenting with a connection to the kitchen behind the serving counter, as seen on the left. The next iteration, on the right, explored a connection that had an overlap between kitchen and cafe that created a more interesting shape.



SCHEMATICS 77

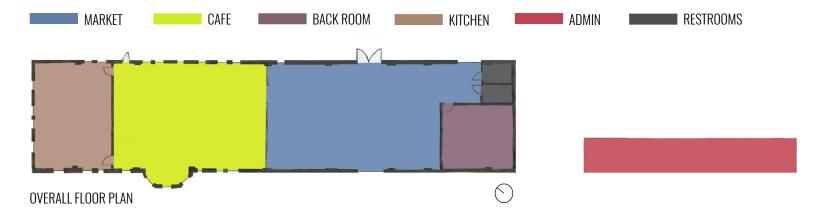
MARCH 19 MARCH 26

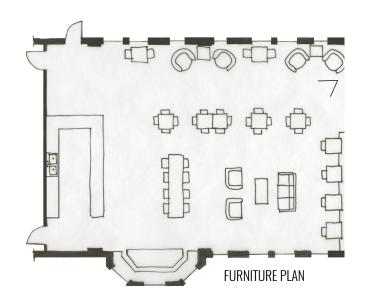




The next iteration of the cafe, seen on the left, was a push to include a variety of seating: lounge, booths, and tables. The coffee counter could be seen immediately as customers entered the space.

The furniture plan seen on the right explored a connection between serving area and kitchen, while also continuing to explore the different ways seating could be arranged.

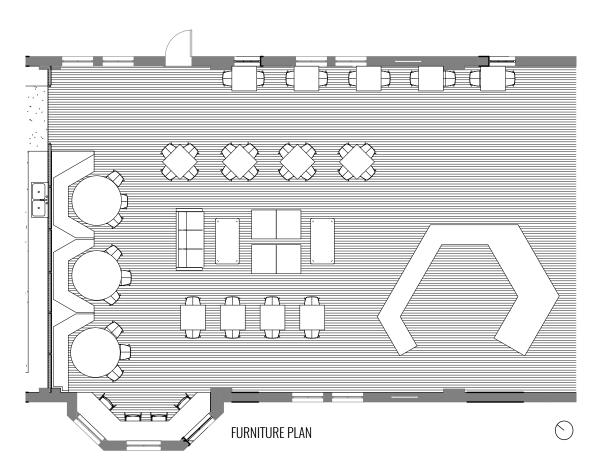






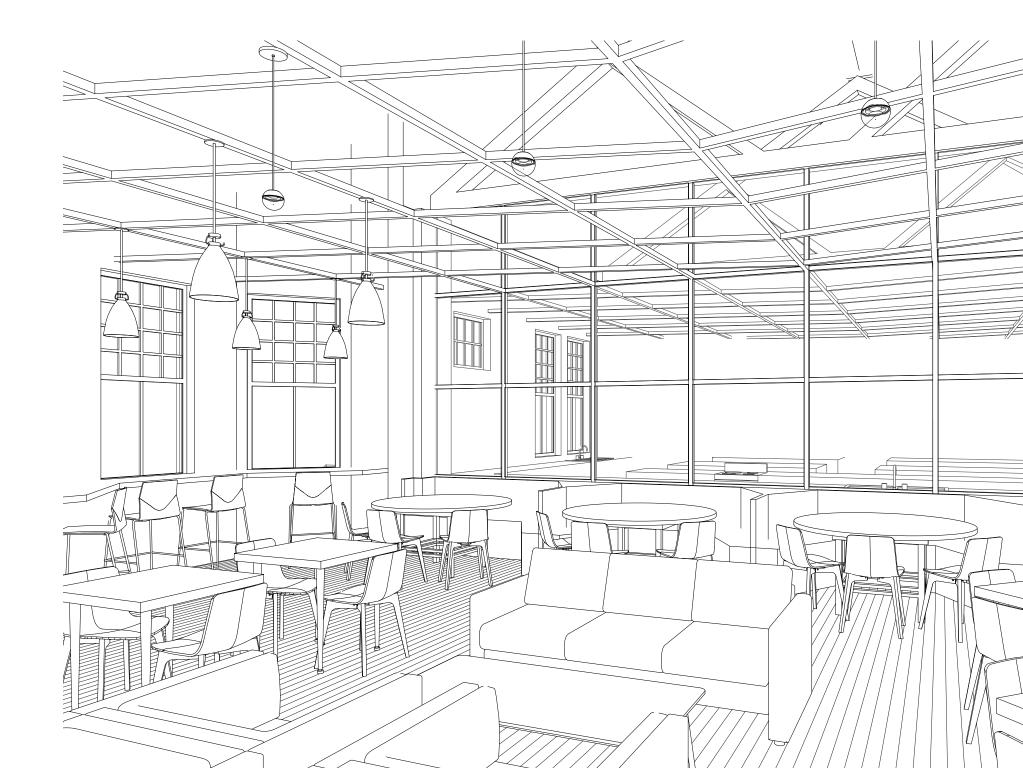
CAFE PERSPECTIVE

SCHEMATICS 79

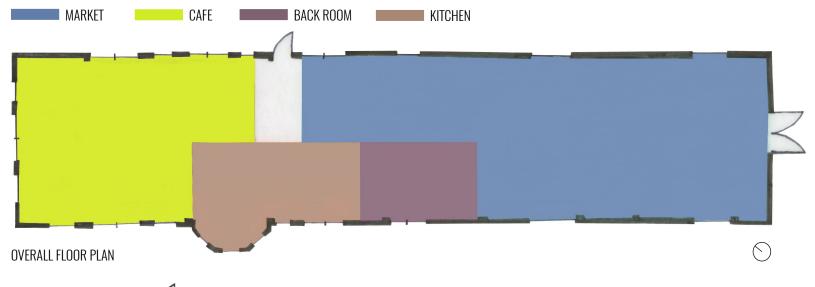


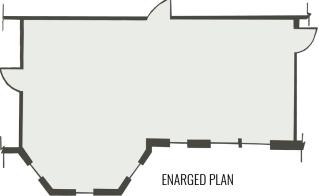
APRIL 4

In this iteration, the coffee counter responded to the shape of the shelves in the connecting market and served as a bridge between the market and cafe. Booth seating was flipped to the wall that the cafe and kitchen share, to allow for unbroken sight lines between market and cafe. More lounge seats were introduced, and a counter-height bar took the place of a built-in booth in the window nook. The perspective on the right shows the glass wall that was designed to connect the kitchen and cafe visually, while still providing some acoustic separation.



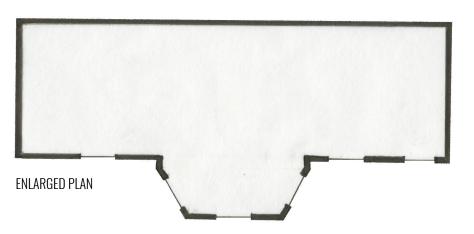
SCHEMATIC DEVELOPMENT: KITCHEN FEBRUARY 19 FEBRUARY 28





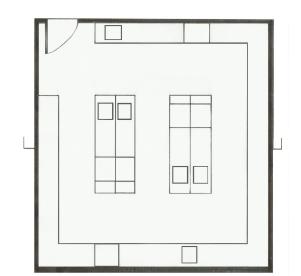
The first designs of the kitchen explored different placements in the building. The plan on the left shows he kitchen straddling the market and the cafe, as well as being the first thing people see as they enter the space. The plan on the right shows the kitchen and cafe overlapping to a great degree, while it also shares back room storage with the market.





SCHEMATICS 83



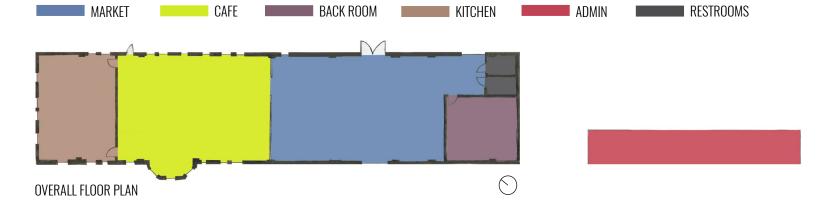


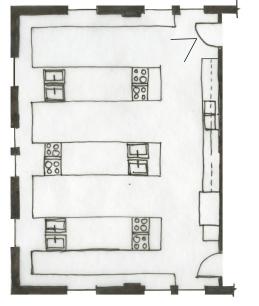
OVERALL FLOOR PLAN

On the left plan, the kitchen and cafe moved to the east side of the building. The kitchen included 4 learning stations as well as counters around the edges.

On the right plan, the kitchen and cafe occupied the west portion of the building. The 4 learning stations became 6, and the stations all connected to the outer wall.

MARCH 19 MARCH 26







KITCHEN FLOOR PLAN

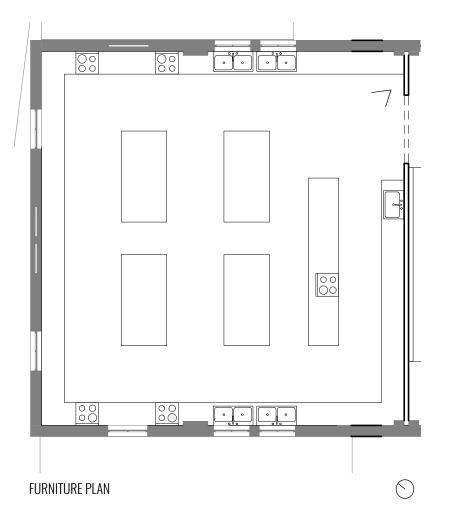
KITCHEN PERSPECTIVE

84

FURNITURE PLAN

SCHEMATICS 85

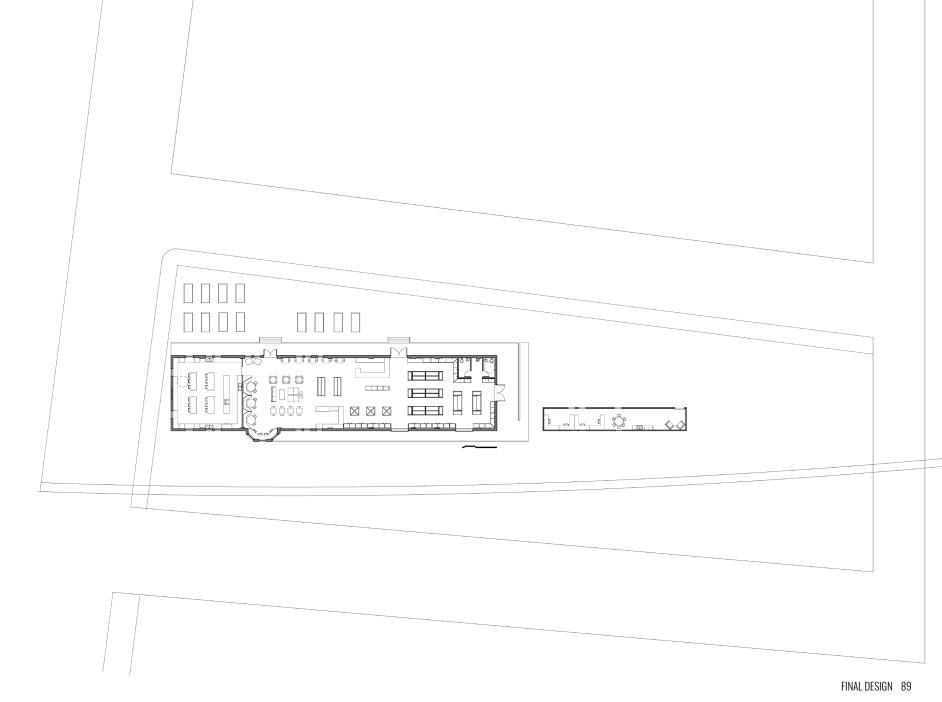


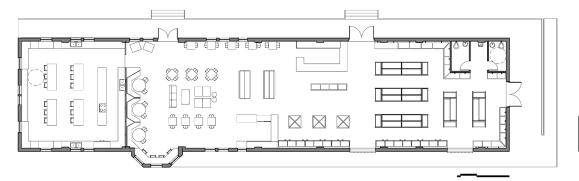


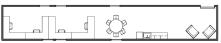
The kitchen continued to occupy the west side of the building in this next iteration. The learning stations were pulled away from the wall to face a centralized teaching station. The perspective on the right shows the view upon entering the kitchen, behind the teaching station.



FINAL DESIGN

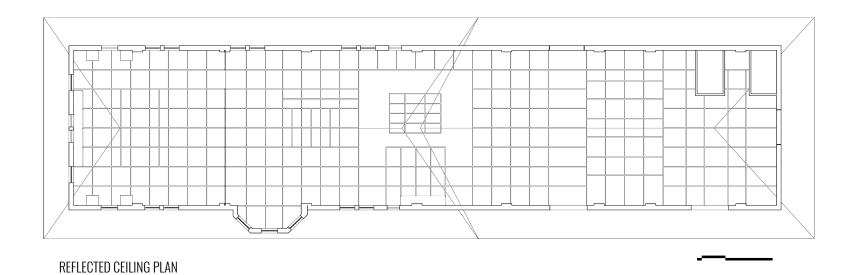




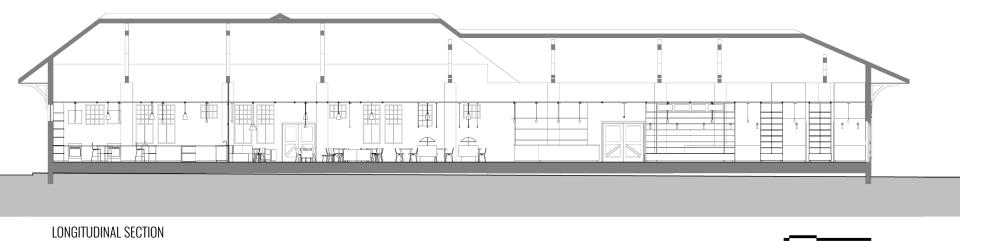


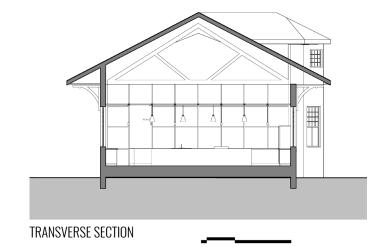
FURNITURE PLAN

In the floor plan, there is a fluid connection between the areas central to the program, while the less signifiant administrative area occupies an existing train car on site. The finalized reflected ceiling plan displays the grid that spans the entire space.



FINAL DESIGN 91





92 FINAL DESIGN 93

URBAN GROCERY DESIGN



KITCHEN

The kitchen space provides teaching and learning spaces. Community members of all ages are invited to join food prepation and cooking classes that teach about techniques and balanced meals. Exposure to a wide variety of foods and simple-to-follow information abut what constitutes a healthy lifestyle are key experiences to provide to food desert neighborhoods.

A glass wall connects the kitchen visually with the rest of the space, with views directly into the cafe. A large ceiling grid provides space for hanging storage, while lights drop from the ceiling piece, with the emphasis on connection between the mullions of the glass wall and the ceiling grid. Each learning station is a custom stainless steel piece with stools that can accomodate both standing and seated participation.



Continental Slate Porcelain Tile Asian Black Daltile



Stainless Steel



Brown's Point Richlite









Caravaggio Matte Pendant Lamp Hightower



Four Cast'2 High Hightower



CAFE

The cafe is the central gathering and social space. A variety of seating options includes a bar-height counter, built-in booths for larger groups, smaller tables for individuals or small groups, a couch or lounge chairs. The floors that flow between the market and cafe are porcelain tiles laid in a herringbone arrangement.

Two prepared foods bars, one with hot foods and one with cold foods, sit by the coffee counter, where drinks and pastries are sold. The ceiling grid that passes through from the kitchen interacts with the mullions on the glass wall, then continues on to the market space.





Alter Ego Charcoal KnollTextiles



Sierra Bastille Tiger Leather



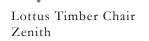
Cloudburst Concrete Caesarstone



Brown's Point Richlite









PLC Bistro Table Davis



Bank 80" Sofa Blu Dot



Skirt Eureka



Free Range Side Table Blu Dot



Teton Table Hightower



Krefeld Lounge Chair Knoll



Bello Coffee Table Hightower



MARKET

The market encompasses the mission of the space to provide healthy, accessible fresh food to a food desert community. The custom shelving is crafted from Richlite and stainless steel, with highly articulated connection points. The shelves connect to the ceiling grid and span the distance from the ceiling grid to the floor. Signage is incorporated into the custom shelving units, while lights hang from the ceiling grid.

The wood planks and herringbone pattern porcelain floors continue from the cafe into the market. Large windows provide views into the outdoor vertical gardens.



Brown's Point Richlite



RetroSpace Modern White Daltile



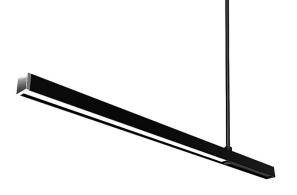
Cloudburst Concrete Caesarstone







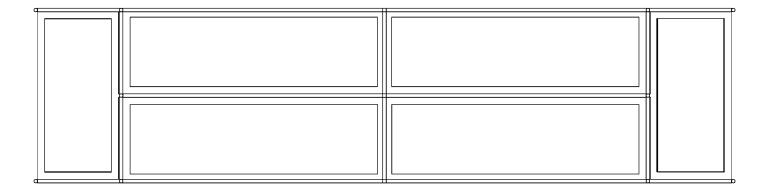
Bestlite BL7 Wall Sconce By Robert Dudley Best



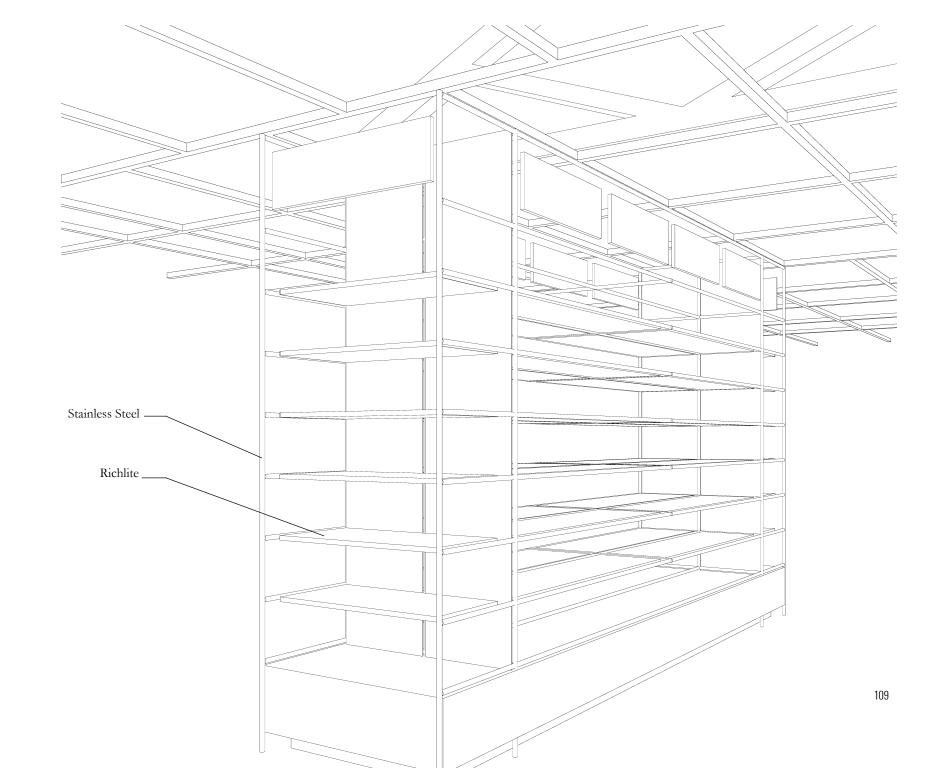
Switch Eureka

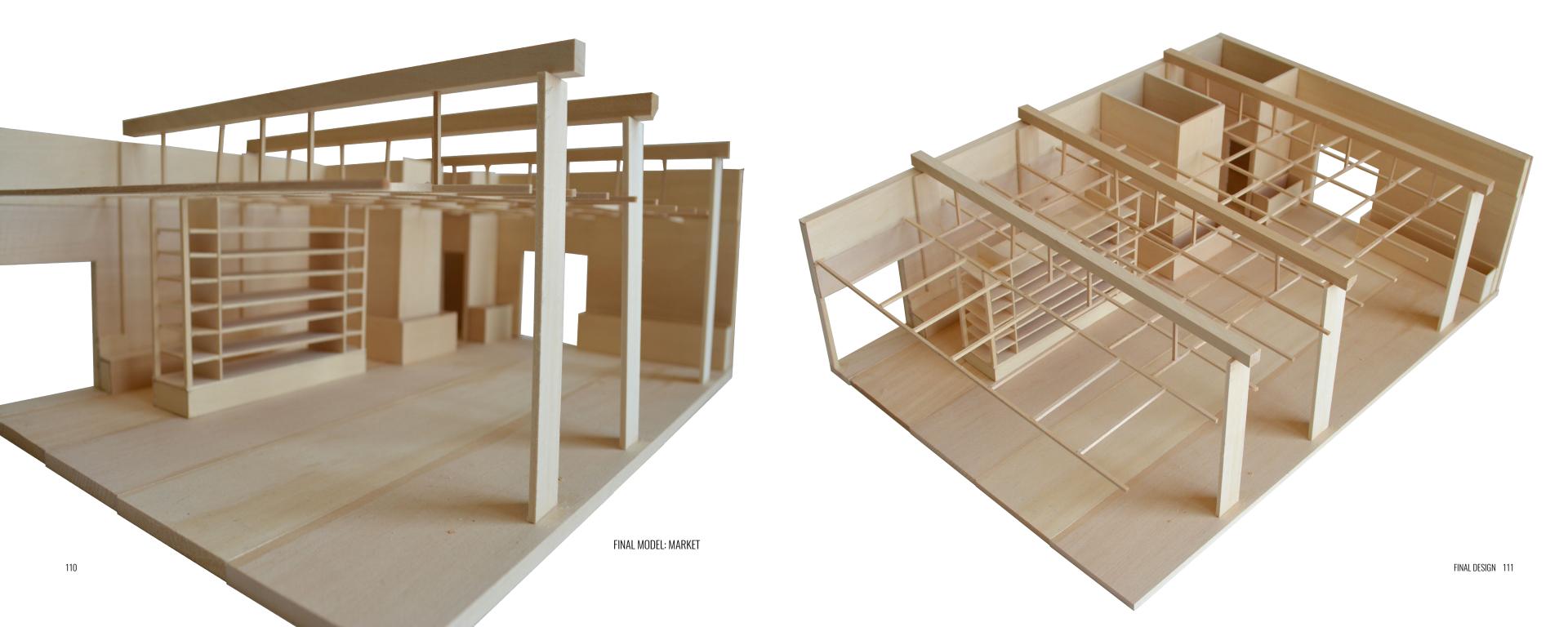


CUSTOM SHELVING



PLAN VIEW





THESIS REFLECTION

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THESIS DEFENSE

Synthesizing a year's worth of research and design work in a 15 minute presentation required practice and strategy. I felt renewed excitement and passion for the project I had designed, as well as nervous, as I prepared to share it with the faculty of the interior design department. This project represents so much time, energy, effort, research, emotion, and also the end of a life-altering 2 years.

The feedback and questions I received during my critique ranged from design to program to research. One major design element that sparked conversation and critique was the ceiling grid I had designed that spanned across the entire interior of my building. The discussion centered around the fact that the ceiling grid should be more responsive to the floor plan rather than abiding by a predetermined grid. The connection between the metal of the ceiling grid and the brick wall was also discussed. At first it was suggested that the connection be more carefully designed, or align with the Kintsugi concept better. As the conversation about the building structure as a whole developed, it was proposed that the ceiling grid would not touch the walls in any way, to echo the relationship of the existing trusses with the roof line.

An important piece of critique I received is that the market looked too museum-like, which might detract from the mission of the space. The faculty advised that there should be an exploration of design strategies that made the space feel less pristine and more accessible, which would align with the spirit of everyone feeling ownership over the space.

I also responded to many programmatic questions, providing clarification on the role of the community garden, which segued into questions about the research I did. Much of my research centered around community gardens and the role they play in typically transient populations. By giving neighborhoods a garden to invest in, many researchers noticed a sense of ownership develop in the residents of the neighborhoods, while social connections were strengthened. At this stage in the conversation, I felt grateful for the extensive research

process we went through in the fall, because I felt it truly guided my design both in aesthetics and program and I was able to call back on it to answer questions.

There were a few successes I was proud of in my project. First, I was happy with the amount of custom furniture pieces I was able to design, and I felt the furniture I selected spoke to my concept and used a similar design language. I also felt satisfied with the fact that I was able to flesh out all the areas that were programmatically central to my design.

This project was challenging, and I am left with many ideas about where it could go next. If it were to continue, I would want to extend my design into the outdoor spaces and integrate the indoor and outdoor spaces. This could include greenhouses, outdoor seating, or simply designing views between the indoors and outdoors. The ceiling grid that sparked so many questions in my critique would be redesigned to speak to the floor plan and to have separation from the walls rather than extending all the way. Finally, I would re-examine my design of the market area to feel less museum-like.



THESIS REFLECTION 113



PAUSE ENTRY SIGN

THESIS EXHIBITION: PAUSE

The show installation was a great opportunity to collaborate as a class on a joint project, as the past few months have been very self-focused. Each project represented us as designers and individuals, and it was gratifying to see the diverse range of projects hung in preparation for our opening show. So much hard work was represented and it was exciting to display our projects.

With the hard work being done, installation was an opportunity to enjoy each other's company and use our range of skills to assemble our show. Although some printing challenges arose, our cohort worked together and supported each other until the final boards were hung and our show kicked off. I am so proud everyone's growth as designers, the friendships we have formed, and the work ethic that went into both our individual projects and the group installation.



INSTALLED FINAL BOARDS

THESIS REFLECTION 115

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