

## ABSTRACT

Title of Thesis: CITY HEARTH

Lynn Khuu, Masters of Architecture, 2011

Thesis Directed By: Hooman Koliji  
Assistant Professor  
School of Architecture, Planning, & Preservation

The traditions of cooking have significantly changed from what it once was in its practice and cultural meaning. A fast paced lifestyle and preference for convenience has led to the commodification of food and redefined meals. In some cases, cooking has become the practice of heating up a pre-prepared meal or purchasing from a nearby store where there is a lack of recognition for what is fresh or where the food originated. For others, accessibility to nutritious options is a challenge. This change in culture and lifestyle choices is major contributor to significant health issues in today's society. With an interest in challenging people to rethink the way they consume, this project looks at the reintroduction of food culture and traditions to engage and help people make healthier choices. City Hearth is a community kitchen where all are welcomed to come learn, pass a plate, and share in a meal at the family table.

CITY HEARTH

by

Lynn Khuu

Thesis submitted to the Faculty of the Graduate School of the  
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Advisory Committee:

Professor Hooman Koliji, Chair  
Professor Madlen Simon  
Professor Brian Kelly

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## The Project

Food is such an integral part of our lives. At the very basic level, it is what sustains us, but beyond that, it is also a social and cultural element that creates bonds and defines people. It provides a form of expression and a common ground upon which people may coalesce. While everyone desires a good meal, food and nutrition has become the culprit of health concerns for many today and the experience of enjoying food is not quite the same.

Habits and food options have certainly changed. Accessibility to a nutritious meal has become a growing challenge. Based on recent research by the Centers for Disease Control and Prevention (CDC), 15% or more of adults ages 18 or older in over 40% of the US do not consume the recommended 2 fruit and 3 vegetable servings per day. Similarly, 10% of youths in grades 9-12 across the US do not receive the recommended daily servings.<sup>1</sup> While nutritious options may be available, quick, processed meals are also widely accessible. For those on a demanding schedule, these meals are the ideal option to meet their needs. In other cases, food deserts have limited residents to processed meals because of accessibility or affordability. These factors have contributed to unhealthy communities and increased obesity rates across the US. In particular, Maryland's obesity rate has shown to have more than doubled since 1980 (see Figure 1). Obesity goes beyond the immediate effects of stress on the body, aches, or strains to posing highly adverse health issues that drastically impede daily activities and in some cases shorten a person's lifespan. According to research by CDC, Maryland

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<sup>1</sup> "State Indicator Report on Fruits and Vegetables, 2009." *CDC: For Health Professionals*. Center for Disease Control & Prevention, April 2010. Web. 2 May 2011.  
<[http://www.fruitsandveggiesmatter.gov/health\\_professionals/statereport.html](http://www.fruitsandveggiesmatter.gov/health_professionals/statereport.html)>.

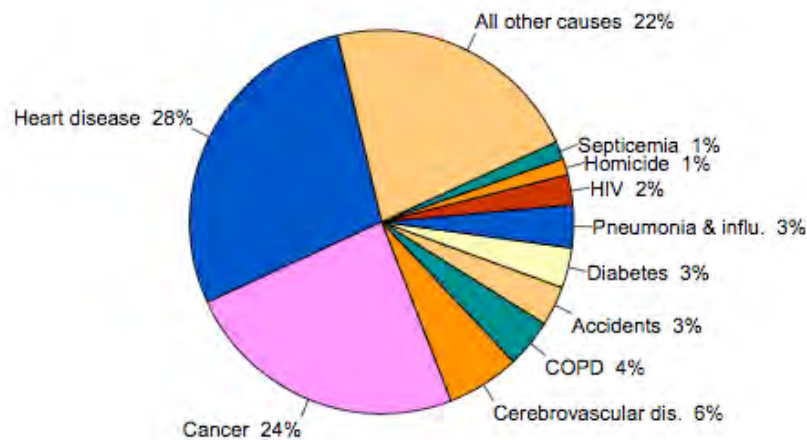


ranks 12<sup>th</sup> (at 29.8%) with diabetes as cause of death, 17<sup>th</sup> for high cholesterol, and 26<sup>th</sup> for high blood pressure<sup>2</sup>. The last two of which are contributing factors to one of the leading causes of death—heart disease (see **Figure 2**).

Obesity Rates by Age and Year

Age	1980 Obesity Rate	2003-04 Obesity Rate
2-5	5.0%	13.9%
6-11	6.5%	18.8%
12-19	5.0%	17.4%

**Figure 1\_** *Maryland Obesity Rates in 1980 & 2003.*  
 [Source: [http://fha.maryland.gov/cdp/co\\_data.cfm](http://fha.maryland.gov/cdp/co_data.cfm)]



**Figure 2\_** *Causes of death.* [Source: *Annual Report 1996-Division of Health Statistics, Maryland Department of Health and Mental Hygiene. p.28*]

Greater consumption, widely accessible processed foods, and inactivity are all causes of this epidemic that have evolved over time. Technology advancements demand

<sup>2</sup> "Diabetes Death Rate per 100,000." *Statemaster.com Health Statistics 2002*: Web. 5 Oct 2010. <[http://www.statemaster.com/graph/hea\\_dia\\_dea\\_rat\\_per\\_100-death-rate-per-100-000](http://www.statemaster.com/graph/hea_dia_dea_rat_per_100-death-rate-per-100-000)>.

little movement from a desk and screen and processed foods are a quick meal solution for busy working individuals. Certainly, it is a reflection of our society's fast-paced lifestyle and preference for convenience. Developments are also occurring without sufficient consideration to accessibility of nutritious food, where neighborhoods are built without a supermarket nearby. Further extracting the issue, this lifestyle is not only of concern on people's physical well being. Indirectly, it is also an affliction on the psychological health of those effected. Nevertheless, opportunities to respond to these factors exist. Educating people of lifestyle changes, their impacts, and providing the resources to promote healthier options starts to address the root of the issue and is a significant step in the direction of improving the communities and way in which people live.

Providing a resource to the community when other forms of assistance cannot meet evolving needs is one of the most valuable contributions. Whether in a difficult time, just wanting to learn, or looking for an opportunity to take control and improve oneself, this project is not meant to be exclusive to any particular group but to exist as a supportive refuge for the community as a whole.

With the concerns of food and consumption in mind, the question becomes "what is a community kitchen?" Looking beyond the physical building and architectural program, one of the most significant considerations of its existence is its social role in the community it serves. What does this project have to offer and is there a way to return the appreciation for cooking traditions and pleasure of enjoying meals back to those distraught by obesity and negligent mass-consumption or limited nutritional accessibility?

## **A Look at Baltimore**

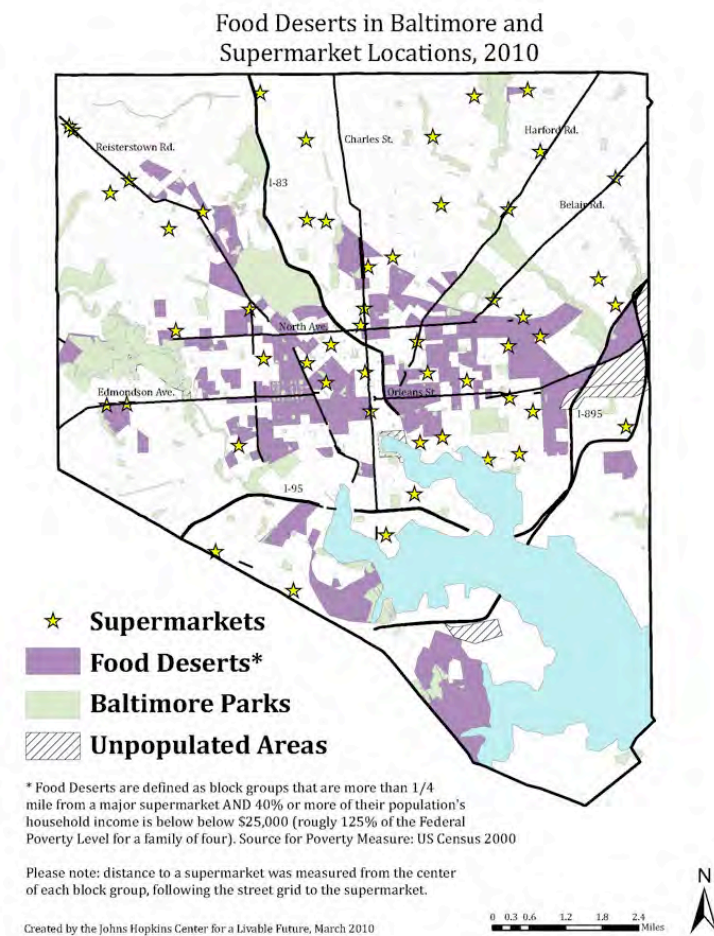
Baltimore has taken a major leap in addressing the issues of health, nutrition, and food security to sustain a better quality of life for the community. Through its food task force and understanding of the city's conditions, policy and incentives are reshaping the food environment.

However, challenges remain as food deserts, areas where 40% or more of the residents earn less than \$25,000 annually and are located more than ¼ mile from a major supermarket, are still found throughout the city (see Figure 3). In 2007, 40% of Baltimore city's surveyed high school students as well as two-thirds of the adult population were considered overweight or obese.<sup>3</sup> These statistics are partly due to accessibility, but also recognizing which foods are nutritious and how to prepare a healthy meal. In a city that has suffered "supermarket flight," the option to eat healthy and affordably is a difficult one where residents begin to rely on corner markets as a main source for food (see Figure 4).<sup>4</sup> While these stores may provide sustenance to get by, the choices for healthy basics in the long run, such as skim milk or even whole wheat bread are scarce. Poor diet, in turn, is associated with chronic health issues like stroke and cardiovascular disease, which are leading causes of death.

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<sup>3</sup> Baltimore City, Food Policy Task Force. Final Report & Recommendations. (Baltimore: 2009) 4.

<sup>4</sup> Baltimore City, Food Policy Task Force. Final Report & Recommendations. (Baltimore: 2009) 5.

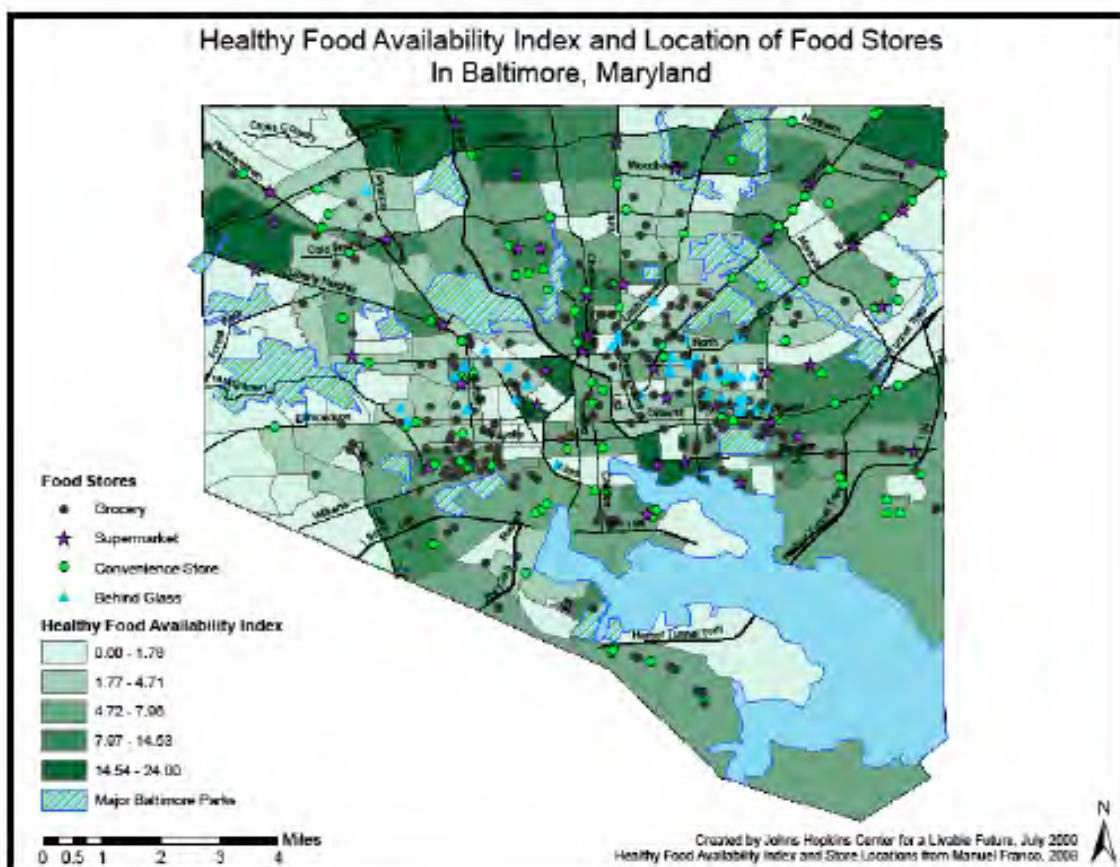


**Figure 3**\_Baltimore City food deserts indicated in purple.<sup>5</sup>

Recognizing these challenges, Baltimore's task force created a set of goals and strategies to improve the way of life for people in the city. These include increasing food security and accessibility to nutritious and affordable food, creating opportunities for selling and distributing healthy foods, and educating the public about the benefits of healthy choices. In order to achieve these goals, expanding farmers markets and city

<sup>5</sup> "Food Deserts in Baltimore." *CLF's Maryland Food System Mapping Project*. Johns Hopkins Center for a Livable Future, n.d. Web. 8 April 2011. <[www.jhsph.edu/clf/PDF\\_Files/food.../Food\\_Deserts\\_notes.pdf](http://www.jhsph.edu/clf/PDF_Files/food.../Food_Deserts_notes.pdf)>.

agriculture, supporting street vending of healthy food, improving the food environment around schools and recreation centers, and using zoning to promote healthy choices<sup>6</sup> demonstrate only a few strategies to improve the current conditions.



**Figure 4\_** *Food Access & Availability, Baltimore, MD. [Source: Baltimore City Food Policy Task Force, Final Report & Recommendations.]*

Although these strategies are important in addressing the physical aspect of the concern on food, understanding the social ramifications of food accessibility and health issues are equally significant to the well being of the city's residents. The proposal of a

<sup>6</sup> Baltimore City, Food Policy Task Force. *Final Report & Recommendations*. (Baltimore: 2009) 7.

community kitchen encourages a support network to assist those in need, inspire, and promote a better lifestyle.

### **Architecture & Beyond**

Baltimore is not alone on its battle against food deserts, obesity, and mission to promote easier ways to practice healthy lifestyles. As Zepeda mentions in *Food & Philosophy*, these issues faced today are a social construct and not singly the result of personal choices.<sup>7</sup> Research shows that the United States has some of the lowest food costs worldwide. Rather than reaping the benefits, the U.S. has somewhat abused this resource, dedicating little time to preparing wholesome meals and instead, consuming empty calories. The value of farmers and those who prepare or serve them meals are often overlooked, as the focus tends to fall on convenience and being easily satiated. This practice has contributed to poor choices, where many find themselves in the category of being overweight. Weight and obesity related health issues have cost the U.S. \$117 billion annually to cover these medical bills.<sup>8</sup> Expressed in *Food & Philosophy*, it is an interesting concept of using “public money and private policy to facilitate poor eating habits.”<sup>9</sup> Public money is used to subsidize or make sure food is affordable, while private funds are handed over for weight loss assistance.<sup>10</sup> Both of these sectors fund healthcare, where the increase in obesity has led to a greater prevalence of health issues. Ultimately,

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<sup>7</sup> Zepeda, Lydia. "Carving Values with a Spoon." *Food & Philosophy: Eat, Think, and Be Merry*. Ed.. Fritz Allhoff, et al. (Malden: Blackwell, 2007) 31.

<sup>8</sup> Zepeda, Lydia. "Carving Values with a Spoon." *Food & Philosophy: Eat, Think, and Be Merry*. Ed.. Fritz Allhoff, et al. (Malden: Blackwell, 2007) 35.

<sup>9</sup> Ibid, 35.

<sup>10</sup> Ibid, 35.

the issue or challenge cannot be placed on the individual alone. In order to affect change in behavior, the context and social values of where people live must also be reconsidered.

Thus, this project simultaneously addresses the community's need for healthier options and provides the individual with access and knowledge to influence change physically and psychologically. Architecturally, the building is a sustainable development that takes into consideration the flow of food from garden to plate, celebrates social interaction within the kitchen, and reintroduces the hearth as place of gathering. The building will be an extension of the urban home, delving into the sensorial experience by taking cues from the textures, smell, and colors of its context and natural landscape to inform its design and atmospheric character. Within the larger urban context, it will be a facilitator for programmatic connections and promote urban agriculture.

This facility gives people a place to come together with a shared interest and need for food. While the focus is on cooking and nutrition, the opportunity to share and learn with others, help one another, and meet people in the community are of equally beneficial value. Aside from providing access to fresh goods, the program reintroduces the customs and traditions of cooking, reinvigorates the idea of a family meal, and instills a sense of pride through the cultivation and creation of food. By demonstrating to the community the prospects for healthy living in the city, there is hope that it will inspire people to take a more active approach to the way they live and influence others. The program, then, surpasses the concept of a kitchen and also becomes a communal family table, the city hearth.

## The Site\_History

Historically a seaport and industrial city, Baltimore has received a great share of diversity over the years. In the 18<sup>th</sup> century, the city's accessible location and concentration on sugar production promoted its role as a sugar granary and rooted its development through food imports.<sup>11</sup> Baltimore continued to grow following the War of 1812, with the construction of US Route 40 and B&O railroad further catapulting its growth and success as a major economic center serving as a link between the city and markets of the Midwest.<sup>12</sup>

However, with the prosperity also came difficult times. In the course of less than a century, riots, a civil war, economic depression, and major fire challenged and shaped the development of the city. For a time, areas like the Inner Harbor where activity was once strong, warehouses stood abandoned. Considerable effort was directed towards redeveloping and revitalizing a once lively port city and continues today. Building upon an element ingrained in the history of the city, food culture has reemerged in Baltimore's abandoned industrial sites with the renovation and adaptation of historic buildings and warehouses for commercial and restaurant use. The new projects are not only drawing people with their eclectic urban charm and warm character, but also offer a taste of culturally diverse dining experiences.

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<sup>11</sup> "Baltimore." *Wikipedia: The Free Encyclopedia*. Wikipedia, 2010. Web. 23 Oct 2010. <<http://en.wikipedia.org/wiki/Baltimore>>.

<sup>12</sup> "Baltimore." *Wikipedia: The Free Encyclopedia*. Wikipedia, 2010. Web. 23 Oct 2010. <<http://en.wikipedia.org/wiki/Baltimore>>.



The project site, located in the Washington Hill neighborhood, shares in an equally rich history. Bounded by Jonestown to the west, Dunbar Broadway and Pleasant View Gardens to the north, Butchers Hill to the east, and Little Italy, Perkins Homes, and Fells Point to the south, the neighborhood embodies historic, economic, and cultural diversity. Washington Hill's location on the fringes of the central business district supported the neighborhood's beginnings as a shipping center and home to seamen arriving from neighboring Fells Point.<sup>13</sup> The area became known as the city's distant "suburb." In the years proceeding the American Civil War, Washington Hill became a refuge for Jewish immigrants from Germany and Russia as well as Irish and Polish American migrants who built homes in the area.<sup>14</sup> Small family owned shops opened, giving immigrants the opportunity to make a living near home with their trades and traditions, and infused a piece of their culture into the surrounding community. The range of activities allowed for economic diversity where wealthy merchants as well as lower income laborers lived and worked side by side in a shared community.

As the neighborhood developed and declined through its history, one aspect that remained was its custom in crafts and small shops. In times of downturn, projects like Artisan Row in the 1970's continued the tradition of storefronts and art to revive the vacant city. Co-ops and artist housing evolved to bring people back and save Washington Hill's cultural history. Today, the results of the effort stand true through a look at the diverse demographics of the area.

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<sup>13</sup> "Washington Hill." *Live Baltimore*. Live Baltimore, 2010. Web. 23 Oct 2010. <<http://www.livebaltimore.com/neighborhoods/list/washingtonhill/>>.

<sup>14</sup> "Washington Hill." *Live Baltimore*. Live Baltimore, 2010. Web. 23 Oct 2010. <<http://www.livebaltimore.com/neighborhoods/list/washingtonhill/>>.

Largely an area immigrants have resided in, today, Washington Hill exists as home to those of African American, Hispanic, Asian, Polish, Italian, German, and Irish ethnicity. Douglass, Pleasant View Gardens, and Perkins Homes public housing anchors the north and south as townhouses, artist housing, subsidized housing, and co-ops continue to develop, offering an economic mix, variety in housing options, and program in the area.

While the level of activity and economic prosperity of the area is not active as it once was, there have been efforts to reintroduce activity to Washington Hill. Building upon the growth and development of Harbor East to the south, buildings like Gerry's auto service, Department of Public Works, or Saval Foods meat packing facility along Central Avenue make up a few of many potential sites for commercial revitalization in an otherwise vacant and diminished commercial area. Renewal projects have initiated the emergence of new apartments and condominiums to the west, while restaurants and retail prosper in renovated projects in Fells Point to the south. To the east, 3 blocks of land that was once a public housing project have been cleared and slated for mixed use to be developed as Gateway at Washington Hill. Expanding upon the commercial activity that once existed and responding to the retail needs of the neighborhood, the Gateway project will include luxury apartments, office space, as well as shops and food stores to serve locals and commuters to Johns Hopkins.<sup>15</sup>

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<sup>15</sup> Whelen, Robbie. "Officials Hoping Two Projects Will Spread Baltimore's Harbor East Momentum." *Daily Record*. 26 Aug 2008: Web. 23 Oct 2010. <<http://www.allbusiness.com/real-estate/commercial-residential-property/12097280-1.html>>.

The area is rich in residential options and its assortment of services and non-profits, but lacking is the accessibility to nutritious grocery and fresh produce. Local residents and commuters are limited in their choices for healthy food and the vision for a grocery store is much desired. As shown in a research study by the Johns Hopkins Bloomberg School of Public Health and Baltimore City Health Department, the number of supermarkets in the city dropped 15% between 2002 and 2003.<sup>16</sup> Corner shops and small grocery stores are currently the main sources of sustenance in the neighborhood, and substantially affect the habits and welfare of the people as reflected in their health. Convenience has overshadowed the effort or time needed to reach better sources and affordability and accessibility have become determining factors in people's food choices.

Certainly, the issue does not persist unacknowledged. Programs at Johns Hopkins Bloomberg School of Public Health as well as Baltimore's Food Policy Task Force have taken the initiative to tackle the issue of food disparities and security that contribute to malnutrition and obesity throughout the city. Collectively, their vision for the Baltimore is to create awareness, provide education, and offer opportunities for "affordable healthy food options [...] to achieve and sustain better health outcomes and higher quality of life."<sup>17</sup> Promoting farmers' markets, zoning for healthy food, supporting street vending of healthy foods, and promoting urban agriculture or community gardens are but a few strategies the city plans to practice to improve the health and quality of life for Baltimore.

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<sup>16</sup> "Baltimore Healthy Stores." *Healthy Stores Project*. Johns Hopkins University, 2006. Web. 20 Nov 2010. <<http://www.healthystores.org/BHS.html#ref3>>.

<sup>17</sup> Baltimore City, Food Policy Task Force. *Final Report & Recommendations*. (Baltimore: 2009) 7.

## Site Parameters

With many potential sites to promote change and develop a program that supports the vision of the Baltimore City's Food Policy task force and mission through this project, the following parameters have been generated as a criterion for selection of a site where the community would significantly benefit. Taken into consideration are the social, cultural, economic, and physical aspects of a site that allows for the reciprocating support of program and community, promoting growth, and sustaining the vision and values of the project into the future.

### Social/Cultural

- Allow for interaction with a diverse surrounding community—engaging people of all backgrounds & ages, community residents as well as schools, non-profits, and/or professionals within the vicinity (Social connectivity relationship)
- Promote safe community environment
- Breed cultural understanding & appreciation and overcome cultural gaps
- Provide physical & psychological support, teach, and reintroduce food cultures and traditions

### Economic

- Encourage sponsorship/financial and pro bono support by local schools and universities
- Develop opportunities for self-sustaining financial support (e.g. venue for selling fresh homemade meals from the community kitchen to locals)

- Locate in economically diverse area

#### Environmental/Physical

- Be highly accessible by all modes of transportation (walking, driving, bus, bike, metro)
- Allow for flexibility in program & uses (multifunctional/transformable spaces)
- Have ample space for a garden, encouraging an indoor-outdoor relationship
- Take advantage of natural and existing conditions, making efficient use of solar, water, wind
- Site, building, and functions that are able to adapt with the seasons
- Connectivity: Relate to and complement existing community program such as markets, parks/green spaces, other community facilities or outdoor venues.  
Conveniently accessible from surrounding educational facilities  
(Physical & programmatic connectivity relationship)

## The Site Today

In rigorous consideration of Baltimore's vision and above parameters for site selection, the proposed location for City Hearth, is within  $\frac{3}{4}$  miles of Baltimore's harbor front, in the northwest quadrant of Washington Hill. It is bounded by East Baltimore to the north, Lina Court to the south, South Eden to the west, and South Spring to the east (see Figure 5). The site possesses the unique character of being on the transitional junction between a commercial district and primarily residential area where the organization of the central business district meets the grid of the residential area at South Central Avenue, one block west of the site. The special condition makes its location potentially significant for activity development and civic presence.



**Figure 5\_** *The Site. Located in the Washington Hill district on East Baltimore St approximately half a block east of South Central Avenue.*

Adjacent the vacant lot to the east is a small woodworking trade shop that is now owned by a law agency and a row of artist housing (see Figure 6). The remnants of a once lively commercial area are reflected through the storefronts that still exist, but are now adapted for residential privacy. Nonetheless, the character of the street remains expressive through its contrast with surrounding buildings and variety in brick and storefront palette. A block west, along South Central Avenue, is a string of service functions consisting of a number of auto shops and limited retail (see Figure



7  
) Also prominent in the area are community service facilities such as the busy rescue mission on South Central, multi-purpose community center on South Carolina, and transitional housing. While the city's skyline and commercial district are highly visible from the site, it is not overwhelmed by the traffic or busy clamor of the downtown area

(see **Figure 8**). Rather, it possesses a quaint, colorful, personable, and inviting charm with its tree lined street, scale, and warm brick.





**Figure 6\_** *Adjacent buildings & program. Artist housing along E. Baltimore Street, facing site (top left). Woodworking shop next to site (top right). View towards site along E. Baltimore (bottom).*

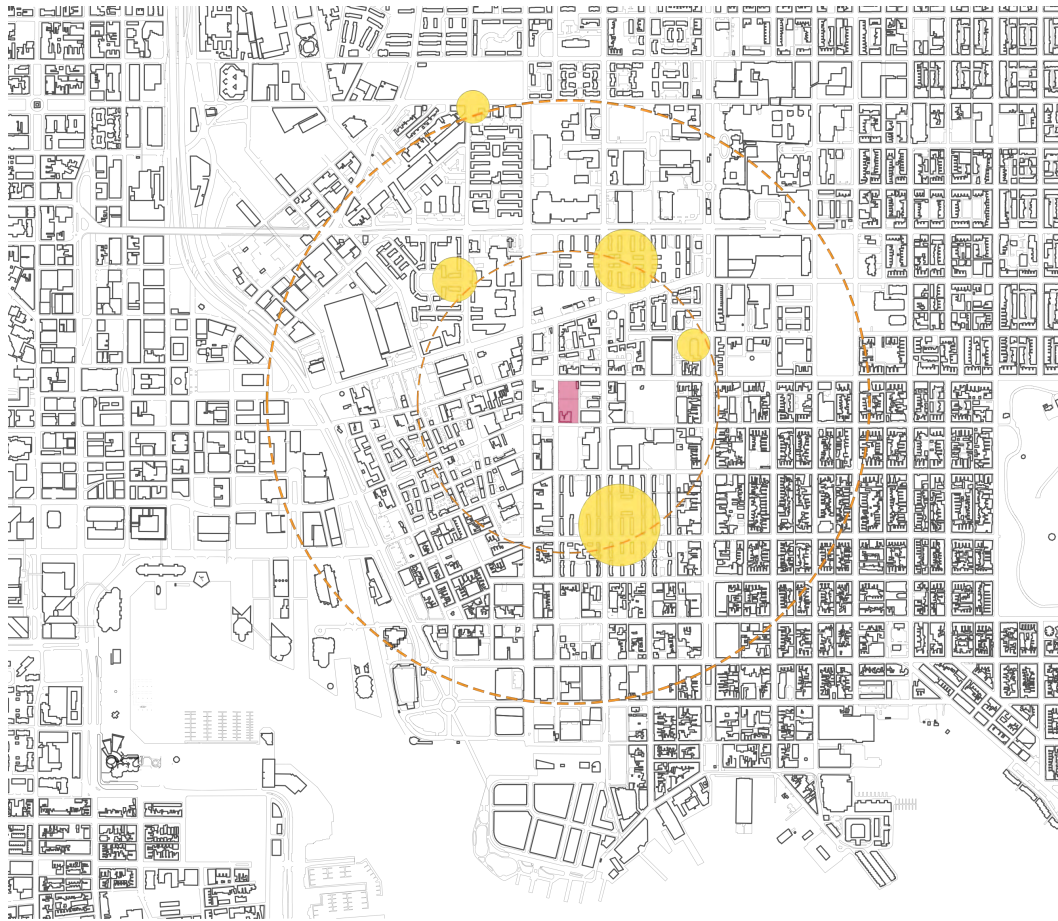


**Figure 7\_** *South Central Avenue. Higher multi-story commercial and institutional buildings towards harbor front (top). Garages and local service functions near residential area, a block southwest of the site (bottom).*



**Figure 8\_** *East Baltimore Street. Site at foreground with business district seen beyond (top). Residential with storefronts at ground level (bottom left). Housing adjacent site and bike path in both directions (bottom right).*

The site offers a unique balance of the surrounding community fabric as it sits midway between three major public housing projects, Douglass homes, Pleasant View Gardens, and Perkins homes and is the bordering edge between residential and commercial functions (see **Figure 10**). Culminating the block on E. Baltimore is an artist gallery and within a quarter mile walking distance are supporting religious, community, and family centers, as well as Enoch Pratt public library. Quiet and modestly active, it is not uncommon for neighbors in the area to recognize one another or gather at a shared neighborhood facility for music, potluck, or other small event. Also encouraging healthy and active living, a pool and City Springs park, which is home to one of Baltimore's 74 community gardens, are within less than a 5-minute walk.



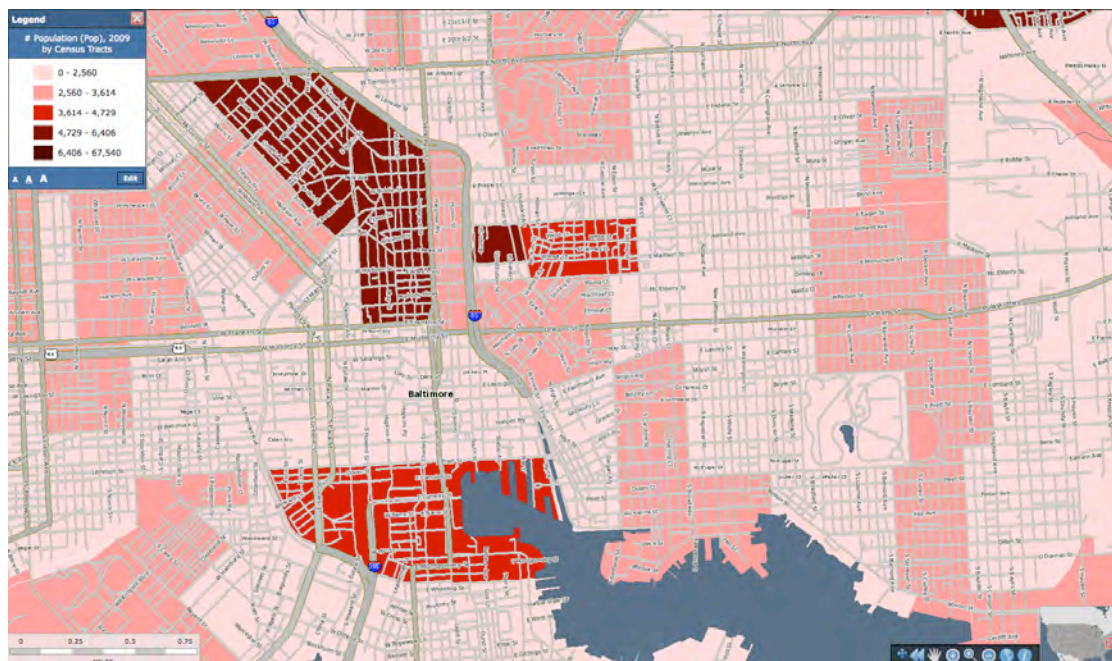
**Figure 9\_** *Public housing projects within ½ mile of site.*



**Figure 10\_** *Douglass Homes, several blocks north of site (previous). Perkins Homes, south of site (bottom).*

Demographically, the population of this census tract is between 2,560 to 3,614 people (see Figure 11) with the majority of the area's residents African American

followed by White American. Much more sparse are the Asian and Hispanic population, which range in the low double digits. The residents of the immediate area are fairly young with the age range of 32-35 years of age. To the northeast is a greater concentration of individuals younger than 32 and towards the south resides a more mature population.

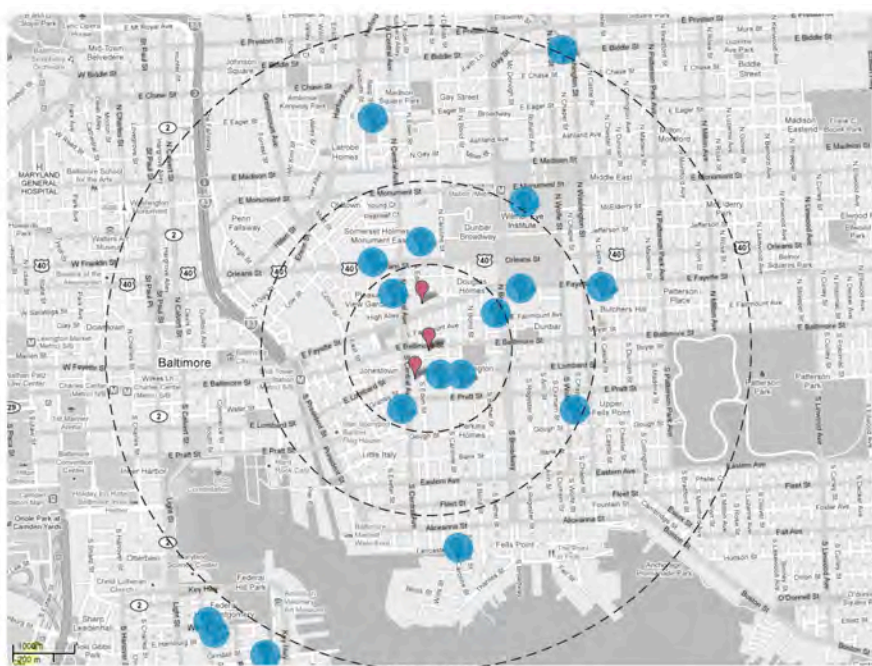


**Figure 11\_** *Population count 2009. [Source: GIS]*

The deep contrast in socioeconomic circumstances of locals present an interesting condition of economics, education level, and quality of life. The area's economic and employment distribution mediates between the majority white-collar professions of the central business district and the regional blue-collar work of the residential area towards the east side of the city (see Figure 14). The calculation for people claiming an average quality of life index, which takes into account factors such as health, the quality of family and community life, employment, and gender equality is also at a median state. It is not

uncommon to see those struggling and those who are better off living or working within a block or even across the street from one another.

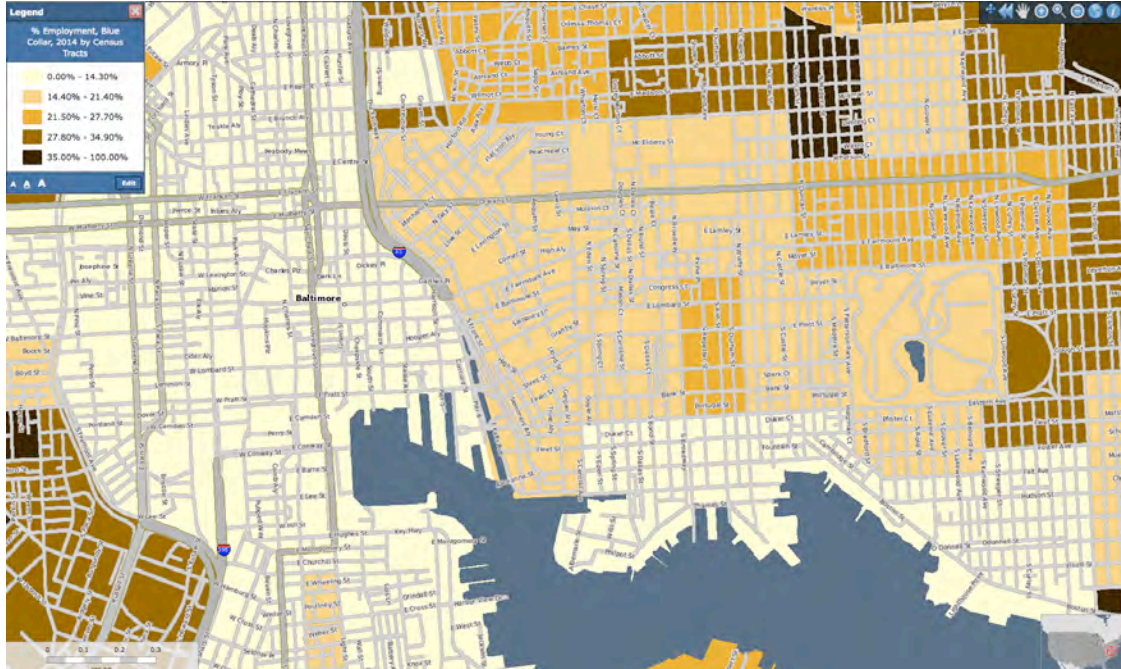
Also unique to this location is its close vicinity to five schools ranging from primary and special education to higher education within a quarter mile radius of the site (see Figure 12). This concentration contributes to a diversity of ages, experience, and interests in the area. Furthermore, the high concentration of schools and public facilities offer the opportunity for greater outreach and networking for support. Its relation to Johns Hopkins University proves valuable. Located three blocks northeast, JHU's Bloomberg School of Public Health is a leader in research and programs to promote and support healthy eating, lifestyles, and neighborhoods. The site's accessibility by the surrounding community and local schools is a major benefit to keeping people engaged and providing youth with extracurricular activities.



**Figure 12\_** Educational institutions located  $\frac{1}{4}$ ,  $\frac{1}{2}$ , and 1 mile from proposed project site.

With ample space to develop and a location where diverse neighborhoods could converge, E. Baltimore is a promising location to receive as well as reach out to the community. An opportunity exists for the community kitchen to become a major asset to Baltimore's urban fabric, as it is located within reachable distance of the harbor and business district, but also serves residents beyond the city core. There is also a potential to create a network of support by involving the local schools and programs that currently surround the site. Rather than thrusting the project and its program into the midst of the city, this location allows for a gradual growth, expanding the shared vision for healthier living.

**Figure 13\_** *Projected employment percentage in white and blue collar professions, 2014. Blue-collar employment (below). White-collar employment (p 26). [Source: GIS]*





**Figure 14\_** *Projected employment percentage in white and blue collar professions, 2014. Blue-collar employment (previous). White-collar employment (above). [Source: GIS]*



## Site Analysis

### Zoning



**Figure 15\_ Site & Allowable lot coverage.** *Building proposal on northern block may encompass up to 70% of the site, resulting in a floor area of roughly 17,100 square feet.*

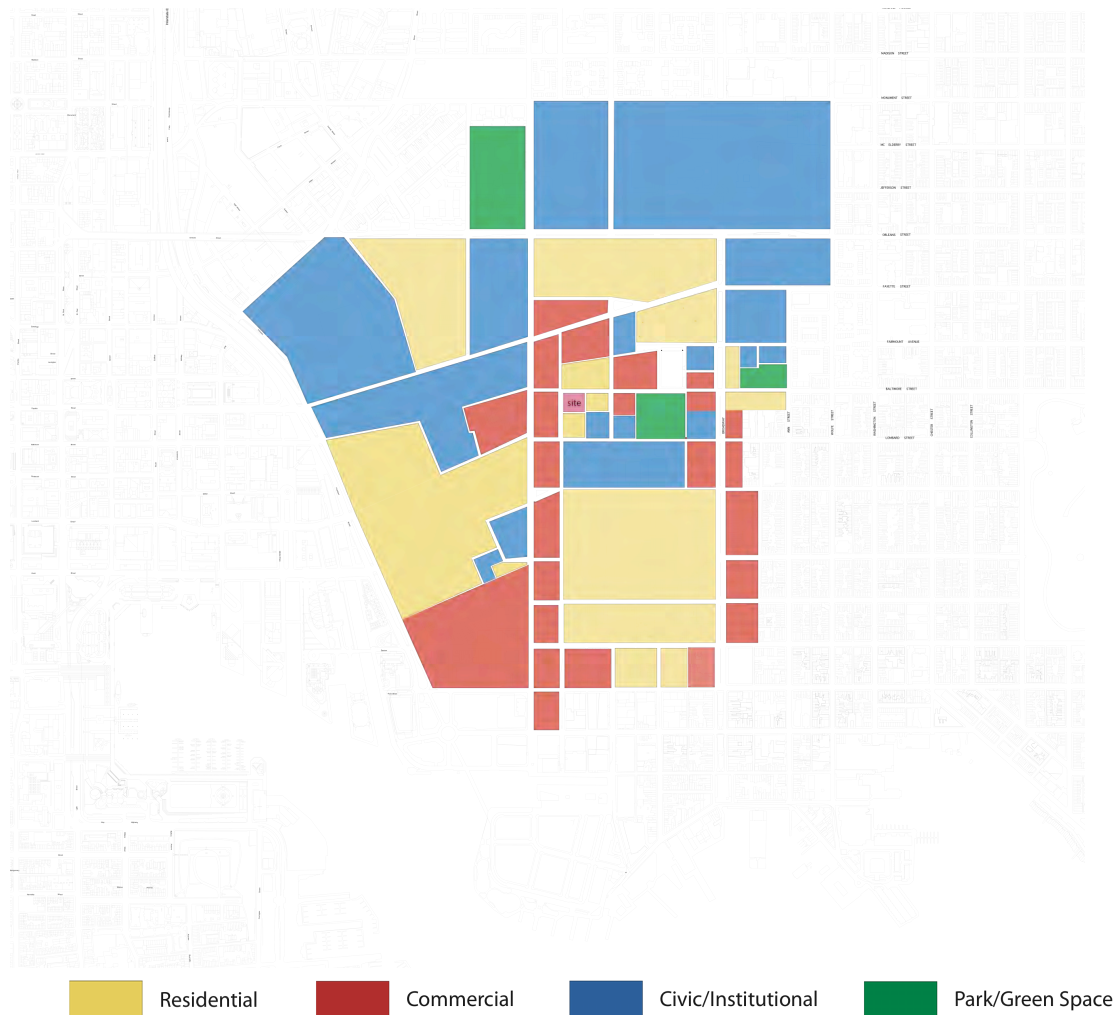
The proposed site is a combination of two vacant lots with access from all sides. The building's two main public faces are along East Baltimore Street and South Eden Street. South Spring Street and Lina Court currently serve as minor alleyways. In particular, Lina Court primarily acts as an access way from South Caroline Street to a parking lot at the rear of a row of housing east of the site, which terminates into a pedestrian path connecting to Eden Street.

The area is zoned R-8 for general residential,<sup>18</sup> but in efforts of revitalization also allows enterprise development. In an area that would otherwise be dedicated to single-family attached and multi-family housing, there is adequate flexibility for other program. The proposal for commercial or civic functions is not outside the realm of the surrounding uses, as adjacent the site is an area zoned for community business and commercial functions as well as industrial program 2 blocks southwest. Currently, an auto repair shop and parking lot exist across Eden Street, and south on the site is a transitional housing unit.

With lot dimensions of approximately 163 feet wide (north-south) by 150 feet long (east-west), the allowable buildable area of 70% yields a site of roughly 17,100 square feet (see Figure 15). Maintaining the scale of its three-story surroundings and building height regulation of 45 feet, there is the potential for 50,300 square feet of enclosed program space. The site does not have lot coverage requirements for parks and gardens. However, its requirements of 10 to 25 feet for side, corner, and rear yards, create ample opportunities for landscaping and gardens.

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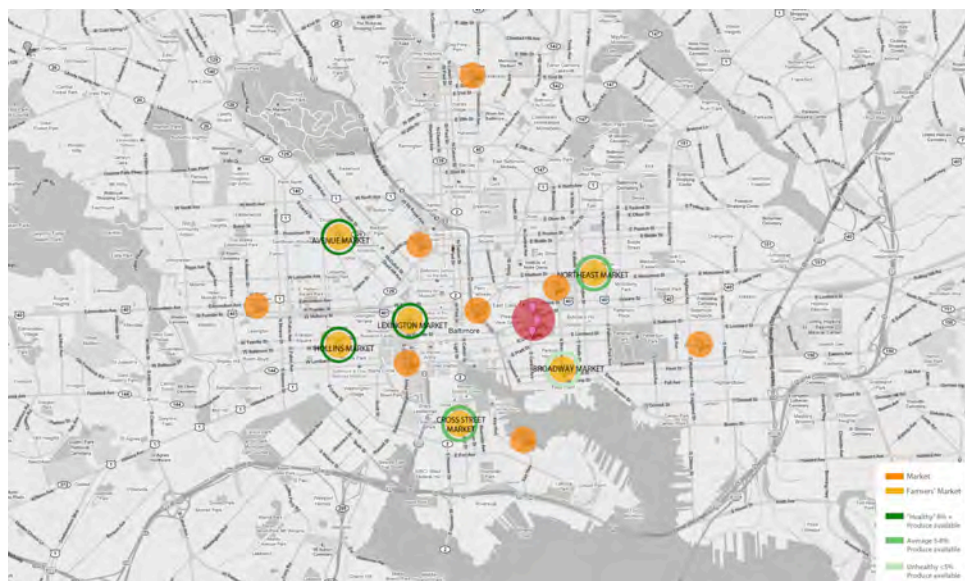
<sup>18</sup> MOIT/EGIS , . "Information Technology / Enterprise Geographic Information Services / Zoning Map." *Baltimore*. City of Baltimore, 2010. Web. 10 Nov 2010. <<https://www.baltimorecity.gov/OfficeoftheMayor/MayoralOffices/InformationTechnology/EnterpriseGeographicInformationServices/ZoningMap.aspx>>.

*Urban Context*

**Figure 16\_** *Surrounding program.*

Although the majority of the area is zoned for residential use, commercial and civic functions are prominent and diversify the program of the area. Some of the retail, restaurants, and entertainment of Fells Point or Harbor East towards the waterfront has expanded its way north along South Central Avenue and South Broadway. With this growth is a greater activation of the surrounding neighborhoods where residential, civic, and commercial functions begin to weave together.

South Central Avenue and South Broadway are two major public axes of this area (see Figure 16). Lining these streets are a string of auto shops, home improvement stores, convenient shops, restaurants, and other services that act as a buffer transitioning into a primarily residential district. The distribution of schools, community services, religious program, residential functions, as well as small local shops between these two major streets account for many community needs. Housing options are plentiful, including apartments, condominiums, and townhouses that range from transitional or subsidized housing to high-end living. However, within the abundance of commercial program and public markets nearby, the only major supermarket offering fresh produce and nutritious options is Whole Foods located more than a ½ mile away in Harbor East. Distance may not be a deciding factor, but for those on a limited income may find affordability a challenge. In such cases, meal options are limited to fast food, carry out, and items found at the local convenient store.



**Figure 17\_** *Neighborhood & Farmers' markets. Green shades indicate produce availability with dark green noting that at least 8% of vendors offer produce vs. light green where less than 5% offer produce.*

## Access



**Figure 18\_ Site Access.** Green dash designates bike path. Blue dots represent bus stops and red dots indication metro stops.

Accessibility is key to the viability of any business and is likewise true for the operation and effectiveness of a community center or hub. The array of intermodal transportation available to this site is a great advantage to the development of City Hearth's program. Anchored with two metro stations, multiple bus stops, parking garage as well as a bike path, there is an option that meets the preferences of every visitor.

Street and garage parking are available for those who prefer to come by car. Bus stops are located at nearly every corner surrounding the site and within the walking

distance of one block. It is also common to see the Baltimore Circulator making its rounds on South Central Avenue, a block west of the site. For people who choose to ride the metro into downtown or work near Johns Hopkins University, the project site is reachable in about a ten-minute walk. Furthermore, wide and continuous sidewalks make walking a practical option. For many students of local schools and universities, the site is at an intermediate location that is safely and easily accessible in the distance of one or two blocks. There are also dedicated bike paths to and from the site that connect to points of interest in the city, offering the increasing number of cyclists equal access.

#### *Parks, Community Gardens, & Vegetation*

An important aspect of healthy living is a relation to nature, which exists in the participation in outdoor recreation, planting, and consumption of garden fresh produce. Baltimore has developed plans to green the city, making streets more inviting and offering residents the opportunity to partake in local agriculture. A line of deciduous trees borders the edge of the sidewalk at each side of East Baltimore Street moving from the project site. During the warm summer, the tree canopies provide shading from the sun and aesthetically pleasing streetscape foliage. While, in the autumn and winter, the warm sunlight is allowed to penetrate into the buildings beyond. The tree-lined street continues to City Springs Park, where locals may gather to play a game of football. Also at this site is East Side Garden, one of many urban gardens the University of Maryland Master Gardeners program has started in vacant spaces throughout the city. Although there is progress in landscaping the streets of Baltimore and promotion of more active lifestyles, some of the parks and streetscape remain disconnected. Thus, there is great potential for a

uniting element through the development of this community kitchen, integrating building, gardening, green spaces, and fruit bearing trees to complement the existing landscape.



**Figure 19\_** *Green spaces throughout Baltimore City.*

### *Climate & Solar Exposure*

With the street front of the building facing north, the majority of the site beyond receives ample southern sunlight throughout the day and year-round. The ideal condition allows for the fruit and vegetable garden to receive recommended sunlight for up to 8 hours a day. By considering solar exposure with Baltimore's typical climate, a variety of

edible plants may be grown from widely popular lettuce to eggplant and strawberry. The humid subtropical climate yields 3-4 inches of precipitation each month and mild temperatures that allow for 200 growing days a year.<sup>19</sup> With the first frost appearing towards the end of October and last frost in mid-April, half the year may effectively produce food.

### *Opportunities for Sustainable Practices*

The food cycle offers many opportunities for practicing sustainability in that there is much to learn and mimic from the natural sequence. The building and its program has the potential to be self-sustaining by taking advantage of its readily available resources to harvest water and sunlight, and turn wastes into food. Designing with passive strategies and proper orientations also optimizes the buildings performance and reduce the amount of resources it consumes.

Features may be designed to collect rainwater and diverted greywater for use as irrigation instead of placing greater demands on potable water or relying on treatment facilities for water purification. Additionally, food wastes may return nutrients to the soil through the form of compost.

Within the building, heat from the kitchens may be recycled to warm the building and reduce the energy load required to maintain a comfortable indoor environment. Or, use of a traditional fireplace could offset heating needs. Furthermore, the collection of excess heat may be channeled into the planting beds to support its growth during early

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<sup>19</sup> "Frost Chart for United States." *The Old Farmers' Almanac*. National Climatic Center, 2011. Web. 14 March 2011. <<http://www.almanac.com/content/frost-chart-united-states>>.



growing periods or when natural seasons would not allow planting otherwise. Skylights and large windows combined with proper shading and louvered elements can adequately ventilate and meet lighting needs naturally. In addition, plants integrated into the building help to improve indoor air quality.

Beyond the immediate site with its sustainable design approaches and material selection, the building presents a greater impact on its surrounding environment. The incorporation of plants not only benefits the building in cooling or insulating needs but also reduces solar reflectance and stormwater run-off. Sustainability requires a fully integrated design with considerations to nature's processes. By retaining these natural resources on site, the building can begin to act as a natural landscape and redirect the resources to sustain the building and its operations.

## **Program**

With a social mission to become an integral part of the community and provide people with accessibility and skills to be self sufficient, the program encourages communal interaction at both the scale of the city and the building itself. At the urban scale, the community gardens will involve the participation of locals to maintain, grow, and cultivate the food. Additionally, the potential for fruit-bearing plants connecting to other gardens or points of interest within the city creates interaction between people, the city in which they live, and nature. The building program allows for spatial and activity overlap. The spaces revolve around the theme of gathering and sharing, whether it is through teaching and learning a cooking skill together or socializing over a meal.

From simply smelling the aroma of food on the stove to planting a vegetable, the program emphasizes hands-on activity and involves a heightened sensorial awareness and immersion into food culture. The core programmatic feature is the multiple residential style learning kitchens, where the art of creating occurs. Spurring from these, the other program “ingredients” form reciprocating interactions with the kitchens. Supporting spaces include classrooms, library, lounge and dining areas, and children’s activities center, which promote learning and collaboration. Outdoor cooking and dining areas allow for a connection to the garden and nature. Office spaces foster a sense of permanence by providing local volunteers and food or health groups a place to base part of their program. The administrative and outreach spaces help to maintain efficient operation of the community kitchen and offer a consistent resource where those looking for assistance may always know where to go. Financially, the market and café generate a portion of the funds for operating the facility. However, more importantly, these two

commercial functions act as an outlet for creative cuisine, source of fresh produce, and demonstration that agriculture can exist in an urban setting. The intent of the program, and project in general, moves beyond the concept of a culinary school and develops itself upon the social significance of food, its preparation, and food choices.

#### *Program Objectives\_Social*

- Generate equal opportunities for nutritious food.
- Promote social bonds by providing a space for interaction and shared learning about health and food cultures.
- Equip participants with the necessary knowledge and cooking skills to be self-sufficient and make healthy choices.
- Keep the community engaged and interested with applicable hands-on activities and nurture a sense of value and pride in the creation of food and gardening.
- Encourage a “pass the plate” or “pass it on” mentality of educating and reaching out to others in the community.
- Practice sustainability.

#### *Program Objectives\_Design*

- Create overlapping program or communal spaces that encourage interaction and communication.
- Design residential style learning kitchens to generate the warmth and comfort of a sense of home.

- Design for flexibility such that spaces may be transformed to serve multiple functions and needs.
- Offer ample space that is conducive and efficient for teaching, learning, and participating in cooking activities.
- Use the rituals or practices of cooking and process of garden to plate to inform spatial organization.
- Emphasize a relationship to nature and its role in healthy living by creating indoor-outdoor relationships and/or incorporating gardens indoors.

## Program Summary

Program	Size & Quantity	Total
<b>COOKING (FIRE)</b>		
Learning Kitchen	1000 SF (4)	4000 SF
Bakery Kitchen	1000 SF (1)	1000 SF
<b>Subtotal</b>		<b>5000 SF</b>
<b>LEARNING</b>		
Classroom (12-16 people)	600 SF (3)	1800 SF
Children's Center	600 SF (1)	600 SF
Library	1200 SF (1)	1200 SF
<b>Subtotal</b>		<b>3600 SF</b>
<b>CONSUMING (AROMA)</b>		
Lounge	600 SF (3)	1800 SF
Dining	840 SF (3)	2520 SF
Cafe	1300 SF (1)	1300 SF
Market	2000 SF (1)	2000 SF
<b>Subtotal</b>		<b>7620 SF</b>
<b>ADMINISTRATION</b>		
Administrative Office	320 SF (1)	320 SF
Outreach Office	320 SF (1)	320 SF
<b>Subtotal</b>		<b>640 SF</b>
<b>OUTDOOR (EARTH)</b>		
Multi Outdoor Cooking & Dining	200 SF (3)	600 SF
Main Outdoor Hearth	550 SF (1)	550 SF
<b>Subtotal</b>		<b>1150 SF</b>

Program	Size & Quantity	Total
<b>GROWING (EARTH)</b>		
Garden	20,000 SF (1)	20,000 SF
Greenhouse	700 SF (1)	700 SF
Tool Shed	450 SF (1)	450 SF
Compost Area	450 SF (1)	450 SF
<b>Subtotal</b>		<b>21,600 SF</b>
<b>SUPPORT</b>		
Reception	600 SF (1)	600 SF
Coat Room	200 SF (1)	200 SF
Restrooms	200 SF [pair] (4)	800 SF
Food Storage	650 SF (3)	1950 SF
Loading/Service Entry	1480 SF	1480 SF
Trash & Recycling	100 SF (1)	100 SF
Mechanical	1360 SF	1360 SF
<b>Subtotal</b>		<b>6490 SF</b>
<b>BUILDING TOTAL</b>	<b>23,350 SF (Indoor conditioned space)</b>	<b>22,750 SF (Outdoor space)</b>

## **Program Descriptions**

### ENTRY\_WELCOMING

Entry to the building is meant to be an open and inviting space that gives visitors a taste of the character and activities of the community kitchen. Upon entering, visitors will be on axis with a hearth, symbolic of the core or heart of a home.

### COOKING\_FIRE

This area is considered the “hearth” of the home. Designed to be residential in character, the multiple kitchens serve the core function where people gather to participate in cooking. These spaces are highly active and require ample space for comfort and efficiency in movement, teaching, and learning. Multiple kitchens allow for different classes or events to occur in tandem.

### *Kitchens*

The four cooking areas will be reflective of residential style kitchens to generate the atmosphere of home. These spaces will include all the necessities of a fully functional kitchen equipped with stovetops, ovens, sinks, under-counter refrigerators and flexible counter space for demonstrations & preparation.

### *Bakery*

The bakery kitchen will be specially designed and organized for the production of baked goods. Ovens, mixers, and generous counter space allow for ease of hands-on activities.

Baked items support the operation of Café and Market where the food produced may be sold.

## LEARNING

The spaces for learning include classrooms, children's activity area, and library. While the classrooms and activity space may double for food preparation that doesn't require a kitchen, the main purpose of these learning spaces is to serve as a resource center. Those of all ages may come for a class on health and nutrition or garnish and edible art. Parents may bring their children for a holiday event or simply to make some finger foods.

Regardless, these classroom spaces are flexible to accommodate the activity and interest of each group or event.

### *Classrooms*

The three classrooms are transformable learning spaces for less intensive meal preparation activities, instruction, or discussions. They may also serve as secondary overflow spaces for the kitchens should additional space be required for activities that may occur.

### *Children's Activity Center*

Colorful and inviting, this space is meant to capture creativity and promote healthy choices by engaging children in hands-on cooking activities and instruction that are appropriate for their age group. The space is a blend of a classroom and play area.



### *Library*

The library will provide a public resource to the community with books and digital media covering a range of subjects. Locals may come to look up a recipe in the catalog, check out a cooking instruction DVD, find books on nutrition, or sit and read about food culture. For those participating in a demonstration in one of the kitchens or classrooms, they may take a trip to the library to grab a recipe of the day. Essentially the purpose of this space is to provide easy access to food related information and expose visitors to the many traditions of cooking.

### CONSUMING\_AROMA

Café, market, dining and lounge areas compose the spaces where a meal can be shared at the community table. These spaces support the social interaction of the kitchens.

### *Lounges*

In essence, the lounges are family rooms of a home. The lounges are arranged around the central hearth and serve as the break out area for the kitchens and dining spaces after a class or meal.

### *Dining*

The dining areas celebrate the idea of a “family meal.” The large communal table arranged around the hearth allows for a gathering of friends and locals of the community to enjoy freshly prepared meals from the kitchen.

### *Café*

For those who want a convenient meal or snack, the café will provide daily specials of freshly prepared food for sitting down or on the go. The café offers a creative outlet for inventing new dishes or introducing cultural cuisines using fresh herbs and produce from urban gardens.

### *Market*

The neighborhood currently has a limited number of supermarkets and the purpose of the marketplace is to provide access to fresh local produce and cooking ingredients. The market will offer seasonal products grown on-site as well as from gardens nearby. Its flexible space allows for the market to expand outdoors during favorable weather or to double as outdoor dining.

## ADMINISTRATION

Administration spaces allow for organization and maintenance of a well-operating facility. Rather than moving from one building to another or locating the program headquarters in another part of the city, these offices encourage involvement and provide direct access to the activities and events of the community kitchen.

### *Administrative Office*

This office offers ample space for 2-3 individuals who are overseeing the events and progress of the community kitchen. The office provides a place for administrators to keep calendars, logistics, or paperwork organized and maintain smooth operation.

### *Outreach Office*

This outreach office is a shared space where local programs such as those from Bloomberg's School of Public Health, nearby health clinics, or community centers may send volunteers to educate, be actively involved the community, as well as recruit interested volunteers and participants. Programs and volunteers may rotate, but overall those the office is meant to serve as an informational resource for the community.

### OUTDOOR\_EARTH

In an otherwise heavily built environment where people are mainly indoors, the outdoor spaces connect people back to the natural environment and remind them of its significance in their everyday life.

### *Outdoor Cooking*

The outdoor cooking spaces are organized around a central fireplace, symbolic of the hearths within the community kitchen. These spaces provide the learning opportunity for a different method of cooking that otherwise may not occur indoors or may simply serve as gathering spaces. With outdoor cooking, participants are able to directly relate the fresh garden produce to plated meal and appreciate the process of growing and cooking. Additionally, the aroma of the food being prepared invites the community to become engaged.

### *Outdoor Dining*

Al fresco dining generates a relationship to the natural environment. Surrounded by the garden, diners are able to temporarily escape the busy urban environment and enjoy the scenery and atmosphere of a planted landscape.

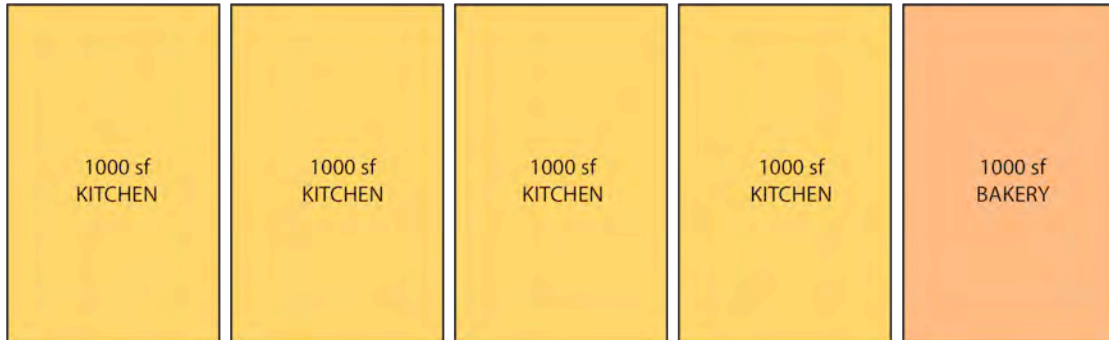
### GARDENS

The gardens support urban agriculture and provide access to fresh goods. The fruits and vegetables grown in the garden will be used for cooking and/or sold at the market on-site.

The garden is a shared space for everyone from the community to participate in growing and caring for the plants. It provides a hobby for locals and educates people about agriculture and food origins.

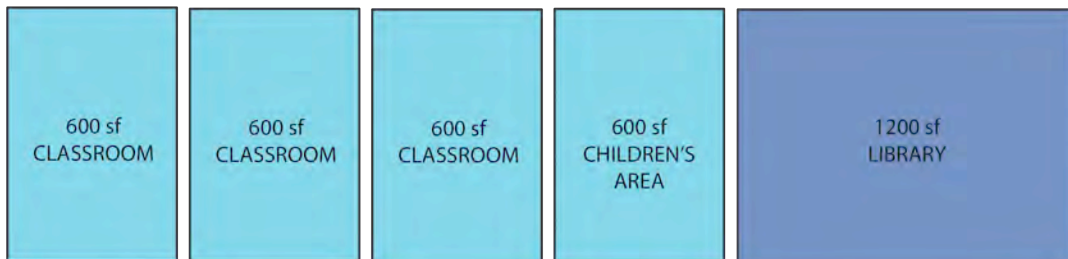
### Spatial Comparison

#### COOKING



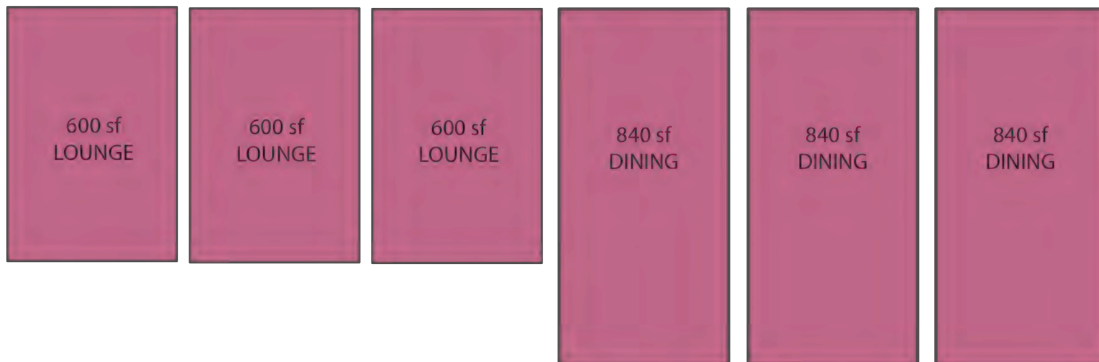
SUBTOTAL: 5000sf

#### LEARNING



SUBTOTAL: 3600sf

#### CONSUMING



**Figure 20** *Relative spatial size comparisons for program elements. (Continued on next page.)*

CONSUMING



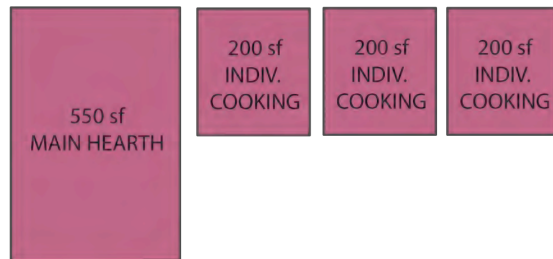
SUBTOTAL: 7620sf

ADMINISTRATION



SUBTOTAL: 640sf

OUTDOOR



SUBTOTAL: 1150sf

**Figure 21\_** *Relative spatial size comparisons for program elements continued.*

## **Precedent Analysis**

The proposed program does not exist in entirety in any single project. Rather the development of a community kitchen is largely an integration of research on multiple programmatic elements to form a whole. From social values to the flow through a kitchen, aspects of soup kitchens, school programs, restaurants, cafes, markets, residential kitchens, and more are studied to inform their design as part of this project.

## **What is HEARTH?**

To define hearth is to look at the meaning of kitchen within a home, as a space everyone occupies daily and is very familiar with. The kitchen or hearth has always been an integral part of a home, a source of energy, and source of heat. Whether existing as back-of-house or the focal point of a home, the kitchen has provided a place for gathering and socializing.

Following 1990, cooking emerged as an interactive engagement that revolved around the kitchen as a central place of familial interaction. The elemental space has continued to be redesigned to be more flexible and accommodating such that its “landscape merge[s] with every aspect of the rest of the house.”<sup>20</sup> The value of the kitchen exceeds its practical purpose of providing sustenance. Rather, it is the processes and interactions of communication and bonding occurring within the space that gives it distinguished meaning. The practice of coming together, therefore, defines hearth as heart of a home and symbolically a heart and source of support for the community.

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<sup>20</sup> Gdula, Steven. *The Warmest Room in the House*. (New York: Bloomsbury, 2008) 205.

*DC Central Kitchen: <http://www.dccentralkitchen.org/>*

Quoted from their website, DCCK's mission is "to use food as a tool to strengthen bodies, empower minds, and build communities." Recognizing local needs, they take the initiative to not only provide food sustenance to the homeless but also create opportunities for a fresh start. Founded in 1989 by Robert Egger who worked in the bar and nightclub industry, his original intention was to make use of excess restaurant food to feed the hungry and give the unemployed a second chance with culinary training opportunities. Today, seven programs work together to meet the needs of the community. Counseling and training are large functions of their program to address the long-term needs of those they serve. Integrated with their mission is the responsibility of sustainability through a "Farm to Kitchen" initiative, a food-recycling program that partners with local farmers to provide fresh and healthy meals from edible but unmarketable produce. The significance in looking at this program is recognizing there are multiple functions and responsibilities to these facilities that make them a valuable asset to the development and interactions of the community. The purpose may be to provide food, but ingrained in that is a greater contribution of connecting and helping people.



## The Edible Schoolyard

Founded by the Chez Panisse Foundation and Alice Waters in 1995 at a middle school in Berkeley, CA, this program now reaches out to young adults in affiliate programs across the United States. Starting as a vacant parking lot near King middle school, the area has been transformed into a thriving garden classroom that reaches over 1,000 students and visitors each year. With hands-on activities, the program engages students in the process of growing, harvesting produce, and preparing healthy meals. Their



mission is to foster an understanding and appreciation for the environment and health of the community by integrating food related concepts into the school curricula. While health and nutrition are major objectives, the lessons of individuals' impact, sensuous experiences, curiosity and appreciation for cooking traditions are of even greater outgrowth of the program.

## Kitchens & Dining

Of useful consideration is the processes and organization of commercial kitchens and preparation areas in relation to residential style kitchens. By taking cues from each, the proposed kitchen and dining spaces designed will be responsive to larger groups and activities while maintaining a quality of home.

### Japanese Hibachi

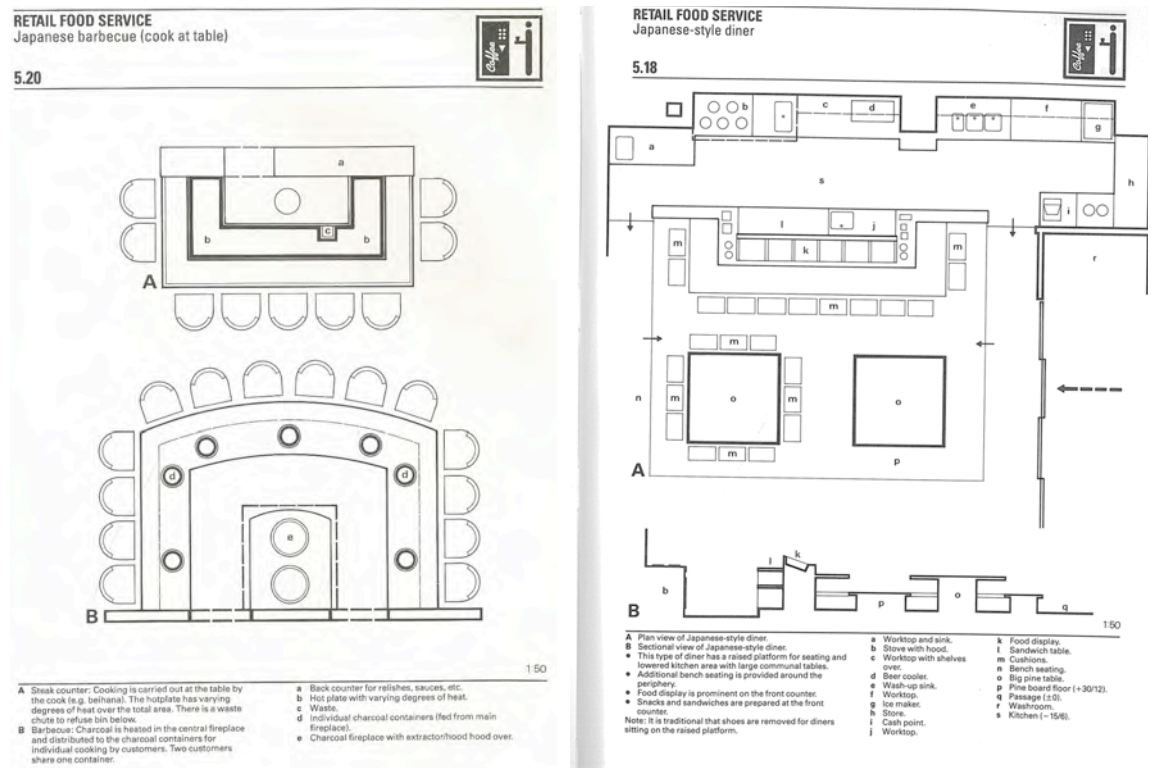
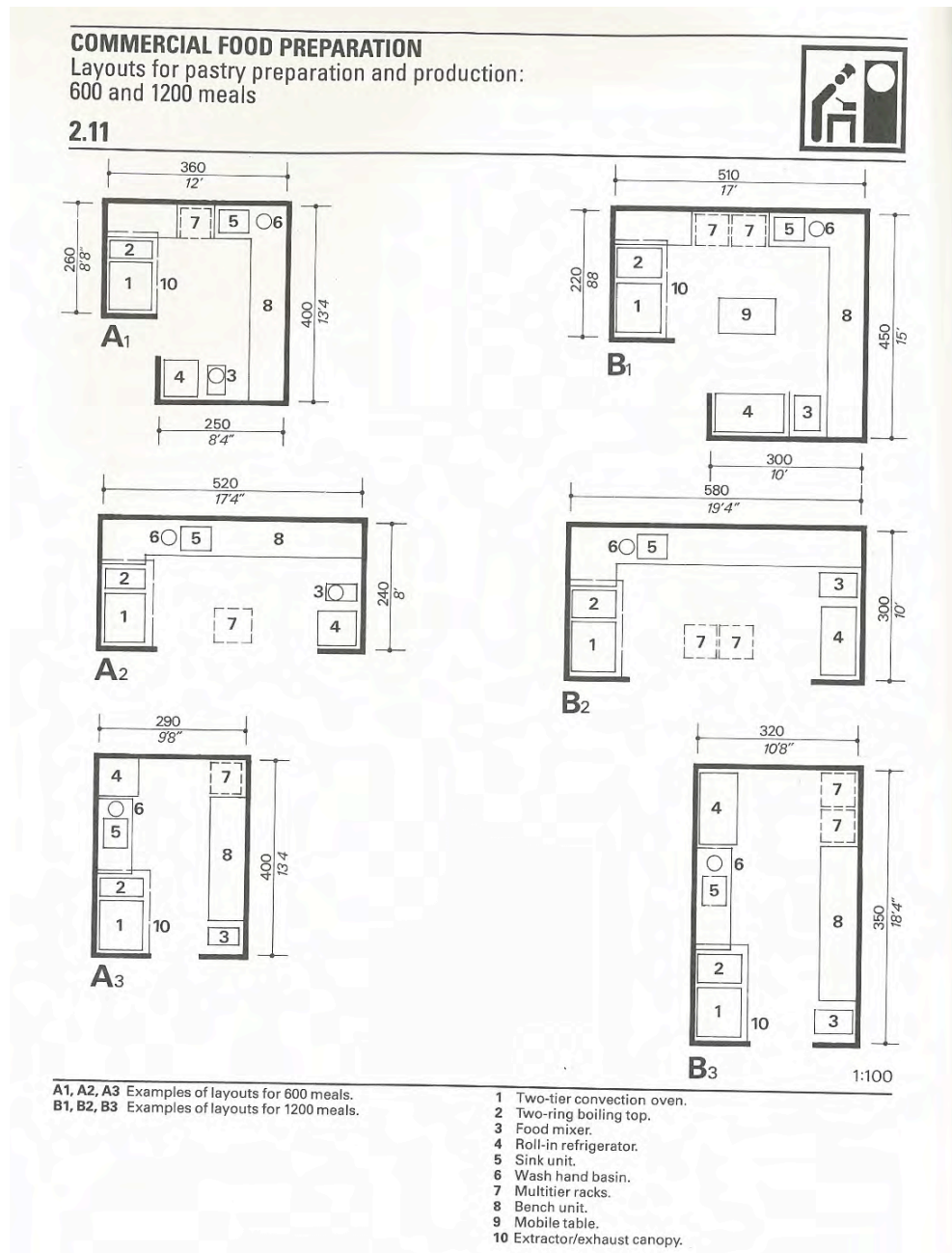


Figure 22\_ Sample layout of hibachi grill and dining.

Looking at cooking and dining spaces, the Japanese Hibachi style is unique for sharing meals and central cook top feature. In the setting of a learning kitchen, such concept may be conducive to demonstrations and teaching of cooking skills for a group

of participants. Not only does it allow for ease of movement when demonstrating, but allows visual access and supports social interaction.

*Bakery*



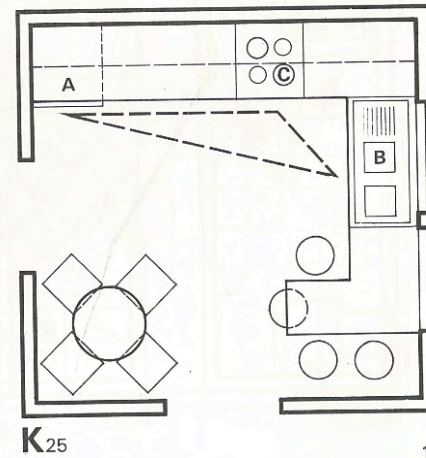
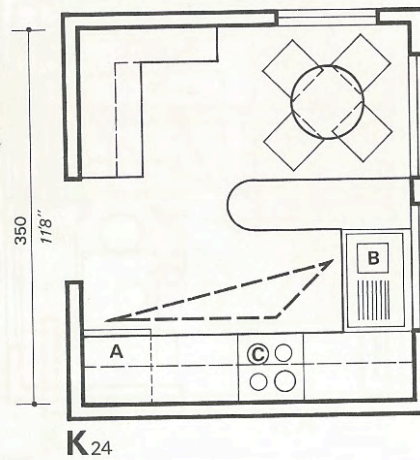
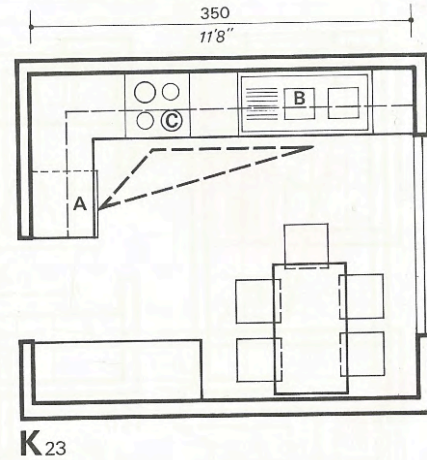
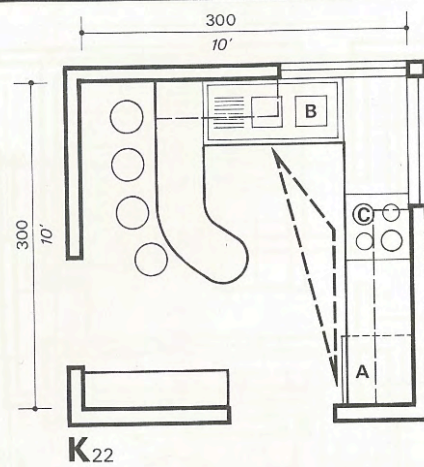
**Figure 23\_** *Layouts of commercial bakery preparation kitchens.*

Residential Kitchens

DOMESTIC FOOD PREPARATION  
Kitchen layouts 4



1.09



1:50

• Further examples of "L"-shaped and broken "U"-shaped kitchens.

- A Refrigerator.
- B Sink.
- C Stove.
- K22 "L"-shaped for 4-6 people (through circulation avoids work circulation area and breakfast bar).
- K23 "L"-shaped for 4-6 people (large dining area, therefore separate dining room could be omitted).
- K24 Broken "U"-shape for 4-6 people (dining area).
- K25 "L"-shaped for 6-8 people (breakfast bar and dining area).

Figure 24\_ Layout diagrams from Food Preparation Spaces.<sup>21</sup>

<sup>21</sup> Crane Dixon, Robin. *The Shape of Space: Food Preparation Spaces*. New York: Van Nostrand Reinhold, 1990. Print.

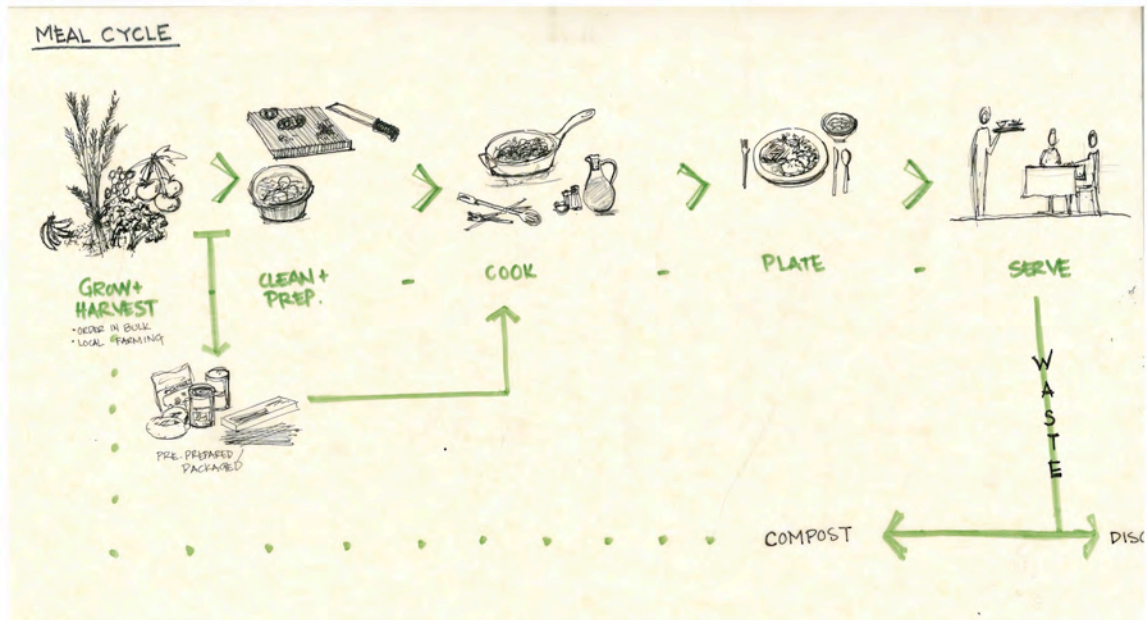
## **Design Approach**

Understanding the identity of the surrounding community both technically and socially lead to the realization that the proposal for a community kitchen offers the opportunity for a much greater impact with an integrated and encompassing program that extends beyond the building.

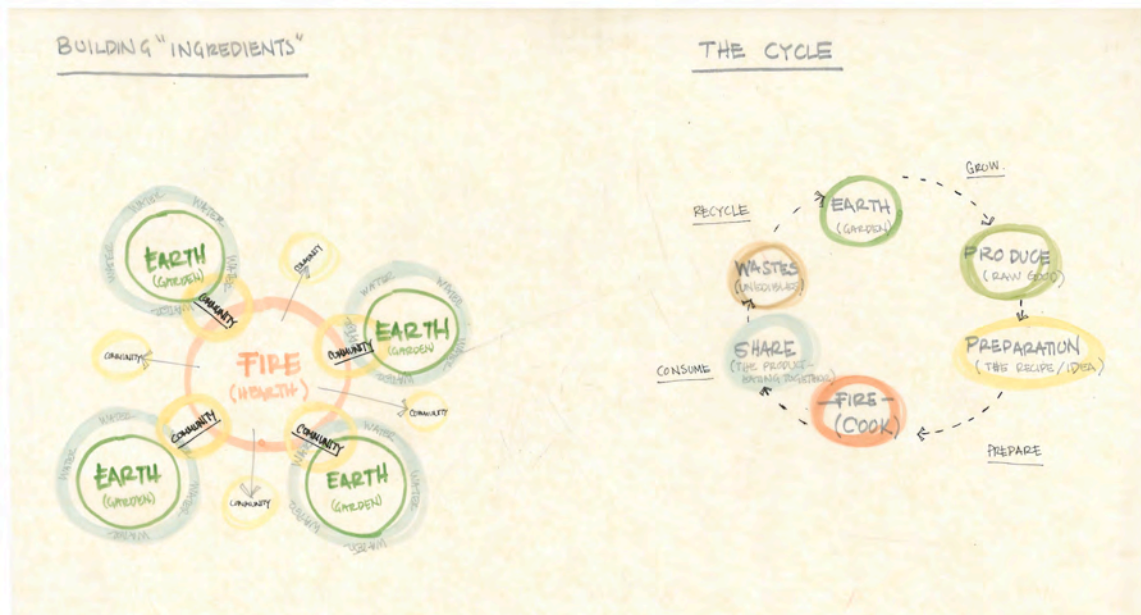
The design development includes reiterative studies of the different elements that compose a kitchen and the interactions of hearth within a home. The process of food from garden to plate at the residential scale as well as the options for commercial or café functions are also considered. Analyzing the relationships of organization within each as well as with one another allows for the development of practical kitchen sizes and layouts conducive for learning and socializing. Additionally, a look into the different rituals of cooking and eating inform a design that is flexible to the needs of different cultural styles of food, preparation, and interaction.

In approaching the design, the core aspect of this program is the practice of gathering and is a concept that is considered hierarchically. Throughout the conceptual studies, there is a constant relationship of the access to food, its preparation, and the sharing of a meal. A constant reciprocal or cyclical relationship is created between the building “ingredients” where the programmatic elements “feed” one another—garden supporting kitchen, kitchen promoting social gathering and learning, and so on. At all points of the cycle is also the involvement of community members.

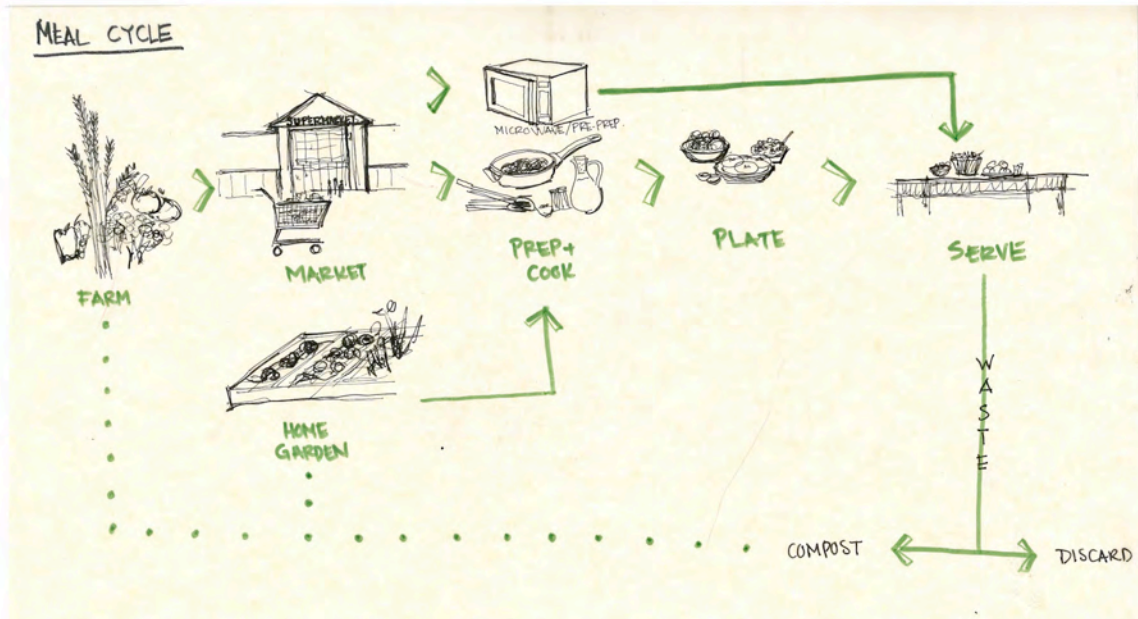
The study begins with an understanding of the food cycle from garden to table as well as functionality of kitchens and overall building flow.



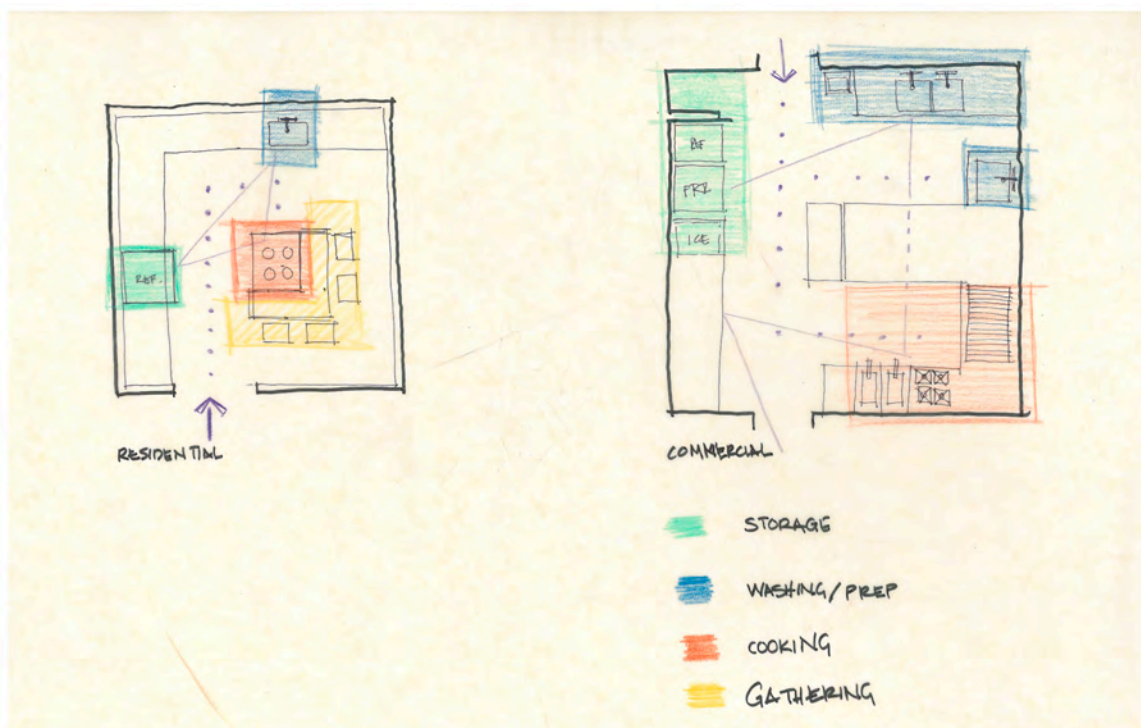
**Figure 19\_** Meal cycle for restaurant. Generalized process from garden to table.



**Figure 25\_** Building Ingredients informed by elements of nature. The relationship between “building ingredients” highlights the cycle of food from earth to plate.



**Figure 26\_ Residential meal cycle.** *The farm aspect is often overlooked where the market becomes a focal point as a beginning step in the cycle.*



**Figure 21\_ Comparison of residential and commercial kitchen layouts.** *Overall organization is very similar with grouping of functions.*

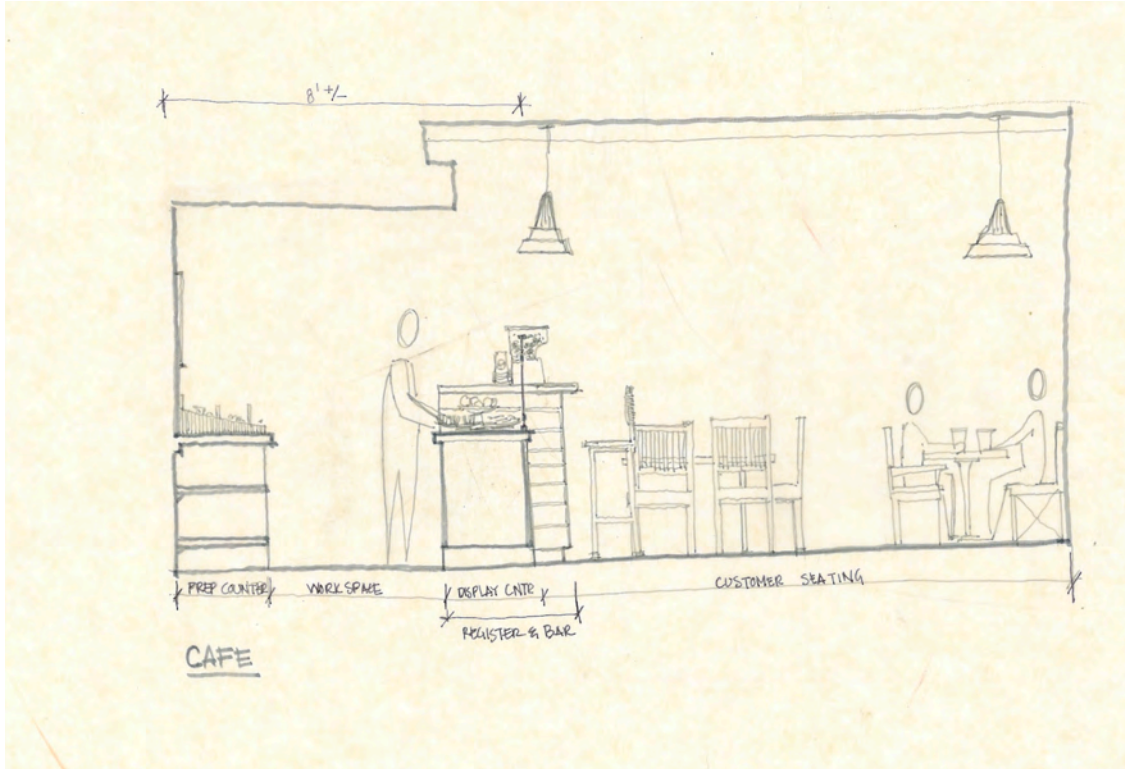
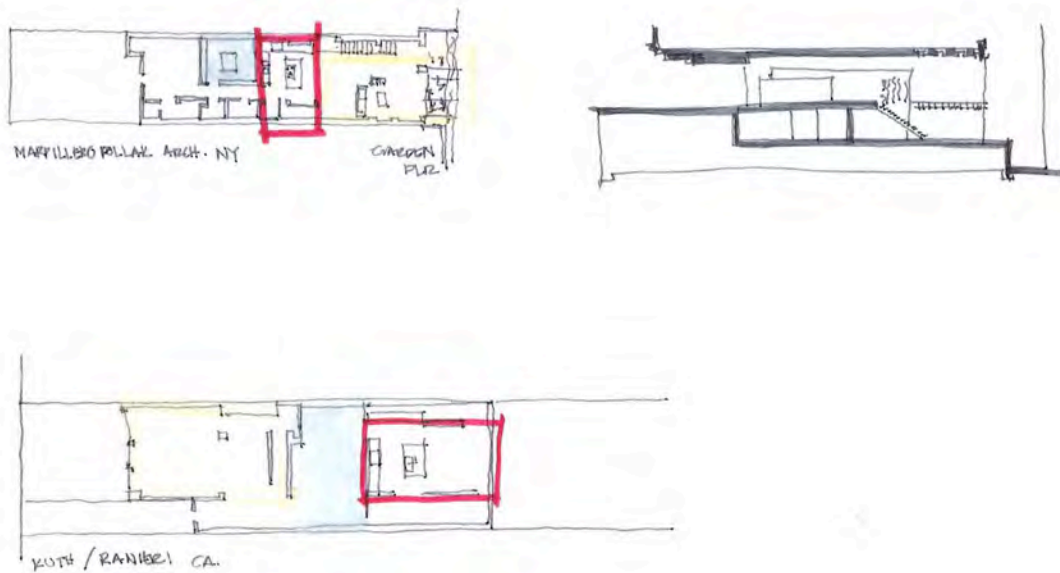
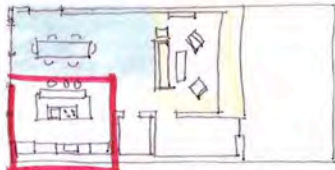


Figure 27\_ Study of spatial layout and rough dimensions for café space.

Figure 28\_ Study of spatial relationships of kitchen, dining, and living room within a home. (below & p 58)





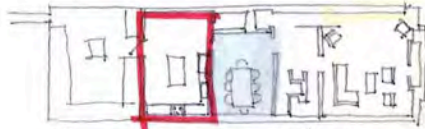


JOAN PETRARCA NY

KITCHEN

DINING

LIVING



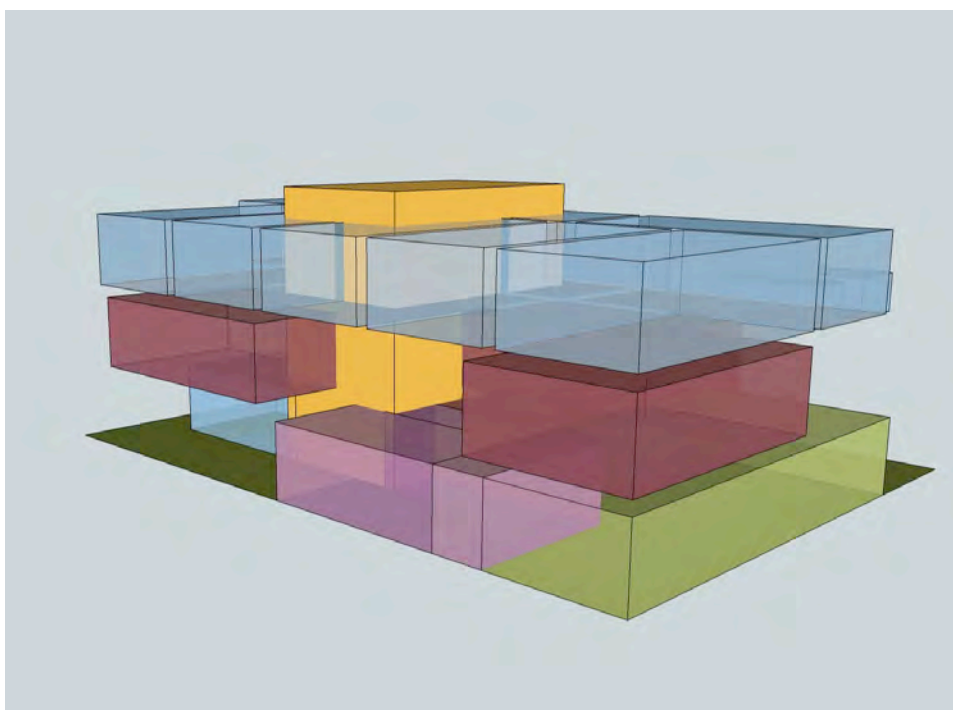
MICHAEL STRAUSS + DOROTHY HAM NY

AMERICAN TOWN HOUSES

## Conceptual Studies

Through a preliminary study of the program, typical processes, and organization, several approaches are possible in promoting the social goals and physical mission of this building. The following conceptual studies develop around a hierarchical principle of “gathering” from which other programmatic elements are arranged.

### *Scheme 1*

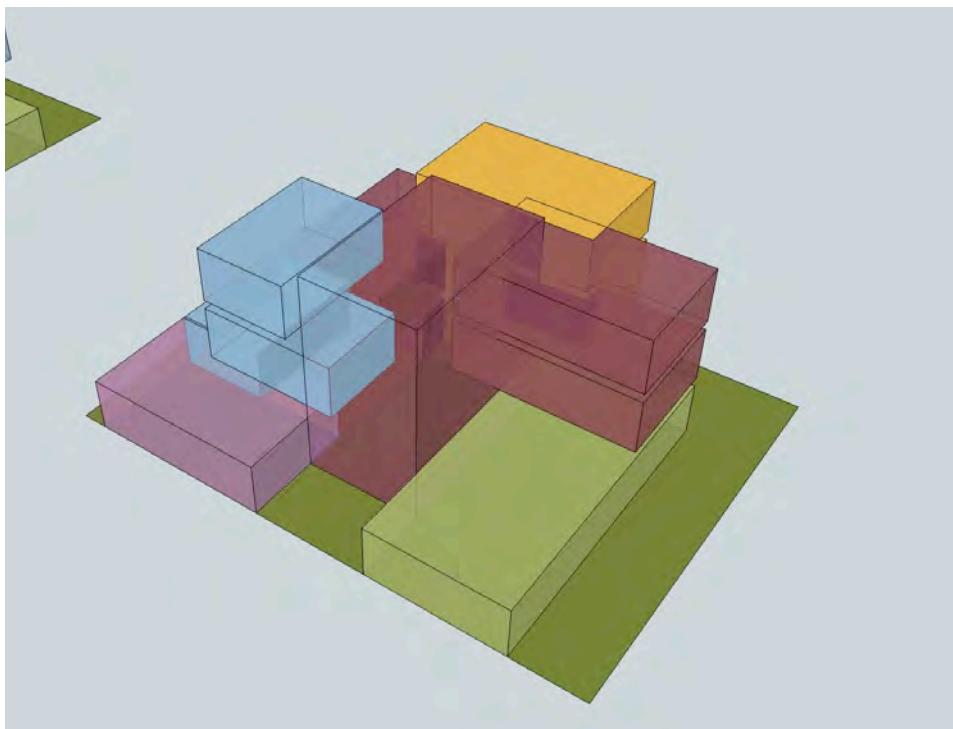


**Figure 29\_** *Scheme 1 explores the idea of the lounge as the core of the building with intersecting program.*

The communal lounge and dining area, illustrated in yellow, are the focal piece of this concept. Within this central shaft, other programmatic elements project into the space and interact with the lounge and dining as the social center. Incorporated into the program is also the possibility of a residential aspect (shown in blue), maximizing on the

idea of hearth and home. This provides the opportunity for the facility to be all encompassing by considering the pieces that compose the idea of a home and providing the resources to be self-sufficient in terms of nutritional sustenance.

*Scheme 2*

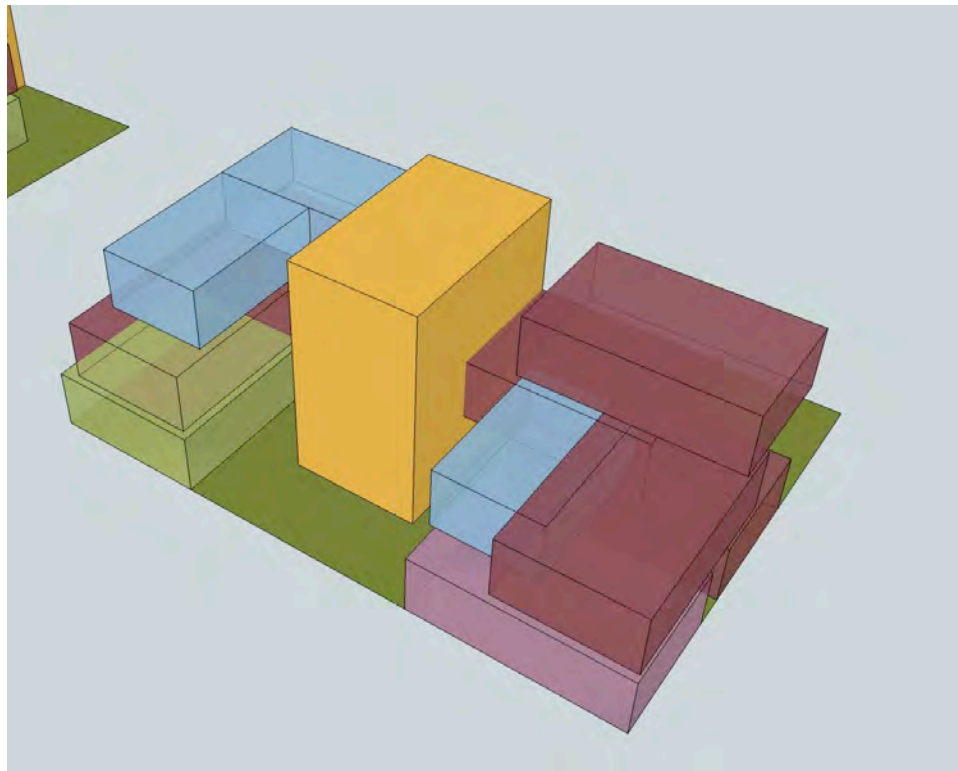


**Figure 30\_** *Scheme 2 places the kitchen as the central element, building upon the idea of hearth of a home.*

The kitchen, shown in red, is the hearth of the building similar to the concept of hearth within a home. From this core, other spaces begin to overlap such that the activities of the different spaces may potentially be visually or physically connected. Learning and gathering spaces, which are illustrated in blue and yellow, interweave into the hearth. Gardens are distributed at multiple levels to engage the different program and

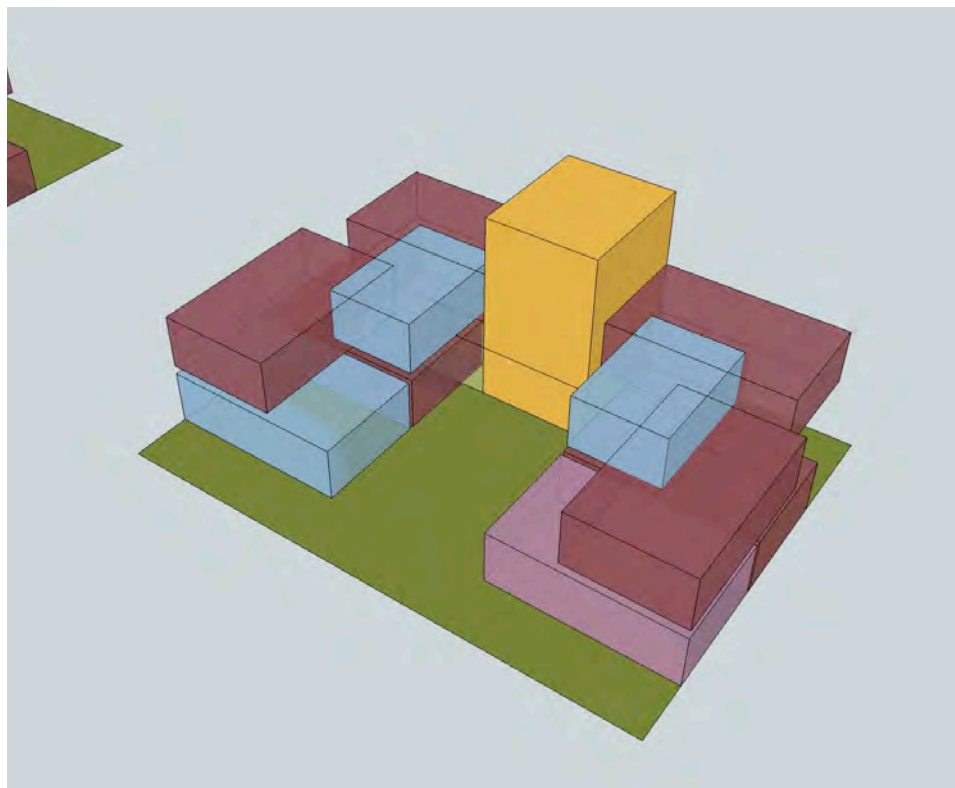
provide outdoor space. Overall, the spaces are arranged to give public functions a street presence.

*Scheme 3*



**Figure 31\_** *Scheme 3 optimizes on the relationship of building and garden.*

This concept looks at weaving nature through the building. Between the different spaces is a shared garden, where the cycle of garden to plate is reiterated at a micro scale. While this design generates multiple sections or components to the building, the communal dining area remains as a unifying element that encourages coming together. The garden wraps around the “gathering” core, reminding visitors of the connection of their food with nature. Spatial overlap is important to ensure that the multiple components do not begin to divide or segregate one another in the larger organization of the building.

*Scheme 4*

**Figure 32\_** *Scheme 4 uses the spatial layout to communicate the process of food from farm to being served.*

This concept creates the building as a teaching tool by using the program to inform visitors of the food cycle. Upon arrival, visitors are greeted by the garden where the initial step of growing is demonstrated. The harvested food is then carried through the building to the market at the rear and moves through the process of meal preparation within learning and kitchen spaces. It eventually arrives again at the front of the building in the café as the finished product for locals. The café front is the public and interactive face with the community.

## **Design & Development**

Each concept exhibits a strength and value to the community whether the focus is on an educational or community center aspect. However, the most successful design is an integration of all these values. Therefore, development of the building design explores ways to serve the community by offering educational experiences, as well as social and personal components operating at multiple scales. The building becomes a tool for teaching and demonstrates alternative ways to live comfortably and sustainably within a city.

The parameters of design are driven by the context and concept of communal hearth and extension of home. While the building could visibly contrast and differentiate itself from its neighbors, it, instead aims to blend in. A relationship is generated with its surroundings where the building becomes interweaved into the community's fabric rather than merely an intervention. The design is also informed by storefronts and townhouses, balancing a public face with residential character.

### *Phase I*

In the initial phase, the building is conceived as an object in which the garden landscape would be infused. Its lateral bearing walls generate a rhythm around which spaces are organized. By breaking the massing into volumes and shifting the building's street fronts, it begins to build upon the language of its context. The building becomes more relatable in scale, both inside and out, and is respectful of a townhouse tradition (see Figure 33).

At the street corner, the bakery generates a “performance” piece where those passing by may view goods being baked. The main entrance remains at the marketplace, which is the connector and thoroughfare to the gardens that align to the south. Horizontally through the building, the café and kitchen align, skewering the building volumes and projecting onto the street. The café is, therefore, given a presence, while inside the components of cooking, including the café and kitchen, become focal pieces around which other spaces interact. The study of the townhouse spatial arrangement is applied and alternated to allow the kitchen to be the shared central piece of the building. The concept is carried through each floor with staggered cooking spaces that create spacious double height kitchens and allow for vertical interaction (see Figure 37). Dining, lounges, and outdoor terraces are arranged with consideration to programmatic overlap and movement through the spaces. Although the components of cooking and learning are spatially separated, the horizontal core acts as a bridging element between these two areas.



Figure 33\_ Ground floor plan. (Original scale: 1"=20')



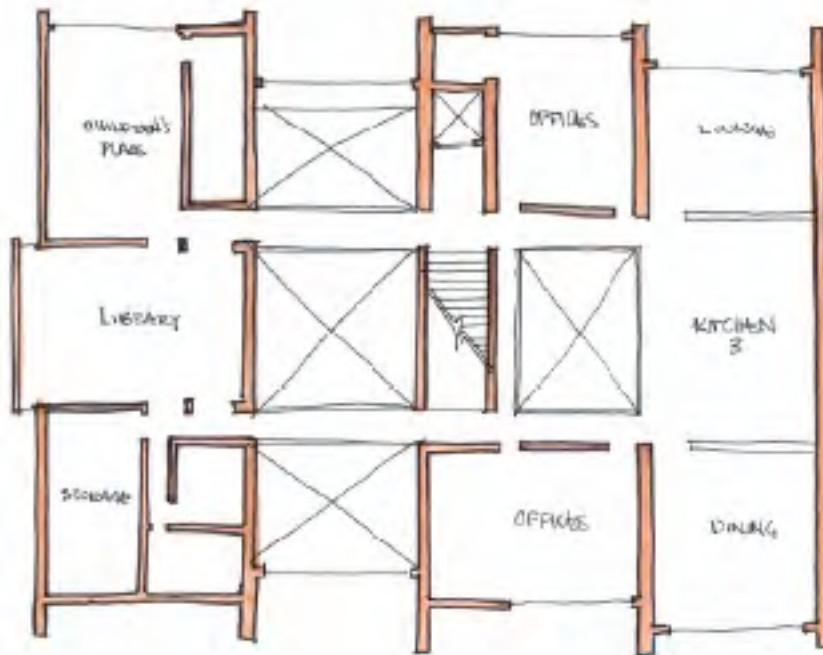
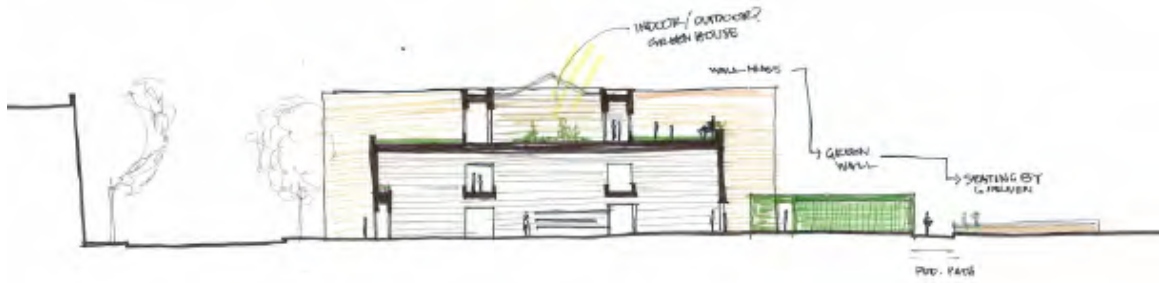


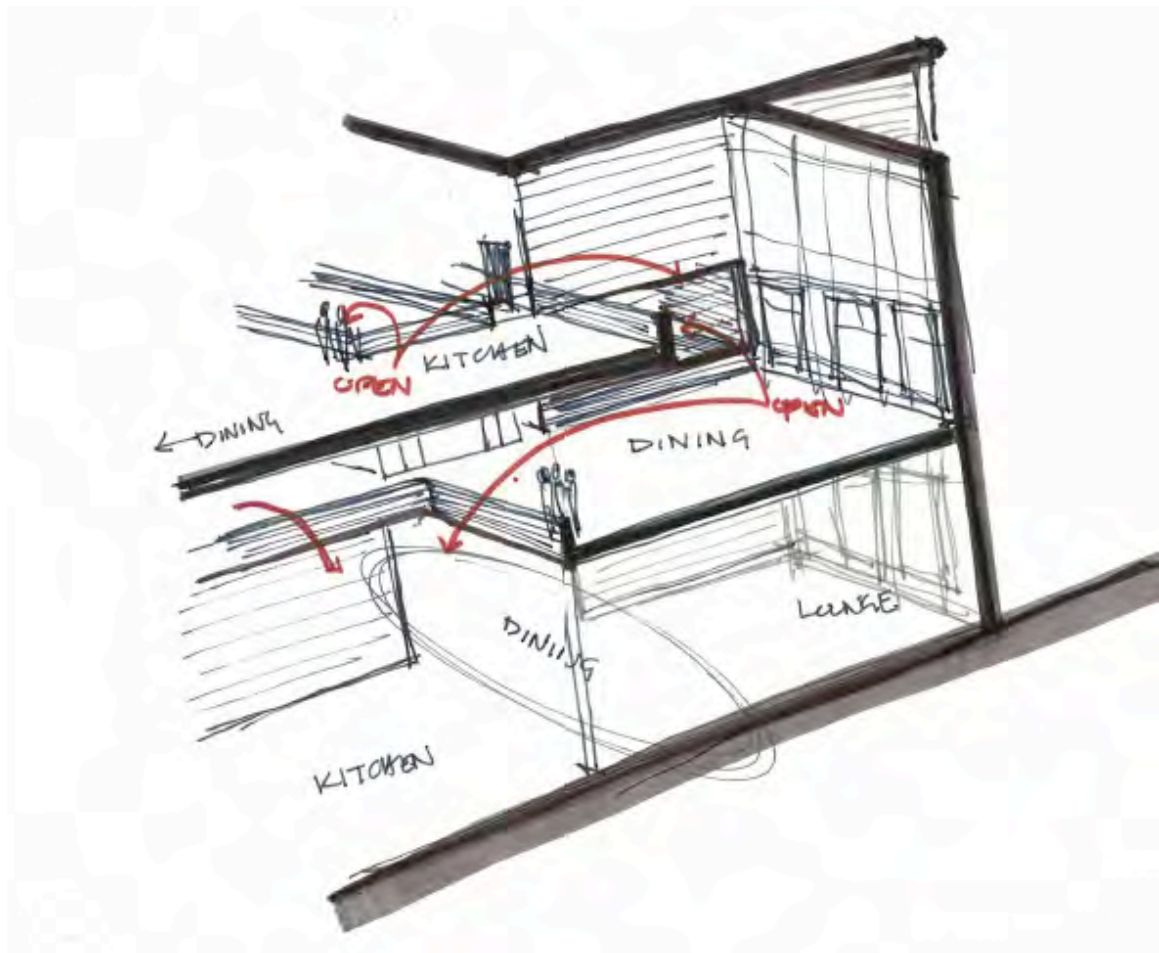
Figure 34\_ 2<sup>nd</sup> floor plan.



Figure 35\_ 3<sup>rd</sup> floor plan.



**Figure 36\_** Section north-south through center of market volume of building. Greenhouse and landscaped terrace are incorporated at the roof top of the building which responds to a roof deck tradition throughout Baltimore.



**Figure 37\_** Staggered overlapping spaces create visual connections vertically through the building.

*Phase II*



**Figure 38\_** *Ground floor plan. (Scale: 1"=30')*



Figure 39\_ 2<sup>nd</sup> Floor plan.

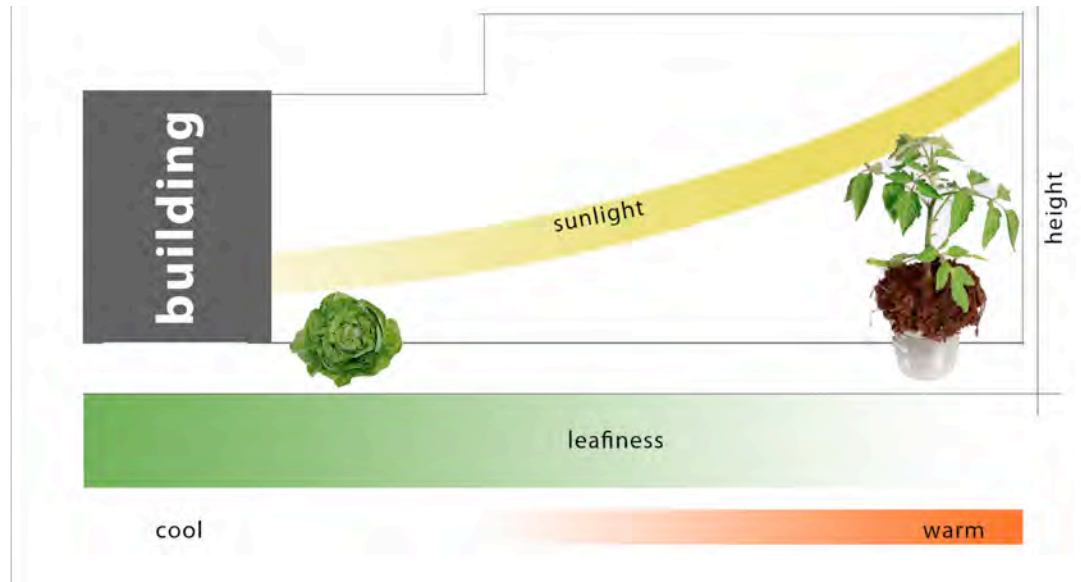


Figure 40\_ 3<sup>rd</sup> Floor plan.

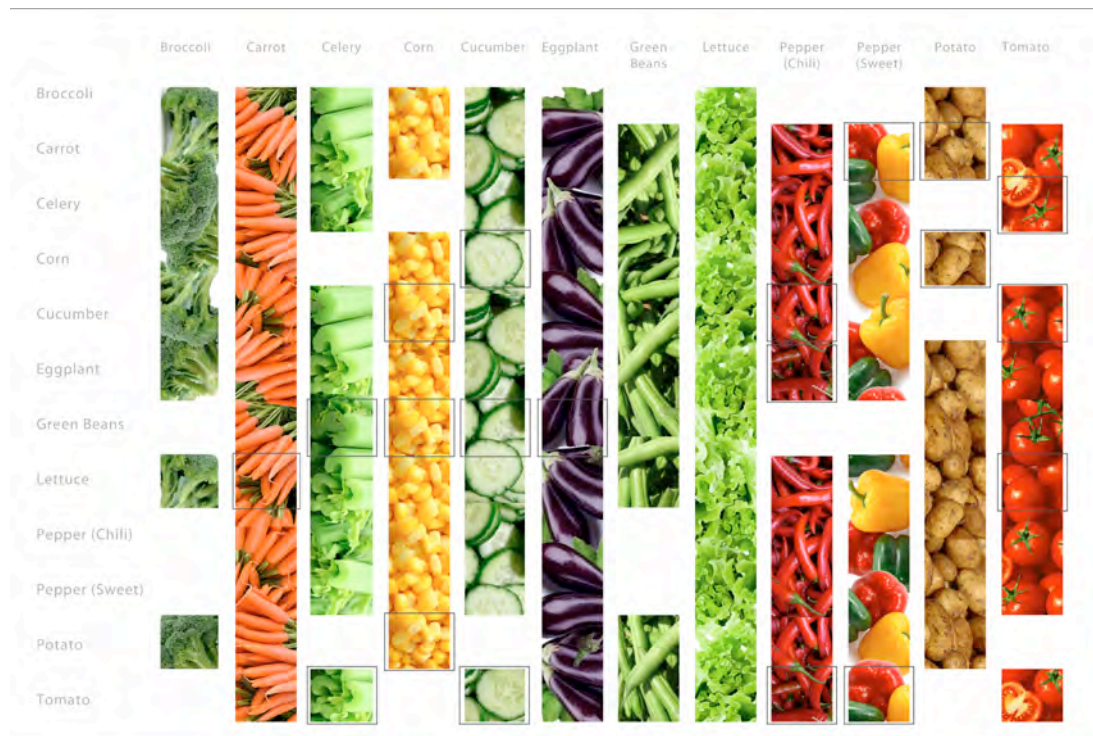
As the design is developed and refined, its organization is further regularized to hold the street edge and allow select shifts in the building volumes to be unique. The garden is also expanded, allowing for a greater integration of building and landscape where one component does not overpower the other but are in support of one another.

The garden mimics the rhythm of the building and carries the planted landscape to the southern street's edge. The linear arrangement allows for the number of plants grown on site to be optimized in relation to compatibility, solar needs, and plant spacing.

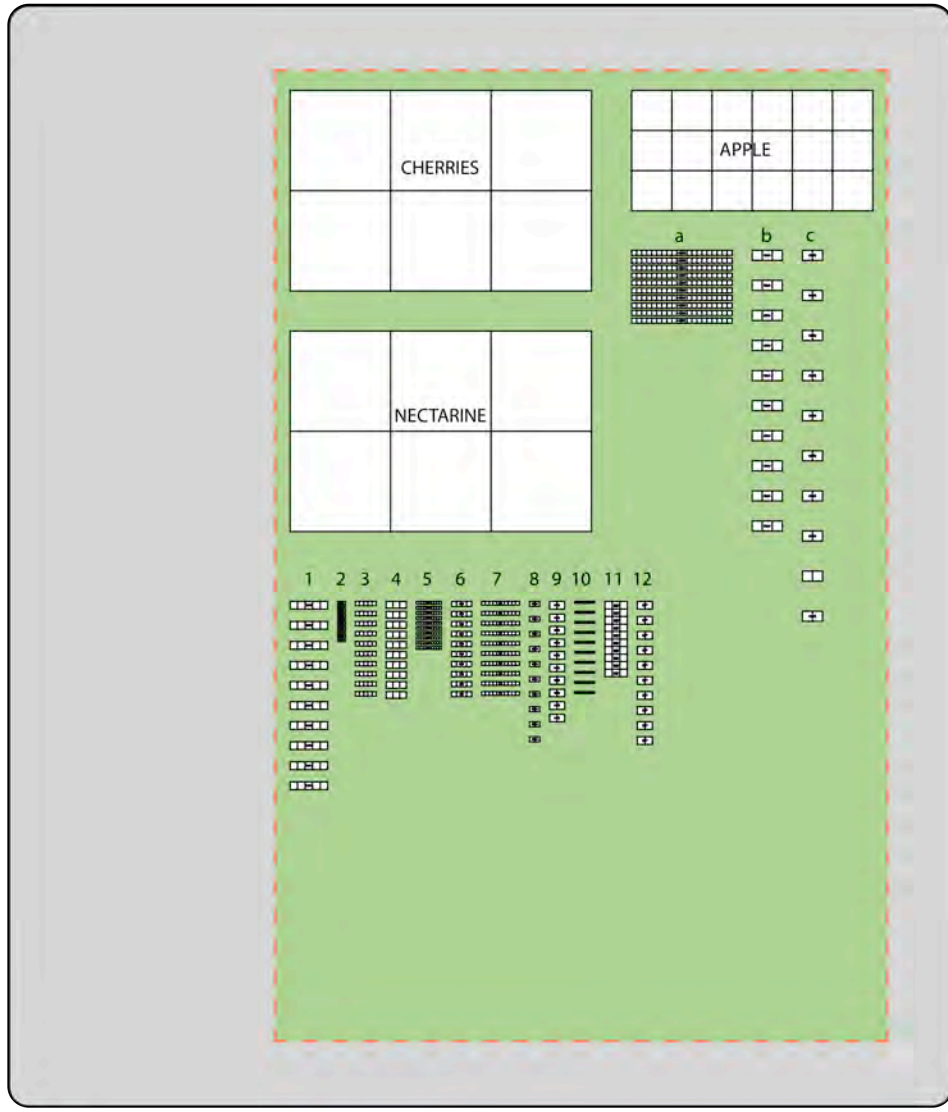
The building is organized into two main parts with the more public market and learning spaces remaining grouped towards the west street corner. These functions are further explored with considerations to flexibility for activities year round. By switching the market and café at the ground level, the market is given a greater street presence. It holds the street edge at the northern portion of the site and begins to fade into a colonnade as it reaches the garden for light and air to penetrate and serves as a threshold for movement into the garden beyond. The flexibility of the market volume allows it to operate as indoor and outdoor space. Between the market and café, the bakery becomes a mediating element between the more commercial aspect of the market and communal gathering character of the café. Towards the east, more intimate cooking-dining areas are arranged around a symbolic central hearth. These two volumes assume the concept of a home on the community scale.






**Figure 41\_ Relationship of plant height and leafiness to solar needs. Leafier plants may be grown relatively close to the building without significant concern about shading.**



**Figure 42\_ Plant compatibility for garden layout.**



scale: 1"=20'-0"

- |    |            |   |               |
|----|------------|---|---------------|
| a. | STRAWBERRY |  | BLOCK         |
| b. | CANTELOUPE |  | PLANTED AREA  |
| c. | WATERMELON |  | PLANT SPACING |
1. TOMATO
  2. LETTUCE
  3. POTATO
  4. BROCCOLI
  5. CARROT
  6. CELERY
  7. CORN
  8. CUCUMBER
  9. EGGPLANT
  10. GREEN BEANS
  11. PEPPER (SWEET)
  12. PEPPER (HOT)

### plant spacing and size relation

**Figure 43\_** Plant spacing dimensions and quantity per 10 people in relation to site dimensions.



**Final Design**



**Figure 44\_ Ground floor plan.**



Figure 45\_ 2<sup>nd</sup> Floor plan.



**Figure 46\_ 3<sup>rd</sup> Floor plan.**

The final iteration involves developing a highly integrated building and landscape with response to existing regulating elements of streets and context. The building is mindful of existing structures and program and aspires to appropriately relate without overtaking the programs that are already in place to serve its community. Volumes of the building extend into the garden and similarly the garden is integrated into different

sections and elevations of the building. The garden is arranged for ease of movement, and planting beds are raised for ease, convenience, and operation throughout the different seasons. Plants are strategically arranged in order to provide produce for at least 40 people throughout a growing season. The garden is envisioned as a learning garden, where people not only have the access to fresh produce, but can interact with others to learn how to plant and harvest food in their own homes. The landscape design is also conscientious of environmental sustainability, exploring techniques to recycle and incorporate collection of water and compost for irrigation and nutrients as a way to help nourish and self-sustain. Settled among the landscape, outdoor cooking-gathering areas create a balance between nature and the man made urban environment. Further connecting the various components of the building and its program, the fireplaces are placed on axis with one another as a consistent reminder of the hearth and its symbolic meaning to the project.

The building is organized into two main grouped functions of public and semi-private program. The demonstration bakery is relocated to the corner, allowing the rhythmic wall structure to consistently read through. Also sharing the western-most volume is the public market, which is operational year round as an indoor or outdoor space. Fading into an arcade as it extends south, the outdoor space is flexible as farmers' market or additional dining area. Above the market and bakery are the classrooms, library, and offices that extend south towards the transitional housing units and vertically assist in creating a street edge.

As a transition between the public market place and more personal kitchen and dining areas, the café within the central volume is a blend of the two, incorporating a

commercial aspect as well as food preparation. At the upper levels, kitchen, dining, and lounge areas are stacked and arranged around a central hearth that penetrates the height of the building. The kitchens are the main activity centers where people can gather to teach or learn to cook or simply participate for personal enjoyment. In many modern homes, the kitchen is a place of social interaction and entertainment as family and friends can cook and eat together. In extending the interactive character of this space on a community scale, the double heighted kitchens offer visual connection between the different floors so that visitors may interact with activities of a neighbor on another floor. Adjacent the kitchens, the dining and lounge areas, which in a sense are the dining and living rooms of a typical home complement the social interaction supported by the kitchens in offering people a place to sit around the hearth and table to share a meal or meet friends without feeling the time pressure of having to leave.

Edible plants, panels, and landscape are incorporated onto the building's elevations, interior, roof, and terrace to fully highlight the significance of plants and the opportunity for urban agriculture. The gardens are operated by season and food stored or jarred for use during off-season. The greenhouse and planter boxes raise plants off the ground from frost and offer the opportunity for earlier growing seasons when paired with the use of plant covers. During off seasons, the soil may be prepared for the next growing cycle or in some cases, other plants or florals may be grown until produce is in season.

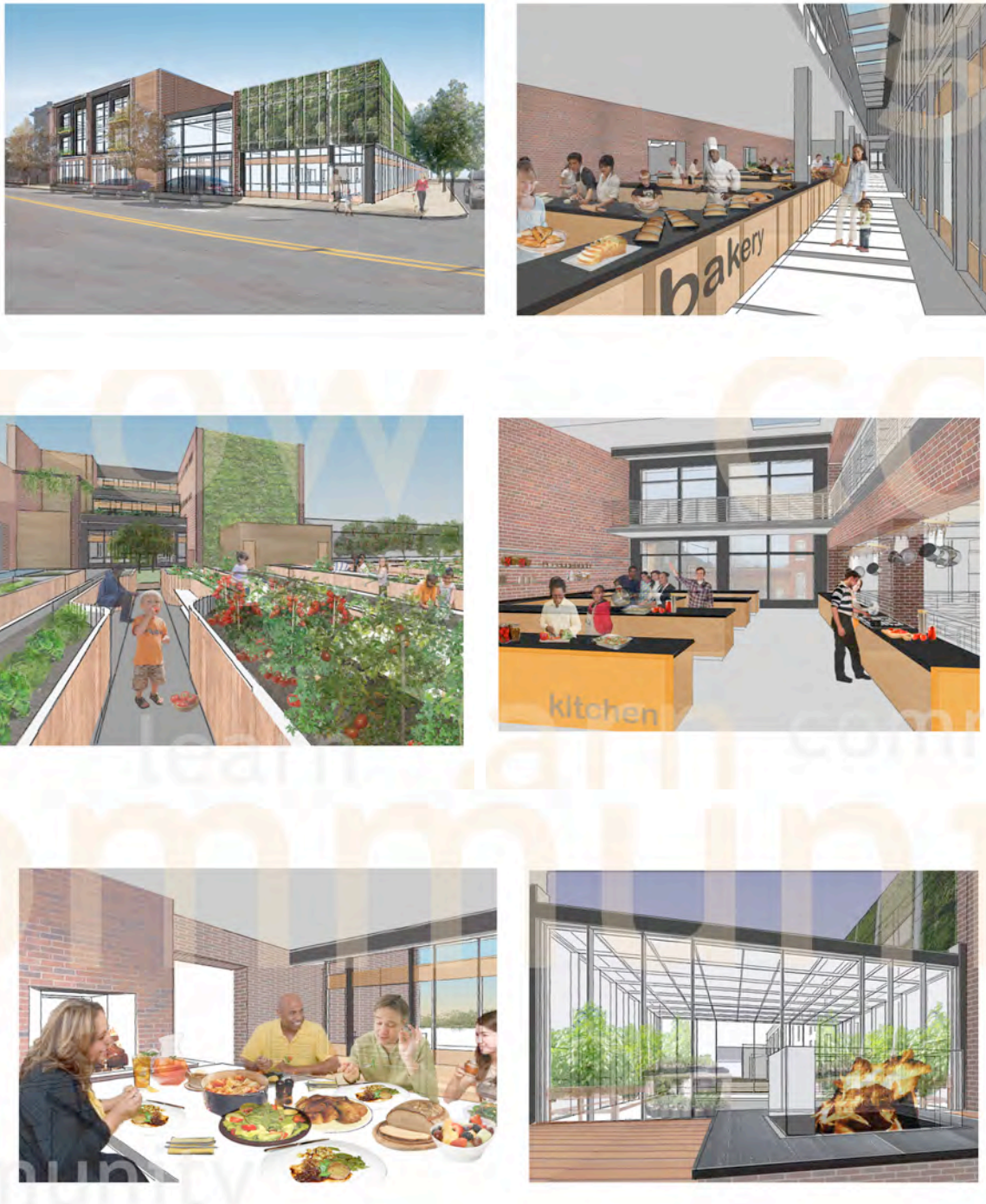
It is anticipated that local schools may assist in providing educational programs, and funding for operation be raised with the help of local restaurants and from the market and café on site. A small fee may be incurred for materials cost in participating in cooking classes, but the hope is that the activities be affordable and accessible to

everyone. The greater mission is to give back to the community and equip people with the resources to make healthier choices, whether it is simply providing access to fresh food and produce or the opportunity to engage in preparation of a dish and cooking traditions.

Overall, the community kitchen incorporates elements from growing to cooking and consuming in order to highlight and celebrate the process of preparing a meal. By being able to grow fruits and vegetables on site, then bringing them into the kitchen to prepare, and eventually eating, people are more conscientious of the food cycle, their options, and are able to appreciate the impact of food culture within their personal lives.



**Figure 47\_** *Section north-south through the building and garden illustrates the process of growing to kitchen and table that is encompassed by the program of this project.*



**Figure 48\_** *Experience through City Hearth. Incorporation of market, cooking, learning, growing, gathering areas provide a valuable interactive space for the community.*



**Figure 49** *\_ Section north-south looking through café towards market. The market & classroom bar beyond holds the street's edge while allowing movement into the garden at the ground level. The café is a connector between the public and semi-private program of the building.*



**Figure 50** *\_ Section east-west through building looking towards E. Baltimore. Hearth penetrates the building's floors and is a central feature of warmth and gathering.*



**Figure 51** *\_ Section east-west through garden looking towards building. Plants are raised off the ground for protection from frost and to allow for greater exposure to sunlight. Beyond, the outdoor terrace overlooks into the garden.*



## Conclusion

The design of a community kitchen is a rich one with a program that has potential for significant development and a valuable role within the community. At the conception of this program, the main focus was to create a social center revolving around an educational component as a response to fading food cultures and health concerns. The challenge became understanding how this building was to function and defining its identity socially and architecturally. It wanted to assume the role and character of many things from a public commercial space to educational facility and extension of the home. Thus, the question was striking a balance, what category does building type fit in, and creating the design for a new program from integrating aspects of spaces that are familiar.

The scope of the project significantly grew from its original intents. What started as a building evolved into an immersion of building and garden, creating a much richer response to providing the necessary resources as well as educating the community. In delving deeper into the program and studying the neighborhood, nutrition became a much smaller concern in relation to access, affordability, and sense of community. There was an interesting dichotomy between those living comfortably and those in poverty, and it was an eye opener to see and interact with the large number of locals that were struggling to simply have a place to go or meal on a plate. Each group shared the need for food and nutrition, but at very different levels.

The architectural contribution became a social response focused on necessity rather than an amenity or supplement as it was initially conceived. The project looked at both extremes of minimal program to fully encompassing and sought for a balance that

would effectively serve the community. The success of the design development in moving forward is the consideration that the building fulfills more than one purpose architecturally and socially. While it embodies the role of an educational facility, it also serves as a “home” for those in the community, and provides recreational value. It is acceptable that the building and program typology does not fit into a category. The more significant acknowledgment is integrative design as a vehicle for sustainability in terms of the building, its site, and the development of the individual as well as community.

With additional development, the design of the community kitchen could serve as example for redefining urban agriculture and reducing the prevalence of food deserts in the city. By considering all the aspects of food preparation and its cycle from “farm” to table, a full experience and appreciation is generated. Education related to food culture and nutrition could be maximized through the availability of resources immediately on site. Furthermore, considerations in operations of the garden and building throughout different seasons offer opportunities for sustainable and innovative use of the facility year round. The building does not and cannot be designed for only a particular season. There may be optimal times and off-seasons, but the need within the neighborhood is constant. For the program to be successful, it must offer flexibility and be able to respond to changing needs. It is to provide everyone with an equal access and personally meaningful experience. It is to be a fully integrative design creating awareness of the natural environment with seamless transition between nature and man made. And, importantly, the building and program should foster appreciation, inspire growth and desire to come together as a community.

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