

## ABSTRACT

Title of Thesis: ADAPTIVE REUSE: AN ARCHITECTURAL  
SOLUTION TO POVERTY &  
HOMELESSNESS

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All cities are forced to deal with homelessness and poverty; often they rely on temporary shelters and welfare programs as the only solutions. These do not assist the impoverished in establishing themselves in the community, and ignore the fact that many lack the necessary education, job skills, and life skills to establish independence. This thesis examines a way to provide vocational education to break the poverty cycle by providing disadvantaged citizens access to education, training, and work.

The abandoned Hostess factory on 7<sup>th</sup> and S Street NW in Washington DC, and its adjacent vacant land presents an appropriate site for study. Adaptively re-using this factory as a vocational school can rejuvenate the local neighborhood while helping to change the lives of the impoverished. The vocational school is designed as a community school that offers services for poor and homeless adults as well as the continuing education programs for the local community.

ADAPTIVE REUSE: AN ARCHITECTURAL SOLUTION  
FOR POVERTY AND HOMELESSNESS

By

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## DEDICATION

To my family for always being supportive.

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## **Introduction**

Poverty and homelessness are problems that plague cities all over the world. Current policies for reducing these conditions rely on welfare and subsidized housing which are only temporary solutions to these conditions. These adults often lack the job and life skills necessary to sustain themselves independently in society. These groups must be given a means to end their situation, and scholars, as well as practitioners, recognize that providing these groups with housing and financial assistance is not enough. Knowledge is the path to success in any endeavor and may hold the key to ending poverty and homelessness in America. This thesis proposes the need for vocational education at the adult level to assist the impoverished in obtaining meaningful employment to break the poverty cycle. Vocational programs are ideal for getting these adults back on their feet in a minimal amount of time.

Vocational programs to assist impoverished and homeless adults are necessary in all cities. As these populations grow, their presence in cities is difficult to overlook. Efforts to reduce these conditions have increasingly strained the social service delivery systems in many cities.<sup>1</sup> By introducing vocational schools for adults in the city, current social services will be supported, providing opportunities for these populations to assist themselves in exiting their current situations.

This thesis examines a vocational school program in the context of Washington, DC. The city offers several existing social services for poor and homeless adults, making the need for a vocational school viable. The site chosen for exploration of the vocational school program is in Northwest Washington, DC in the Shaw neighborhood.

There are already several initiatives for enhancing the quality of life in the Shaw neighborhood, including the desire to improve job-training programs. The strategic plan for the Shaw neighborhood, created by the DC Office of Planning, has outlined the following priorities:

Shaw Neighborhood Strategic Action Plan Priorities
<ul style="list-style-type: none"> <li>• Residential/Retail and Economic Development;</li> <li>• Affordable Housing/Develop abandoned housing;</li> <li>• Job training;</li> <li>• Public Safety;</li> <li>• Parking Management;</li> <li>• Green Space Beautification;</li> <li>• Revitalize Community institutions;</li> <li>• Better Schools and programs for youth;</li> <li>• Clean Streets.<sup>2</sup></li> </ul>

**Figure 1: Strategic Neighborhood Action Plan Priorities**

**[Author]**

The strategic plan describes the desire to ensure that “neighborhood residents have adequate access to job training. As a strategy, community members suggested diversifying and expanding job-training programs provided by the district.”<sup>3</sup> According to the neighborhood objectives, there is a desire in the Shaw neighborhood to diversify and expand job-training programs. These initiatives can be met by locating the adult vocational program in the Shaw neighborhood. All of these factors are to be taken into consideration when developing the vocational school program and site strategies. An adult vocational school in the Shaw neighborhood can demonstrate the ability to rejuvenate the lives of the students as well as addressing the local community’s current needs.



Shaw Neighborhood Strategic Action Plan for Job Training
<ul style="list-style-type: none"> <li>• focus training on courses that are technology based, that follow future economic trends, and that included computer skills;</li> <li>• prepare workers for jobs in the construction industry, including classes such as plumbing and carpentry;</li> <li>• provide workforce training that focuses on basic skills (such as spelling and typing) as well as preparing people for the reality of the workplace (ie, money management, office etiquette, and appropriate work ethic);</li> <li>• provide inspirational sessions for individuals who are wary of job-training programs, and have trouble getting jobs;</li> <li>• establish comprehensive programs with hands-on support services;</li> <li>• establish an investigative office, and increase the enforcement capacity of the job-training program.<sup>4</sup></li> </ul>

**Figure 2: Strategic Action Plan for Job-Training Programs**

**[Author]**

The first chapter of this document enumerates the state of poverty and homelessness in America. The chapter describes the current statistics of these conditions, as well as policies in effect to reduce them. Understanding the current policies in effect supports scholars and practioners' inclination that education is the necessary method for changing the state of poverty and homelessness in America.

The second chapter outlines the theories of school design, and in particular the impact of vocational school theories on design. Understanding the various schools of thought behind school design establishes design criteria with which to follow. Several vocational schools are analyzed to understand their organizational and programmatic strategies.

The school analysis provides a framework with which the vocational school program can be defined. This thesis believes that vocational education is necessary in all

contexts, and therefore aims to design the vocational school program so that it is not only a center of learning, but also a center for community activities. The program is developed with specific attention paid to the community's current economic needs and how they impact the school's curriculum. The program chapter shows that the vocational school program is a method for not only improving the lives of its students, but also the local neighborhood. The vocational school program can serve as a model that can be applied to all cities to alleviate problems of poverty and homelessness.

The fourth chapter outlines the criteria used in determining a site to test the vocational school program. There is a need for vocational schools everywhere, and therefore certain criteria were established to determine the Shaw neighborhood as an appropriate site to test the vocational school. The site analysis included in the fourth chapter identifies the constraints and opportunities of the chosen site.

Understanding the constraints and opportunities of the site allow the fifth chapter to consider comprehensive design strategies for the vocational school. This chapter illustrates the possible architectural solutions of placing the vocational school in the Shaw neighborhood. Various site solutions are proposed leading to the final design strategy of the vocational school.

The concluding chapter of the document describes the design process. After considering the various solutions for designing the vocational school, realistic constraints alter these conditions, emphasizing that the site has an impact on the implementation of the vocational school program.

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<sup>1</sup> William O'Hare, "A new Look at Poverty in America." Population Bulletin. (1996):13.

<sup>2</sup> United States. Office of Planning. District of Columbia Strategic Neighborhood Action Plan: Neighborhood Cluster 7. Washington, 2002: 15

<sup>3</sup> District of Columbia Strategic Neighborhood Action Plan, 55.

<sup>4</sup> District of Columbia Strategic Neighborhood Action Plan, 55-56.

“The educational system, being part of the culture, has two supplementary functions: to be a mirror that reflects the society as it is, and at the same time, to be an agent of social change and a force directed toward implementing the ideals of society” ~ John Thompson, Foundations of Vocational Education

## **Chapter 1:**

# **The State of Poverty and Homelessness**

## **The State of Poverty**

In 2005, according to the United States Census, 37 million people, 12.6% of the total population, lived in poverty.<sup>1</sup> In the US, poverty is defined by income level. The government establishes the minimum income used to determine the poverty line annually to reflect the changing economy. Poverty analysts believe the current government definition of poverty is flawed since, it neglects the role of non-cash welfare benefits. Other analysts believe that the defined poverty line is too low and does not accurately reflect the cost of raising a family today.<sup>2</sup> Many social scientists believe that poverty should not be viewed from a strictly monetary standpoint, but must also factor in the culture of poverty. Author Michael Darby emphasizes that poverty is not only a lack of financial stability, but is a diminished quality of life accompanied by an array of problems.<sup>3</sup> Understanding poverty as a social condition, rather than a purely monetary one can change the perception of poverty and ultimately find the appropriate solution to the problem.

## **Perceptions of the Poor**

The poor are often categorized into a monolithic group that leads to several misconceptions about who poor people are. According to author William O'Hare, people often conclude that most of the poor are African-American and do not work. The truth is that the impoverished population is as diverse as the causes of poverty. Contrary to the misconceptions about the poor population, nearly half of the poor who are able to work do so and are usually employed full-time.<sup>4</sup>

## **Poverty as an Urban Problem**

Although poverty exists everywhere, demographic shifts in the American population has redefined poverty as an urban problem.<sup>5</sup> American cities in the 1960s experienced a change in the urban population with the advent of white flight. It was during this time that upper and middle class Americans moved away from inner cities to live and work in the suburbs. Poverty became concentrated in the centers of large cities. Prospects for employment also dwindled as jobs moved with the upper and middle class to the suburbs.<sup>6</sup>

The concentration of poverty in central cities has isolated poor and low-income people, creating the development of social norms and attitudes that many scholars believe perpetuate poverty itself. Social scientist Charles Murray describes the underclass as poor people who behave in a way that is different from social norms and who propagate the negative image most Americans have of poor people.<sup>7</sup> The separation of poor in central cities from middle-class and wealthy Americans, along with the development of “dysfunctional or antisocial behavior” has hindered the ability of the poor to integrate with mainstream society.<sup>8</sup> Although the underclass is only a small portion of impoverished people, they challenge policy makers to view poverty as a cultural problem and not just a financial one.

## **Current Solutions to Poverty**

Initiatives to reduce or perhaps end poverty have been pervasive in American social policies since the 1930s. The Great Depression caused a severe loss of personal property and widespread unemployment, leading the government to establish policies to alleviate these problems. President Franklin Roosevelt established the New Deal

programs which provided “social security, unemployment insurance, and Aid to Families with Dependent Children,” marking the first time the government took responsibility for providing basic services to its citizens.<sup>9</sup> During the 1960s “The War of Poverty” expanded government services for the impoverished. O’Hare, in 1996, noted that poverty policies tend to change every 30 years as each generation tackles the poverty problem, making the 1990s the next wave of changes in policies to aid the poor.<sup>10</sup> This indicates now, 16 years later, we are halfway through the current policies that aren’t working. According to this cycle, we are on the verge of developing new and more effective policies to deal with poverty, unlike current legislation, which is leaning toward limiting government assistance for the poor as well as reducing spending for programs aiding the poor.

Although there continues to be an interest in assisting the poor through public policy, little has been done to change the state of poverty in America. Welfare, which is the government sponsored financial assistance to aid individuals who are unable to support themselves or function in society, has been the predominant policy for aiding America’s poor. Social analysts such as Charles Murray believe that the government assistance problems launched during Lyndon B. Johnson’s War on Poverty have “trapped many welfare recipients in poverty by sapping individual drive and motivation and fostering dependency.”<sup>11</sup> The American attitude towards poverty continues to be monetary, with the belief that “poverty in the monetary sense is easy to reduce. All it requires is money.”<sup>12</sup> This preoccupation with financial assistance emphasizes the ease with which money can temporarily eradicate problems.<sup>13</sup> Douglas Besharov adds that welfare dependency has taken on a life of its own, with 82% of recipients receiving aid

that will last 5 years or more, and 65% of which will receive aid for 8 years or more.<sup>14</sup>

The criticism of the current welfare system emphasizes that welfare has little impact on raising the poverty. It is important to note that one-quarter of the poor population do not participate in welfare programs.<sup>15</sup> The majority of welfare programs can only sustain those experiencing poverty by providing “basic sustenance, housing, and health care to poor and low-income families,” which can’t move those people out of poverty.<sup>16</sup>

Welfare is not the only policy in effect to reduce poverty. During the Clinton administration, policy changes shifted to provide people with “the education, training, job placement assistance and child care they need” in order to encourage the poor to obtain better jobs.<sup>17</sup> There continues to be an emphasis placed on making work pay, looking to job placement programs as mediating factors for receiving government aid. Social scientists believe this will enable the dependence on welfare to decrease. Yet with all of the policies aimed at ending poverty, it is clear that there has not been a solution that gets at the root of the problem. It is imperative that policies begin to break the cycle of poverty and end government dependency.

## **The State of Homelessness**

The most visible of the poor population are the homeless. Homelessness is a national epidemic, effecting thousands, if not millions of people. Sources are unable to come to a consensus on the number of homeless, with figures ranging from 250,000 to 4 million.<sup>18</sup> The discrepancy lies in the difficulty of calculating the number of homeless, as they are a difficult population to monitor, and the number of homeless is constantly changing with the economy, social situations, housing availability, and weather conditions.<sup>19</sup>



## **Homelessness as an Urban Problem**

Homelessness by definition is an individual's lack of fixed nighttime residence. It is this lack of residence that has caused the number of homeless in urban areas to rise. As previously mentioned, white flight had a large impact on the number of poor living in cities, and consequently this carries over to the number of homeless in cities. Author Doug Timmer states that the rise in urban homelessness has occurred due to "rapidly dwindling supply of low-income housing and increased economic marginality among the poor and near poor, caused by changing economy, changes in family structure, and shifts in government policies."<sup>20</sup> Panhandling, or begging on the street, has become more common in many cities, which has consequently increased public awareness of the homeless problem.<sup>21</sup>

## **Perceptions of the Homeless**

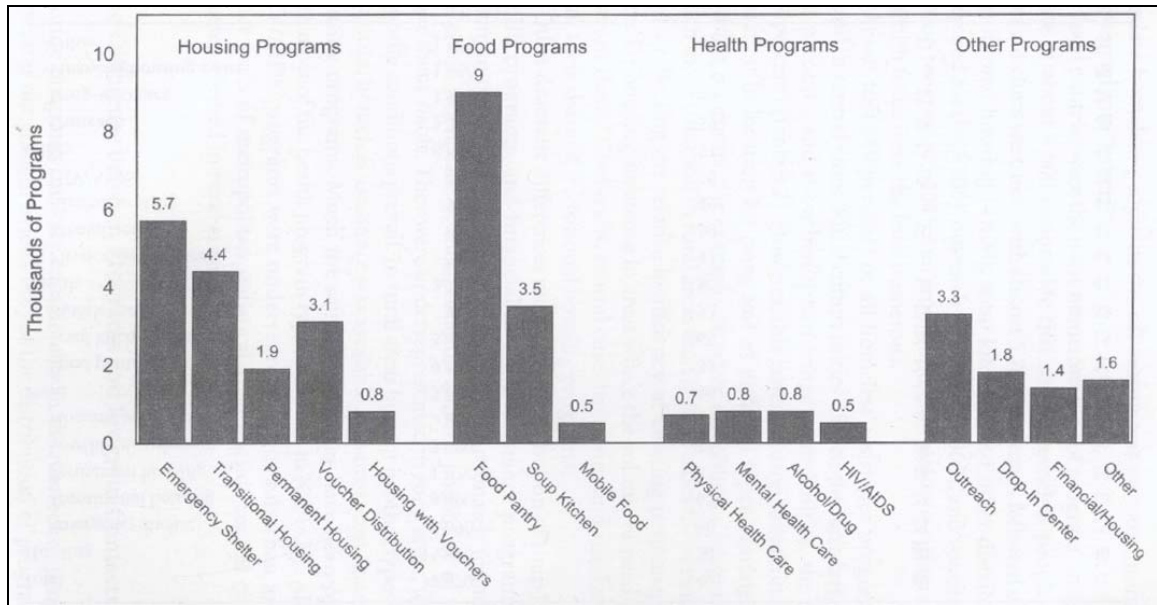
Author Kim Hopper states that homelessness occurs due to a variety of factors: "scarce housing, poorly planned and badly implemented policies of relocation and support, dismal prospects of work, exhausted or alienated kin."<sup>22</sup> There are many misconceptions about who the homeless are, and consequently there are misconceptions on how to remedy the homeless problem. Understanding who are America's homeless will provide keys to creating the appropriate short and long-term remedies.

There are often negative associations when thinking of the homeless, viewing them as "the wandering loner who may be alcoholic or mentally disabled" and the "derelicts of society."<sup>23</sup> The homeless population today represents a broad cross section of American society, ranging from "young and old, single and families, mentally and physically disabled, and able-bodied."<sup>24</sup> Marita Dean, who worked for the office of

Catholic Charities in Washington, DC stated that the newest wave of homeless in America is made up of “ the young and able-bodied who have little chance of winning a place in a tight employment market, and consequently no ability to win the competition for housing in a tighter and tighter housing market.”<sup>25</sup>

### **Current Solutions to Homelessness**

As homelessness has become more evident to the majority of the American public, negative impressions of these populations have changed. This change has sparked nationwide advocacy for the homeless. According to Nora Richter Greer, homelessness reached epic numbers in the 1980s due to “the most severe housing crisis since the Depression.”<sup>26</sup> This sparked the creation of coalitions and legal acts to help mediate the issues of homelessness in America. Prior to 1986, there were no government-supported initiatives to assist the homeless. The McKinney-Vento Homeless Assistance Act became the first legal response to aiding those experiencing homelessness by establishing programs to address the lack of shelter and education of homeless children, and the need for healthcare for the homeless.<sup>27</sup> The 1990s saw an expansion in homeless shelters and soup kitchens, as well as several other programs aimed at addressing health needs, homeless outreach, and drop-in centers.<sup>28</sup> Homeless assistance programs began to expand to include “life support services, health and mental care, education, vocational training and long-term housing” which sought to improve the conditions of homelessness.<sup>29</sup>



**Figure 3: Graph of Homeless Assistance Programs** [Burt<sup>30</sup>]  
 This graphic emphasizes the various outreach programs for the homeless. The majority of current programs focus on housing and food. The “other” category includes welfare benefits. Although these programs assist the homeless with basic needs, they do not give these people the tools to escape homelessness.

It is apparent that these types of services are needed to lighten the burdens of homelessness. Although, it is clear that these are only temporary solutions to hunger, health problems, and exposure to the elements that burden the homeless, and that these solutions by themselves cannot end homelessness. Author Carol Caton emphasizes that “services that offer hope for the future, such as access to job training and placement and income maintenance services should be made available” in addition to temporary food and shelter programs.<sup>31</sup> Providing the homeless with life-support services in addition to addressing issues that interfere with an individual’s ability to function independently will create opportunities for permanent contribution to society. As Carol Caton suggests, housing is only one element in rectifying homelessness, and it must be accompanied with clinical and humanitarian efforts working in concert to confront homelessness.<sup>32</sup>

## **The Need for Adult Education**

Scholars, as well as practitioners, believe that policies to aid the poor and homeless populations must change. There continues to be an emphasis on altering policies to get to the root of the problem and to not use money as the temporary solution. The cycle of poverty clearly emphasizes that current policies are allowing for a perpetuation of poverty and dependence on government financial support. Understanding that education is crucial to breaking the poverty cycle can begin to shape new policies and social services that will begin to end this condition once and for all.

Author Michael Darby emphasizes that the fundamental truth behind why some people are poor is because they “lack the capacity to attain the levels of education and training required to earn what the rest of us would consider an adequate standard of living in the United States.”<sup>33</sup> Currently in the United States educational programs are aimed at helping impoverished children, however this neglects the need for education for the adults who are experiencing poverty. Policies have begun to introduce job-training programs that are key to providing “basic education needs; extending opportunity; enhancing the quality of life; and addressing issues of gender, ethnicity, and poverty.”<sup>34</sup>

Providing impoverished people the opportunity for education will shift the dependency off of the government and onto the individual participating in the educational program. Vocational education programs can provide the important link between education and the workforce that will assist adults in rising out of poverty and homelessness.

## **Vocational Education: Providing a Means to an End**

Vocational education prepares students for specific careers based on the practical application of skills necessary for a particular vocation. This educational model tends to be more people oriented and aims to provide life skills training, in addition to vocational skills training. The inclusion of life skills training enables individuals to be not only employable, but increase their usefulness in a working society. Vocational programs are increasingly focused on the development of core skills, such as “communication, literacy, technology, creativity, and planned learning strategies.”<sup>35</sup> It is the transmission of these core skills, in addition to vocational specific skills, that allows vocational education to transform an individual socially. This notion of developing human capital, which is “the productive capacity of human beings as income producing agents in an economy”, is the foundation of vocational education.<sup>36</sup> The promotion of human capital simultaneously promotes the acquisition of skills necessary to be successful socially in society.

Vocational education is the crucial element needed to promote the end of homelessness and poverty in adults. Criticisms of current policies recognize the disconnect between stabilizing a person in his/her current condition as compared to moving him/her out of his/her disadvantaged state. Unlike other government policies currently in effect, vocational education assists individuals to “grow and develop, to become separate from other things and other persons, to discover a satisfying role in an occupational area.”<sup>37</sup> Instead of providing band-aid solutions to these problems, vocational education provides a means for training that will allow individuals to have an awareness of work, which will develop competency in making a contribution to earning a

living.<sup>38</sup> Vocational education is responsive to not only the needs of individuals, but to the needs of society for ending the cycle of poverty.

## **Vocational Education Models**

Vocational education is not a new concept. Federal support of vocational education in the United States can be traced back as early as 1862.<sup>39</sup> Vocational education is also not limited to the United States, but is a worldwide method for educating the workforce. The vocational education systems abroad, however, differ greatly from the vocational models in the United States.

Vocational schools in the United States are either geared toward high school students, or are available only through tuition-based programs. The majority of public institutions for vocational education are vocational high school programs, or area vocational schools, which are only available to those already enrolled in public schooling. The only opportunity for vocational education in the private sector is through proprietary schools such as trade schools, junior colleges, community colleges, and four-year colleges. Scholars and practitioners have noted that the vocational programs in the United States have focused too much on the transmission of specific work skills, failing to recognize the ability for vocational education to transform an individual to contribute positively to society socially.<sup>40</sup>

Although the vocational programs abroad are private institutions similar to those in the United States, there is greater respect toward vocational education in other countries. Within the European Union there is an emphasis on establishing a “parity of esteem” between vocational programs and university education. Parity of esteem

emphasizes the ability of a student to easily transition from work-force preparation to advanced university education, thereby reducing social and class biases.<sup>41</sup>

Many countries in Europe and Asia have adopted a dual education system. This two-tier system gives students the choice to enter either higher education at a university, or enter a vocational school. The two-tiered system has placed vocational education on a level equivalent to higher university education.

Germany is world renown for the scope of its vocational program. The vocational system is based on apprenticeship programs that form cooperation between employers and schools. The apprenticeship system is recognized as an efficient and effective system of vocational training that gives young adults practical experience and instruction on and off the job.<sup>42</sup> Germanic vocational schools rely on workshops to introduce the skills necessary for operation of equipment, as well as hands-on practice with skills.<sup>43</sup> The success of Germany's vocational system has made it the example to which the majority of European vocational schools have based their programs on.<sup>44</sup>

The two-tiered educational system in Europe has also provided for adult vocational education, opportunities which are scarce in the United States. For example, in Finland, adult education is available at all levels of the Finnish educational system.<sup>45</sup> Finnish adults who are either unemployed or in need of vocational training can attend state financed institutions, ranging from adult education centers, vocational schools, and the AMK which is the Finnish ammattikorkeakoulu, or vocational higher education institutions.<sup>46</sup> Vocational education in all of the Nordic countries aims to provide the core skills necessary to succeed in society.<sup>47</sup>

The Netherlands also offers adult and continuing education opportunities. The educational system in the Netherlands separates adult education from vocational schools, using adult educational centers as pre-requisites for entering a vocational program.<sup>48</sup> The vocational education programs which these adults enter focus on supporting job specific training, act as a starting point for changing careers, give adults a second chance for qualification, and contribute to larger participation in the labor market.<sup>49</sup>

### **The New American Vocational School Model**

The United States can look to Europe's two-tiered educational system to develop the appropriate model for adult education. Junior colleges and technical schools are already starting to shift the American education system toward respecting vocational education, yet this shift needs to come full circle to include impoverished and homeless adults. Non-profit organizations in the U.S. have begun to recognize the transformative power of vocational education by developing vocational rehabilitation programs. These programs give impoverished adults, or adults with disabilities, the vocational training necessary to become integral to working society. So Others Might Eat is an example of a non-profit organization in Washington, DC, geared toward providing social services to homeless and impoverished adults, while also providing opportunities for job training.

This thesis contends that providing vocational education, in addition to social services, is the key to ending poverty and homelessness in America. Adult vocational education can be a seamless addition to the American education system. The unique pedagogy of the vocational school allows it to act as an autonomous public school, fitting the requirements of a charter school. As a charter school, the institution can be publicly funded, yet freed from the rules, regulations, and statutes that apply to other public



schools. This status provides the necessary resources for funding, maintenance, and upkeep. The program provides the opportunity for subsequent support from local trades and businesses that participate in the school's various programs. These public private partnerships solidify the school's role as a community entity, and enables students to actively participate in the community by working with local businesses. These partnerships provide students work-study opportunities, giving students financial support while attending the vocational school.

The student body is comprised of impoverished and homeless adults, no younger than age 16. The curriculum supports their need for not only vocational skills, but life skills including money management, and basic education skills including English, English as a second language, reading, and math. The school also provides the opportunity to obtain a General Education Degree. Understanding the needs of these adults impacts the design of the vocational school's program and site. By examining existing school models a design framework can be established.

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<sup>1</sup> Alemayehu Bishaw and John Iceland, "Poverty: 1999" Census 2000 Brief. (2000):1.

<sup>2</sup> O'Hare, 3.

<sup>3</sup> Michael Darby, Reducing Poverty in America: Views and Approaches. (London: Sage, 1996):3.

<sup>4</sup> O'Hare, 5.

<sup>5</sup> O'Hare, 7.

<sup>6</sup> O'Hare, 14.

<sup>7</sup> Darby, 91.

<sup>8</sup> O'Hare, 14.

<sup>9</sup> O'Hare, 1.

<sup>10</sup> O'Hare, 2.

<sup>11</sup> O'Hare, 7.

<sup>12</sup> Darby, 91.

<sup>13</sup> Darby, 84.

<sup>14</sup> Darby, 44.

<sup>15</sup> O'Hare, 17.

<sup>16</sup> O'Hare, 18.

<sup>17</sup> Darby, 44.

<sup>18</sup> Nora Richter Greer, The Search for Shelter (Washington DC: AIA, 1986):11.

<sup>19</sup> Greer, 11.

<sup>20</sup> Doug Timmer, Paths to Homelessness: Extreme Poverty and the Urban Housing Crisis. (Boulder: Westview Press): 17.

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- <sup>21</sup> O'Hare, 13.
- <sup>22</sup> Kim Hopper, Reckoning with Homelessness. (Ithica: Cornell University Press, 2003): 23.
- <sup>23</sup> Greer, 13.
- <sup>24</sup> Greer, 13.
- <sup>25</sup> Greer, 14.
- <sup>26</sup> Greer, 11.
- <sup>27</sup> Greer, 181.
- <sup>28</sup> Martha Burt, Laudon Aron, and Edgar Lee, Helping America's Homeless: Emergency Shelter or Affordable Housing? (Washington DC: The Urban Institute Press, 2001): 246.
- <sup>29</sup> Carol Caton, Homeless in America. (New York: Oxford University Press, 1990): 174.
- <sup>30</sup> Burt, 247.
- <sup>31</sup> Caton, 177.
- <sup>32</sup> Caton, 190.
- <sup>33</sup> Darby, 8.
- <sup>34</sup> Dennis Herschbach and Clifton Campbell, Workforce Preparation: An International Perspective. (Ann Arbor: Prakken Publications, 2000): 5.
- <sup>35</sup> Angelo Gillie, Principles of Post Secondary Vocational Education. (Columbus, OH: Merrill, 1973): 82.
- <sup>36</sup> Herschbach, 44.
- <sup>37</sup> John Thompson, Foundations of Vocational Education: Social and Philosophical Concepts. (New Jersey: Prentice-Hall, 1973): 239.
- <sup>38</sup> Herschbach, 203.
- <sup>39</sup> Gillie, 3.
- <sup>40</sup> Herschbach, 9.
- <sup>41</sup> Herschbach, 9.
- <sup>42</sup> Herschbach, 107.
- <sup>43</sup> Herschbach, 109.
- <sup>44</sup> Herschbach, 120.
- <sup>45</sup> Herschbach, 100.
- <sup>46</sup> Herschbach, 100.
- <sup>47</sup> Herschbach, 104.
- <sup>48</sup> Herschbach, 125.
- <sup>49</sup> Herschbach, 126.

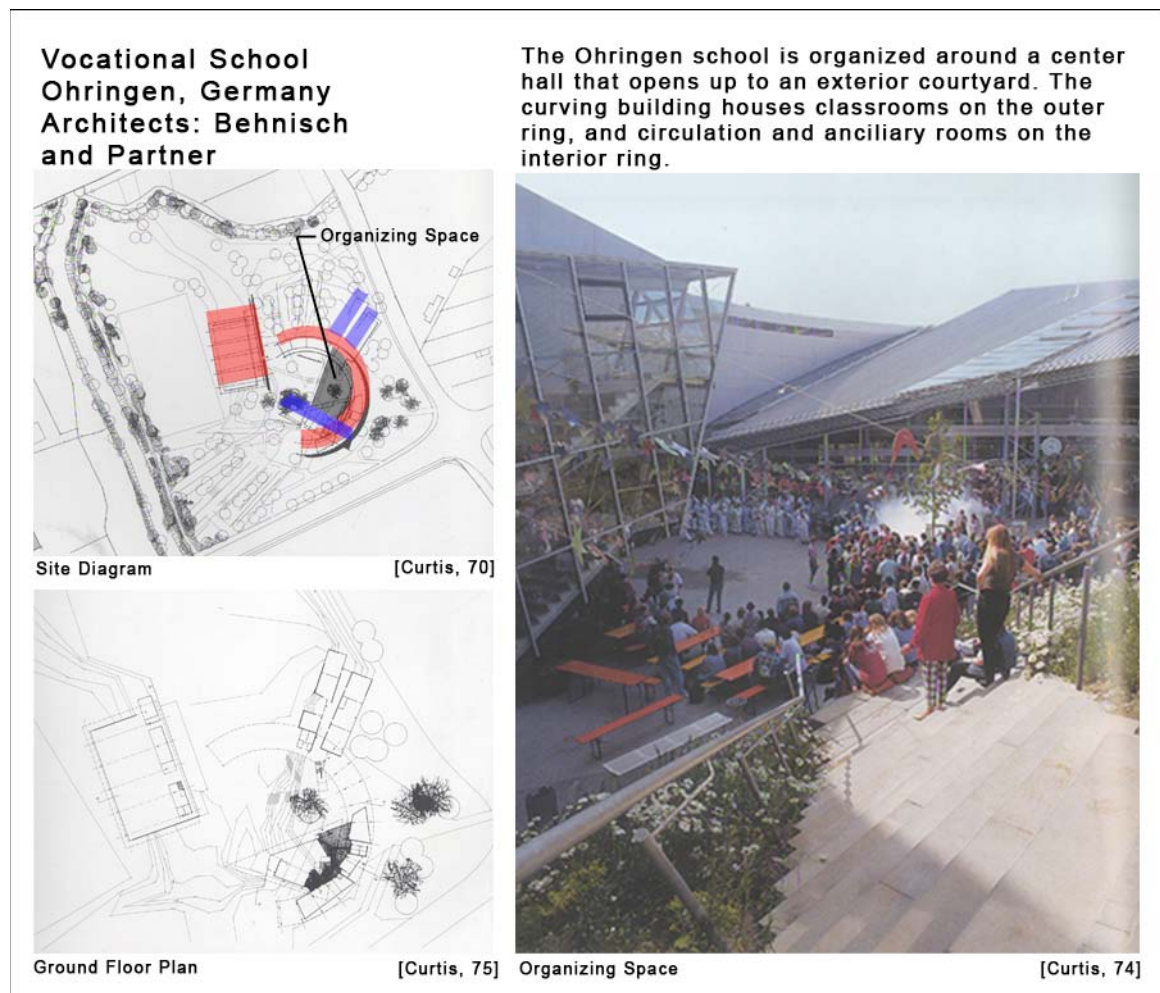
“Education, and therefore school architecture, is responsive to changes in demographics, changes in culture and the economy, new social and environmental demands, and competition.” ~ C. William Brubaker, Planning and Designing Schools

## **Chapter 2:**

### **Vocational Schools and Spatial Examples**

## Vocational School Examples

The designs of vocational schools often present unique solutions for organizing complex programs. Unlike typical schools, vocational schools must deal with organizing highly specialized spaces in a way that allows the building to be coherent, unifying a diverse curriculum under one roof. The following vocational school examples have been analyzed in order to understand their various organizational principles.

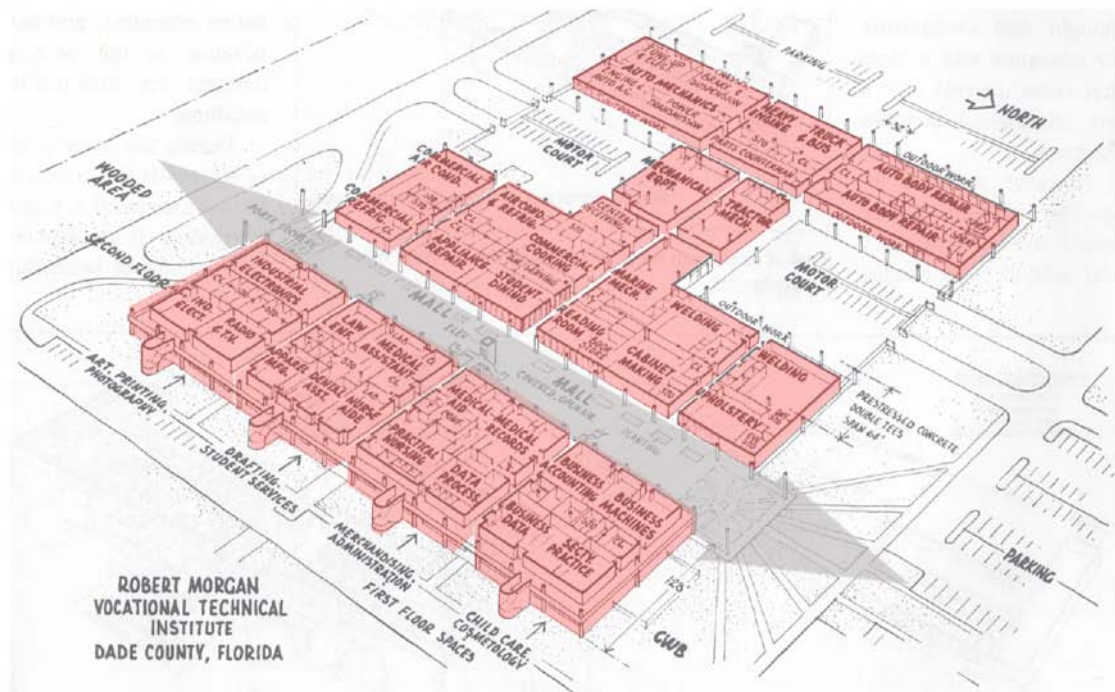


**Figure 4: Analysis of Ohringen School** [Author]  
Behnisch and partners took the opportunity to organize the rural site of the vocational school with curving and angled forms. A central courtyard provides a meeting place for students and sponsors the angles of subsidiary classroom wings.

The Robert Morgan school is a magnet high school for students interested in vocational and technical education. The school also serves adults. A central mall organizes the school and the free-standing vocational structures. Large programs have their own houses, and smaller programs are grouped together.



[Brubaker,26]



**Figure 5: Analysis of the Robert Morgan Technical Institute's Organization** [Author]  
The architect organized the various vocational programs as separate structures, or houses. A central mall and courtyard spaces organize the various vocational houses.



**Chelsea High School**  
**Chelsea, Massachusetts**  
**Architect: Symmes, Manni, McKee**  
**Date Completed: 1996**

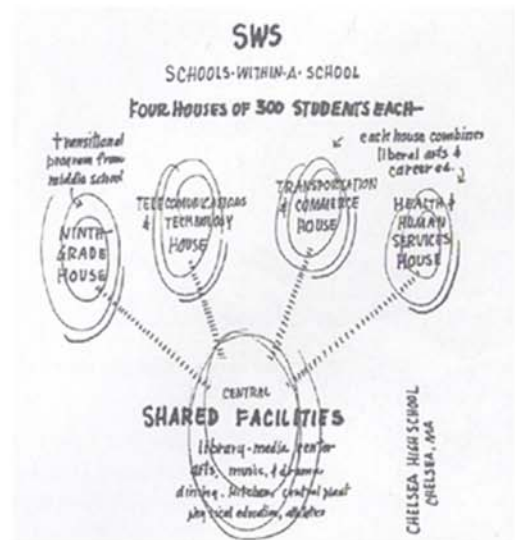
The Chelsea school integrates vocational-technical education with liberal arts education. The school is subdivided into four houses that hold both a liberal arts and career education school. Each house is a different career program.



Elevation Showing Classroom Houses [Brubaker, 144]

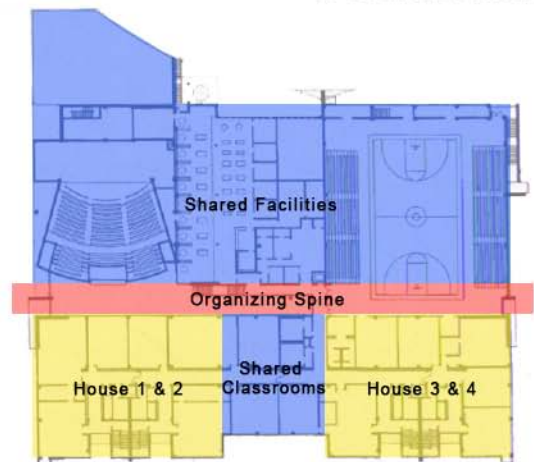


Central Corridor which organizes the four houses and shared facilities [Brubaker, 129]

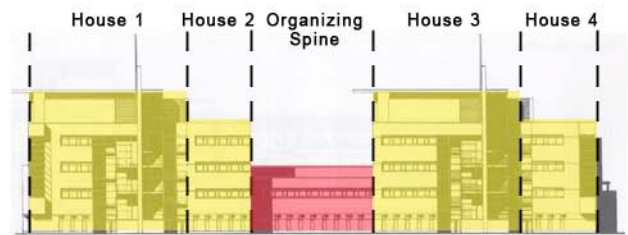


[Brubaker, 131]

Conceptual Organization of Chelsea School



Plan Diagram Showing Organization of Classroom Houses



Facade Diagram Showing Organization of Classroom Houses

**Figure 6: Analysis of Chelsea High School**

[Author]

The various vocational programs are organized into 4 separate houses. A central corridor links the houses and shared facilities.

## Spatial Examples

The diverse building program of the vocational school creates the opportunity for a spatially rich building. It is important to consider the impact of the various programmatic elements in creating the image of the school. The following spaces were analyzed for their spatial quality and serve as examples for the vocational school.



**Figure 7: Library Spaces**

[Author]

Each of these libraries are organized so that study carrels and reading areas are adjacent to windows, providing natural light and views to the outside. The stacks are set back from the windows, providing a clear separation between reading areas and browsing.



## Atrium Using Existing Exterior Facade



[Steve Rosenthal]

**Harvard Medical School**  
Boston, Massachusetts  
Ellenzweig Associates, Architects



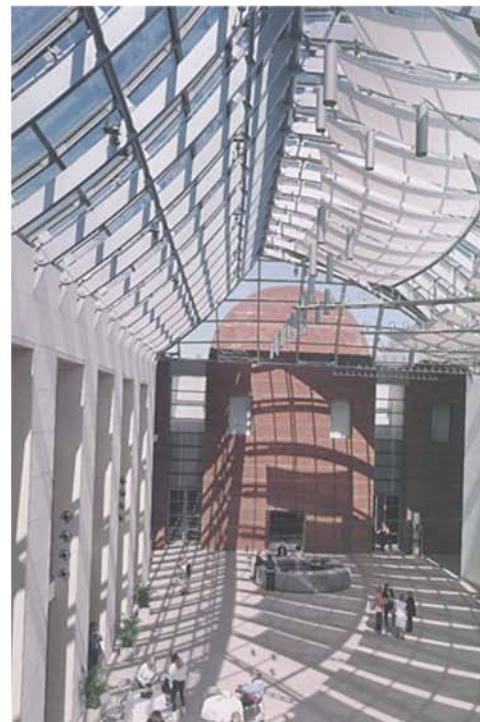
[Edward Jacoby]

**Science Center Addition, Wellesley College**  
Wellesley, Massachusetts  
Perry Dean Rogers & Partners, Architect



[The Stubbins Associates]

**The Learning Technology Building**  
Vanderbilt University  
Nashville Tennessee  
Stubbins Associates, Architects



[Architectural Record]

**Peabody Essex Museum addition**  
Salem, Massachusetts  
Moshe Safdie, Architect

**Figure 8: Existing Atriums that Use Exterior Facades as New Interior Walls**

[Author]

These atriums are examples of how to take an existing exterior condition and transform it to an interior space. The atriums help to organize the new additions and existing building. This is one strategy that could be used for the Hostess Factory to help integrate the existing building with new structures.



## Cafeteria



York University Student Center  
York University  
Toronto, Ontario, Canada  
A.J. Diamond, Donald Schmitt and Company, Architects

[Steven Evans]



[Steven Evans]

York University Student Center



[Sasaki Associates]

Bethel College, Community Life Center  
St. Paul Minnesota  
Sasaki Associates, Inc. Architects

**Figure 9: Cafeteria Spaces**

[Author]

These cafeteria spaces act as an informal meeting ground for students, without having the quality of a typical school cafeteria. The York University student center easily transforms to an entertainment space due to the inclusion of a stage. Natural light and plants help to enliven the spaces.

## Communal Spaces



[Marek Bulaj]

Arts and Sciences Building,  
Richard Stockton College of New Jersey  
Pomona, New Jersey  
Michael Graves, Architect



[Mitchell/Giurgola]

Chancellors Hall, Southampton College  
Long Island University  
Southampton, New York  
Mitchell/Giurgola Architects

**Figure 10: Communal Spaces**

[Author]

Each of these institutions utilizes the concept of “watering hole” spaces, which act as informal meeting grounds for students and faculty. These spaces help to break up the monotony of a corridor, while also providing places of repose along the circulation paths.

## Gymnasium



[Robert Benson]

Student Recreation Center  
Miss Porter's School  
Farmington, Connecticut  
Tai Soo Kim Partners, Architects



[Prakash Nair]

Colegio Altamira  
Penalolen, Chile  
Mathais Klotz, Architect

**Figure 11: Gymnasium Spaces**

[Author]

These gymnasiums are good examples of allowing natural light to filter into the gym space. The Porter School's Recreation center is organized vertically with a running track above the court spaces. The Colegio Altamira is designed for ultimate flexibility of gym activities.



## Greenhouses



1

[Steven Hall]



2

[Steven Hall]



3

[Steven Hall]

1,2,& 3:  
The University of Wisconsin  
Instructional Greenhouses  
Flad & Associates, Architects



[Marek Bulaj]

Arts and Sciences Building,  
Richard Stockton College  
of New Jersey  
Michael Graves, Architect

Figure 12: Greenhouses

[Author]

The University of Wisconsin and the Richard Stockton College have designed the greenhouses to be integral structures to the building façade, rather than separate entities. The University of Wisconsin greenhouses have an ephemeral quality that spatially surpasses a typical working greenhouse.

“The Schools of the twenty-first century will not be walled off from community life as they sometimes were in the past. A school is part of its community, not apart from it.” ~

C. William Brubaker, Planning and Designing School

### **Chapter 3:**

## **Program As Community Builder**

## **The role of Vocational Education**

The variety of vocational school models reflects the numerous ways which to design the curriculum of the school. Consequently, the curriculum of the vocational school impacts the types of spaces necessary to run the school with successful results. In order to truly serve as many poor and homeless as possible, it is necessary to offer a diverse curriculum. The vocational school model advocated by John Thompson is based on the need to offer common core instruction, offering traditional subject areas such as math, science, communication, social science and humanities, as well as occupational cores geared toward specific vocations.<sup>1</sup> Occupational cores should be diverse to meet the maximum amount of students' needs and interests, as well as being offered at more than one academic level, permitting students entry into job fields at multiple levels.<sup>2</sup>

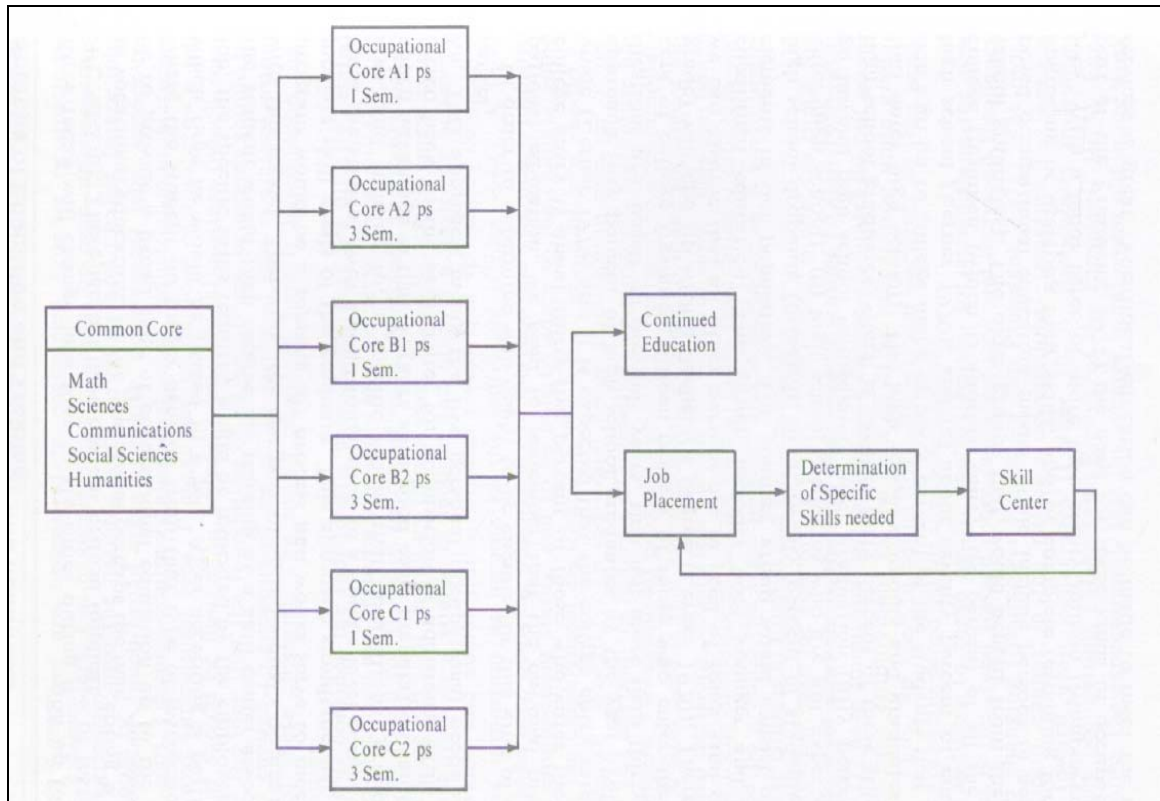
Thompson also emphasizes the importance of providing classroom spaces for not only specific vocations, but spaces for learning important life skills. He emphasizes that “educational skills of spoken and written communication, computation, problem – solving, social awareness, and self-awareness are vital to all students regardless of their planned occupation.”<sup>3</sup> Flexible classroom spaces are necessary to provide students with life skills orientation, providing students the array of skills need to “assess his own abilities, interests, capacities, and to assert a building influence on his society.”<sup>4</sup>

Vocational education is characterized by the variety of areas for instruction, including both services for both the public and private sectors. Establishing partnerships with local businesses links services and resources, allowing schools and training organizations to enter a collaborative relationship that facilitates workforce preparation.<sup>5</sup> Establishing work practicum introduces students to successful work experiences, enable

practical on-the job experiences, provide a form of income, and provide real world experiences that re-enforce classroom and laboratory instruction.<sup>6</sup> It is also important for the vocational school to offer public services that can generate money for the school. The laboratory spaces needed for specific vocational training can double as retail spaces, offering services to the local community.

The success of the school and its students is also contingent on vocational guidance. It is important to provide students with realistic information about their education and employment prospects, and with necessary guidance to help them identify their existing skills and potential.<sup>7</sup> Guidance is especially essential for poor and homeless adults since it “gives them the opportunity to reappraise their existing skills, to think about a wide range of possibilities in terms of training and work, and helps them consider ways of overcoming employment and making significant changes in their lives.”<sup>8</sup> The vocational school therefore needs spaces dedicated to the guidance and assessment of student’s potential careers.

All of these issues must be taken into consideration when designing the appropriate program for a model vocational school. When working with adults it is important to develop a curriculum that is sensitive to adult needs, allowing them to filter into a program when necessary. The model vocational school follows the two-year program illustrated below.



**Figure 13: Diagram of 2-year Vocational school program** [Gilli<sup>9</sup>]

**The two-year vocational school model gives students the opportunity to go on directly to job placement or continued education. This model is ideal for the vocational school since it allows students to complete vocational programs in a minimum amount of time, while also receiving a liberal arts education.**

Author John Thompson stresses that typical problems with vocational schools can be avoided by maintaining a minimum enrollment of 1,000 students.<sup>10</sup> Bryan Ashby, coordinator of the vocational education program for Wicomico county in Maryland, argues that the nature of vocational education is very hands on, demanding smaller class sizes of no more than 25 students.<sup>11</sup> The sensitive nature of working with poor and homeless adults would call for closer relationships between teachers and students, advocating a class size similar to that which Bryan Ashby advocates, allowing for class sizes no larger than 20 students for each year of a program.

	# Students Year One of Program	# Students Year Two of Program	<b>Total # of Students</b>
Building and Construction Technologies	120	120	<b>240</b>
Automotive Technologies	40	40	<b>80</b>
Computer Technologies	60	60	<b>120</b>
Business Management	20	20	<b>40</b>
Criminal Justice	20	20	<b>40</b>
Health Occupations	20	20	<b>40</b>
Culinary Arts	20	20	<b>40</b>
Child Care	20	20	<b>40</b>
Cosmetology	20	20	<b>40</b>
Turf Maintenance	20	20	<b>40</b>
<b>Total Number of Students Enrolled in Vocational School</b>			<b>720</b>

**Figure 14: Table Showing Proposed Enrollment for Vocational School** [Author]  
Based on a module of two-years for each program, the number of students enrolled in the school reflects concurrent enrollment of students in their first and last years at the school.

### School as Community Center

First and foremost the vocational school must be an inviting environment that serves to educate the students and local community. The facility must mediate between the school and the community in which it is located, providing both public and private spaces for school and community functions. The community school model defined by Prakash Nair has the following characteristics:

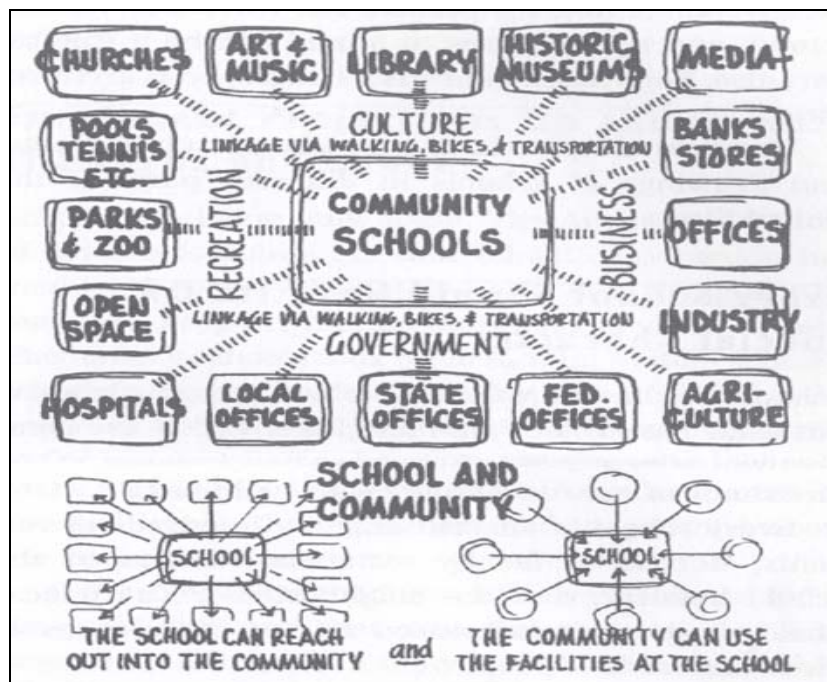
Prakash Nair's Community School Model
<ul style="list-style-type: none"> <li>located in a place that is close to the heart of its community;</li> <li>ties to community businesses, organizations, industries and recreational amenities as a way to extend the school's learning potential beyond its own four walls;</li> <li>the design of the school itself as a welcoming place for the community;</li> <li>extension of school hours so that facilities are open early in the morning and late at night.<sup>12</sup></li> </ul>

**Figure 15: The Community School Model** [Author]



The community school model prevents the ‘closed private facility’ feeling of schools in the past, allowing not only the community to use the school facilities but allowing students to use community resources in their area for educational purposes. The community school model, however, raises issues of security and the blurring between public and private spaces. It is important to separate community use spaces from those reserved solely for students, ensuring both security and building management and efficiency.<sup>13</sup>

The design of the vocational school incorporates the ideas of a community school. This facilitates acceptance of the school and its mission, no matter where it is located. The facility therefore becomes a meeting ground of students and the community, fostering relationships where students and the community can learn from one another, while also creating a social environment that facilitates learning.



**Figure 16: Diagram of Community School Theory [Brubaker<sup>14</sup>]**  
The community school allows the school and community to interact. The school facilities are used by the community, and the community offers its services to the school.

The vocational school design seeks to explore the emerging trends for schools as described by C. William Brubaker in Planning and Designing Schools. These trends include:

Emerging Trends of School Design
<ul style="list-style-type: none"><li>• flexibility of space allowing for variety of learning methods;</li><li>• specialized schools that respond to specific curricula and disciplines;</li><li>• community school as a center for citizens of all ages, providing a variety of social services;</li><li>• recycling outdated buildings for new educational uses.<sup>15</sup></li></ul>

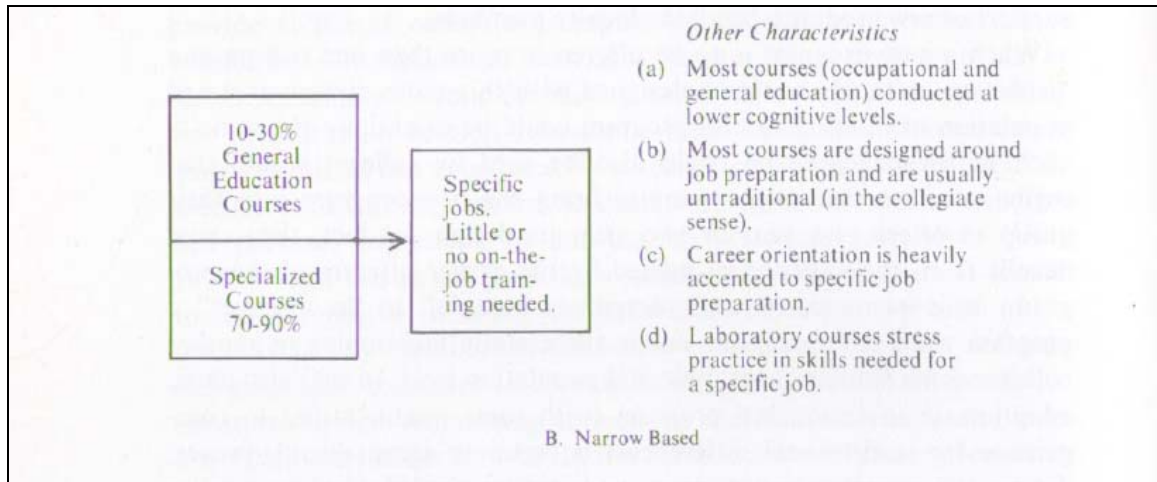
**Figure 17: The Emerging Trends of School Design**

**[Author]**

The design of the vocational school incorporates the theories of community schools with the architectural implications of designing vocational specific spaces. Several existing vocational schools offer services to the public, yet their designs do not facilitate relationships with the community like community schools do. This thesis examines the implications of making a vocational school that acts as a community center, providing educational and commercial spaces to the public.

### **Program Objectives**

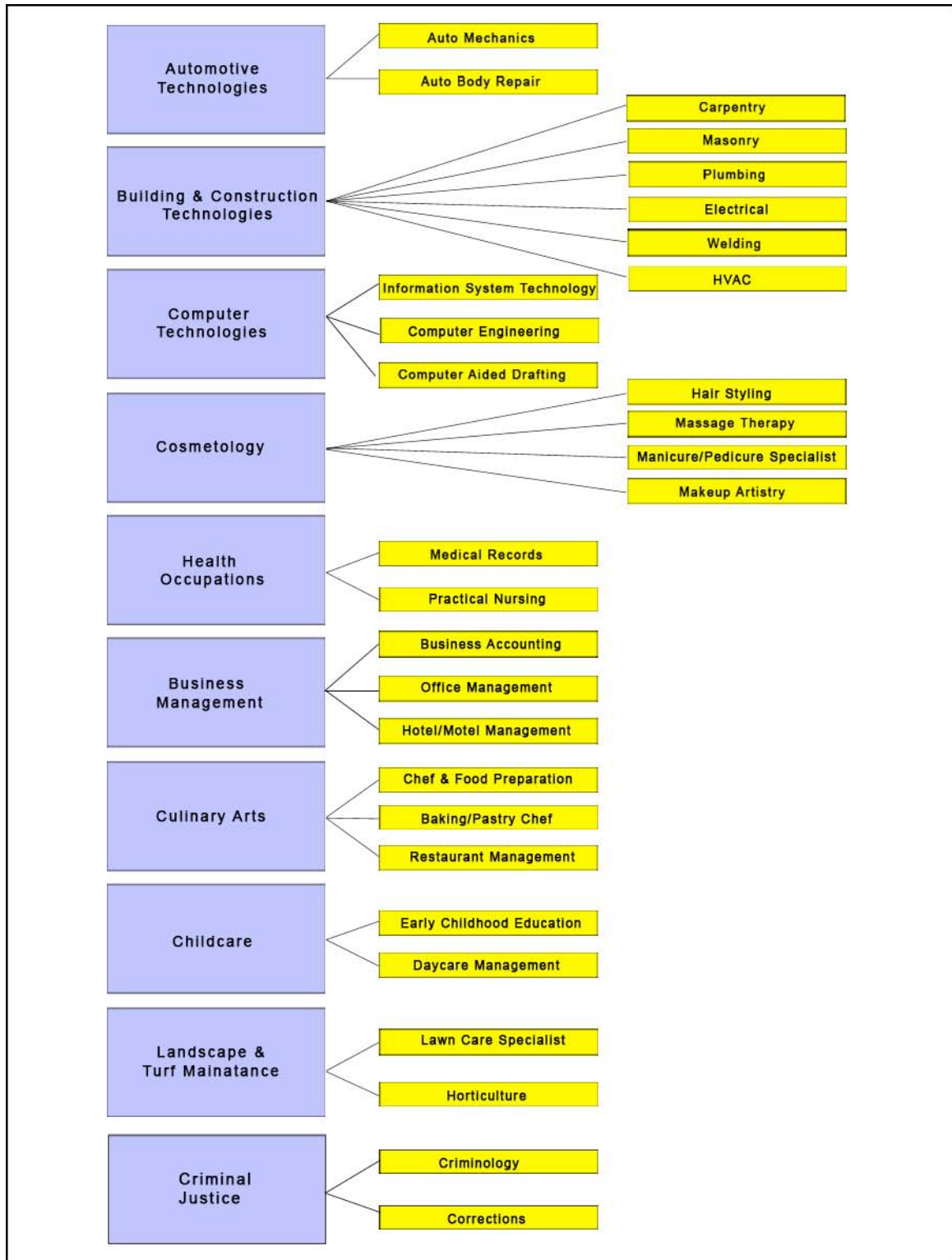
The vocational school is designed as a model for narrow-based vocational programs. These types of programs provide courses directly oriented to job-specific training while also providing general education offerings.<sup>16</sup>



**Figure 18: Narrow Based Theory Diagram** [Gillie<sup>17</sup>]  
**The narrow based program demonstrates the emphasis on vocational education for entering directly into the workforce. The vocational school can use this model to ensure the correct balance between vocational and liberal arts education.**

The program for the vocational school provides specialized spaces for job skills learning, flexible spaces for life skills learning, communal spaces for student interaction, and private spaces for the administration of the school.

The largest component of the vocational school program relies on the designation of laboratory spaces specific to certain vocations. Assessing programs described by the Maryland State Department of Education and assessing the programs offered by the technical schools previously analyzed the following vocational areas were determined:



**Figure 19: Vocational School Curriculum Diagram**

[Author]

This image shows the breakdown of the different vocational subjects into their subsidiary subject areas. Although there are subsidiary subjects, the only vocations that are spatially divided into separate areas are the Automotive and Building and Construction technologies, due to the scope and scale of projects.



**Figure 20: Trade Diagrams**  
Diagrams depicting the basic functions of each vocational program.

[Author]

## Program Description

### **Building Entrances** **1,500 sf**

The vocational school requires multiple entry points to mediate between public and students. The main entrance is the welcoming face of the school, and therefore needs to be adjacent to the street and the main circulation path of the building. The remaining entrances are secondary points of access throughout the building site.

### **Atrium/ Main Courtyard** **10, 000 sf**

The atrium/ courtyard space is the element that organizes the building program. The space requires natural light and should extend vertically to organize the building sectionally as well.

### **Automotive Technology** **14,950 sf**

The Automotive Technology component of the school consists of auto mechanics involving the diagnostic and repair of automobiles, as well as collision repair. These departments require street or alley access in order to bring cars into the repair labs. The laboratories should be double height spaces in order to accommodate car lifts. These spaces need to be well ventilated.

Auto Mechanics Lab	8,500 sf
Mechanics Classroom	600 sf
Auto Body Lab	4,000 sf
Auto Body Classroom	600 sf
Auto Body Planning	150 sf
Teacher Planning 2 @ 150 sf	300 sf
Paint/Equip Storage	250 sf
Storage	250 sf
Lockers 2 @ 150 sf	300 sf

**Building and Construction Technology****26,900 sf**

Building and Construction technology focuses on career training in carpentry, masonry, plumbing, electrical sciences, welding, and heating, ventilation and air conditioning. All areas in this department require access to outdoor space as well as access to a street or alley. The carpentry and masonry departments require double height spaces for the construction of large-scale projects, as well as access to outdoor working courtyards. The welding department also requires the use of a working courtyard. In order to facilitate the use of this department's services in the community a retail component, adjacent to the street, receives clients.

<b>Carpentry</b>	<b>16,650 sf</b>
Laboratory	3,500 sf
Classroom	600 sf
Teacher Planning	150 sf
Storage	250 sf
Lockers	150 sf
Carpentry Courtyard	12,000 sf

<b>Masonry</b>	<b>5,650 sf</b>
Laboratory	3,500 sf
Classroom	600 sf
Teacher Planning	150 sf
Storage	250 sf
Lockers	150 sf
Masonry Courtyard	1,000 sf

<b>Plumbing</b>	<b>2,650 sf</b>
Laboratory	1,500 sf
Classroom	600 sf
Teacher Planning	150 sf
Storage	250 sf
Lockers	150 sf

<b>Electrical Sciences</b>	<b>4,650 sf</b>
Laboratory	3,500 sf
Classroom	600 sf
Teacher Planning	150 sf
Storage	250 sf
Lockers	150 sf

<b>Welding</b>	<b>4,650 sf</b>
Laboratory	2,500 sf
Classroom	600 sf
Teacher Planning	150 sf
Storage	250 sf
Lockers	150 sf
Welding Courtyard	1,000 sf

<b>HVAC</b>	<b>3,650 sf</b>
Laboratory	2,500 sf
Classroom	600 sf
Teacher Planning	150 sf
Storage	250 sf
Lockers	150 sf

## **Cosmetology** **4,750 sf**

The intent of the cosmetology department is to prepare students for licensure in cosmetology. In order to facilitate the use of this department's services by the community, a retail component will mediate between the public and the salon laboratory. The retail space requires adjacency to the street for commercial frontage.

Laboratory	3,600 sf
Styling area	
Dryer area	
Manicure area	
Mannequin stations	
Skin care/facial area	
Shampoo stations	
Computer stations	
Laundry	
Reception	
Classroom	600 sf
Teacher Planning	150 sf
Storage	250 sf
Lockers	150 sf



**Computer Technology****4,950 sf**

The Computer Technology component of the vocational school prepares students for careers working with information systems, computer engineering, and computer aided drafting. Students in the information systems sector learn computer network systems, software applications, web development and data processing. The computer-engineering program provides students with skills necessary for computer repair and design. The CAD department prepares students for careers in architectural drafting and the production of product drawings using CAD technologies.

<b>Information System Technology</b>	<b>1,650 sf</b>
Computer Laboratory	650 sf
Classroom	600 sf
Teacher Planning	150 sf
Storage	250 sf

<b>Computer Engineering</b>	<b>1,650 sf</b>
Computer Laboratory	650 sf
Classroom	600 sf
Teacher Planning	150 sf
Storage	250 sf

<b>Computer Aided Drafting</b>	<b>1,650 sf</b>
Computer Laboratory	650 sf
Classroom	600 sf
Teacher Planning	150 sf
Storage	250 sf

**Health Occupations****1,700 sf**

The health occupations component of the school focuses on training students for careers as nursing assistants as well as careers relating to collecting, analyzing, monitoring, and maintaining health data. The health occupations laboratory doubles as a community health clinic; therefore, it is programmed to double as both a learning

laboratory and public clinic. This department requires street frontage in order to operate as a community clinic.

Waiting Room	100 sf
Exam Room 3 @ 150 sf	450 sf
Treatment	150 sf
Classroom	600 sf
Teacher Planning	150 sf
Storage	250 sf

### **Business Management** **1,000 sf**

The business aspect of the vocational school prepares students for careers in business accounting, office management, and hotel/motel management.

Classroom	600 sf
Teacher Planning	150 sf
Storage	250 sf

### **Criminal Justice** **1,650 sf**

The criminal justice department provides students the skills for employment in the field of criminal justice, ranging from foundations in criminal law to criminal evidence and corrections.

Laboratory	650 sf
Classroom	600 sf
Teacher Planning	150 sf
Storage	250 sf

**Culinary Arts****6,000 sf**

The culinary arts program is geared to help students learn to identify and use the tools of the culinary trade and restaurant management. This department operates a restaurant and bakery that is open to the community. The restaurant component requires street frontage in order to facilitate its role as a community restaurant, as well as adjacency to outdoor space for dining. The laboratory space also acts as a community facility and is open after school hours for community cooking classes and seminars.

Cooking Laboratory	2,500 sf
Dishwashing	200 sf
Dry Storage	100 sf
Freezer	100 sf
Cooler	100 sf
Restaurant	1,500 sf
Bakery	500 sf
Teacher Planning	600 sf
Storage	250 sf
Lockers	150 sf

**Childcare****6,750 sf**

This program provides students the necessary education to pursue careers in the education and care of infants through elementary school, or the management of daycare centers. The laboratory space doubles as a community day-care center and therefore must have adjacency to the street. In addition to street adjacency, the childcare department requires adjacency to outdoor space to act as a child play area.

Laboratory/Day-care center	2,000 sf
Classroom	600 sf
Observation Room	150 sf
Kitchen w/dining area	300 sf
Child equip Storage	150 sf
Teacher Planning	150 sf
Storage	250 sf
Lockers	150 sf
Outdoor play center	3,000 sf

**Landscape and Turf Maintenance****7,650 sf**

Courses in landscape and turf maintenance prepare students with the necessary skills to pursue careers in landscape design and maintenance, greenhouse management, horticulture, and garden center operation. This department requires access to green space for a planting courtyard, as well as greenhouses spaces. The greenhouse spaces act as garden centers that are open to the public and therefore must be easily accessible.

Laboratory	2,500 sf
Classroom	600 sf
Teacher Planning	150 sf
Storage	250 sf
Lockers	150 sf
Greenhouses	1,000 sf
Planting Courtyard	3,000 sf

**Library****6,750 sf**

The library functions as a space to support the curriculum of the vocational school as well as a community library. The digital research lab provides access to computers for those who would otherwise not have money to afford them. The library must be easily accessible for the public and should therefore be adjacent to the atrium/main building courtyard.

Circulation Area	200 sf
Reading Room	2,000 sf
Stacks	4,000 sf
Reference Room	400 sf
Librarian Office	150 sf

**Lecture Hall****12,050 sf**

The lecture hall of the vocational school serves as one of the main components linking the school and its students to the public. The lecture hall doubles as a community auditorium, seating 800 people. It should be close to the main entry and atrium/courtyard space.

Auditorium	7,000 sf
Projection Room	250 sf
Lobby	2,000 sf
Dressing Room (2)	400 sf
Costume Storage	200 sf
Prop Storage	200 sf
Stage	2,000 sf

**Gymnasium****9,600 sf**

The gymnasium of the vocational school provides interaction amongst students and the community. Natural light and ventilation are important to the design of the gym facility. The gym functions as a community gym and requires easy access by the public, near the main entrance and atrium/courtyard space.

Gym	6,000 sf
Mens Locker Room	800 sf
Women's Locker Room	800 sf
Weight Room	1000 sf
Equipment Storage	1000 sf

**Cafeteria****7, 580 sf**

The cafeteria space serves multiple functions. First and foremost it is where students are able to eat during the day, as well as a space for students to interact with one another. It serves up to 800 students, with seating for 325. Access to natural light and

outdoor space are important needs for the eating areas. The kitchen must be adjacent to a street or alley for ease of receiving food and supplies.

Receiving	80 sf
Kitchen	2,000 sf
Dry Storage	300 sf
Freezer	150 sf
Cooler	150 sf
Dishwashing	250 sf
Food Prep	150 sf
Serving	1,500 sf
Dining Area	3,000 sf

**Informal Communal Spaces 10 @ 200sf** **2,000 sf**

The intent of the communal spaces is to serve as informal meeting and study areas for students and faculty. They are to be located throughout the school and be furnished with tables, couches and chairs. It is important for these spaces to provide views to the outside, as well as allow for natural light.

**Flexible Classrooms 6 @ 600 sf** **3,600 sf**

In order to maintain opportunities for changing and adapting the vocational school curriculum, flexible classroom spaces must be provided. Life skills courses and community seminars are held in these spaces and must therefore be easily accessible by the public.

**Administrative Suite** **1, 570 sf**

In order to keep a school this large running, it must have dequate administrative services. The administrative suite must be adjacent to the main entrance of the school and

the main circulation path. The reception area acts as the formal front for the school to the public and its students.

Director's Office	250 sf
Assistant Director's Office	100 sf
Assistant Director's Office	100 sf
Bookeeping	120 sf
Work Room	200 sf
Conference Room	200 sf
Reception Area	300 sf
Restroom	200 sf
Vault	100 sf

### **Guidance Suite** **1,800 sf**

The guidance suite houses the offices of counselors for the school. The students' skills are assessed prior to choosing their vocational path and therefore need a testing room and conference room to help identify their existing and potential skills. The guidance suite needs to be adjacent to the administrative suite and main circulation.

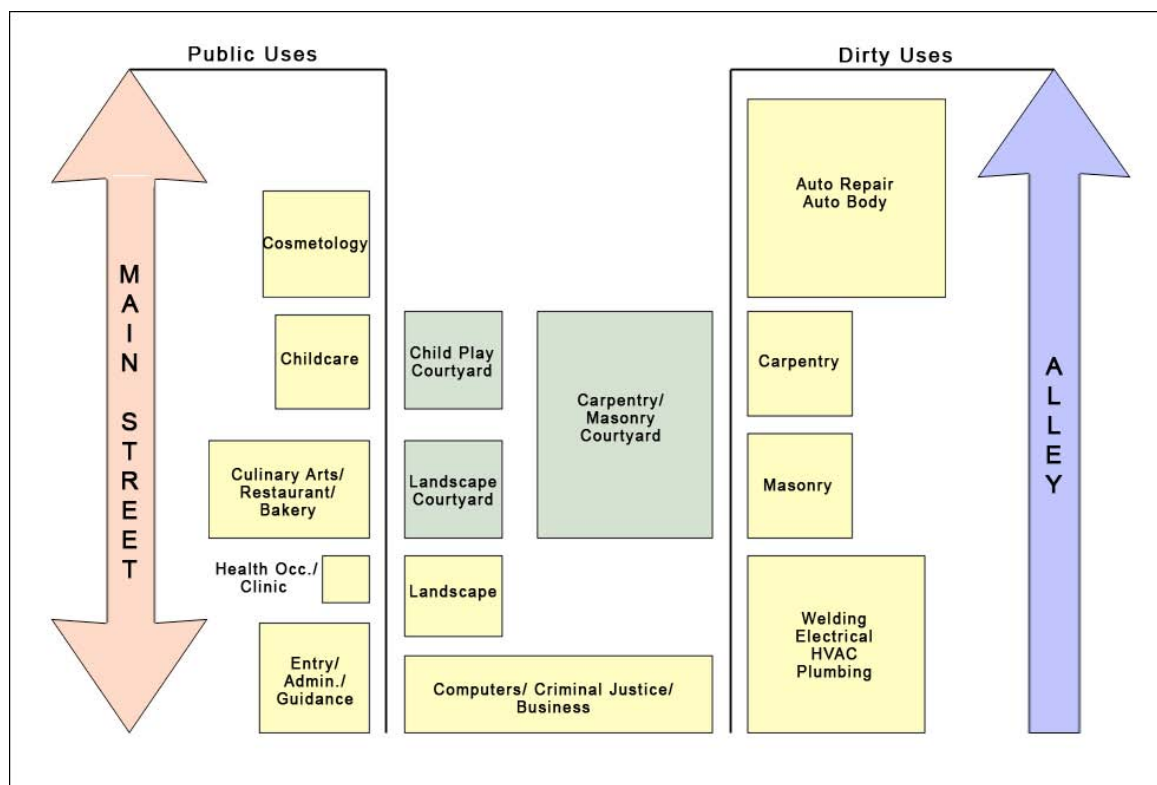
4 Counseling Offices @ 200sf	800 sf
Conference Room	200 sf
Testing Room	500 sf
Reception Area	300 sf

### **Building Maintenance** **2,300 sf**

The vocational school requires custodial closets and storage rooms throughout the building in order to keep the school maintained. These spaces need to be easily accessible from the main circulation path, yet organized as private spaces.

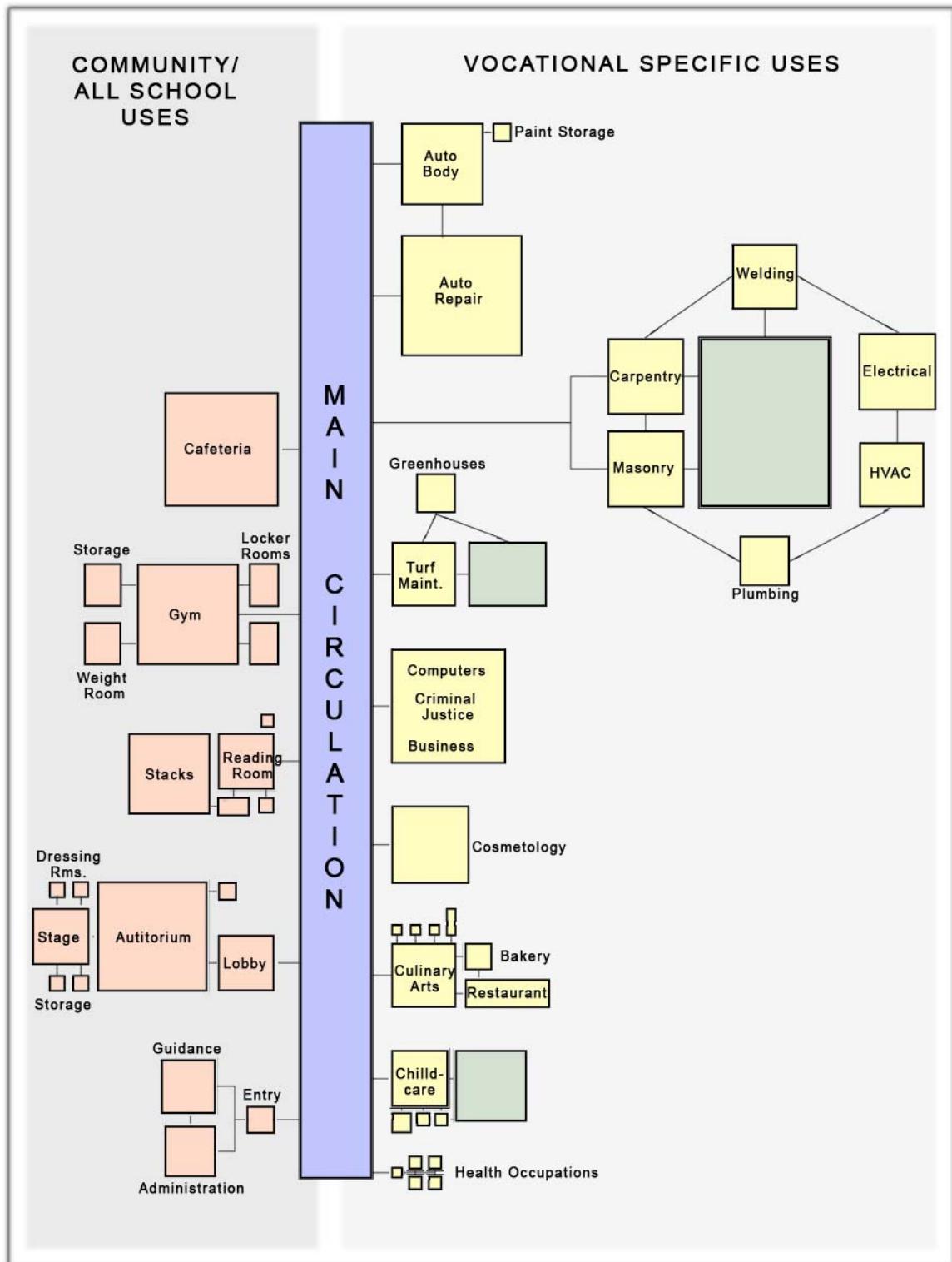
Storage Room 6 @ 250 sf	1,500 sf
Janitor Closets 6 @ 100 sf	600 sf
Maintance Office	200 sf

<b>Restrooms 8 @ 200sf</b>	<b>1,600 sf</b>
<b>Circulation @ 20%</b>	<b>2,671 sf</b>
<b>Mechanical @ 10%</b>	<b>1,336 sf</b>
<b>Parking 20 spaces @ 250 sf</b>	<b>5,000 sf</b>
<b>Total Building Square Footage</b>	<b>139,657 sf</b>



**Figure 21: Necessary Vocational Adjacencies** [Author]  
 This diagram illustrates the relative sizes and adjacency needs of the various vocations. Those vocations that offer retail services must have access to a major street, while those with dirtier uses require adjacency to an alley. Carpentry, Masonry, Landscape, and Childcare all require adjacency to courtyard space, however these spaces must be separated for each vocation.





**Figure 22: Adjacency Diagram** [Author]  
 This diagram illustrates the necessary programmatic adjacencies. The vocational specific areas are organized by uses accessible to the public closest to the entry, while the dirtier uses are farther away from public access.

## Role of Program in DC

The program of the vocational school can be easily adapted to any site. In order to test the role of the vocational school as a community-building facility, a site in Northwest Washington, DC was chosen. The program brings an opportunity for job training, which the city has created several initiatives to achieve. Diverse neighborhoods and tight-knit communities in DC provide the foundation a community-based vocational school. In this context, program and site are able to reinforce one another, creating a stronger sense of community.

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<sup>1</sup> Thompson, 98.

<sup>2</sup> Thompson, 98.

<sup>3</sup> Thompson, 225.

<sup>4</sup> Thompson, 226.

<sup>5</sup> Gillie, 34.

<sup>6</sup> Thompson, 105.

<sup>7</sup> Jenny Hunt and Heather Jackson, Vocational Education and the Adult Unwaged: Developing a Learning Culture. (London: Kogan Page Limited, 1992): 57.

<sup>8</sup> Hunt, 57.

<sup>9</sup> Gillie, 96.

<sup>10</sup> Thompson, 98.

<sup>11</sup> Asby, Bryan. Personal Interview. 10 Oct. 2006

<sup>12</sup> Prakas Nair and Randall Fielding, The Language of School Design: Design Patterns for the 21<sup>st</sup> Century Schools. (Minneapolis: Design Share, 2005): 87.

<sup>13</sup> Nair, 88.

<sup>14</sup> Brubaker, 41.

<sup>15</sup> Brubaker, 53.

<sup>16</sup> Thompson, 115.

<sup>17</sup> Gillie, 114.

“If community agencies locate their services on the school site, a more comprehensive approach can be taken to meet the economic, physical, educational and social needs of individuals and of the community. Additionally, the school, as a locus of positive activity, can serve as a catalyst for strengthening and revitalizing the entire community” ~

Jeanne Silver Frankl, Schools for Cities

## **Chapter 4:**

### **Site For Community Revitalization**

## Site Determinants

The program for the vocational school helps to solve the universal problem of poverty and is therefore viable in many contexts. For the purpose of this thesis the vocational school program is tested in an urban environment. A vocational school cannot succeed without the proper support from the community in which it is sited. Therefore, several criteria were established with which to choose the appropriate site.

Draw on Diverse Populations	Urban Areas draw on larger populations, therefore the school can reach more people in need. The dense population of cities ensures that there will be diversity in the student body.
Concentration of Poor and Homeless Populations	Urban Areas have denser concentrations of those whom the school is designed to assist.
Good Public Transportation	Urban Areas with good public transportation systems can attract a larger student population, and have greater outreach throughout the city.
Brownfield Sites	Brownfield sites are those that were once used for industry but now lay abandoned. Specifically it is important to look for Brownfield sites with existing structures that can be adaptively re-used for the vocational school program. This will allow the school to rejuvenate a blight on the urban fabric, converting it to a use that can rejuvenate the community and its people.

Figure 23: Criteria for Choosing an Urban Site

[Author]

These criteria can be met in all cities all over the world; however, for the purposes of this thesis, the vocational school is to be located in the nation's capital, Washington D.C. There is a need for adult vocational education in Washington D.C as well as several initiatives to increase the amount of job training being offered in the city.

## Washington D.C.: A City of Opportunity

Why choose Washington D.C over other cities, such as Chicago, New York, and San Francisco, who have several sites that fit the criteria previously defined? Locating the school in the nation's capital serves as an example to these other cities for implementation strategies for the vocational school program.

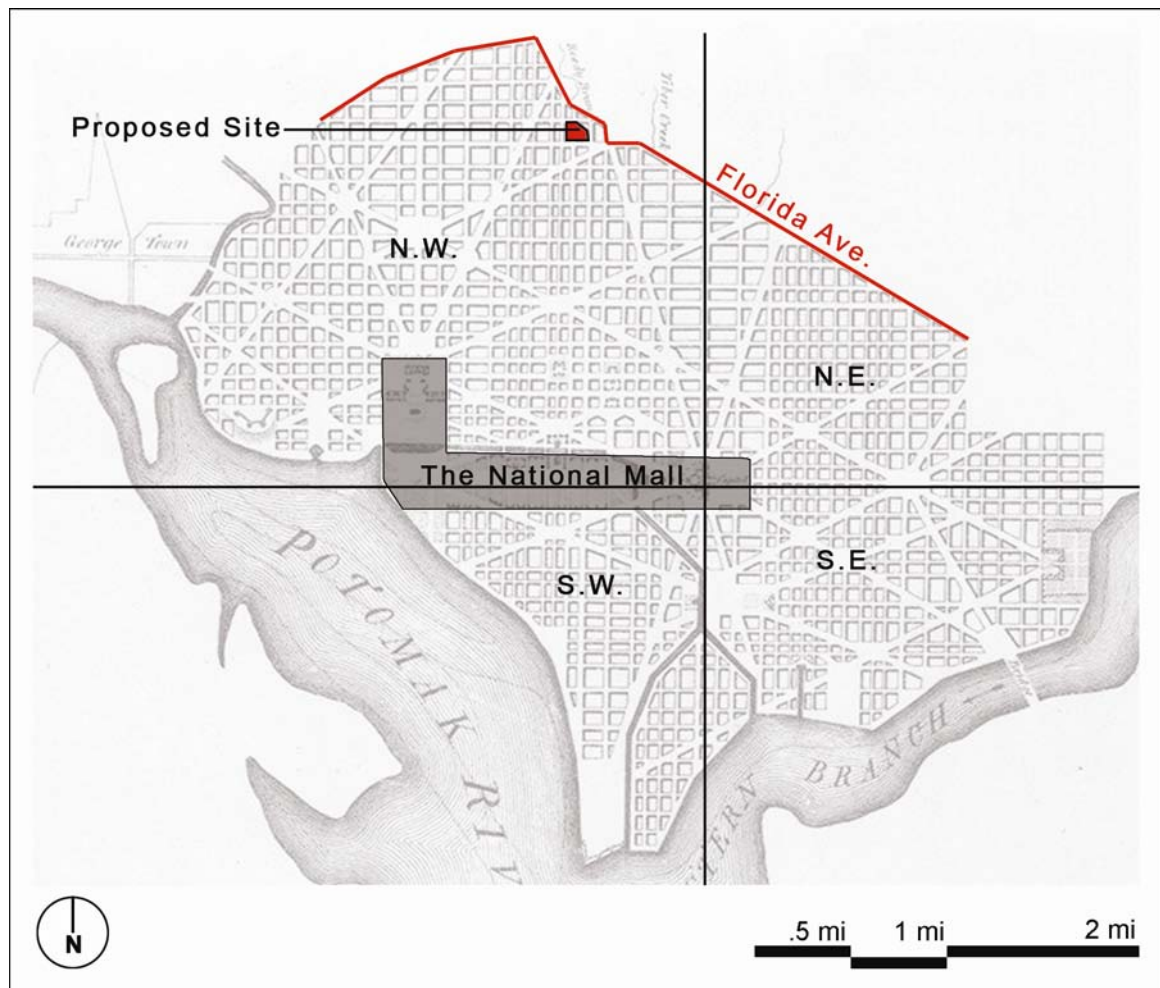
Draw on Diverse Populations	According to 2000 Census, DC ranks 27th in population in the United States with 572,059 people. As a commuter city D.C has the potential to draw students and faculty from easily accessible suburbs. <sup>1</sup>
Concentration of Poor and Homeless Populations	According to Census 2000 Key Demographic Indicators Report, 16.7% of the DC population is comprised of families in poverty, with an additional 20.2% of individuals in poverty. The Fannie Mae Foundation estimated that there are 12,000 homeless in the Washington, D.C. metropolitan area. <sup>2</sup>
Good Public Transportation	DC has a metro system that makes the city easily traversable, in addition to an excellent public bus system that can draw students from all over the city and its surrounding suburbs.
Brownfield Sites	Brownfield sites are spread throughout DC, providing opportunities for community and building rejuvenation.

**Figure 24: Graph Describing How DC meets Site Criteria**

**[Author]**

As the nation's capital, Washington D.C. is a city rich in urban design history and development. Originally planned in 1791 by L'Enfant, little has changed in the city's street layout other than the extension of the grid beyond its original boundaries. At its original conception, Washington D.C. was bounded by Florida Ave at the north and Anacostia river to the south; its current boundaries have expanded north to include Rock Creek Park, and further south to include the area of land adjacent to the Anacostia river. The city is organized into four city quadrants: Northwest, Northeast, Southwest and

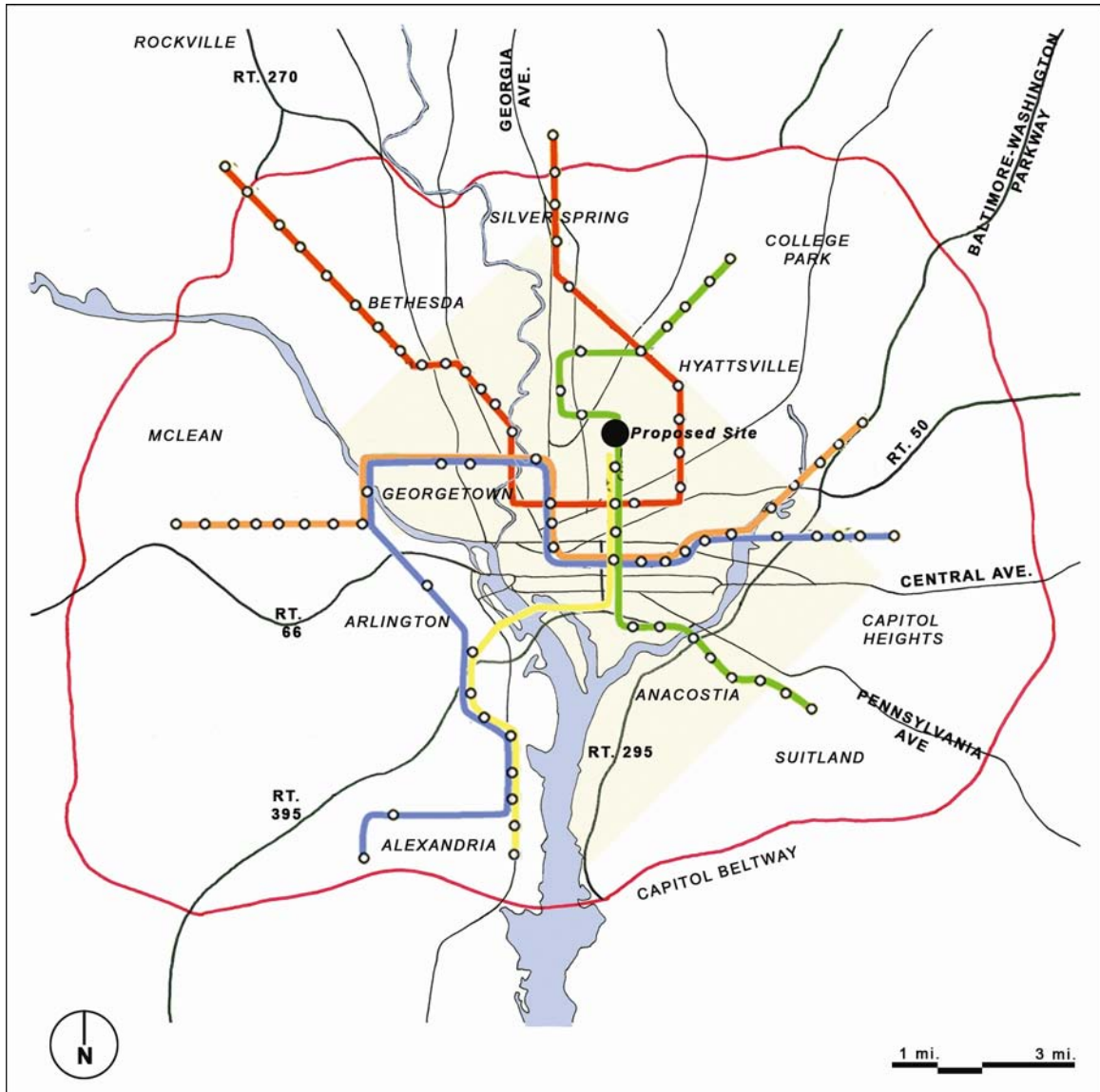
Southeast. The proposed site for this thesis is within the largest quadrant, Northwest. It is the most diverse quadrant of the city and includes the central business district, the federal triangle, the northern portion of the national mall, the white house, and several universities.



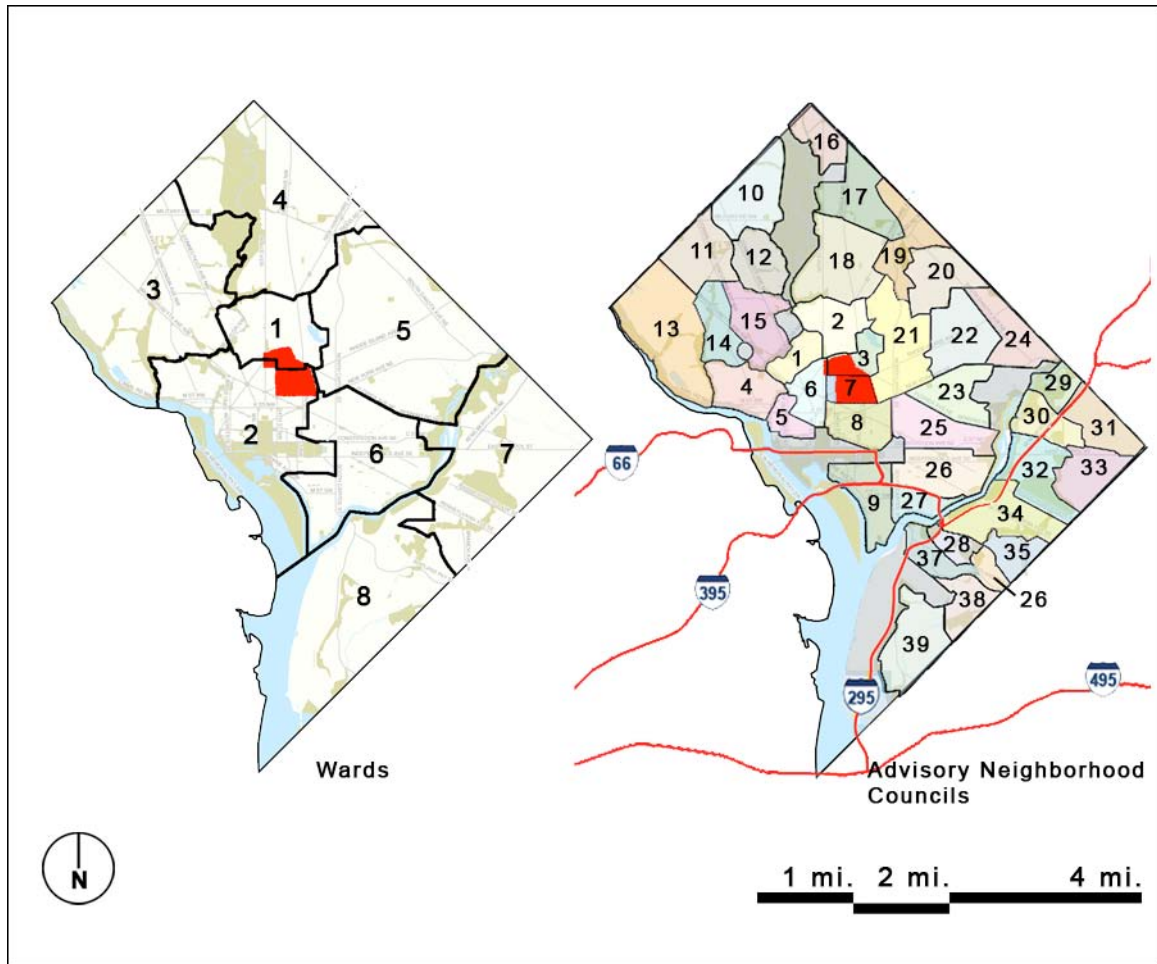
**Figure 25: L'Enfant Plan of DC Showing Location of Thesis Site** [Author]  
The proposed site for this thesis lies on the edge of L'Enfant's original plan of DC.

The Northeast quadrant has a very different character. It is home to a larger number of small Catholic institutions, including Catholic University. Southeast is a predominantly African American quadrant that is rich in cultural history. This area of the city, however, is known consistently high crime rate compared to the other quadrants. Current

revitalization efforts in Southeast are causing the area to become gentrified. Finally, the Southwest quadrant of DC includes some of the oldest buildings and sites in the city. In the 1950s the area experienced an upsurge of urban renewal, changing much of the character of Southeast. Although the area has experienced some gentrification, it is mostly known as a multi-ethnic, working class community.



**Figure 26: Washington DC , Suburbs, and Major Transportation Routes** [Author]  
 DC is often described as a commuter city, with the Capitol Beltway and Baltimore Washington parkway drawing workers into the city. The comprehensive metro system extends the city's public transportation routes out to adjacent suburbs.



**Figure 27: Shaw Neighborhood in Wards and Neighborhoods** [Author]  
 DC is a city comprised of 127 neighborhoods organized in a system of 37 clusters. The city is further divided into a system of eight wards that group regions of the city into electoral districts. The Shaw neighborhood crosses between electoral wards 1 & 2. The neighborhood also straddles between Advisory Neighborhood Council Areas 3 & 7, also known as Clusters 3 & 7.

The diversity of D.C.'s neighborhoods is due in a large part to the rich history of development in the city. Each neighborhood boasts its own attractions and significant historical features that make it unique. When choosing a specific site within D.C. there were several criteria established to ensure the vocational school would be located in a neighborhood rich in history and opportunity. It is important to choose a site that is diverse in its population, diverse in income levels, diverse in building typologies, rich in community organizations, easily accessed via public transportation, and with the proper

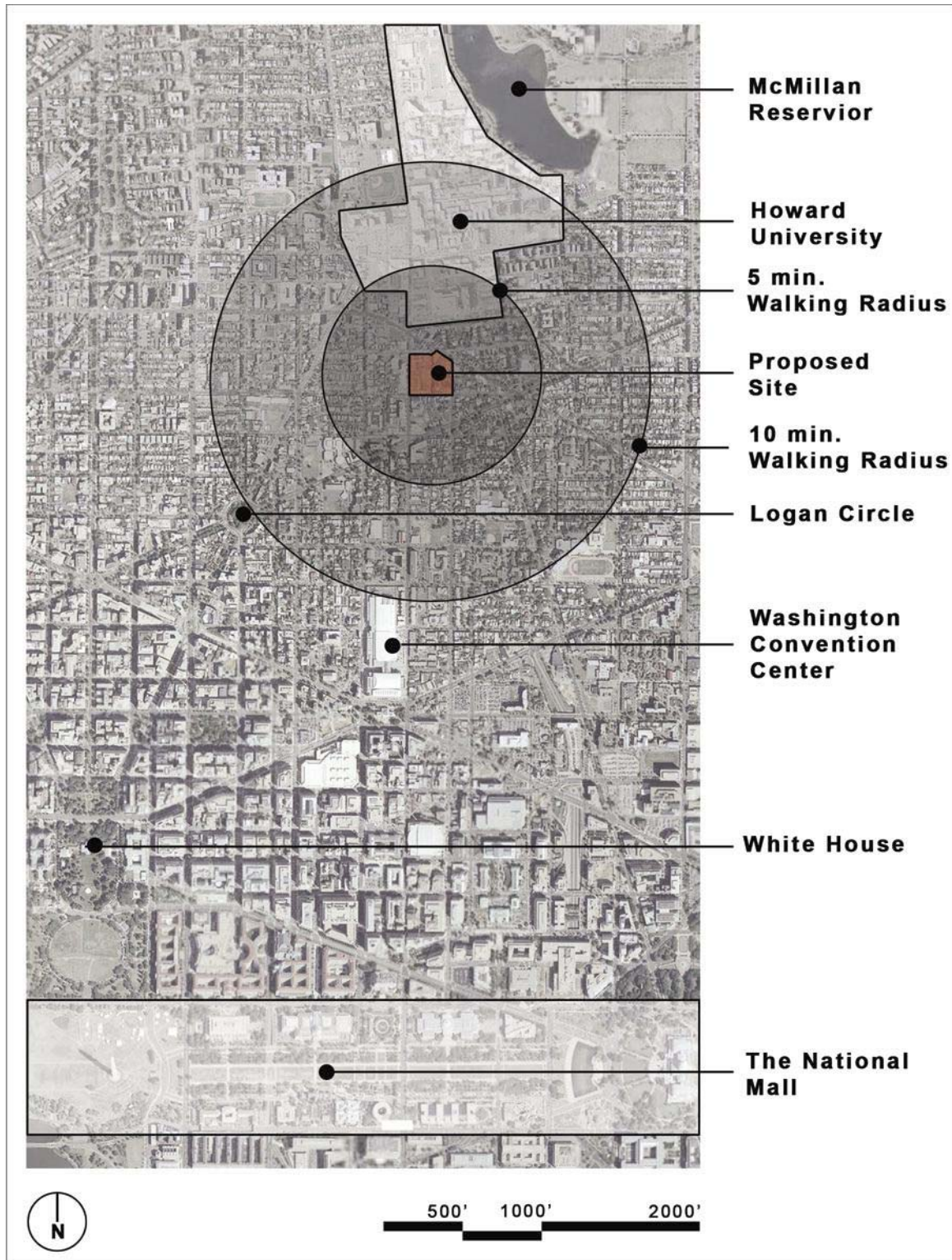


infrastructure and plans for development to ensure the vocational school's success. These criteria can be found in several neighborhoods in Washington D.C.; the character and development potential of the Shaw neighborhood makes it a viable place to test the vocational school program.

## **The Shaw Neighborhood**

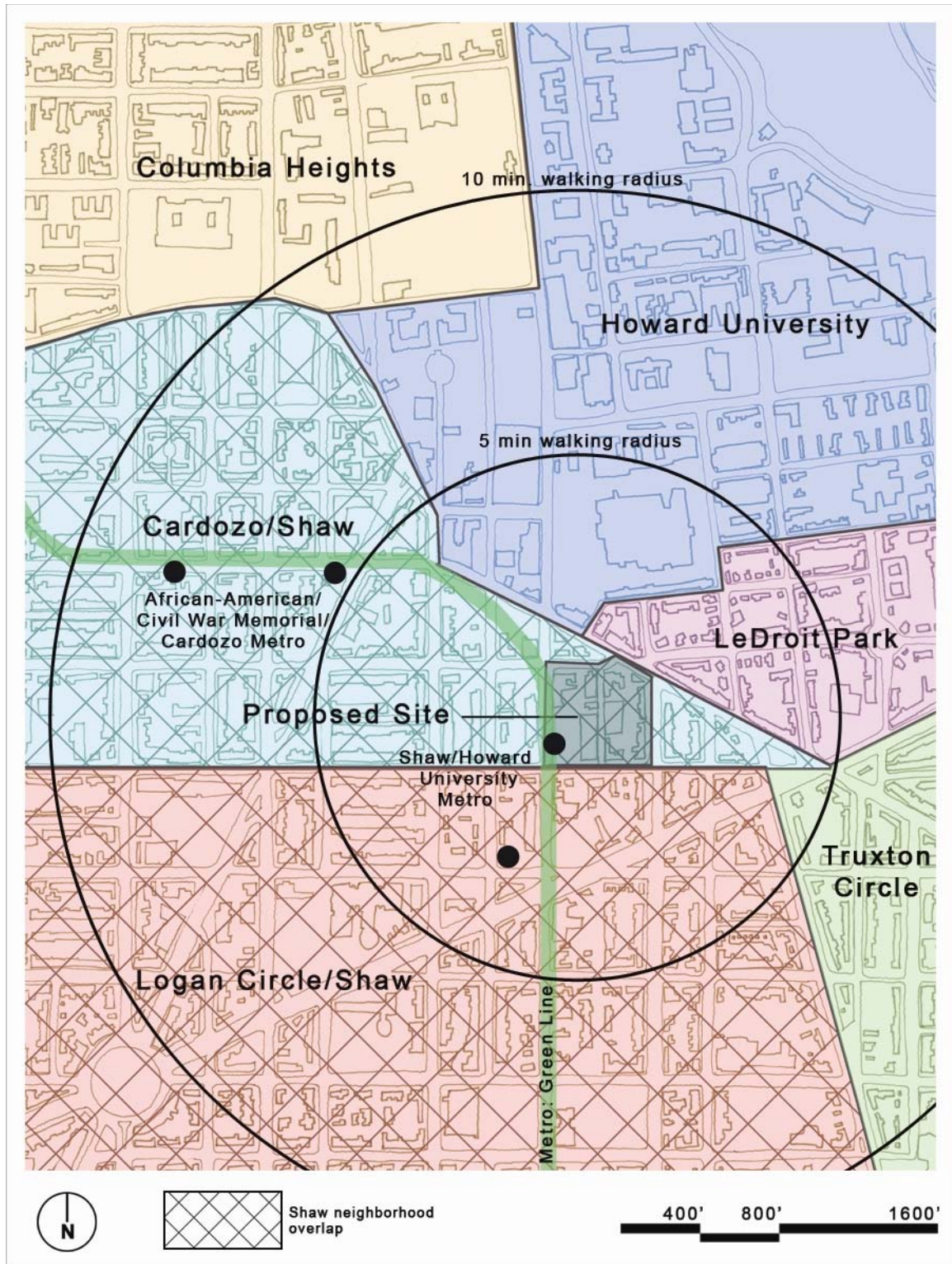
The Shaw neighborhood has the diversity and infrastructure necessary to support the vocational school. It is an area with a rich history that allowed for a diverse population of people, building typologies and strong sense of community, represented by the numerous neighborhood agencies and organizations. There are several metro stations and bus stops which service the area, making it easily accessible citywide. A recent upsurge of interest in the Shaw neighborhood has sparked plans for community development, which should help to ensure the opportunity necessary for the vocational school to succeed.

The Shaw Neighborhood comprises a large area in Northwest D.C, spanning between ward one and ward two and bridging between neighborhood clusters 3, the Cardoza/Shaw neighborhood and 7, the Logan Circle/Shaw neighborhood. The neighborhood is bound by Howard University to the north, the LeDroit Park neighborhood to the east, the DuPont circle neighborhood to the west, and the Mount Vernon Square neighborhood to the south.



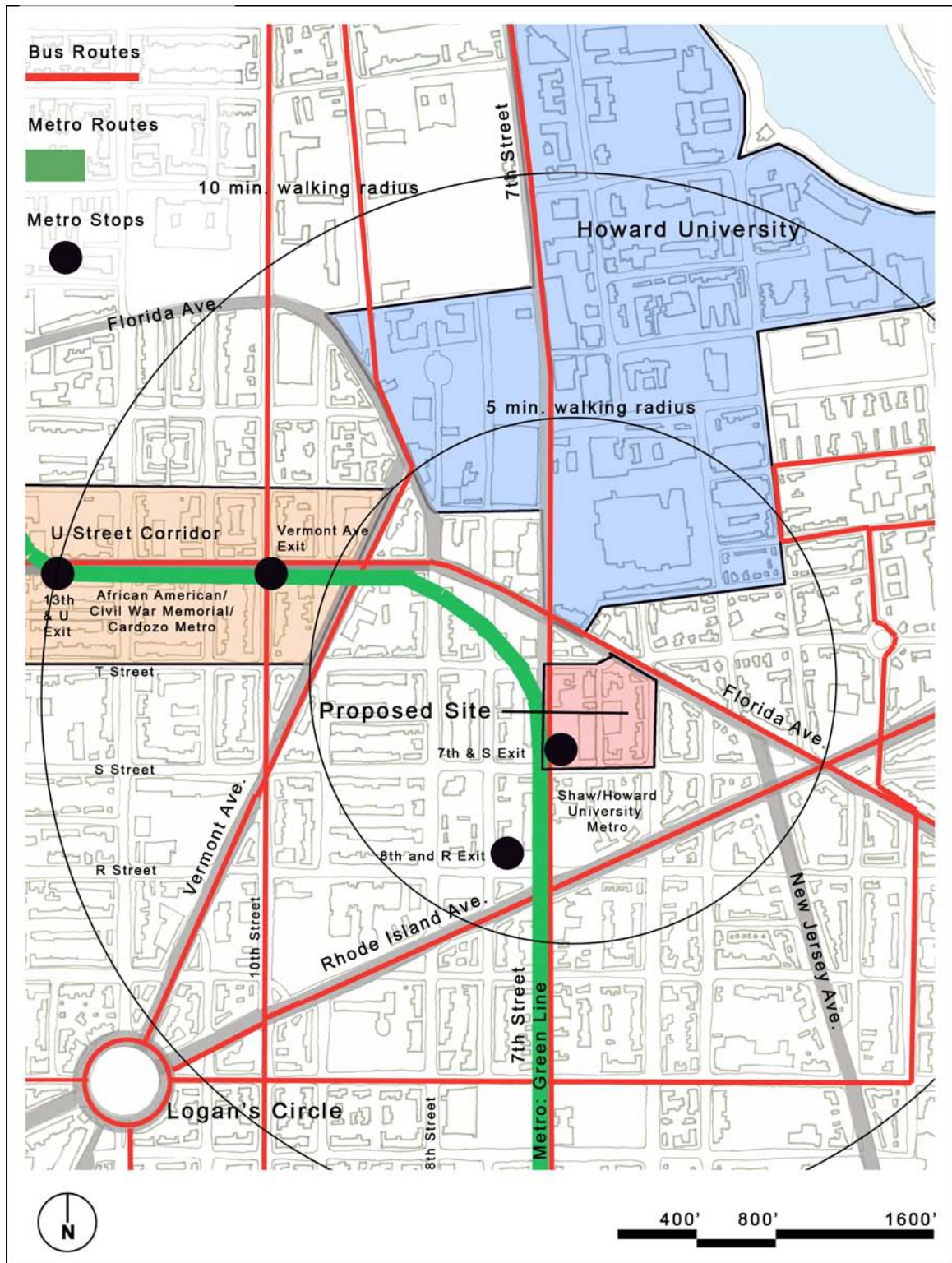
**Figure 28: Site in Relation to the National Mall and significant DC sites** [Author]  
 The proposed site for the vocational school is just 17 blocks north of the national mall, approximately a 15 minute walk, and only 6 blocks north of the National Convention center, approximately a 5 minute walk.





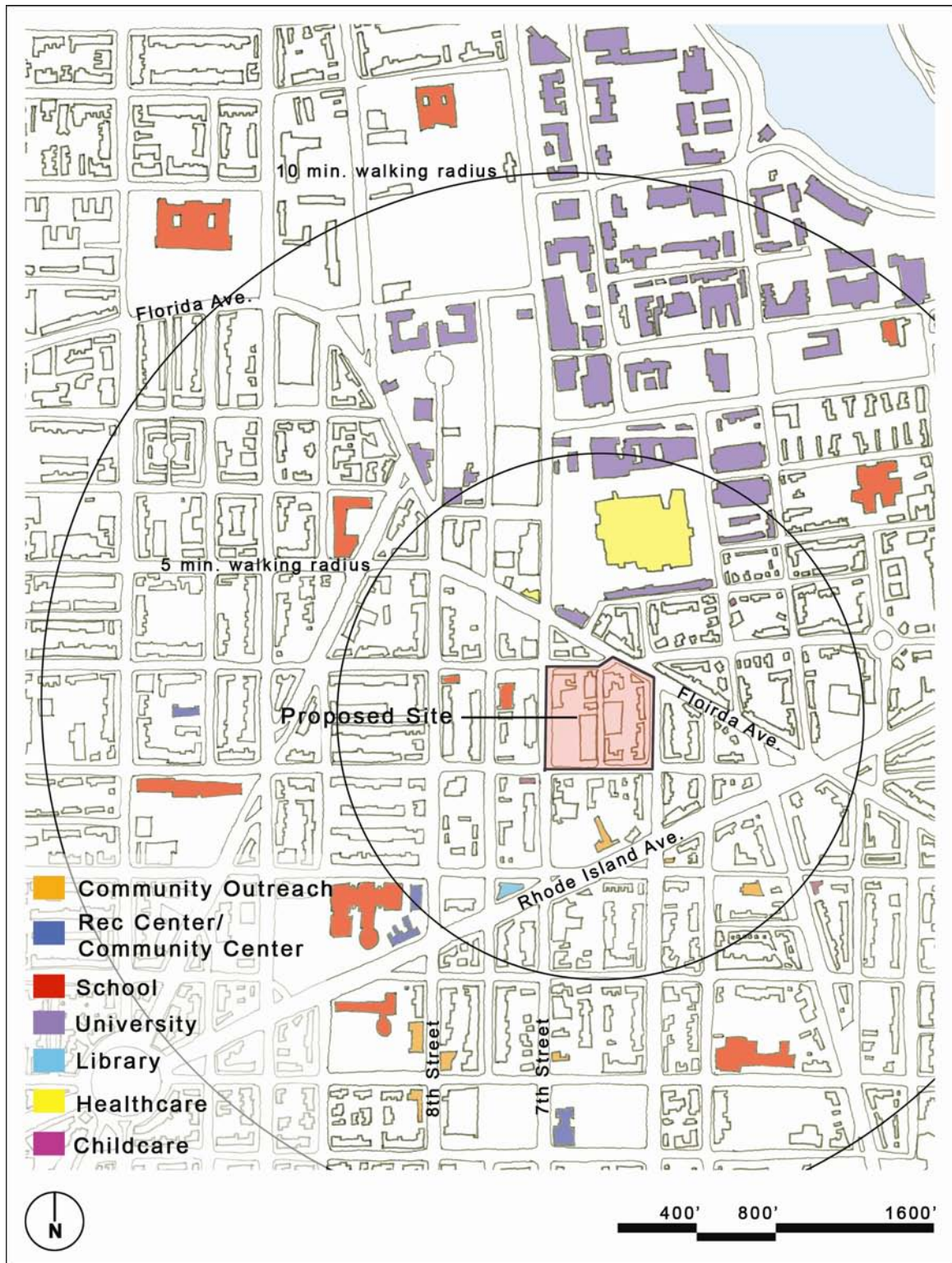
**Figure 29: Neighborhoods Surrounding Site with Shaw neighborhood overlay** [Author]  
 The proposed thesis site lies in the Cardozo/Shaw neighborhood. The Shaw neighborhood, however, extends to the south and is included in the Logan Circle neighborhood boundaries.





**Figure 30: Metro/Bus Routes and Areas of Interest** [Author]  
 Two metro stops on the green line, as well as several local buses service the Shaw neighborhood. The site is located just south of Howard University, and just east of the U Street Corridor that is an important commercial district in the Shaw neighborhood.





**Figure 31: Neighborhood Uses** [Author]  
 The Shaw neighborhood is rich in institutional and commercial uses. The various community buildings provide support to the vocational schools mission. The school's institutional role can be absorbed by the rich diversity of neighborhood uses.

Named after Civil War Colonel Robert Gould Shaw, the Shaw neighborhood grew out of slave encampments on the outskirts of Washington city.<sup>3</sup> At its inception the neighborhood was merely a rural swath of land at the edge of L'Enfant's master plan for Washington, D.C. The founding of Howard University within the Shaw neighborhood in the 1870s attracted black intellectual and artistic leaders to the area.<sup>4</sup> Like many other cities in the United States during the first half of the 20<sup>th</sup> century, Washington D.C was segregated, and the Shaw neighborhood became a self-sufficient community for African Americans in the city. As the city grew, the Shaw neighborhood became the center of the "professional, commercial, educational and cultural life of Washington's black community."<sup>5</sup> The desegregation of Washington DC in the 1950s sparked the beginning of the Shaw neighborhood decline and there was further devastation of the neighborhood following the city riots sparked by Martin Luther King's assassination in 1968. Today the neighborhood is capitalizing on its rich history and culture that is as unique and relevant as New York City's Harlem renaissance. The neighborhood is home to several sites on the city's African American heritage trail, as well as the Greater U Street Heritage Trail.

The Shaw neighborhood is as rich in its architecture as it is in history. There is a diversity of building typologies, making the neighborhood diverse in residential, commercial, and institutional fabric. Although the site has a lot of historic fabric, there are several new structures that begin to break away from the predominate use of brick.





## Residential Typologies

The Shaw neighborhood has an eclectic mix of housing typologies. Row homes, high, mid, and low density apartments are dispersed throughout the neighborhood. Although there is a predominant use of brick in each of these typologies, new materials such as steel and metal panels are being incorporated into new and remodeled structures.



Row homes on 6th street, near the Hostess factory. Brick clad.



Row homes on Wiltberger St., across from the Hostess factory. Brick clad.



Low-income apartment, across the street from the Hostess factory. Metal panel next to brick row homes.



Low-density apartment on 6th street in row home fabric. Brick and metal clad



Multi-story apartments on 7th street, high and mid density. Brick clad.



Low density apartment on S street in row home fabric. Brick clad.

**Figure 32: Residential Typologies**

These images show the various types of residential buildings in the Shaw neighborhood.

[Author]



## Commercial Typologies

Commercial buildings in the Shaw neighborhood range from small local businesses to large chain stores. The majority of commercial buildings are housed in former row homes which were adapted to small mixed-use facilities. Brick is the predominant material for commercial buildings in Shaw.



The Howard CVS on 7th and T Street. This brick building leaves much of the site vacant for parking.



The largest scale of the commercial typology in Shaw. Storefronts line the first floor of these mixed-use brick buildings.



Row homes adapted to commercial buildings on 7th street between S and t street. The original brick cladding remains.



Commercial buildings on U street, converted from row-homes.



Mixed-use buidings on T Street, next to the Howard theatre. Small wood additions have been added.



Abandoned brick commercial storefronts next to the Howard theatre. Slated for historic preservation.

**Figure 33: Commercial Typologies**

[Author]

These images show the variety of commercial buildings located throughout the Shaw neighborhood.





## Institutional Typologies

Several institutions are located throughout the Shaw neighborhood, ranging from Howard University to churches and masonic lodges. Although the typologies vary between the institutional buildings, the majority are brick clad. Several theatre buildings are also located throughout the Shaw neighborhood.



Howard University Hospital on Georgia Ave and W Street.



Howard University offices on 7th and S street across from the Hostess site. Brick clad.



DC Housing Finance Agency on Florida Ave. The brick building incorporates a glass curtainwall.



Brick Masonic lodge on 9th and T street. Brick and concrete complete the curtainwall system.



Church on 7th street, 1 block south of the Hostess site. Brick patterns with a metal seam roof.



Cleveland Elementary School on T and 8th street. The historic brick building has a glass and brick curtainwall addition.

**Figure 34: Institutional Typologies**

These images show the variety of institutional facilities within the Shaw neighborhood.

[Author]

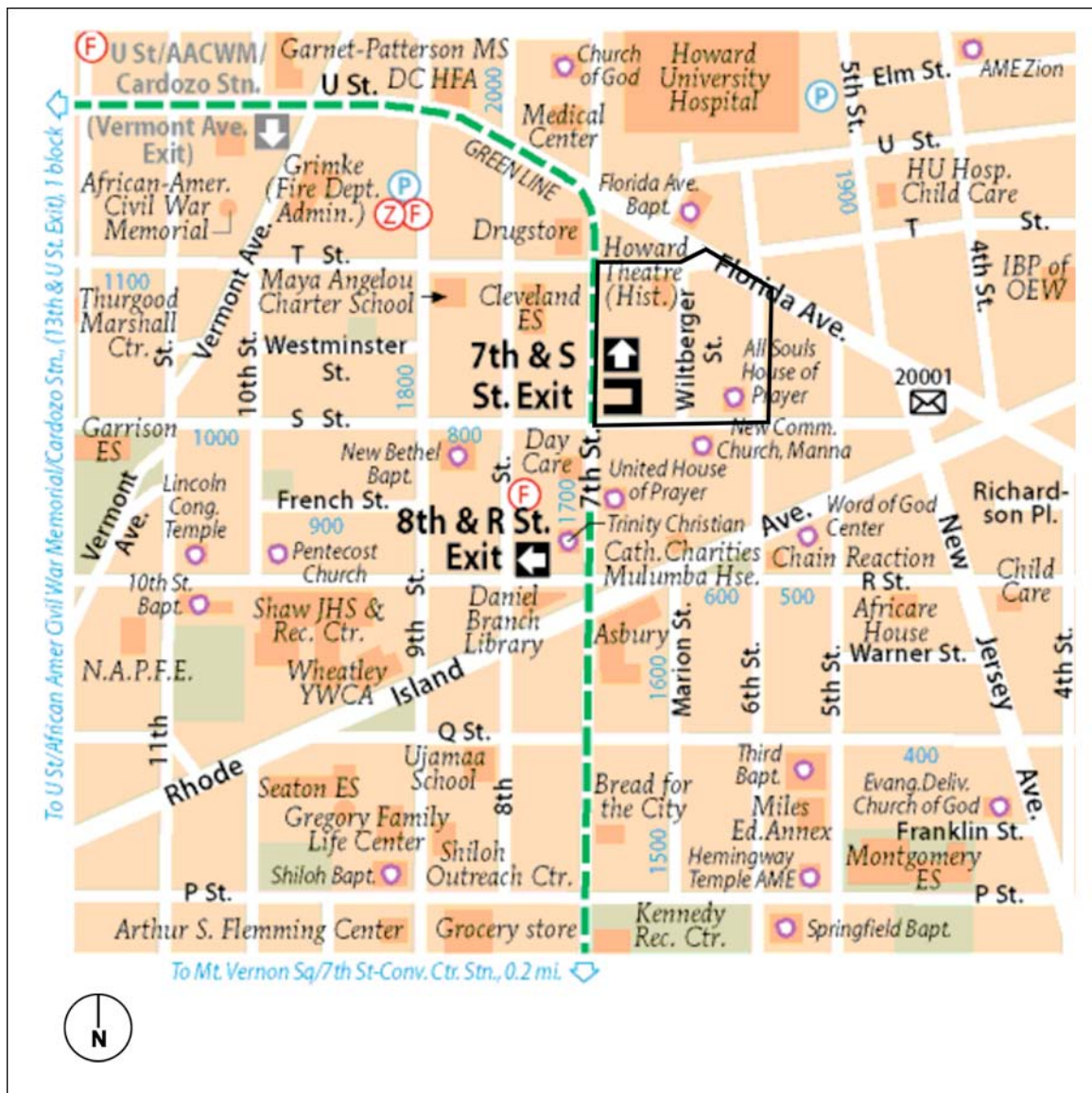
Although the Shaw neighborhood was once primarily African American, it is beginning to experience a balance in its demographics.

	ANC/Cluster 3	ANC/Cluster 7
Population	10,128	20,865
Under 18 years	14%	16%
Between 18 and 65 years	77%	75%
Over 65 years	9%	8%
African American	66%	49%
White	22%	32%
Hispanic	12%	18%
Median Household Income	\$33,717	\$35,628
Occupied Housing Units	3,957 units	10, 512 units
% of Housing Units Owner Occupied	33%	23%

**Figure 35: ANC/Cluster 3 & 7 Demographics<sup>6</sup>** [Author]  
 Since the Shaw Neighborhood spans between clusters 3 & 7 it is important to see the demographics of these two areas.

	District Wide	Ward 1	Ward 2
<b><i>Educational Attainment</i></b>			
Population 25 yrs & Over	384,535	5,134	9,347
% High School Graduate or Higher	77.8%	68.4%	86.8%
% Bachelor's Degree or Higher	39.1%	38.5%	64.1%
% Unemployed	6.8%	5.1%	5.9%
<b><i>Poverty</i></b>			
% Families in Poverty	16.7%	19.7%	11.6%
% Individuals in Poverty	20.2%	22.0%	18.7%

**Figure 36: Ward 1 & 2 Education and Poverty Statistics<sup>7</sup>** [Author]  
 This table shows the levels of education attained and poverty levels of residents in Wards 1 and 2 since the Shaw neighborhood overlaps these wards. Locating the vocational school in the Shaw neighborhood ensures students will not be segregated into a poor area.



**Figure 37: Shaw Support Organizations** [WMATA]<sup>8</sup>

The Neighborhood is rich in community organizations that support local and city residents. The D.C. Housing authority provides and manages affordable housing in the district. Bread for the City is a non-profit organization that provides services such as food, clothing, medical care, and legal and social services to the disadvantaged citizens of Washington, D.C.

The Shaw neighborhood has several organizations aimed at assisting the homeless with various housing and social needs. The Green team initiative, established in 2006, works in the Shaw neighborhood to provide opportunities for the “formerly homeless, unemployed, and underemployed populations through employment, training, and learning life skills.”<sup>9</sup>

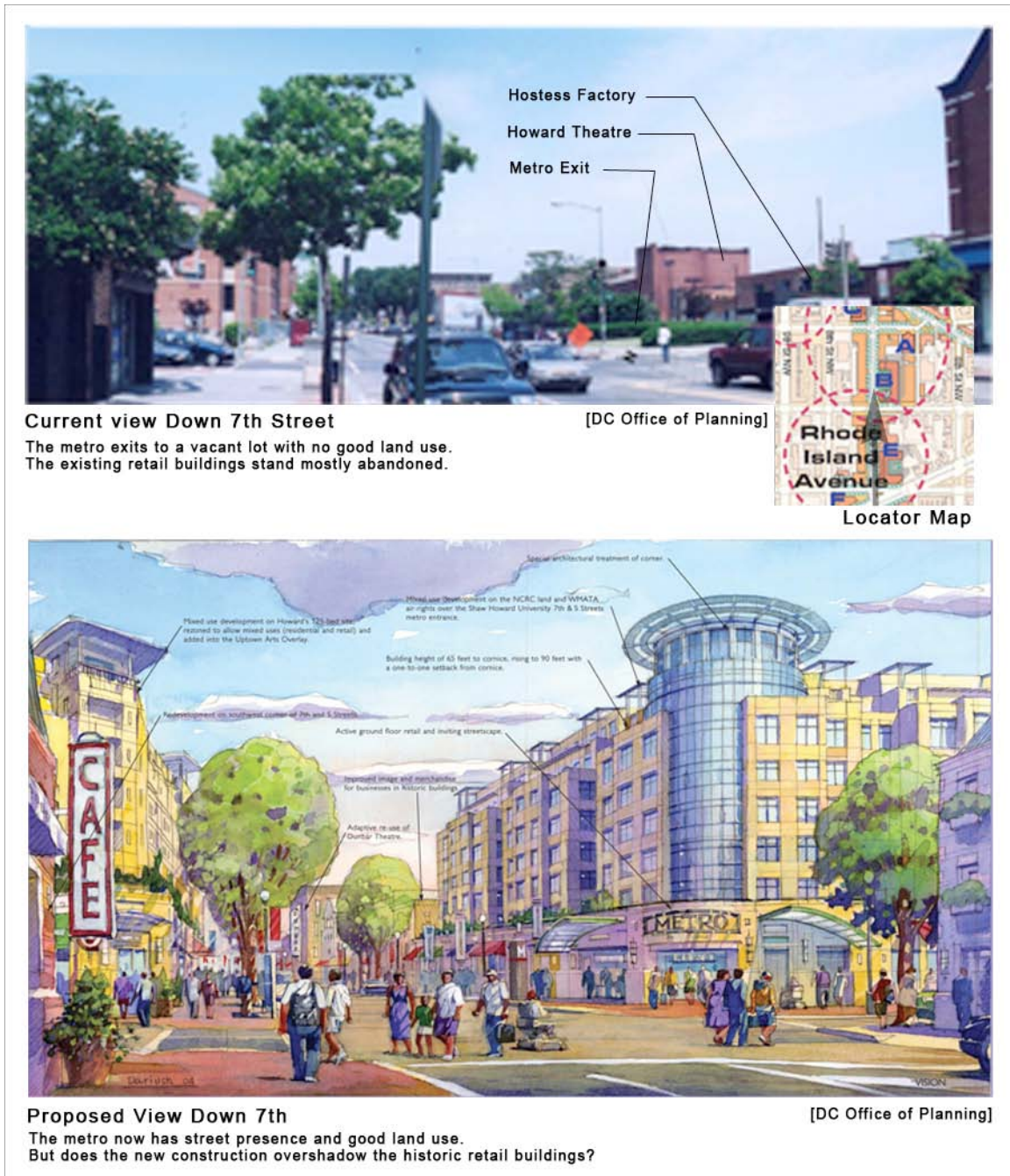
Washington D.C's Main Streets initiative and the citywide interest in Shaw's cultural heritage have sparked an interest in neighborhood revitalization. The neighborhood is becoming a desirable place to live, attracting local and national retailers, developers, and a diverse mix of residents.<sup>10</sup> The goal of the Shaw Main street program is to coordinate "a community based enhancement program over the next five years to encourage business retention, expansion, and attraction."<sup>11</sup>

The D.C Office of Planning, with the help of residents from Shaw, has issued a forty-eight-page draft for the development of a cultural destination district within the Shaw neighborhood. The goal is to link the historic sites within the neighborhood to provide the framework for mixed-use development.<sup>12</sup> The document provides a good foundation for the redevelopment of the Shaw neighborhood, however it lacks integration with the Strategic Action plan initiatives to provide job training and revitalize community institutions. Although the plan outlines a goal to provide low-income, mixed-income, and rehabilitative housing, there are no initiatives to train residents for jobs.

Howard Theatre District Program Recommendations
<ul style="list-style-type: none"> <li>• predominate office use (max 170,000sf);</li> <li>• retail/restaurant (approximately 18,000 sf);</li> <li>• housing potential;</li> <li>• 306 construction jobs, 96 permanant jobs created;</li> <li>• 160 +/- parking spaces below grade and behind retail;</li> <li>• 20%-30% affordable housing target.<sup>13</sup></li> </ul>

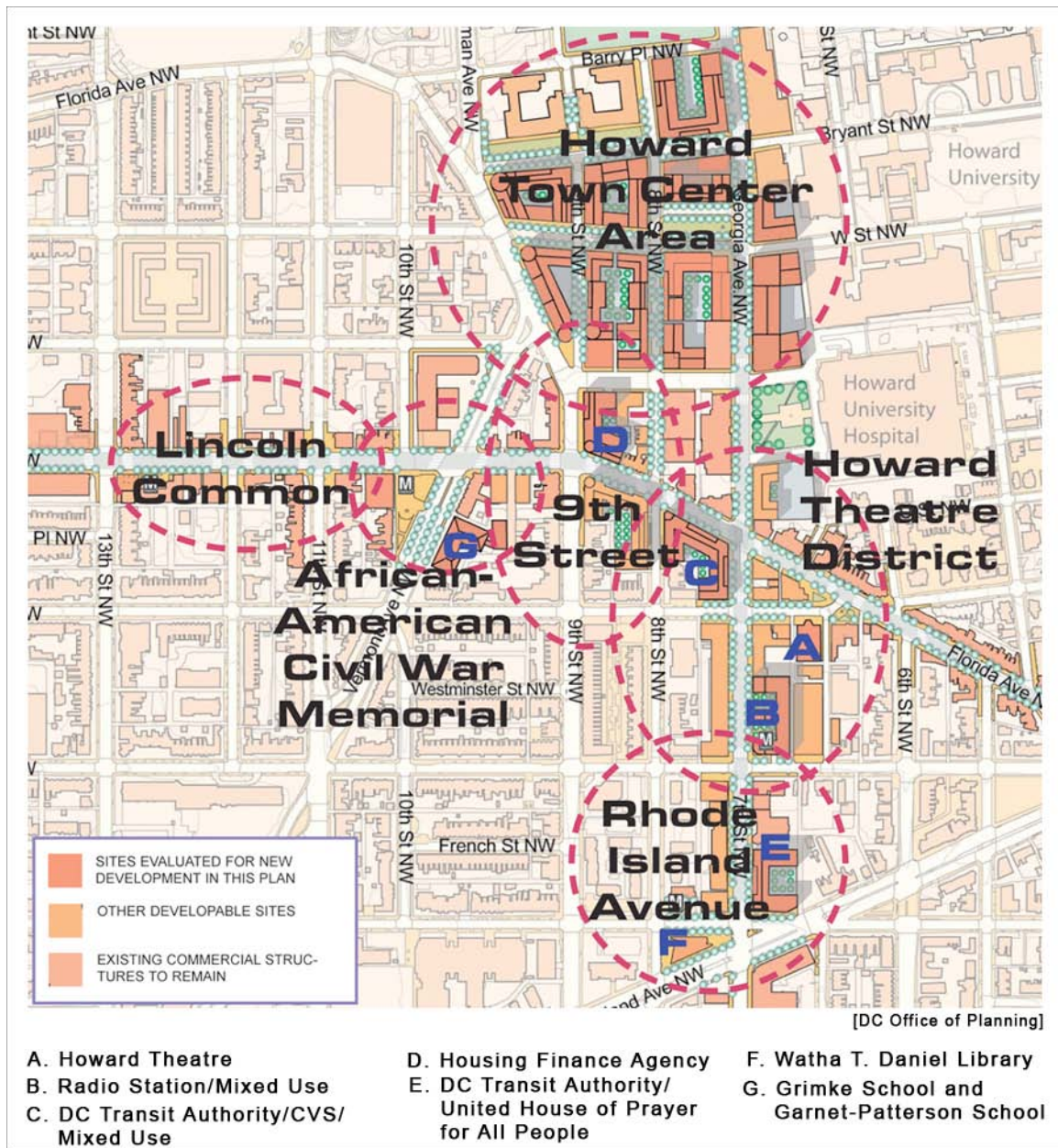
**Figure 38: Howard Theatre District Recommendations** [Author]  
The architecture firm of Ehrenkrantz, Eckstut and Kuhn developed these recommendations based on a four month collaboration involving 400 citizens in 12 meetings.





**Figure 39: Proposed Development of 7<sup>th</sup> Street** [Author]  
 The DUKE development team envisions an active retail and mixed use district for the Shaw/Howard University metro station. The plan emphasizes a pedestrian friendly area, making the Shaw neighborhood a destination district.

The current plan designates the proposed thesis site for occupation by a local radio station, incorporating mixed-use development on the site. Unfortunately, the role of the historic Hostess factory building has been neglected.



**Figure 40: DUKE Development Plan for the Shaw Neighborhood**  
The development plan has a concentration of 6 areas within the Shaw neighborhood. The proposed site for this thesis occurs in the Howard Theatre District, which is planned to become the neighborhood performing arts anchor.

The DUKE development plan concentrates only on retail, office, and residential development. Locating the vocational school on the site designated by A and B provides the opportunity to connect new retail development with a job training facility.

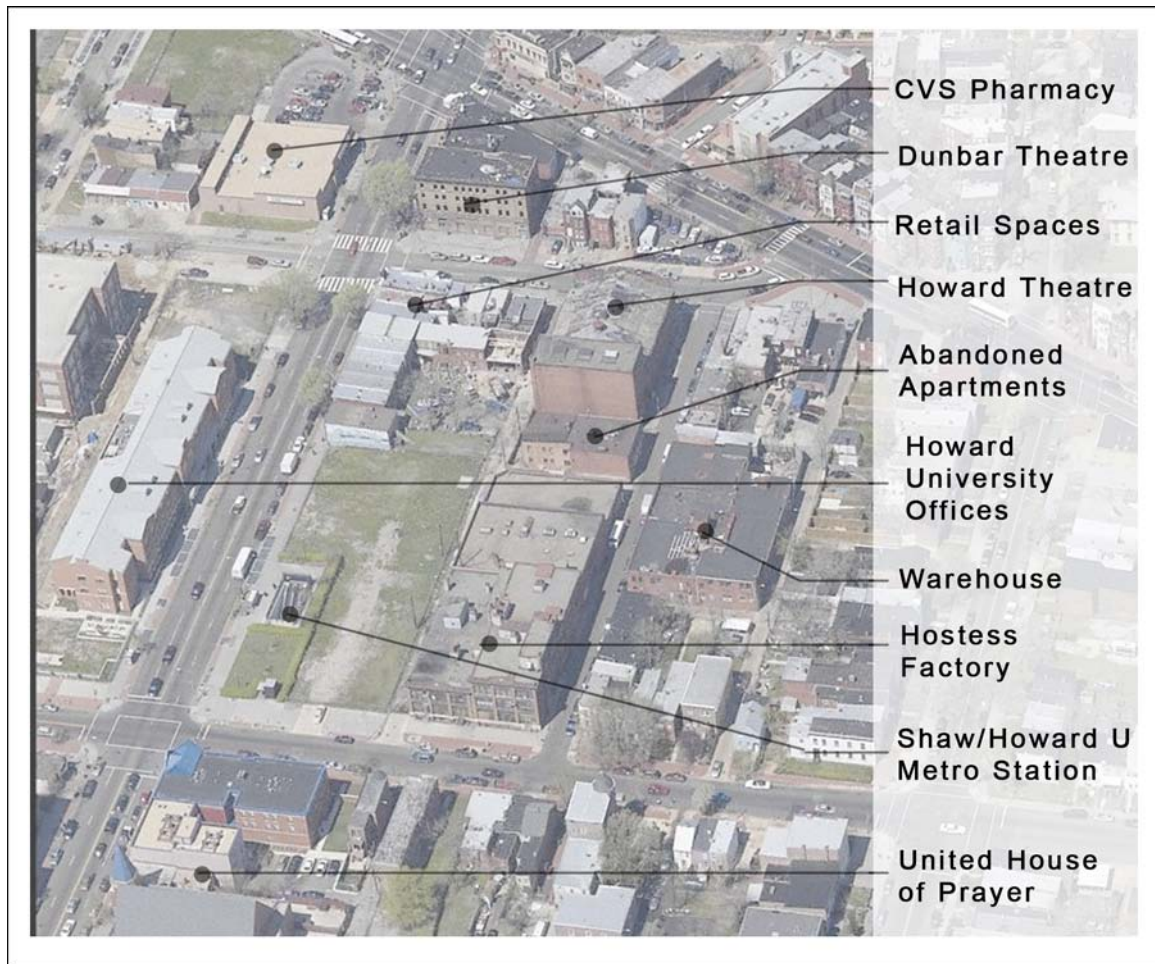
The upsurge of interest in the Shaw neighborhood provides a great opportunity for the vocational school. Locating the school in an area diverse in population and income level avoids the phenomenon of segregating the poor. The area is rich in commercial opportunity, which is important to the success of the students of the vocational school. Accessibility via public transportation also ensures a diverse student population from all over the city.

Although there are several empty lots within the Shaw neighborhood, it was important for the purpose of this thesis to examine the opportunity for the adaptive re-use of an existing structure in the neighborhood. Many row homes are vacant, yet these typologies are inappropriate for adaptive re-use into an institution. Taking a cue from Howard University, which adaptively re-used the Wonder Bread factory on 7<sup>th</sup> street N.W into commercial storefronts with classrooms above. The vocational school must be located in a building that can take on the necessary institutional functions and aesthetics. The abandoned Hostess factory on 7<sup>th</sup> and S Street Northwest has this potential. Although the building cannot accommodate the entire vocational school program, it can act as a catalyst for the school design, reconnecting the building with the neighborhood.

### **The Hostess Factory Site**

The Hostess factory provides a unique opportunity for re-development. Located in the heart of the Shaw neighborhood at 641 S Street, the building is sited on the block defined by T street to the north, Wiltberger street to the east, S street to the south, and 7<sup>th</sup> street to the west. The proposed site for the vocational school includes the block of the Hostess factory building, as well as the adjacent block to the east of the site.





**Figure 41: Site in Context Looking North**

[Author]

**The Hostess factory block is unique amongst its context. The row-home typology dominates the eastern portion of the neighborhood. The neighborhood character shifts drastically beyond the Hostess block.**

The block containing the Hostess factory is currently underdeveloped and lacks an active role in the neighborhood, despite the metro location. Although there is a diversity of building typologies, ranging from retail buildings, industrial buildings, theatres and apartments, many of these buildings are abandoned. The majority of the buildings are clad with brick and range from one story at the Hostess building, to 5 stories at the Howard theatre.



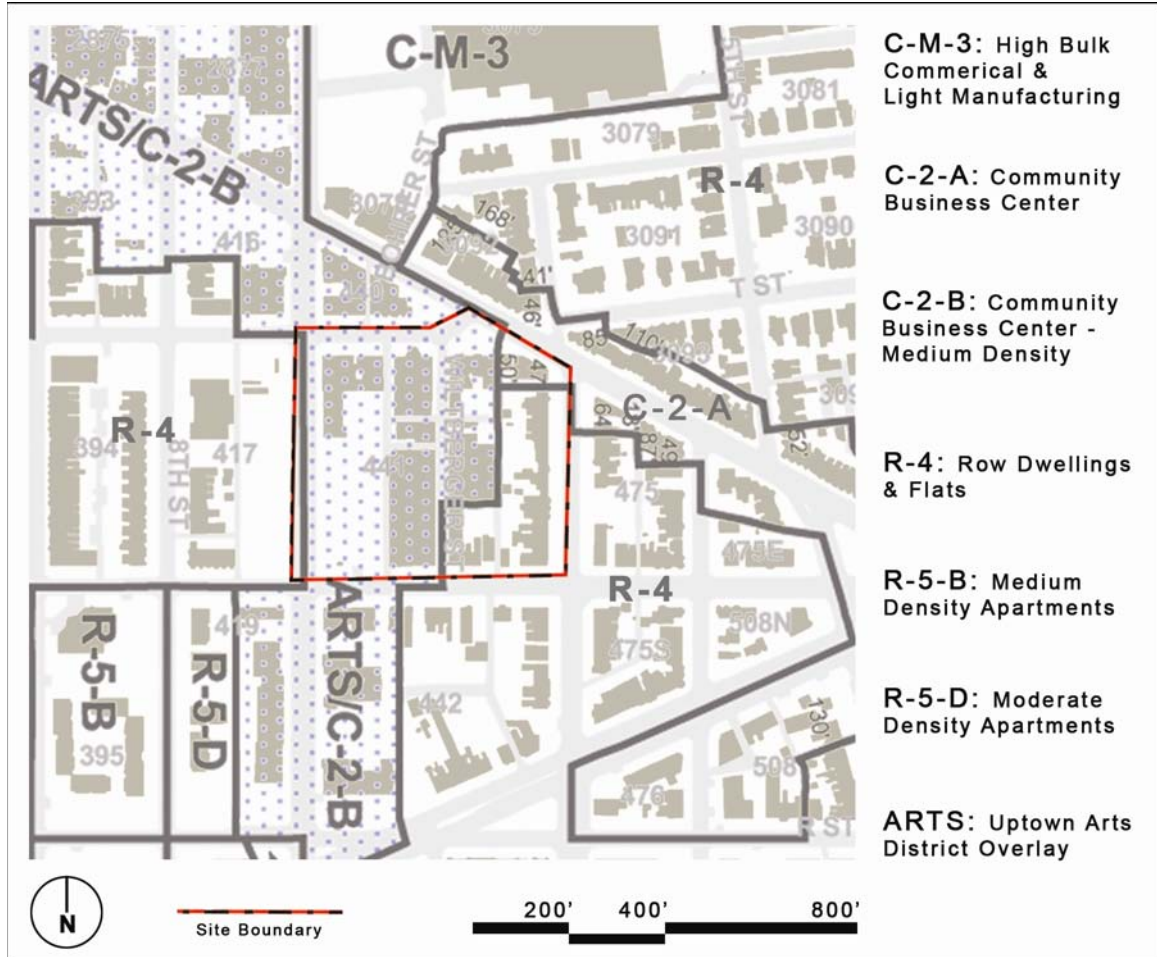


Figure 42: Site Zoning

[Author]

The majority of the Hostess Factory site is located in the Community Business Center zone, with an Uptown Arts District overlay. The Community Business center zone is intended to serve commercial and residential uses at a high-density scale.<sup>14</sup> The sites are required to be compact and have the following restrictions:

Community Business District Site Requirements
<ul style="list-style-type: none"> <li>• maximum height of 65', 90' with PUD, with no limit on number of stories;</li> <li>• FAR for residential uses: 3.5, all other uses: 1.5;</li> <li>• buildings are permitted to build to site lines, and only a rear yard of 15' is required. If the site abuts an alley, the 15' rear yard is measured from the center of the alley;</li> <li>• no courtyard spaces are required, however if a courtyard is provided it must be a minimum of 3" wide per foot of building height, and no less than 12' wide.<sup>15</sup></li> </ul>

**Figure 43: Community Business District Site Requirements**

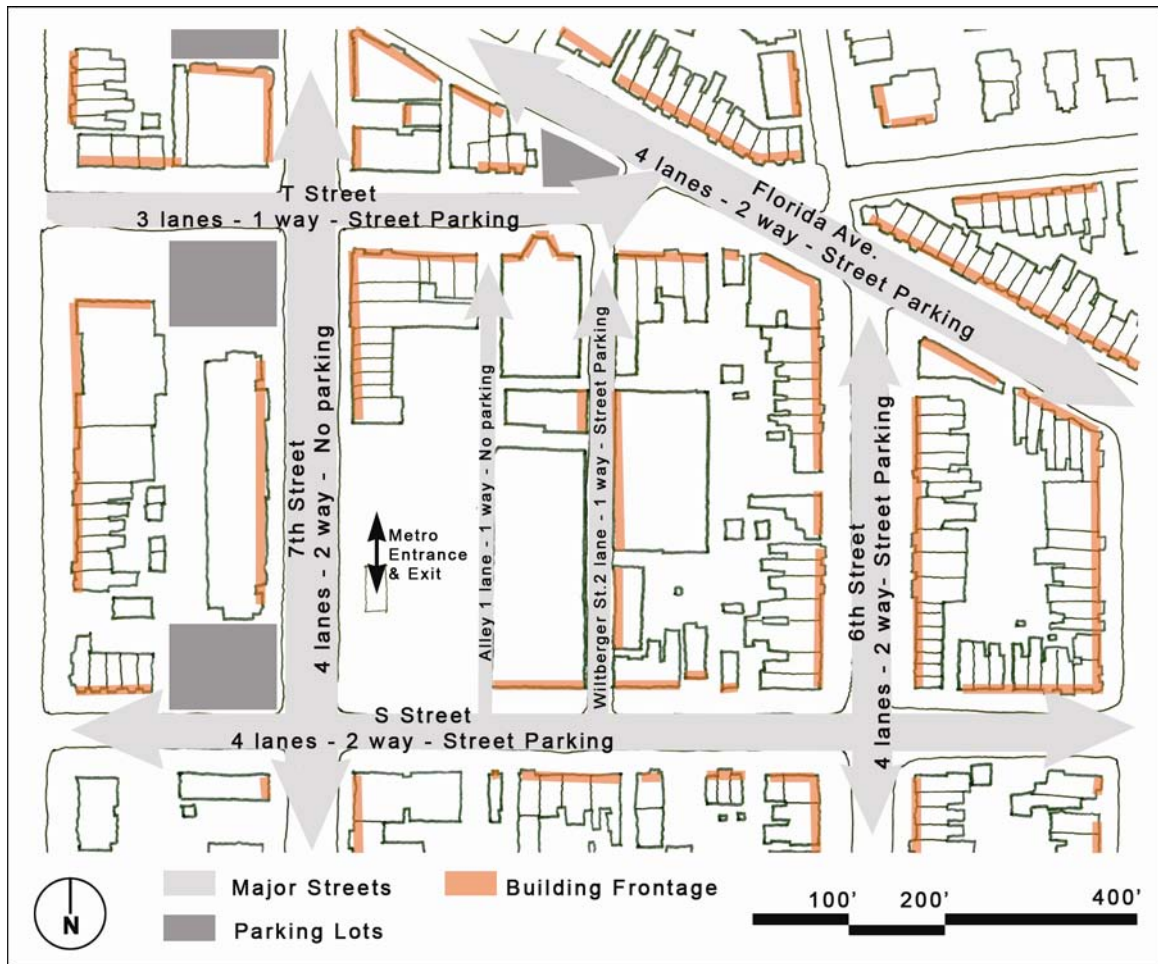
[Author]

The Arts Overlay district increases the amount of FAR typically allowed to 4.5 due to bonuses.<sup>16</sup> The goal of the Arts Overlay district is as follows:

Arts Overlay District Goals
<ul style="list-style-type: none"> <li>• encourage development that attributes to safe and efficient conditions for pedestrian and vehicular movement;</li> <li>• require uses that encourage pedestrian activity, especially retail, entertainment, and residential uses;</li> <li>• provide increased presence for arts and related cultural support uses;</li> <li>• expand business and job opportunities, and encourage development of residential and commercial buildings;</li> <li>• strengthen the design character and identity of the area;</li> <li>• encourage adaptive reuse of older buildings in the area and an attractive combination of new and old buildings;</li> <li>• foster eighteen hours of activity and increased public safety.<sup>17</sup></li> </ul>

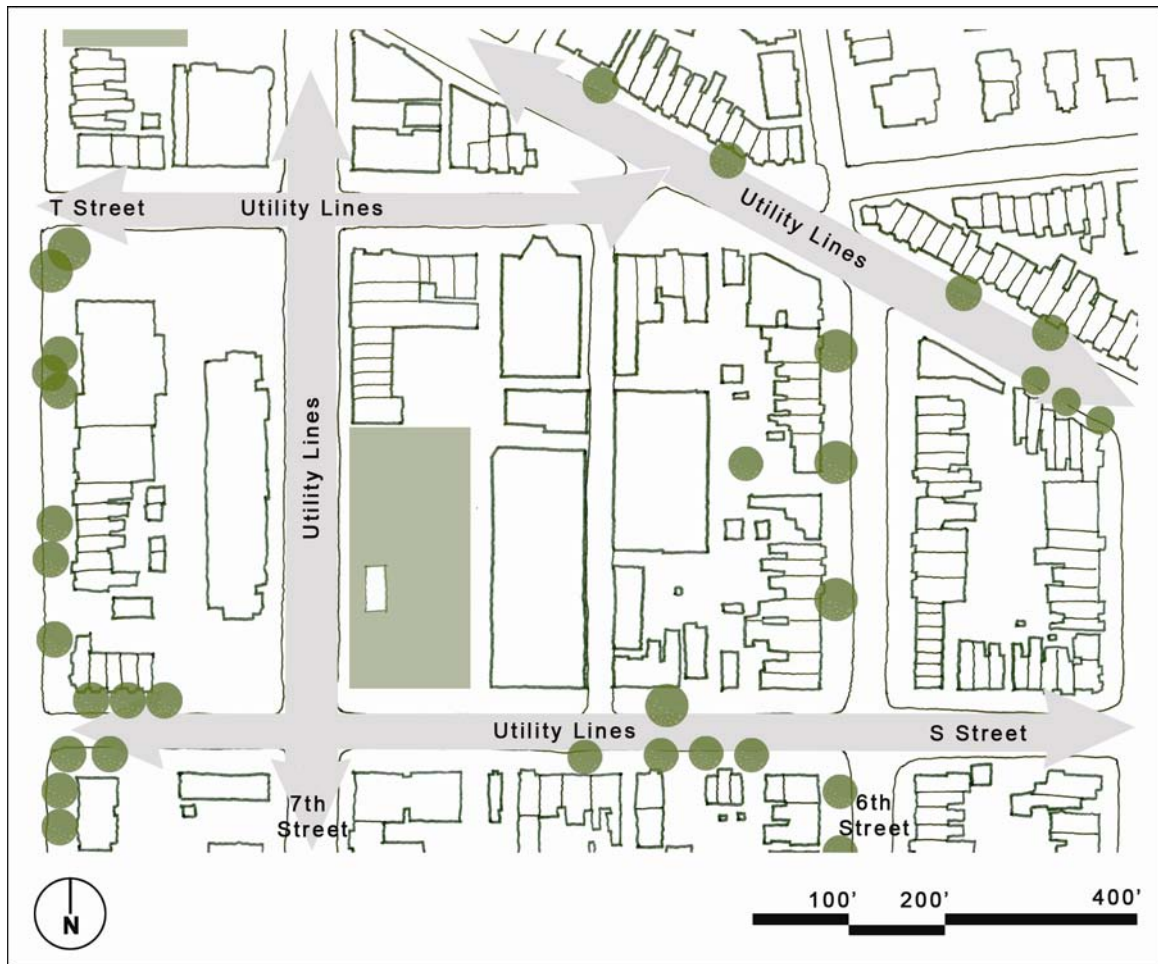
**Figure 44: Arts Overlay District Goals**

[Author]



**Figure 45: Major Streets and Building Frontage** [Author]  
 Seventh Street serves as the major commercial artery past the site. Currently on the Hostess block, 7<sup>th</sup> street lacks sufficient retail frontage to make it a viable commercial area. An odd condition is created on Wiltberger Street where several buildings face the industrial side of the Hostess factory. The majority of the blocks have good front/back relationships.

The Shaw/Howard University metro stop is adjacent to the Hostess factory. Public transportation is key to the success of the vocational school and this on-site station provides the access necessary for the school. Not only is the building accessible by metro, there are several bus stops and routes providing access to the site.



**Figure 46: Site Utilities and Landscaping**

[Author]

The Hostess factory block has adequate access to utility lines along 7<sup>th</sup> street, S street, and T street. Wiltberger street, between the Hostess block and the block to the east, has no utility lines, providing the opportunity for the street to be de-mapped, or built over.

Although there are parks throughout the Shaw neighborhood, the Hostess site and surrounding blocks lack significant green space and unifying landscaping. Urban design strategies should take into account the need for public green spaces and a unifying streetscape in the neighborhood.



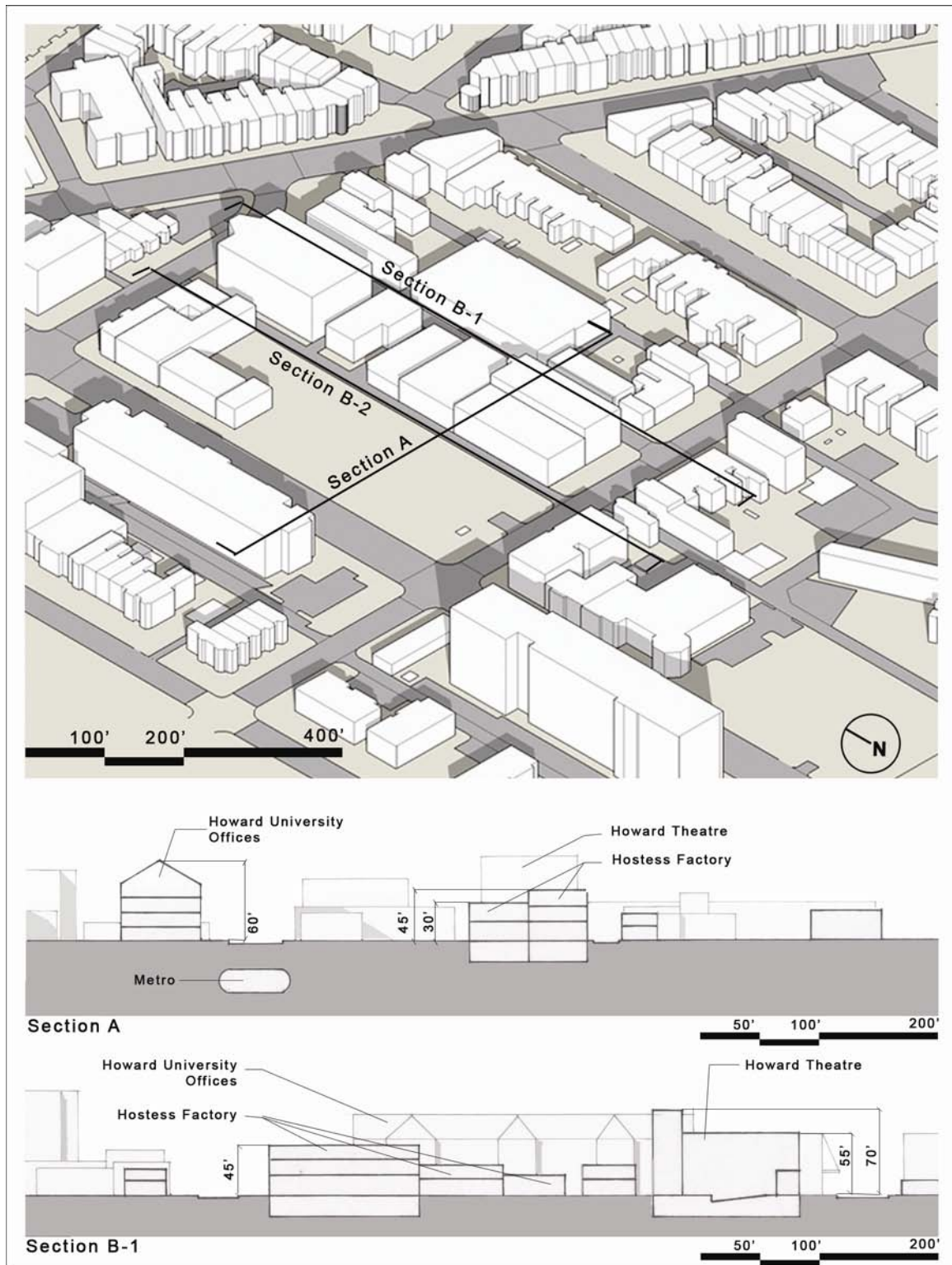


Figure 47: Site Axonometric and Street Sections

[Author]

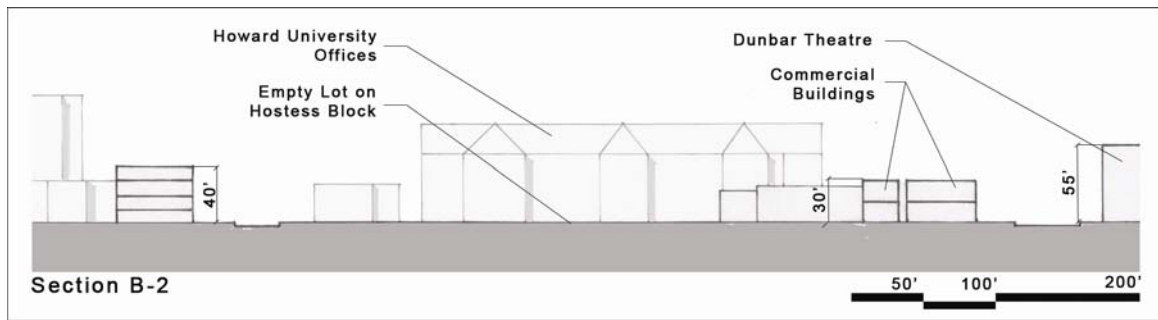


Figure 48: Site Section B-2

[Author]

The majority of buildings on the adjacent blocks range from 2 stories to 4 stories. There are a few buildings in close proximity, which are as tall as 10 stories. The Howard theatre, on the northeast portion of the block is the tallest building on the site, reaching approximately 70 feet in the building's addition. Currently the open portion of the site is susceptible to westerly sun. The Howard University office building to the west of the site provides some shadows throughout the day, however the site remains mostly un-shaded.

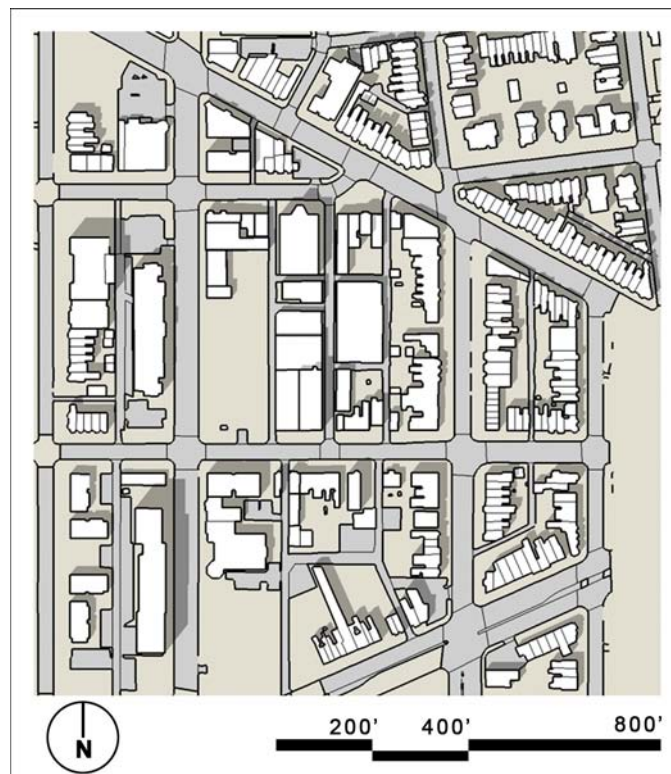


Figure 49: Sun Shadows

[Author]

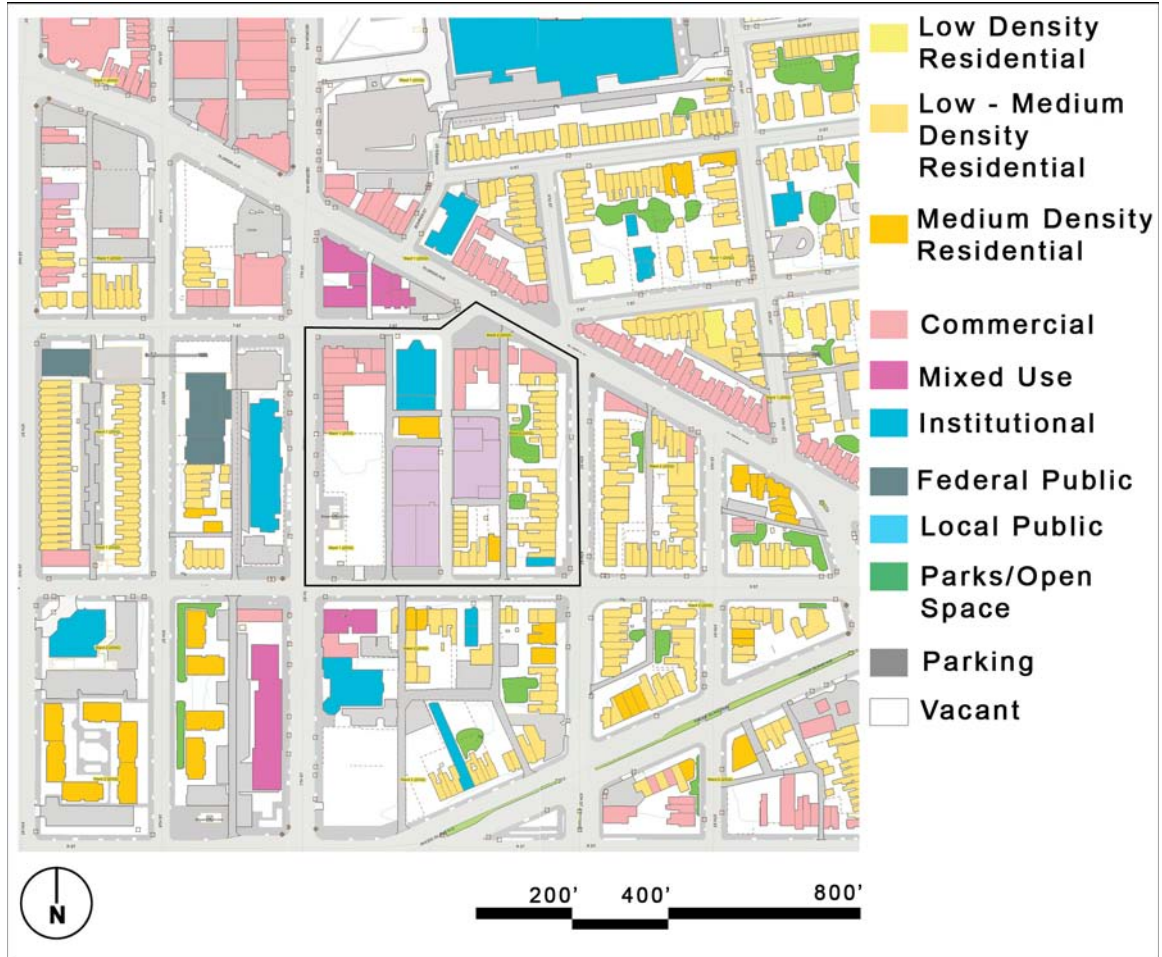


Figure 50: Site Uses

[Author]

The adjacent blocks have uses essential to the success of the vocational school program. There is a good mix of commercial, residential and institutional uses at many scales. There are, however, several abandoned buildings located on and around the site that can be rejuvenated by the placement of the school in this context.





**Figure 51: Abandoned Buildings**

[Author]

Several buildings on the Hostess block are abandoned and in severe disrepair. The retail buildings on the northern portion of the site, although eclectic, lack the scale to hold their own next to the Howard and Dunbar theatres.

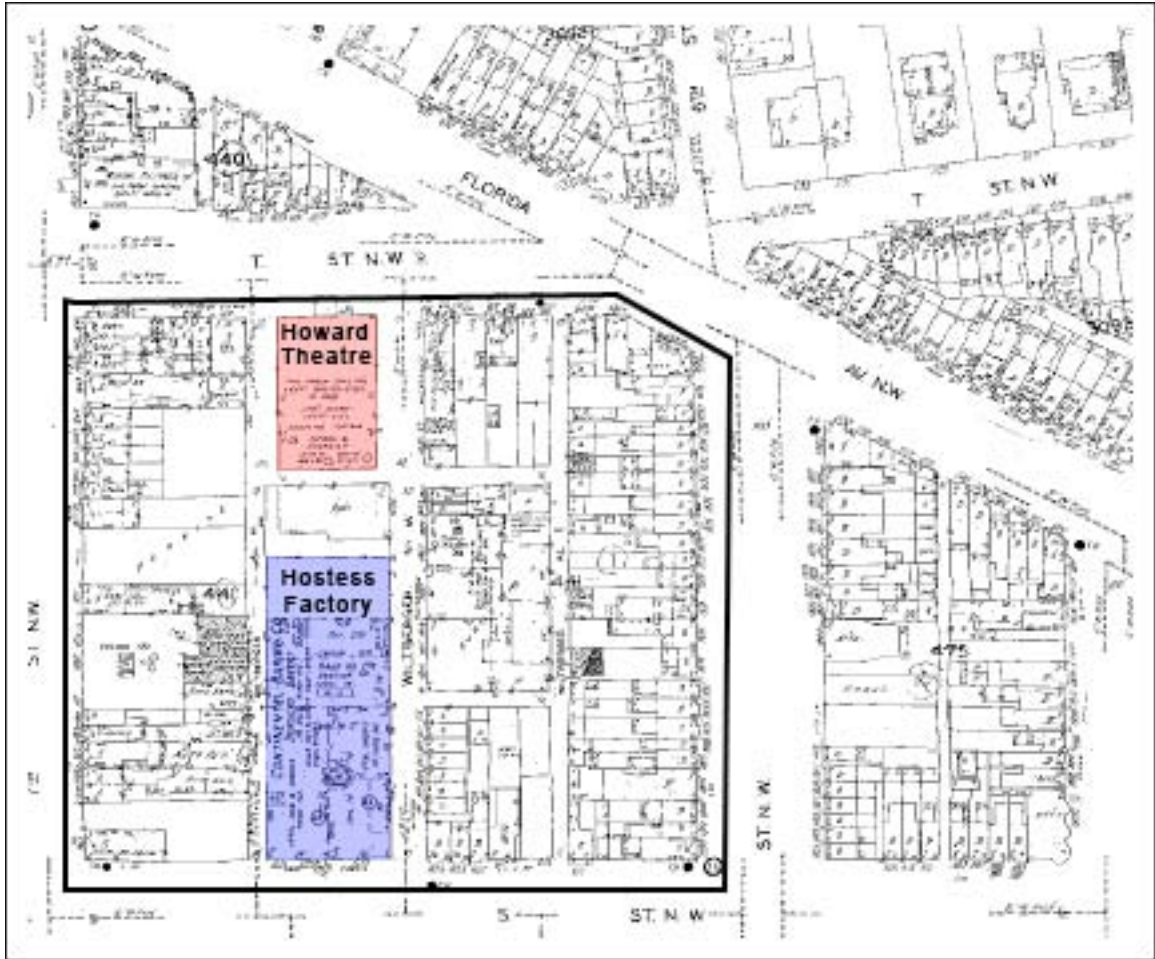


Much like the Shaw neighborhood, the site of the Hostess factory is rich in history. The site was defined in L'Enfant's original plan for DC and at its first development it was comprised of row homes, as seen in the 1904 Sanborn map.



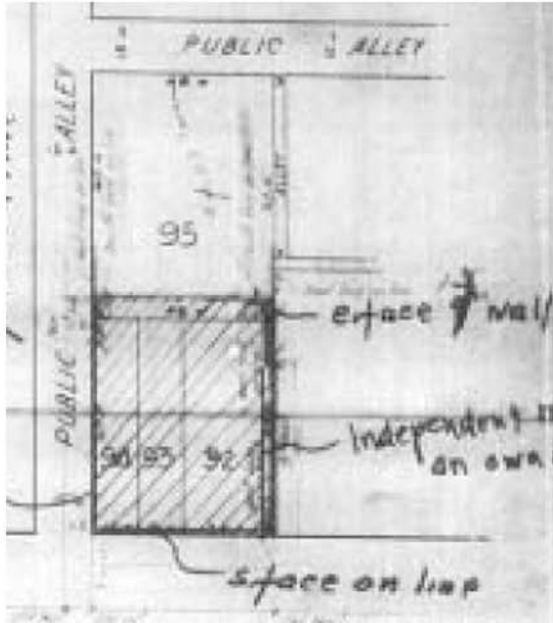
**Figure 52: Sanborn Map of Site, 1904** [Sanborn Fire Insurance Company]  
The red area indicates the future site of the Howard theatre. The blue square indicates the future location of the Hostess Factory. Much of the site has retained the row-house character.

In 1910 the Historic Howard theatre was constructed on the northeastern portion of the site, at 7<sup>th</sup> and T streets. The original portion of the Hostess factory was built in 1913, helping to change the overall character of the site. The factory and theatre spawned the development of more commercial buildings on the site.



**Figure 53: Sanborn Map of Site, 1955** [Sanborn Fire Insurance Company]  
**In 1955 the Hostess Factory site was at its most developed stage. The Howard theatre was still active and several large scale residential and commercial buildings filled in the site. The industrial building across Wiltberger street replaced the row-homes that were once there.**

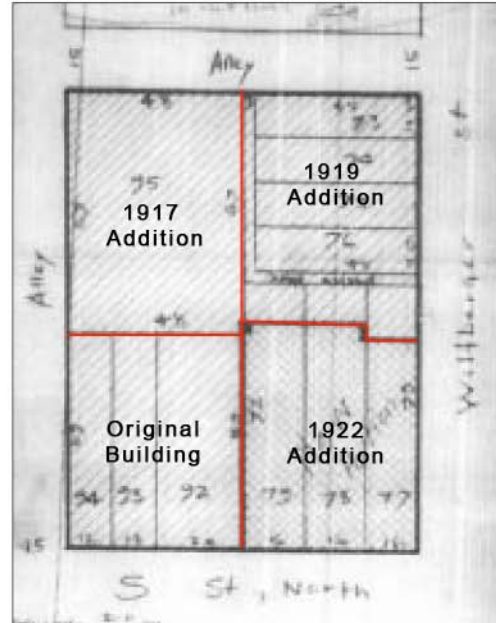
The riots in 1968 caused massive destruction to the blocks near the Hostess factory. Several businesses along 7<sup>th</sup> street were burned and looted. In 1970 the Howard theatre closed its doors, a start to the decline of the block. The site has continued to change throughout time, with the metro station being added in the early nineties.



[Historic Survey of Shaw East]

#### Original Building Site Plan Sketch, 1913

The original building was a three-bay, 3 story masonry structure, designed by Simmon's & Cooper Architects. The original building measured 48' x 64'.



[Historic Survey of Shaw East]

#### Building Site Plan Sketch through 1922

The original building received a 24'x24', 2 story addition in 1917, designed by Alfred B. Mullet. Mullet contributed a third addition in 1919, measuring 50'x48'. The S street addition was completed in 1922, again by Mullet, and measures 48'x50'. A fourth and final, one story addition completed the Hostess Factory's growth.



[Carlisle]

#### Current Building Facade

The 3 bay structure on the left is the original Hostess Factory Facade. The 3 bay structure on the right is the 1922 addition by Alfred B. Mullet.

**Figure 54: Hostess Building Additions & Current Façade**

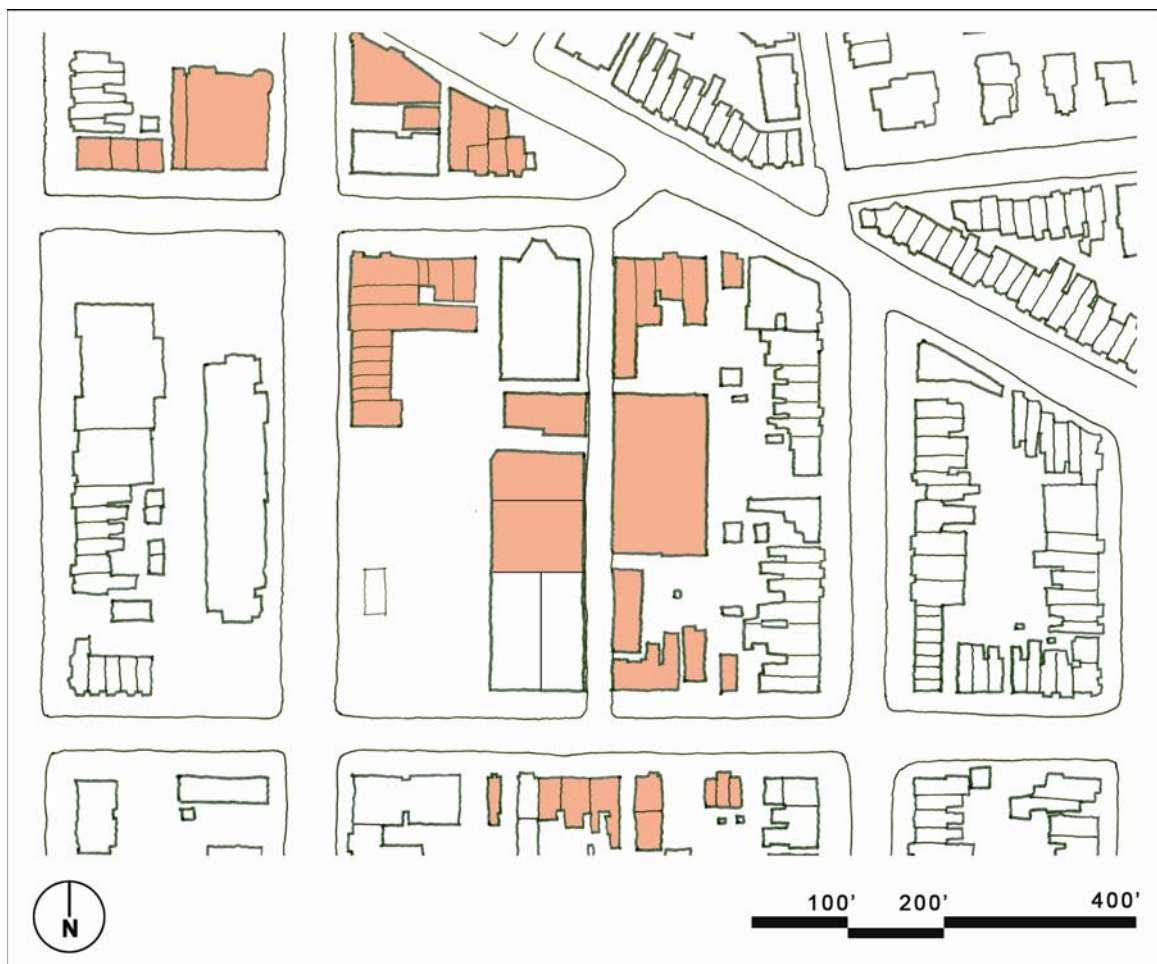
[Author]

The Hostess Factory experienced growth throughout its ownership by Peter M. Dorsch. Prominent government and institutional architect Alfred B. Mullet contributed 3 significant additions to the building between 1917 & 1922.

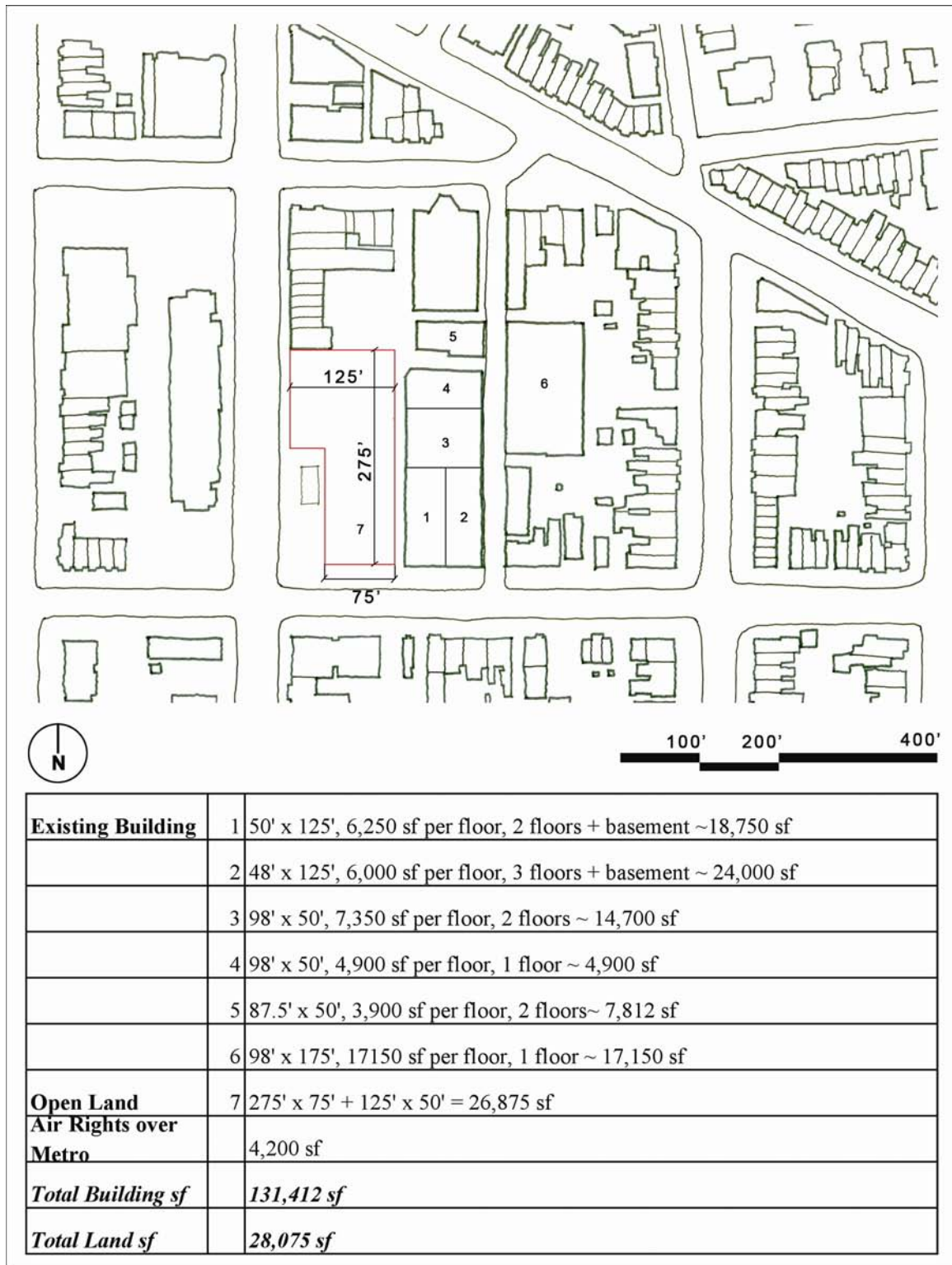


Originally called the White Cross Bakery, the factory building is one of the few industrial buildings in the Shaw neighborhood. The building consists of several additions completed between the years 1913 and 1922.

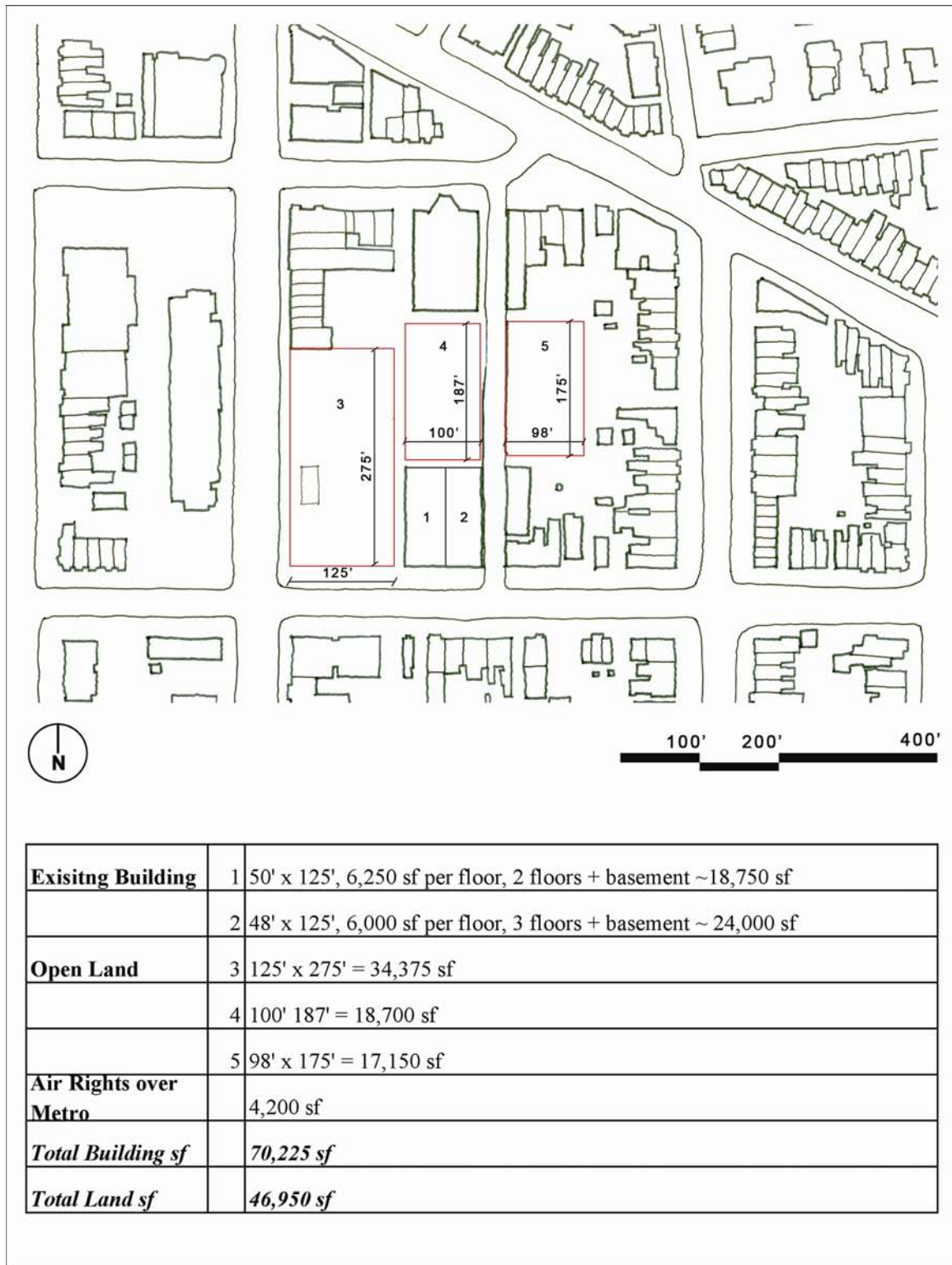
The building, in its current condition has 91,689 square feet, dispersed over three levels including a basement. Since its abandonment in 1988, the building has fallen into disrepair. Each portion of the building requires assessment for historical relevance, as well as for deciding which portions of the building are suitable for demolition.



**Figure 55: Buildings Suitable for Demolition** [Author]  
Several Buildings on the Hostess Factory block, including portions of the Hostess Building are either in bad condition or abandoned.

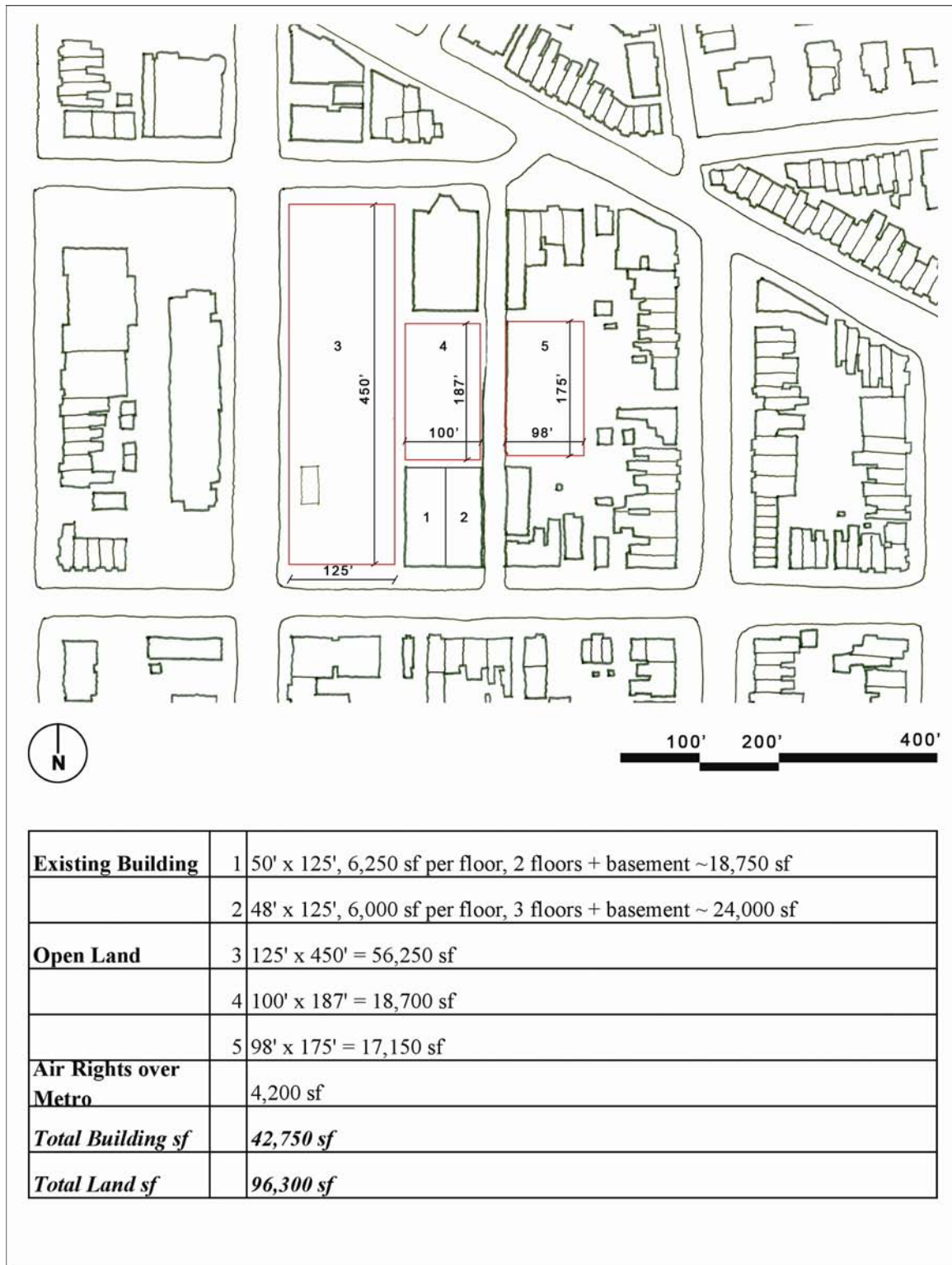


**Figure 56: Diagram Showing the Minimum New Building Area of Site** [Author]  
 By maintaining all structures on the site in tact, and respecting the designated site lines around the metro station, a minimum new buildable area of 28,075 sf is achieved.



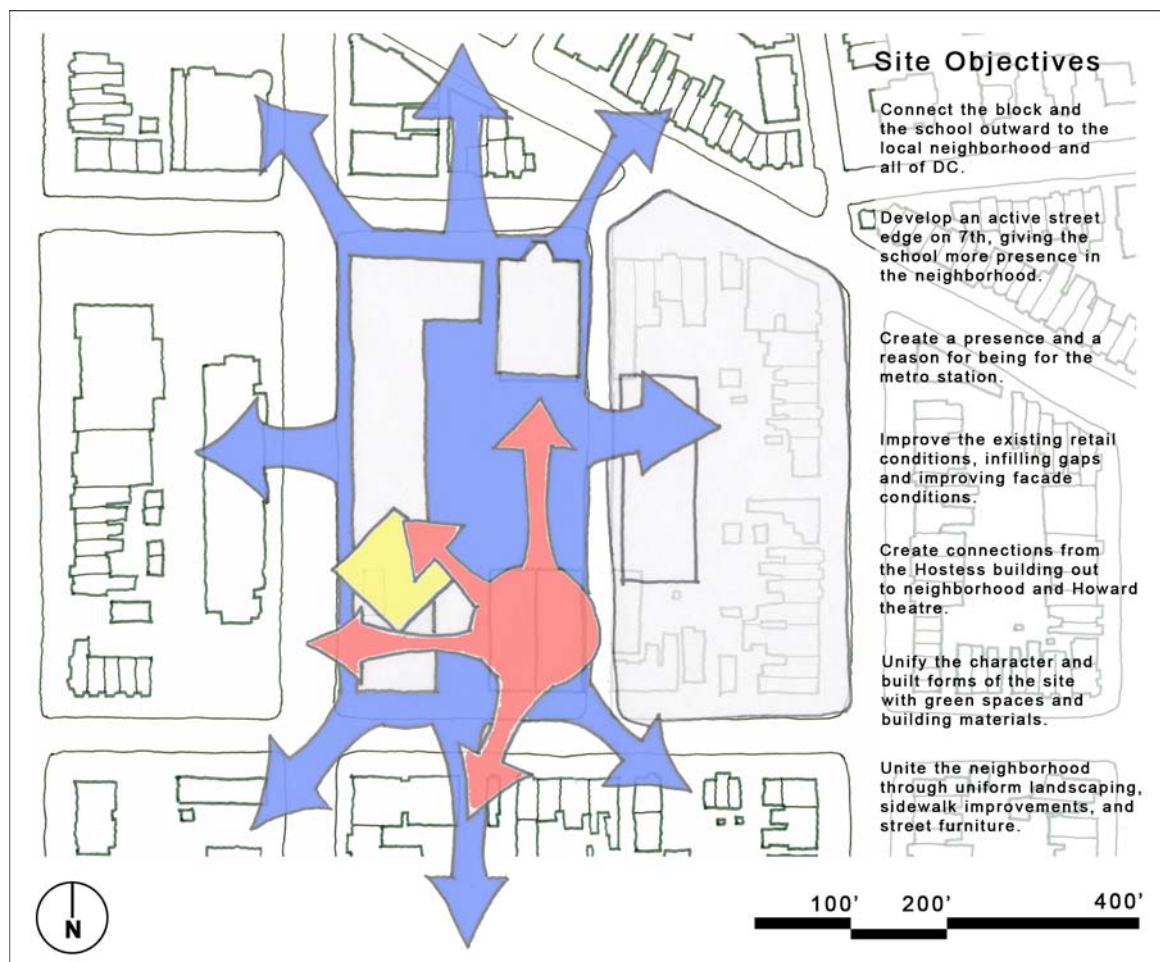
**Figure 57: Diagram Showing Buildable Area with Some Buildings Demolished** [Author]  
 By only demolishing a select number of buildings from the site and leaving only the significant portions of the Hostess Factory and Howard theater in tact, a new buildable area of 70,225 sf is achieved.





**Figure 58: Diagram Showing the Maximum Buildable Area of the site** [Author]  
 By demolishing all industrial and commercial buildings and leaving only the Hostess factory and Howard theatre, the site achieves a maximum new buildable area of 96,300 sf.

The Hostess factory site provides the opportunity for rejuvenation of the factory building itself, as well as the block on which the building is located. It is important to consider the role of adaptive re-use when designing building parts and site strategies. The open space on the site and the site to the east of Wiltberger street provide opportunities to explore various architectural design solutions. Incorporating the block that is adjacent to the east of the site allows for opportunities to extend the school beyond the Hostess building, and back to the west across the ally, integrating the blocks together.



**Figure 59: Site Objectives**  
Diagram showing the objectives reached after site analysis.

[Author]



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- <sup>1</sup> U.S. Census Bureau. Census 2000 10 Oct. 2006 <<http://www.census.gov>>
- <sup>2</sup> Fannie Mae Foundation, "Who is the Homeless and is There a Solution," Help the Homeless 2006, 10 Oct. 2006 <<http://www.helpthehomelessdc.org>>
- <sup>3</sup> DC Cultural Tourism, "U Street/Shaw," Cultural Tourism DC: Historic Neighborhoods 2005, 10 Oct. 2006 <<http://www.culturaltourismdc.org>>
- <sup>4</sup> <<http://www.culturaltourismdc.org>>
- <sup>5</sup> WETA, "Local History: Neighborhoods, Shaw," Exploredc.org: Gateway to America's Capital 2001, 10 Oct. 2006 <<http://www.exploredc.org>>
- <sup>6</sup> Phillips, Joy, and Robert Beasley. District of Columbia: Census 2000 Key Demographic Indicators. Washington, September ,2005:2.
- <sup>7</sup> Phillips, 2.
- <sup>8</sup> Washington Metropolitan Area Transit Authority, "Shaw/Howard U," <http://www.metroopensdoors.com> 10 October 2006.
- <sup>9</sup> Shaw Main Streets. "Shaw Green Team Initiative." <<http://www.shawmainstreets.com> >10 October 2006.
- <sup>10</sup> Washington DC Marketing Center, "District of Columbia Main Streets: Shaw," Shaw Main Streets 2004 10 Oct. 2006, 1.
- <sup>11</sup> Washington DC Marketing Center, 1.
- <sup>12</sup> DC Office of Planning. DUKE: Draft Development Framework for a Cultural Destination District within Washington DC's Greater Shaw/U Street. Washington,2004: 1-48.
- <sup>13</sup> DC Office of Planning: DUKE Draft, 20.
- <sup>14</sup> District of Columbia Zoning, "Zoning the Nations Capital." Zoning Regulations 2006, 20 Nov. 2006 <<http://www.dcoz.dcgov.org>>
- <sup>15</sup> District of Columbia Zoning, <<http://www.dcoz.dcgov.org>>
- <sup>16</sup> District of Columbia Zoning, <<http://www.dcoz.dcgov.org>>
- <sup>17</sup> District of Columbia Zoning, <<http://www.dcoz.dcgov.org>>

“Homelessness is a multifaceted problem, requiring the design of facilities with complex programs that must inspire the inhabitants and those that work with them” ~ Sam Davis,  
Designing for the Homeless

## **Chapter 5:** **Design Strategies**

## **Urban and Building Partis**

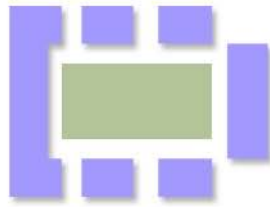
An organizational element is essential to unifying the complex program of the vocational school. The variety of spaces creates an interesting juxtaposition between the public and private realm. Each design strategy deals with providing public access to those vocations that warrant retail spaces, while protecting the more private functions of the school.

Although there are seemingly many ways with which to organize the building program, it is important that all strategies aim to unify the public and private functions of the school. Several urban design strategies and building design strategies were analyzed in order to determine appropriate site and building parties. The campus plan, matrix plan, and street plan were chosen due to their relevance to the proposed site.

The campus plan provides an opportunity to organize the program using a central green space. Instead of trying to organize the disparate program into one building, the campus plan allows for a separation of functions without disrupting the cohesive image of the school.

The matrix plan is similar to the campus plan due to its reliance on green space as an organizing element. Instead of relying on one organizing space, however, the matrix scheme uses several courtyards, placed base on use and need, to organize the various programmatic elements.

Finally, the street scheme uses an interior space to organize the building program. Several school designs emphasize the importance of the 'learning street' as a place for students to gather, and this scheme utilizes this principle to organize the Hostess site.



## Campus Plan Scheme:

The campus plan scheme uses a green space as the element which organizes the program. The program is divided amongst several buildings, and are related through an organizational system such as trees or collonades.

**Oxford University**  
Oxford, England  
Founded in 11th  
Century A.D.



Cloister [flickr.com]

**Yale University**  
New Haven, Connecticut  
Founded in 1701.



Cloister [flickr.com]

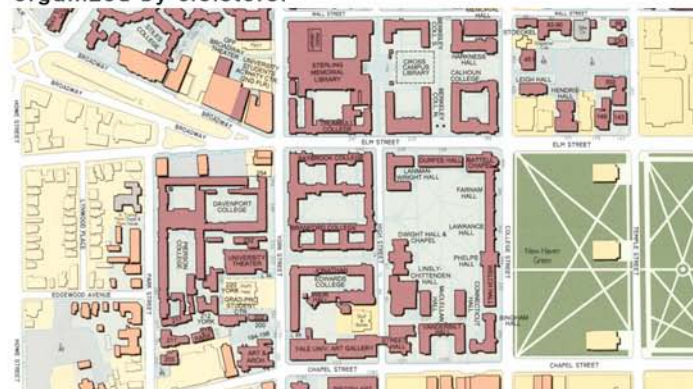
Oxford University is comprised of 39 individual colleges, each with its own internal structure. Although the college is the entire city of Oxford, a system of courtyards organizes the campus and its colleges. Many of the campus buildings present a solid front to the city streets, with pass-throughs that lead to the organizing courtyards, many which are lined with cloisters.



Partial plan of Oxford

[seh.ox.ac.uk]

Similar to Oxford University, Yale is organized as a system of 12 residential colleges. The school is integrated into the urban fabric of New Haven. Similar to Oxford, many of the campus builds present a solid street front with passages into the courtyards, organized by cloisters.



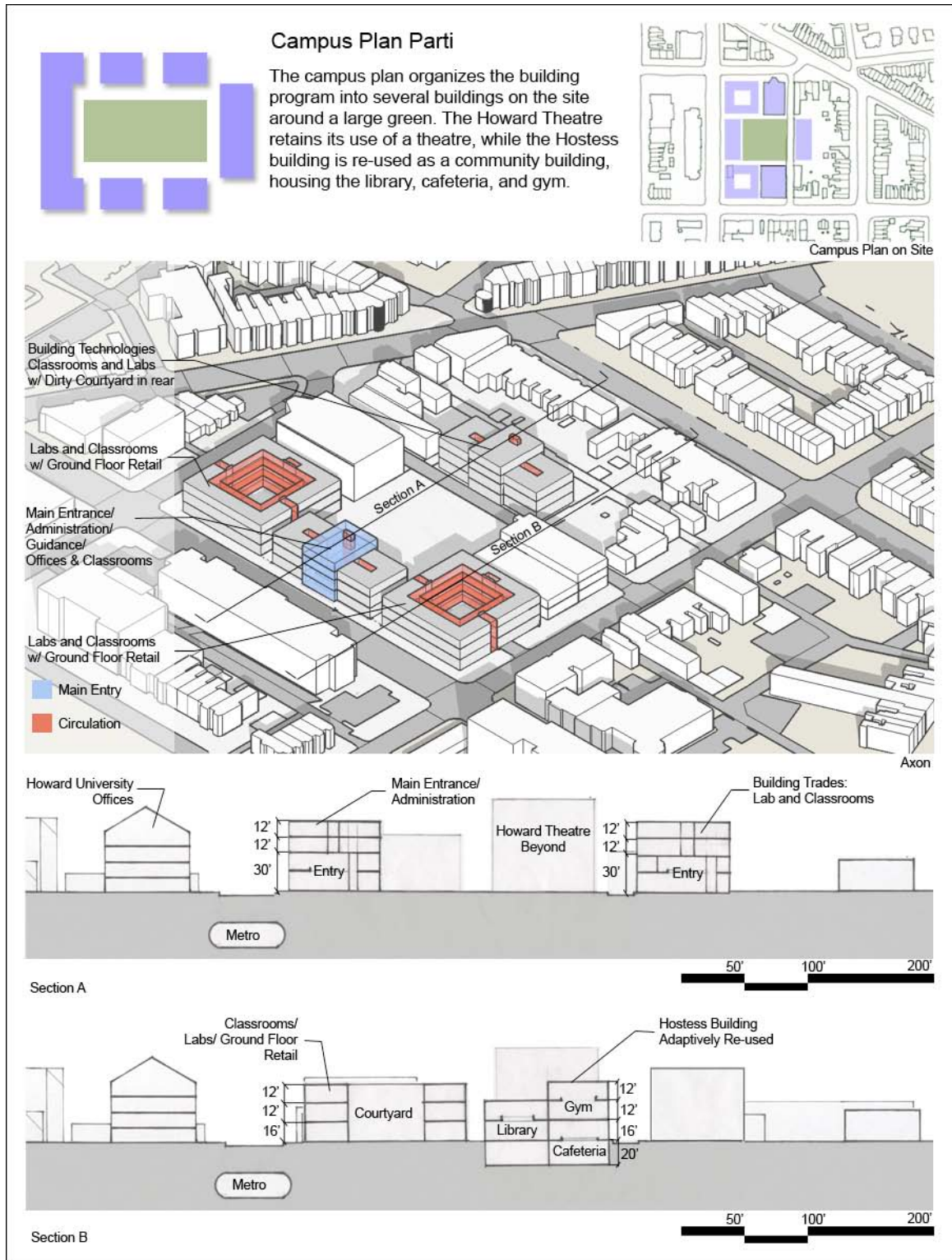
Partial plan of Yale

[yale.edu]

**Figure 60: Campus Plan Precedents**

[Author]

Oxford and Yale rely on the campus plan to organize the buildings both on an urban and building scale. Unifying facades allow the campuses to be cohesive and create an image for the school at an urban scale.

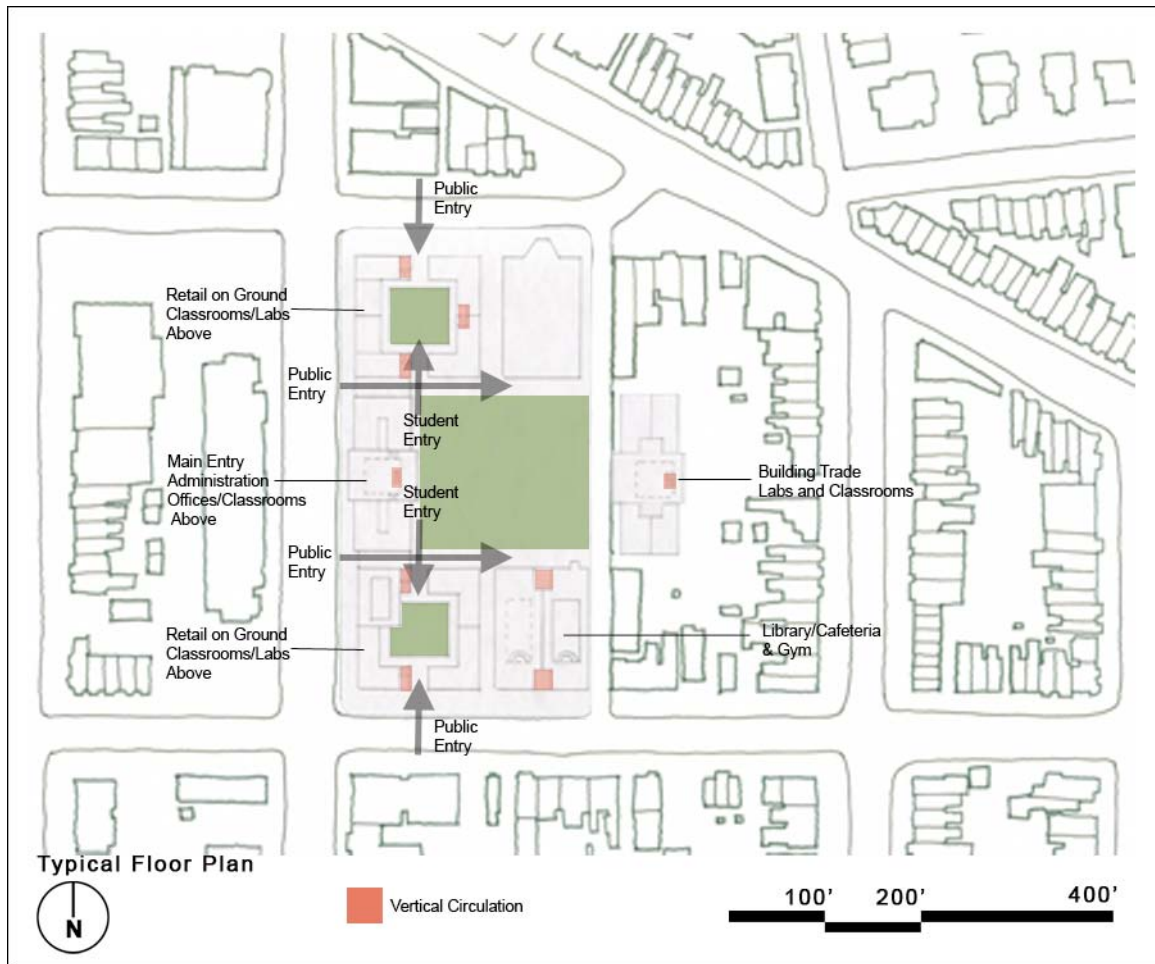


**Figure 61: Campus Plan Parti**

[Author]

The campus plan creates an inward nature to the Hostess block, orienting the entrances to the buildings off of the campus green. The campus scheme poses the question of whether or not the block to the east of the site needs more intervention to include the portions of the site on T and S streets, in order to make a more cohesive campus.





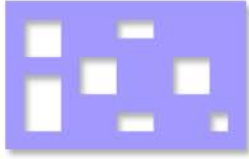
**Figure 62: Campus Parti Typical Floor Plan**

[Author]

Although the campus scheme begins to organize the disparate program throughout the site, it internalizes the majority of the program. The campus scheme raises the question of whether or not it is appropriate to internalize the design of the school around a green space, when the mission of the school is to reach outward to the community. It is important to consider the need to make the campus porous and accessible to the public, making the green space seem park-like, rather than privatized. Furthermore, is there enough building program to warrant 3 buildings?



## Matrix Scheme:



The matrix scheme organizes the building program horizontally through relationships of open space and circulation. The entire building program is kept in one building, separated horizontally and vertically. Several courtyards organize the building in plan and section, providing access to light and air.

**Free University of Berlin**  
Berlin, Germany 1963  
Architects: Shadrach Woods, George Candilis, and Alexis Josic

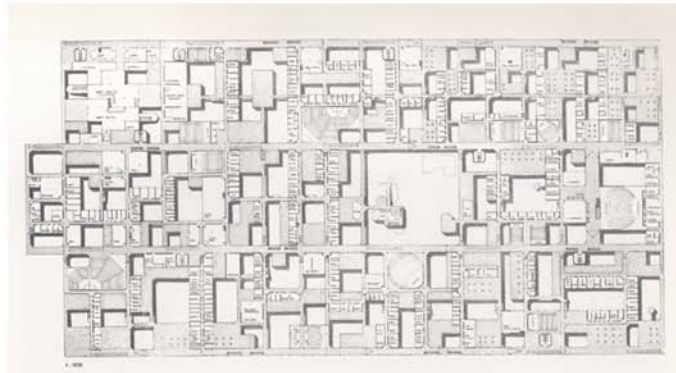
The Free University was a competition-winning plan based on the careful analysis of the college's program. The various academic disciplines are organized in a series of levels and matrixes, courts, and open space. The concept of the plan is derived from the desire to encourage discourse across disciplines while still providing proper access, delivery, and open space.



Diagram of Circulation System [Wolf]



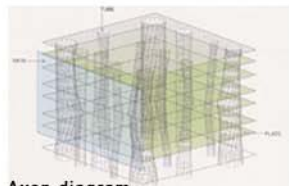
Diagram of Open Space [Wolf]



Plan [Wolf]

**Sendai Mediatheque**  
Sendai, Japan, 2001  
Architect: Toyo Ito

The Sendai Mediatheque is the result of a design competition in 1994. The building is designed with a honeycomb floorplate with 13 independent circular steel shafts running through it, organized on a matrix. Although the building is at a smaller scale than the Free University, the concept of the plan is the same.



Axon diagram



Aerial View [Yokomizo]



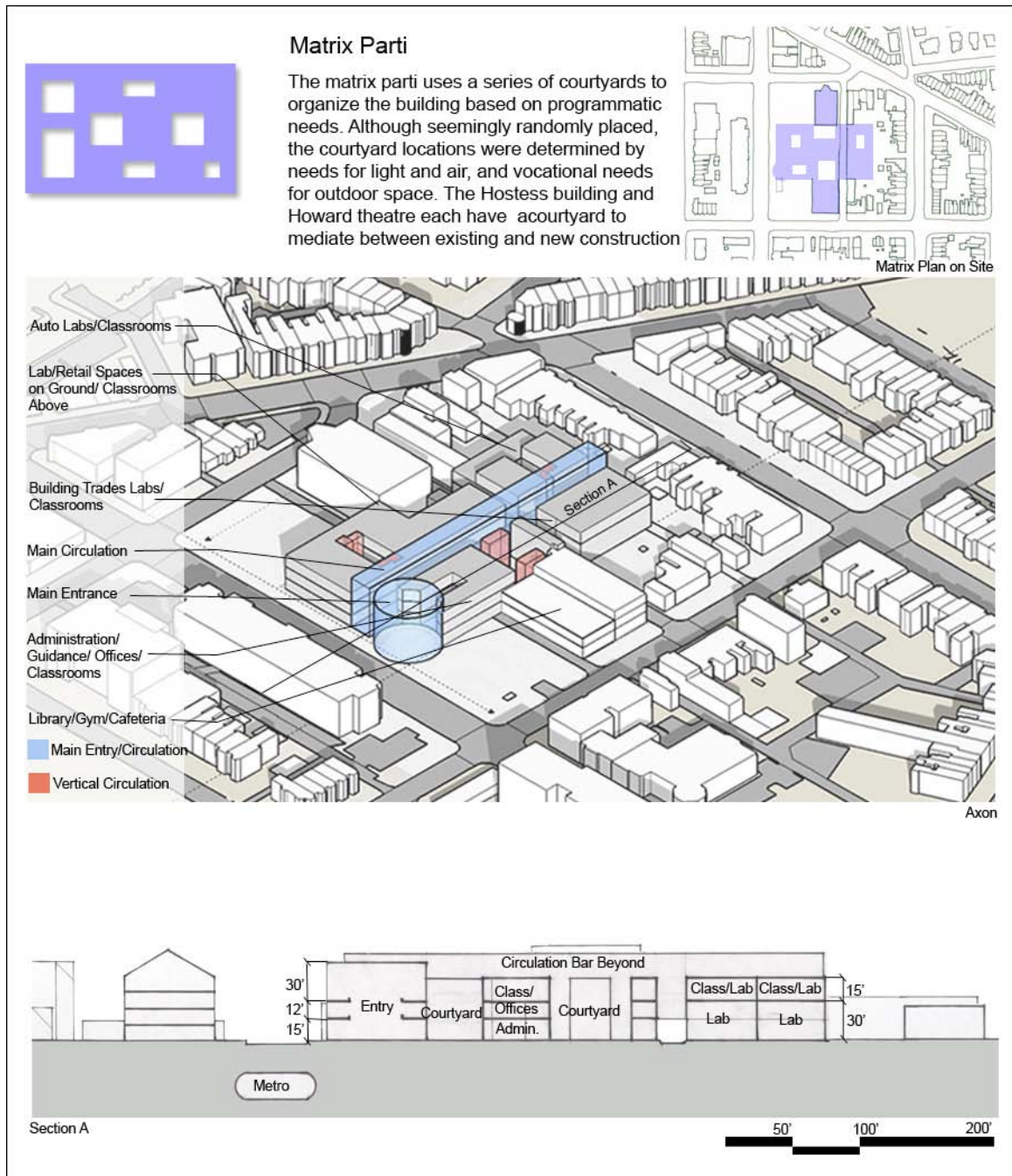
Interior View Of Mediatheque

[Ramon Prat]

**Figure 63: Matrix Building Precedent**

[Author]

The Free University and Senai Mediatheque each offer an unique strategy to organizing the vocational school's program. By breaking up the buildings with smaller and more frequent courtyards, there is more access to light, air, and outdoor space.

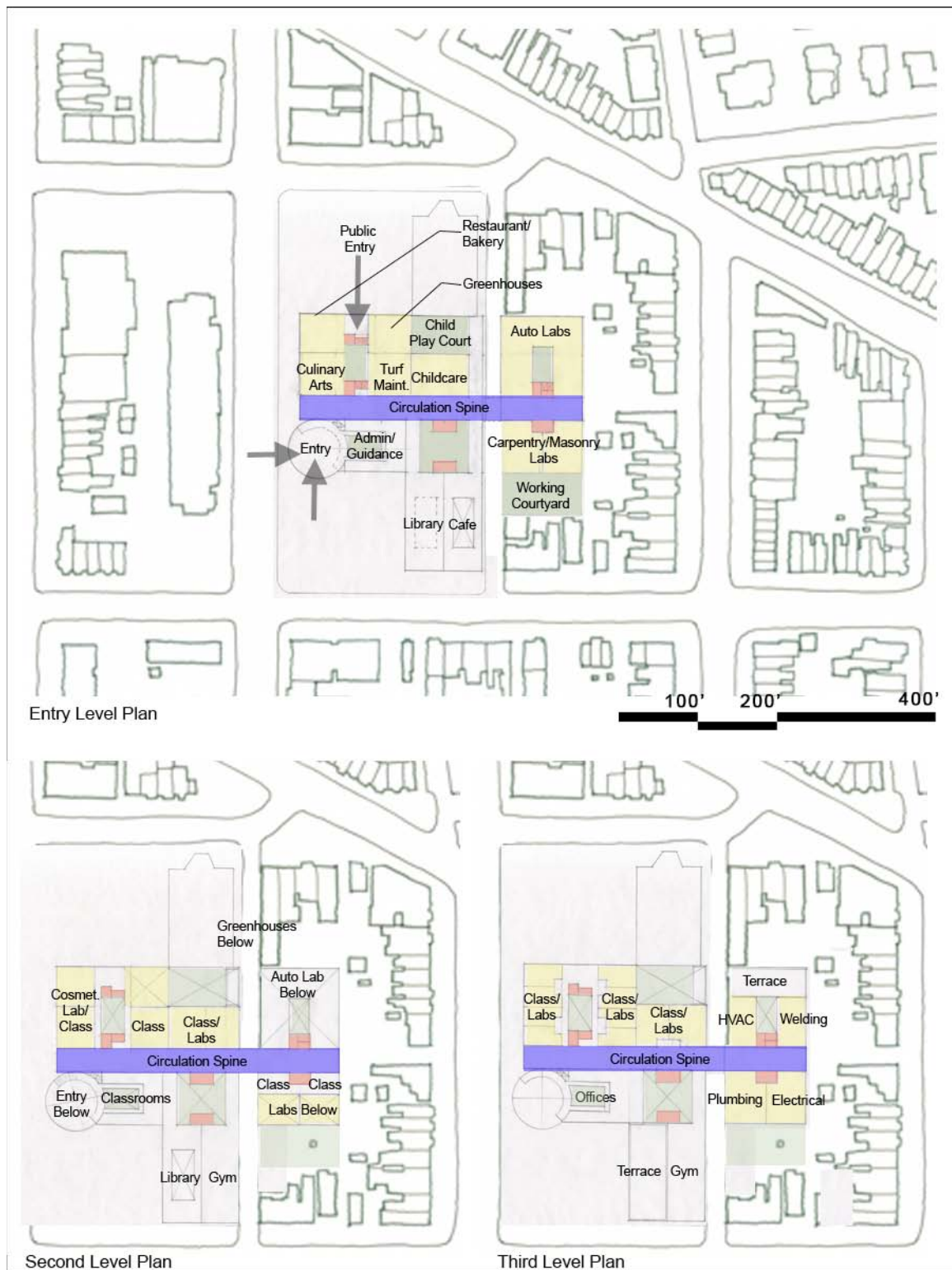


**Figure 64: Matrix Building Parti**

[Author]

This design strategy links the Hostess building and Howard theatre using one building mass that spans across Wiltberger street. The entire building is unified with a series of courtyards and a centralized circulation system.



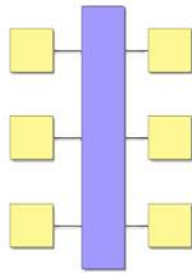


**Figure 65: Matrix Building Parti Plans**

[Author]

These plans show how the various vocational areas can be organized in one building, yet still be adjacent to courtyards, streets, and alleys as need be. However the “wing” effect created by the Hostess and Howard theatre may warrant a North-South orientation instead of an East-West one.

The matrix scheme not only achieves organizing the various vocations into one building, it also creates two public green spaces on the site, with several smaller courtyards dispersed throughout the building. This scheme, however, raises the issue of the proper way to unify the Hostess block, and whether a building with this orientation is appropriate. Perhaps a North-South orientation would create a natural axis between the Hostess and Howard buildings, allowing that axis to become the circulation spine, without having to superimpose an additional organizational strategy.



### Street Scheme:

The street scheme uses a pedestrian street, often referred to as a “learning street” to organize the building. Several street schemes utilize the concept of modularity, using the street to sponsor a system of classroom pods, or modules.

**Middle School in Morbio Inferiore**  
Ticino, Switzerland, 1977  
Architect: Mario Botta



[Sakellariadou]

**Ishibashi Junior High School**  
Japan  
Architect: Kisho Kurokawa Architects



[Tomio Ohashi]

A series of classrooms are organized into an 8 bay structure. The internal street organizes the classrooms in plan and section. The vertical circulation, acts as an alternating core, sometimes independent from the classrooms, and other times creating a series of planes linking across the pedestrian street.



[Carlisle]

An open air pedestrian street organizes the series of corridors and classrooms of the building. Several bridges cut across the space to link both sides of the building at different elevations.



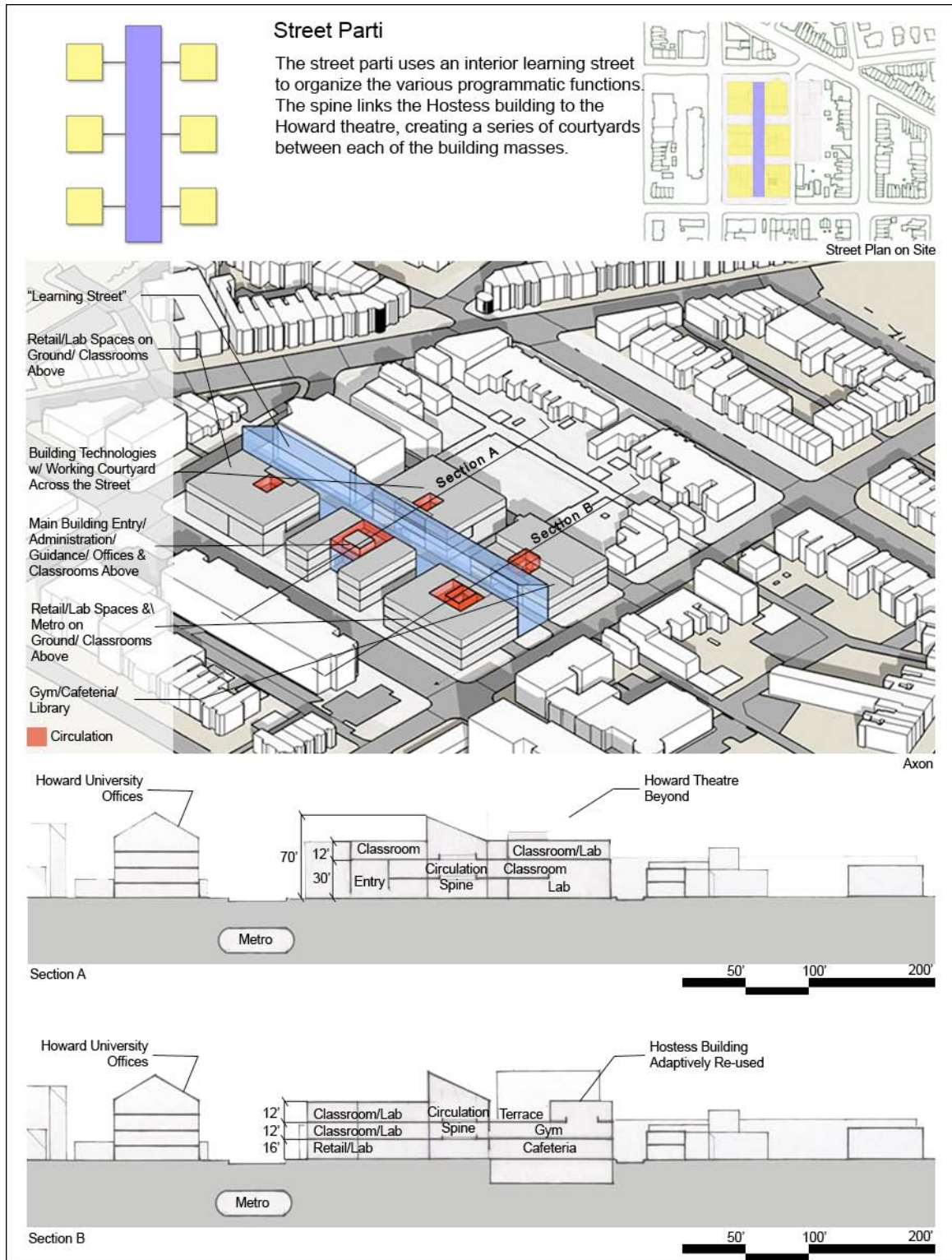
[Tomio Ohashi]

**Figure 66: Street Building Precedent**

[Author]

Each of these buildings utilize the internal street to organize vertical and horizontal circulation. Natural light activates each of the streets with a series of windows, or in the case of the Ishibashi school, a roof covering the exterior space.



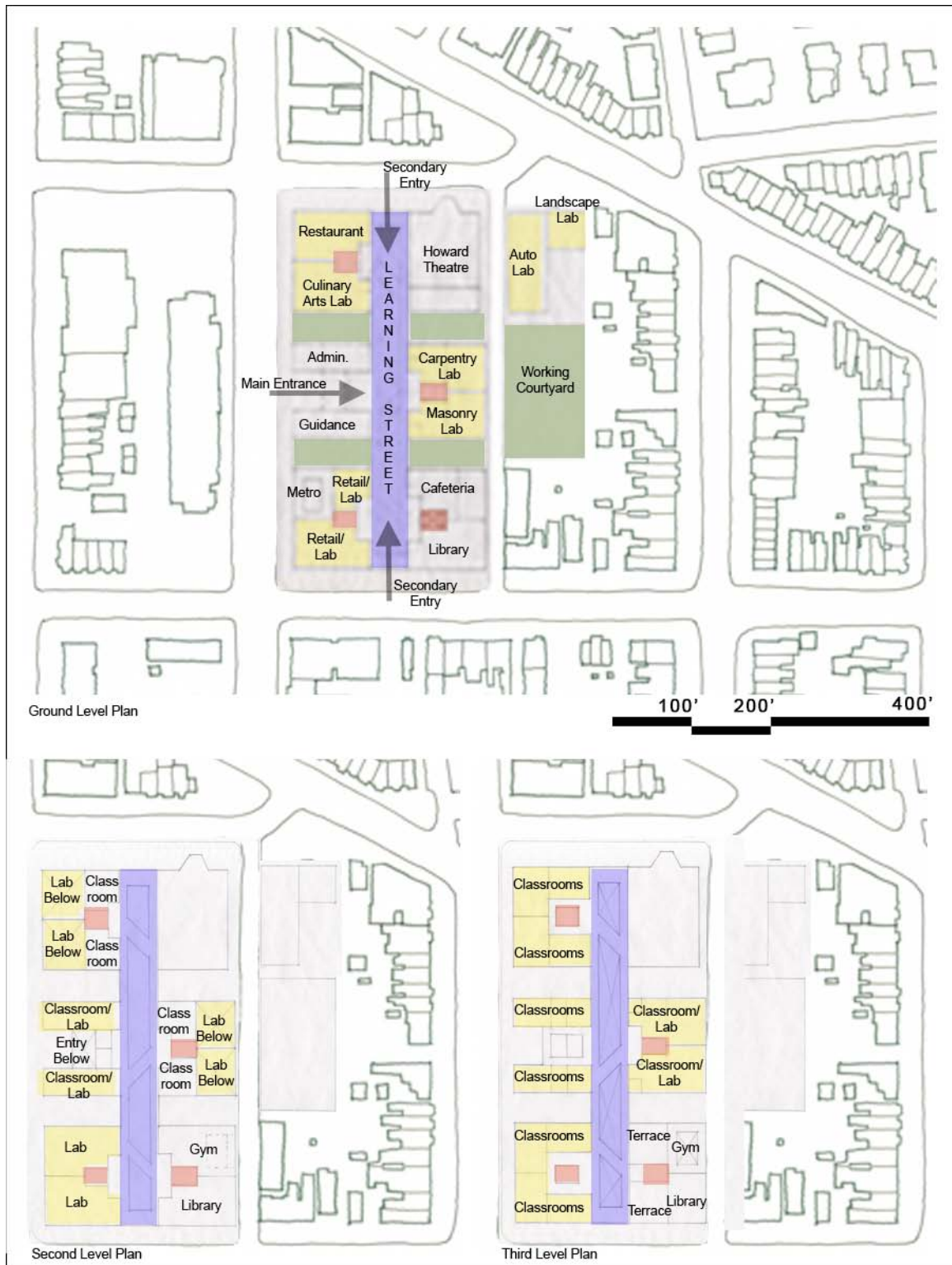


**Figure 67: Street Parti**

[Author]

The street scheme organizes the program into building pods off of the main circulation spine. Each pod has its own vertical circulation that is unified by the horizontal circulation of the 'learning street.' The Hostess and Howard buildings become pods within the street system.





**Figure 68: Street Parti Plans**

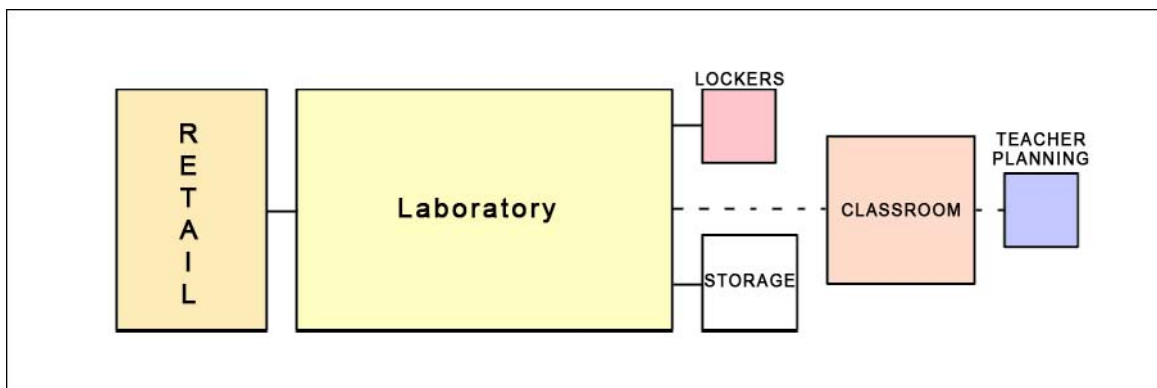
[Author]

The street scheme essentially becomes one monolithic building on the site, broken up by several small courtyards. Given the length of the site it is important to understand the implications of creating such a long space to unite the entire building, and whether or not that space will be sufficiently active.

The street scheme uses a circulation spine to unify the Hostess and Howard buildings. Although the scheme creates several smaller courtyards throughout the site, the building mass is still relatively large. Additionally, the role of the ‘learning street’ must be established as either a public or private entity. If the internal street organizes the public functions along it internally, it then has the same flaw as the campus scheme, becoming inward focused rather than outward focused.

## Modular Strategies

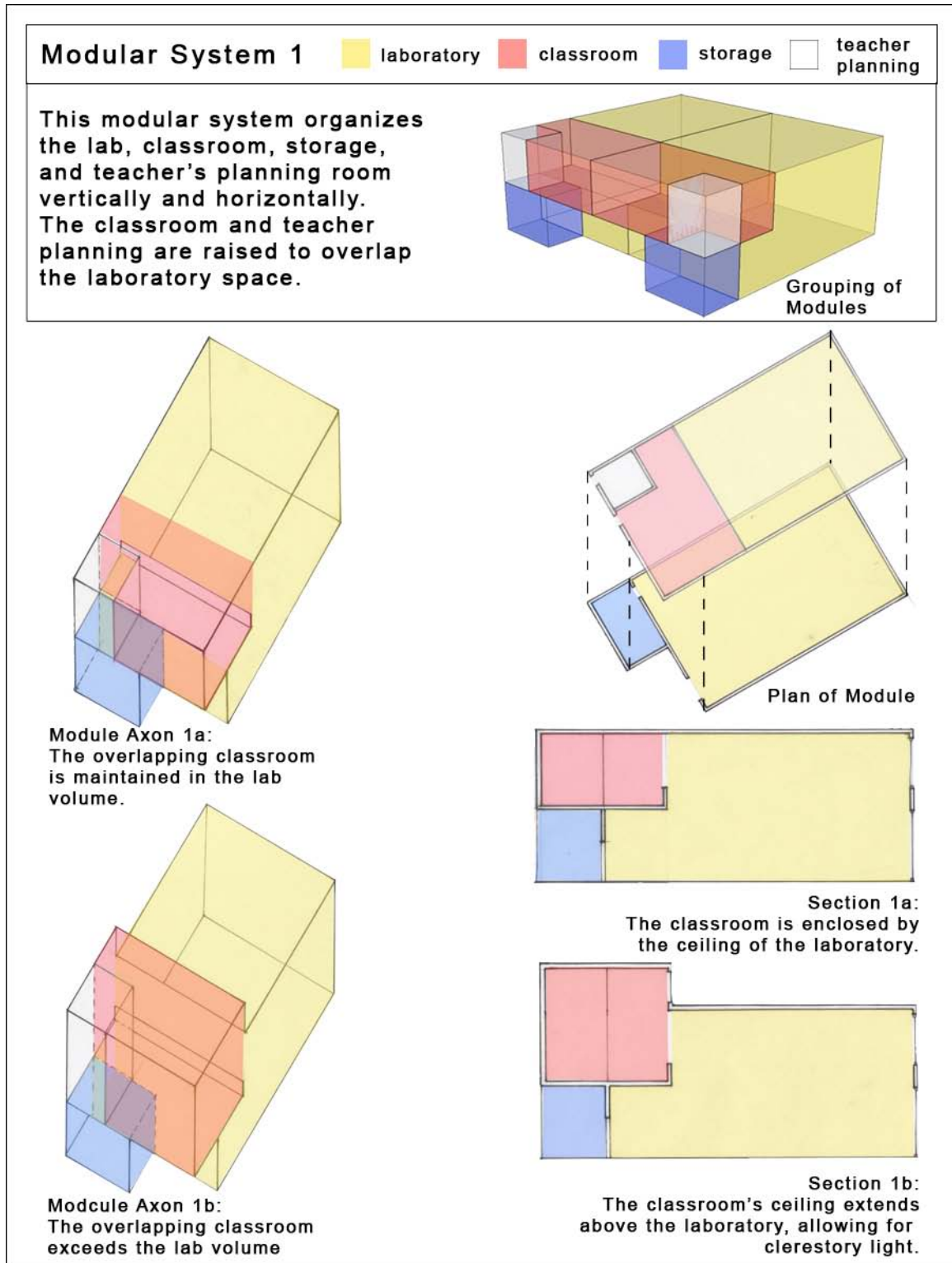
The complex nature of the vocational school warrants the establishment of a kit of parts with which to design with. As the street scheme precedents demonstrated, several school designs utilize a system of building modules with which to simplify the building program. Each vocation, with the exception of a few, requires lab spaces, classrooms, storage, lockers, teacher planning, and sometimes retail spaces. These spaces define a modular system with which to simplify the design of the vocational elements.



**Figure 69: Modular Adjacencies**

[Author]

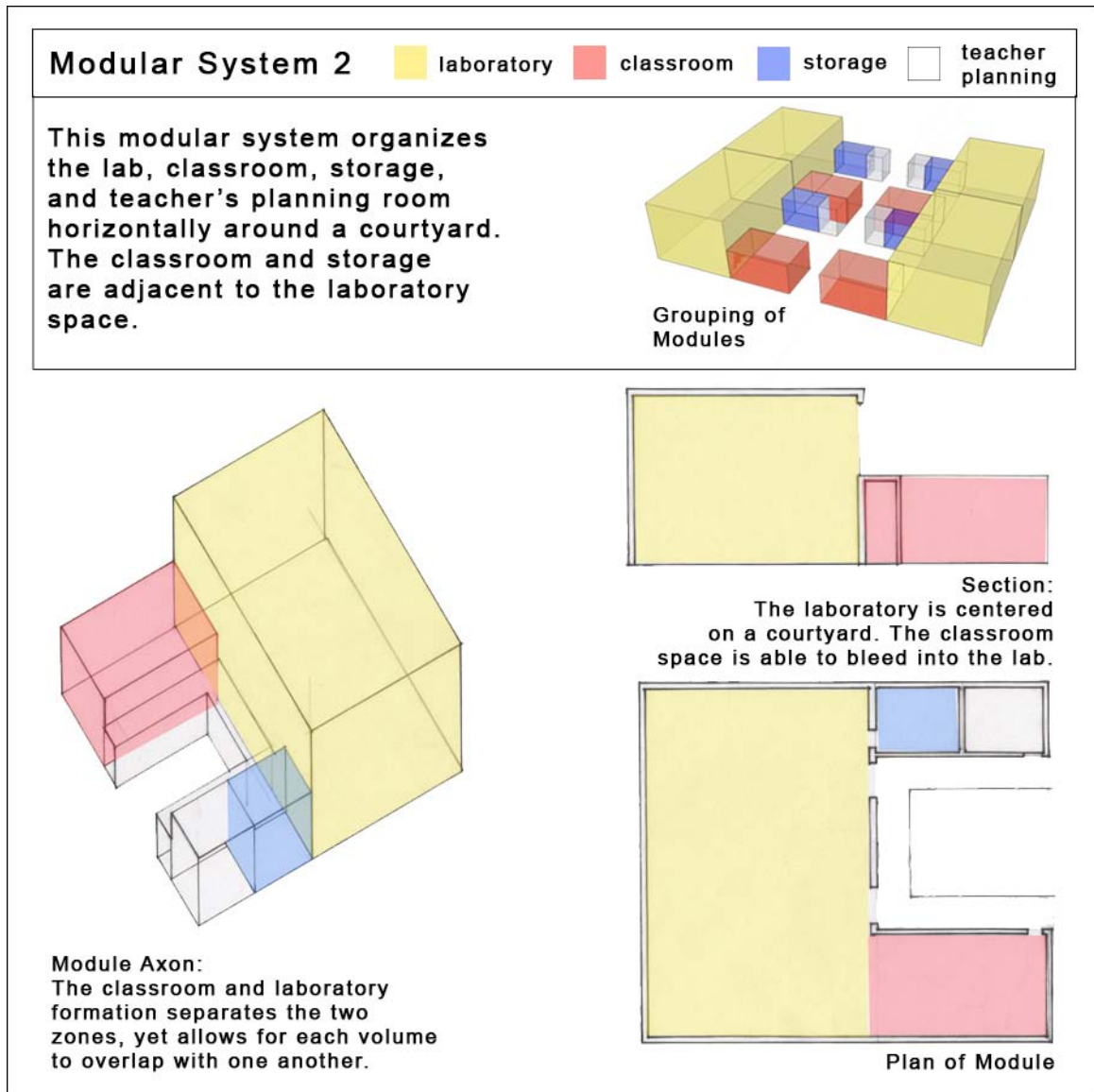
This diagram illustrates the relative adjacencies of the various vocational spaces. The dashed lines indicate adjacencies that can occur, but are not necessary.



**Figure 70: Modular System One**

[Author]

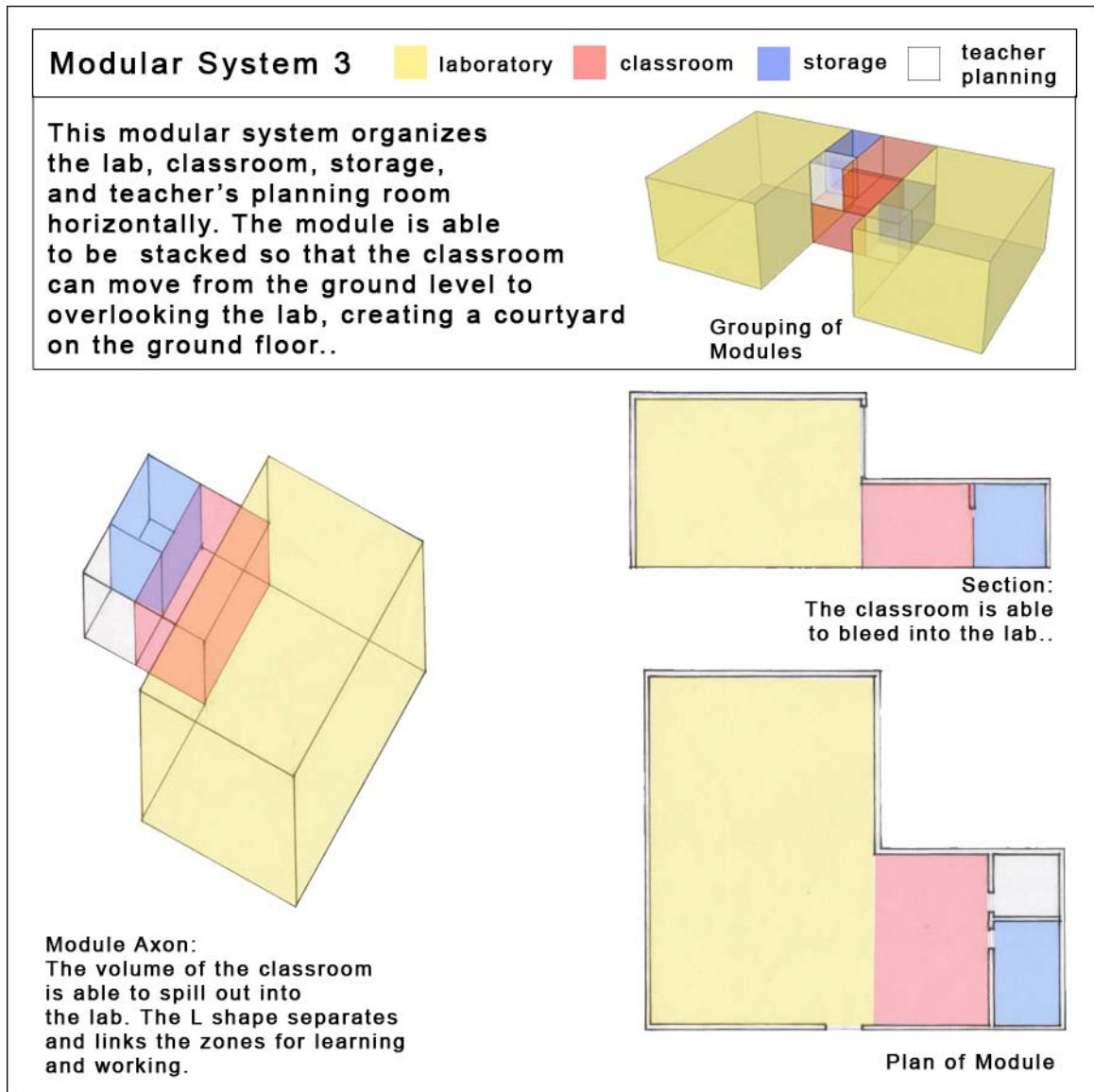
The benefits of this system is that it allows the lab space to become double height in one area, and single height in another. Another benefit is that the module easily groups together, creating a covered entrance to the lab spaces.



**Figure 71: Modular System Two**

[Author]

This module can be easily adjusted to accommodate a one story lab if a double height lab is not necessary. An added benefit is the creation of a small courtyard for each module.



**Figure 72: Modular System Three**

[Author]

This module easily stacks with itself creating a courtyard in between each lab space.

Each modular system explores the implications of grouping all necessary programmatic functions of the labs and classrooms together. The teacher planning, however, does not necessarily have to stay with the module and could be placed elsewhere in the building. Furthermore, it is not necessary in each case for the classroom to be adjacent to the lab.

“Mine is an attempt to find and redefine a sense of order, to understand, then, a relationship between what has been and what can be – to extract from our culture both the timeless and the topical.” ~ Richard Meier, Pritzker Prize Acceptance Speech<sup>1</sup>

## **Chapter 6:**

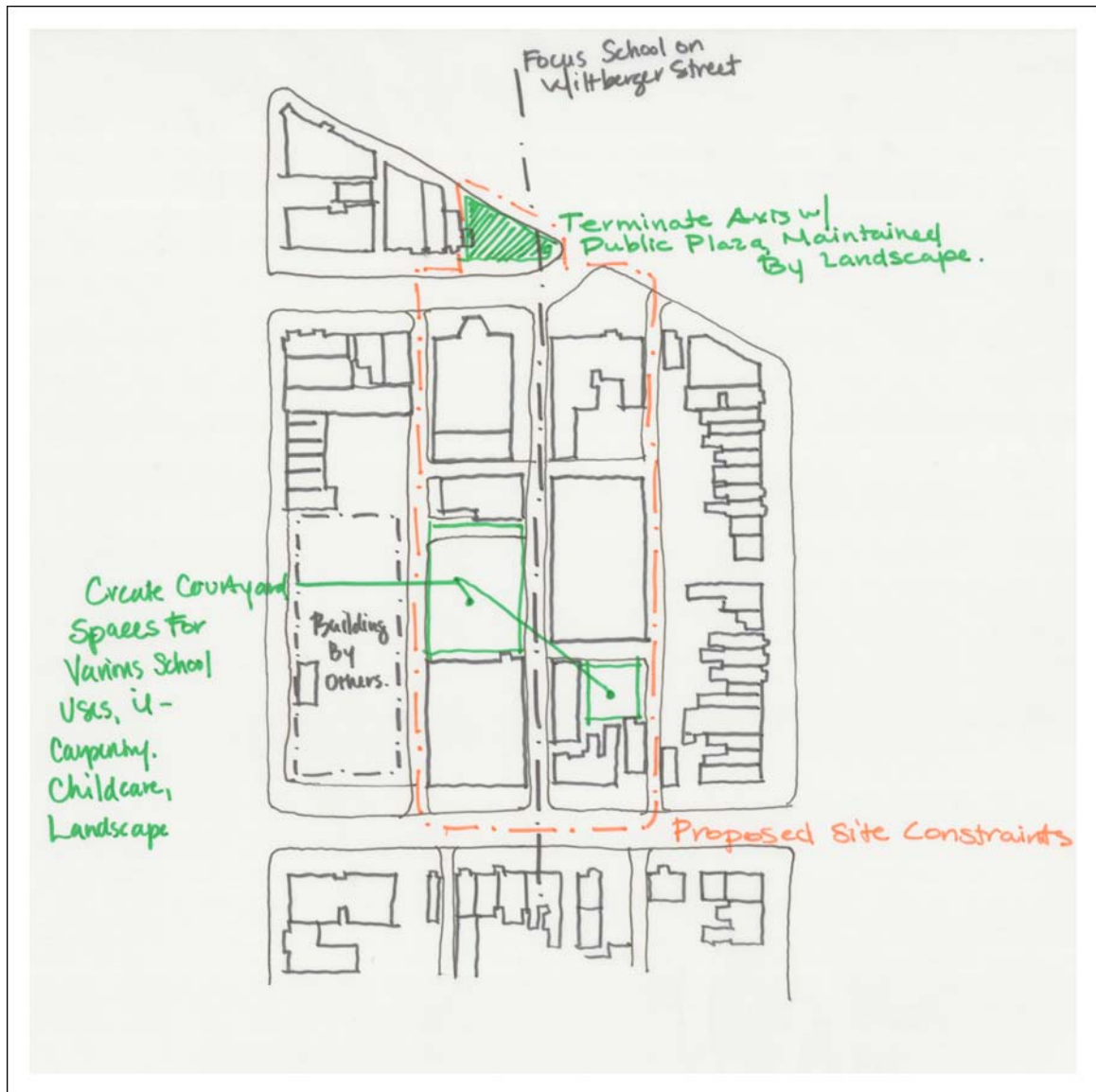
### **Design Conclusions**



## Site Strategy

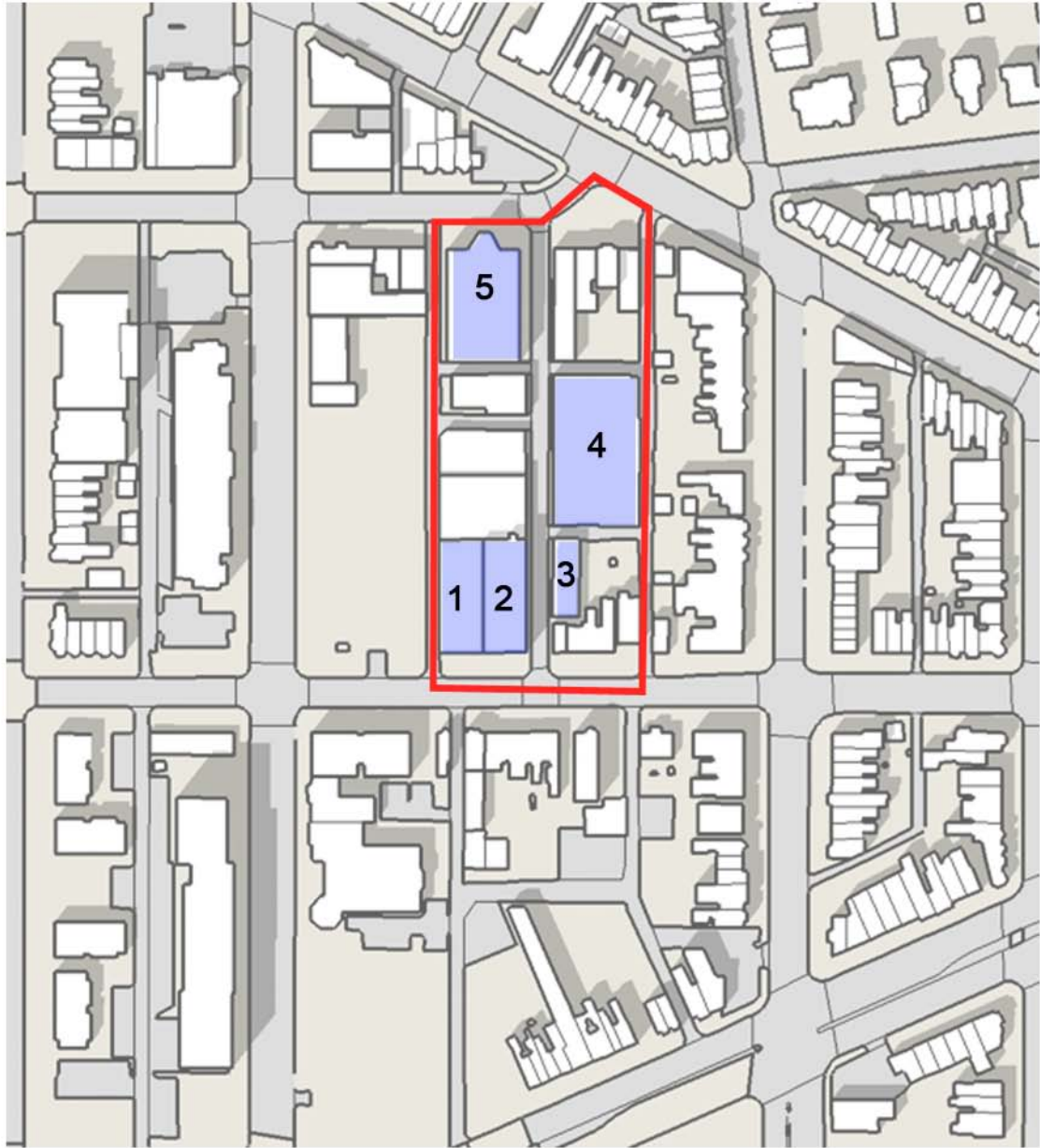
After assessing the initial partis laid out in chapter five, I determined that these strategies, although appropriate for the building program, were inappropriate for the chosen site. In order for the school to have maximum impact on the community and the revitalization the Shaw neighborhood, the focus was shifted from seventh street to Wiltberger Street, the mid-block street between Seventh and Sixth Street. The initial goal of the thesis was to simultaneously rejuvenate a once vibrant part of a neighborhood, while enriching the cultural, commercial, and educational aspects of the area. By focusing the building program on Wiltberger Street, several abandoned buildings and buildings in disrepair could be added to scope of the project and ultimately the school campus design.

Shifting the focus of the project to Wiltberger street not only allowed for the maximum impact of site revitalization, it also created the opportunity for sites of varying degrees of public and private adjacencies which were integral to the success of the vocational school program. The partis in chapter five were unsuccessful in organizing the various vocational systems according to the needs for open space, public access, and need for street presence or privacy. The shift to Wiltberger Street also created the opportunity for several courtyard spaces that were otherwise not available on Seventh Street.



**Figure 73: Process Diagram Proposing New Site Constraints** [Author]  
The new site diagram allows Wiltberger Street to act as the organizing entity for the school, creating a central spine that physically unites all buildings on the site.

Once the constraints of the site were nailed down, it was important to once again assess the quality of buildings on the site, as well as their potential for adaptive reuse. The initial scope of the project focused only on the adaptive reuse of the Hostess factory; however, the warehouse building and row homes on Wiltberger Street became viable candidates for reuse once Wiltberger Street became the organizing element of the site.

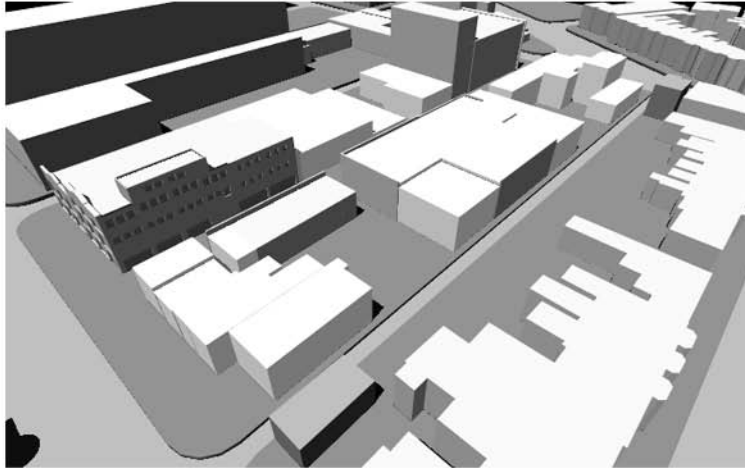


1. Hostess Building: 12,392 sq. ft
2. Hostess Building: 18,384 sq. ft
3. Row Homes: 2,304 sq. ft
4. Warehouse: 23,668 sq. ft
5. Howard Theatre

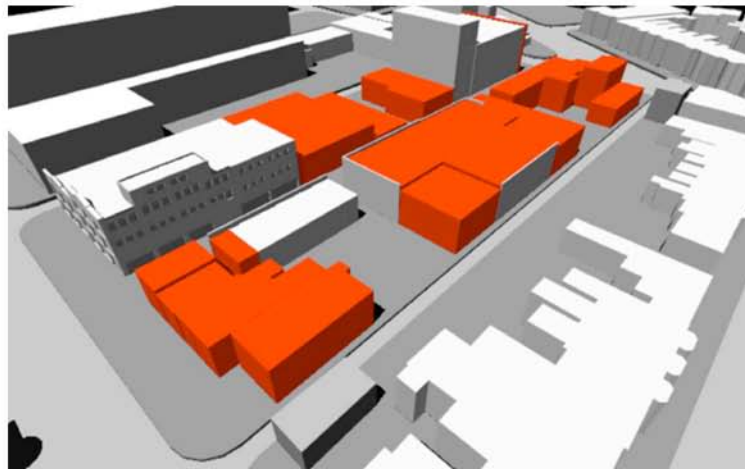
**Figure 74: Diagram Showing New Site Boundaries and Buildings to Remain**

[Author]

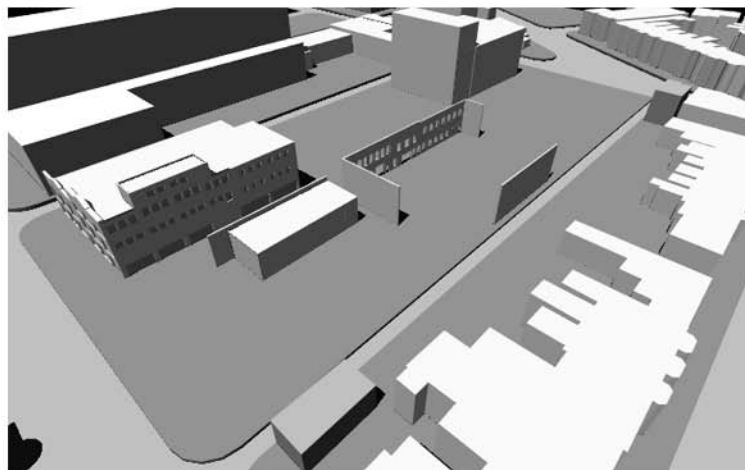
The blue shading denotes which buildings will remain on the site and be adaptively reused. The total existing building square footage is therefore, 56,748 sq. ft, excluding the square footage for the Howard theatre. Allowing the Howard theatre to act as the auditorium for the school would require only 71,252 additional square footage of new construction.



Existing Site Conditions  
before intervention.



Demolition Diagram.



Buildings Remaining  
After Demolition.

**Figure 75: Initial Site Interventions**

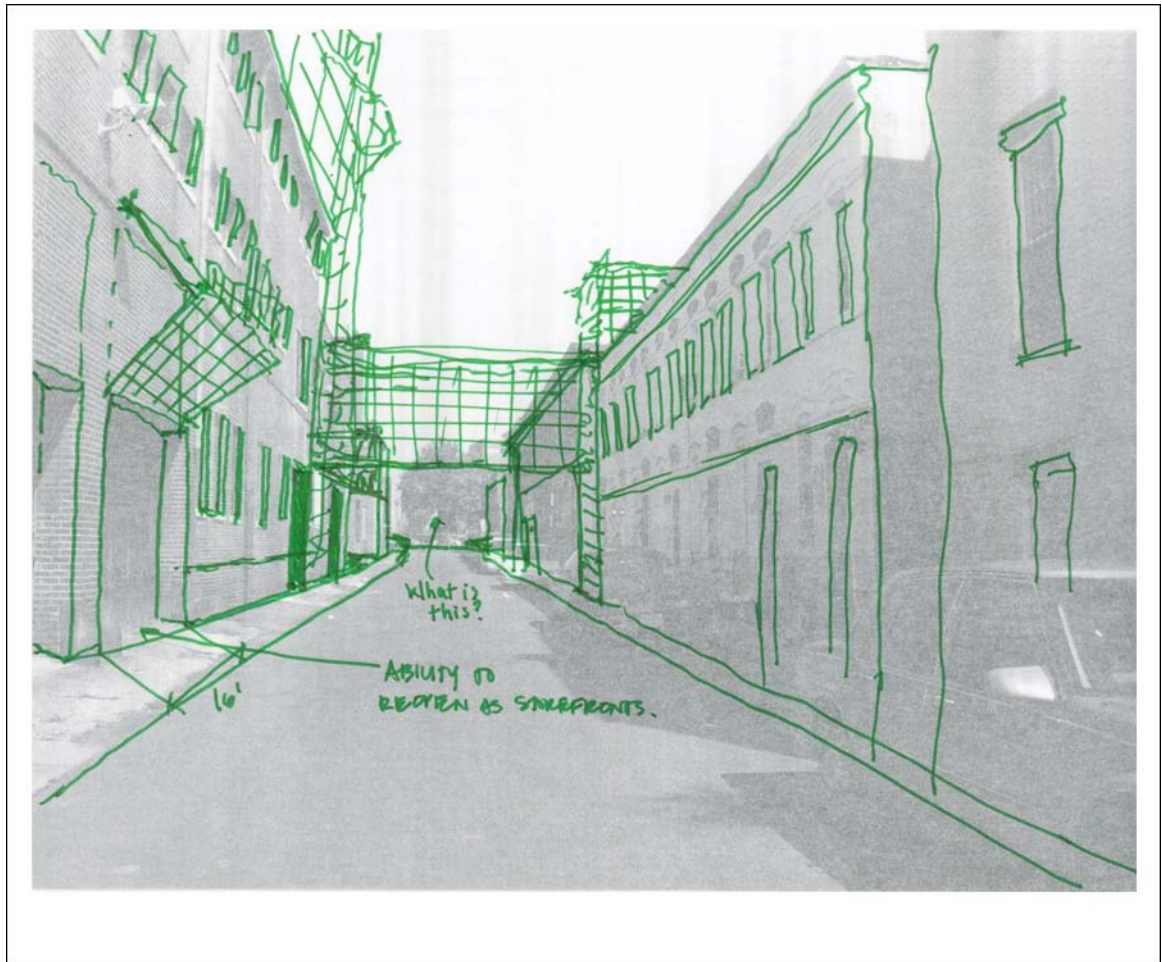
**[Author]**

Diagram showing existing building conditions, the demolition strategy and the site conditions after demolition.

## **Design Process**

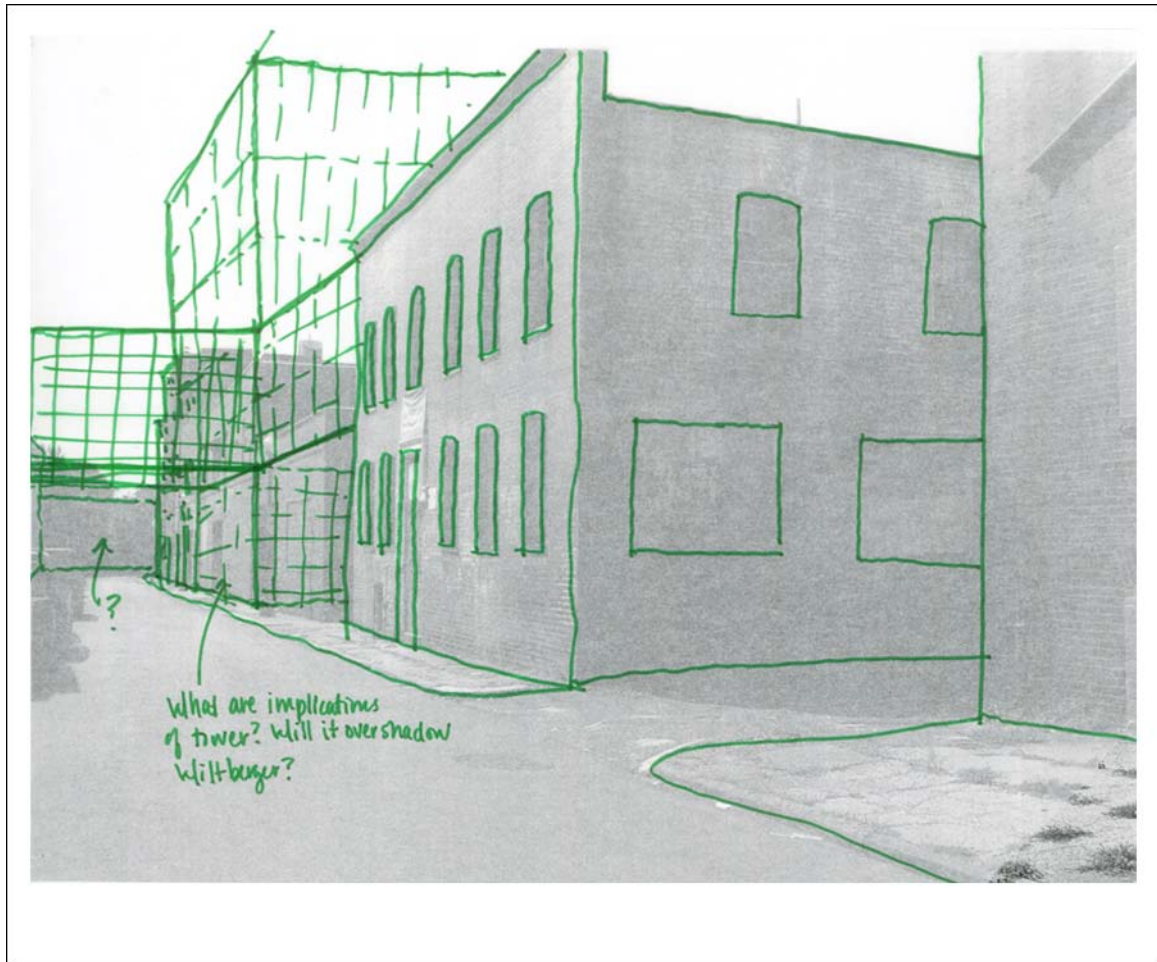
Although none of the partis initially proposed for the site were chosen, the re-evaluation of site conditions allowed for a hybrid parti to emerge. The final parti combined the notions of a campus plan with the organizational structure of the street scheme, and the open space potentials of the matrix scheme. Therefore the character of Wiltberger Street, the campus street, became an integral focus to the success of the school's design.

Despite the initial attempts of the thesis to maintain as many existing structures on Wiltberger Street as possible, massing studies determined early on that it would be beneficial to the integrity of the street and the existing structures to more evenly spread the program density over the site. Due to the limited amount of open space on the site, it was determined that the buildings on the southeast and northeast portions of the site were of inappropriate scale and condition for the scope of the project. The Hostess building, Howard theatre, row homes, and mid-block warehouse were left to be adaptively reused, leaving two open lots for new buildings to be juxtaposed with the existing structures.



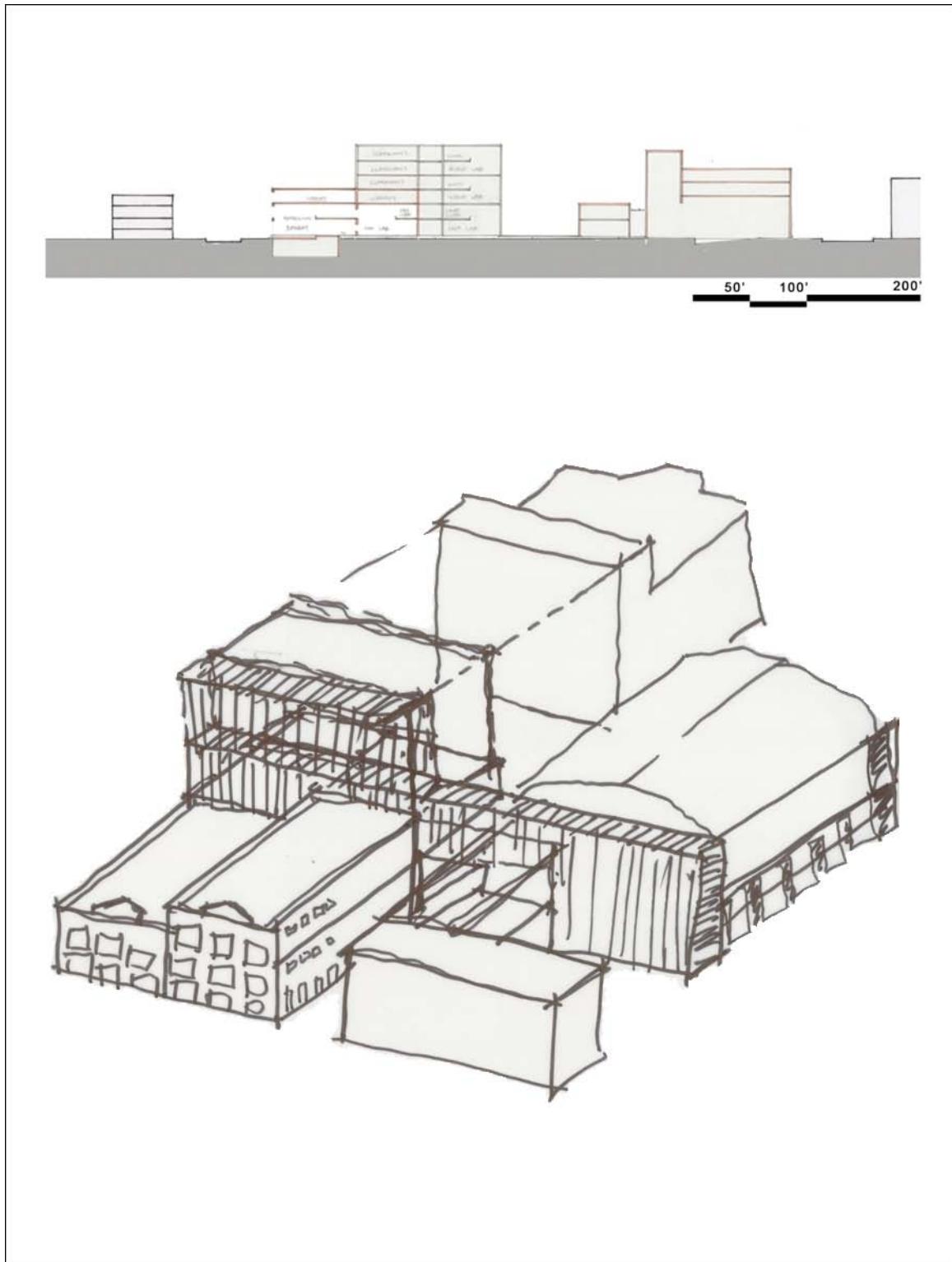
**Figure 76: Process Perspective of Wiltberger Street Looking North** [Author]  
This sketch diagrams the potential of Wiltberger Street to blend spatially with the buildings, while examining the impact of bridging over the street





**Figure 77: Process Perspective of Wiltberger Street Looking South** [Author]  
This sketch diagrams the implications of keeping all of the existing buildings on Wiltberger Street intact and the effect it would have on the massing of the Hostess building in order to accommodate all of the necessary building program.

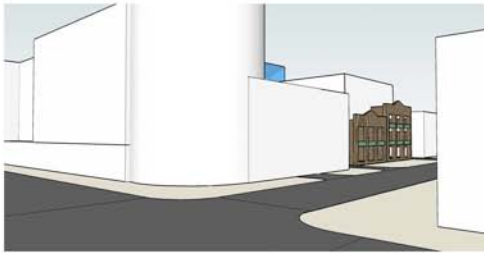
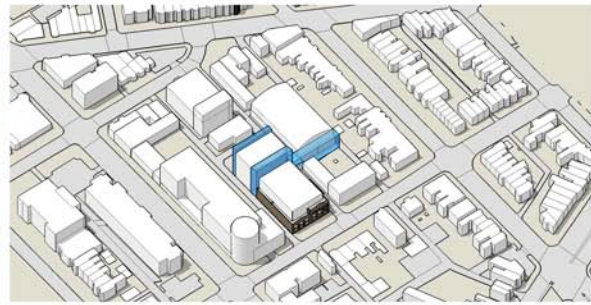
Once it was determined that a large addition would be inappropriate on Wiltberger Street, several massing studies were conducted in order to find site strategies as well as building addition strategies that would best fit the scale of the context and complement the existing buildings.



**Figure 78: Diagram of the Impact of a large addition on Wiltberger Street** [Author]  
 This diagram clearly illustrates the overpowering addition that would have to occur on the rear of the Hostess building as well as on top of the mid-block warehouse in order to maintain all existing structures on Wiltberger Street.



Large Addition Massing Model



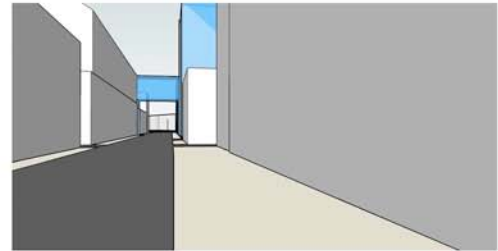
View From 7th Street



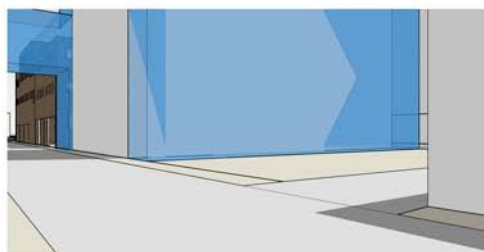
View From S and Wiltberger Street



View On Wiltberger Looking North



View On Wiltberger Looking South



View of Working Courtyard Looking Southwest



Massing Study 2

**Figure 79: Massing Study One**

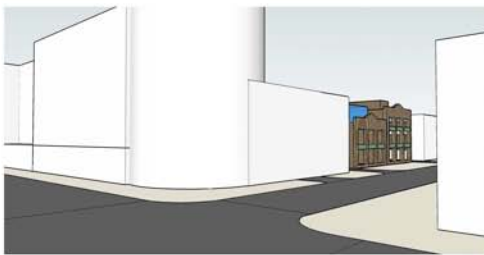
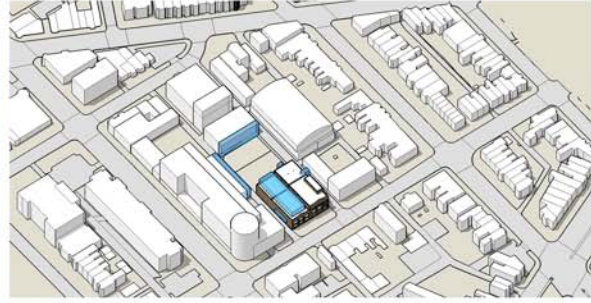
**[Author]**

**These images studied the implications of maintaining all existing buildings on the site and only adding additions the Hostess building and the mid-block warehouse building. These studies determined that large additions were inappropriate for maximizing open space as well as maintaining the integrity of the existing structures.**





Campus Plan Massing Model



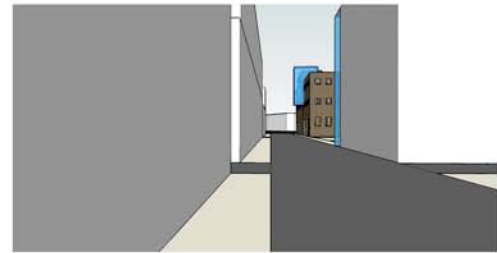
View From 7th Street



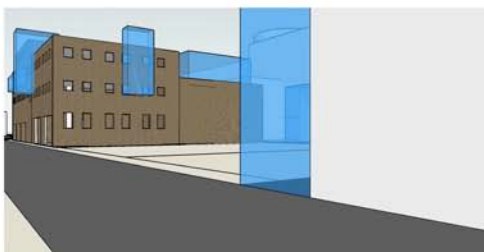
View From S and Wiltberger Street



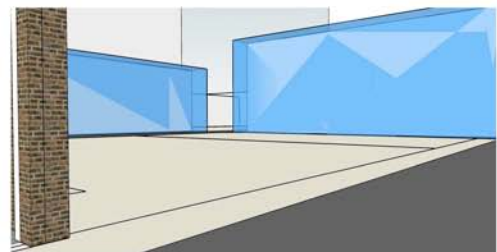
View On Wiltberger Looking North



View On Wiltberger Looking South



View of Working Courtyard Looking Southwest



View Of Working Courtyard Looking Northwest

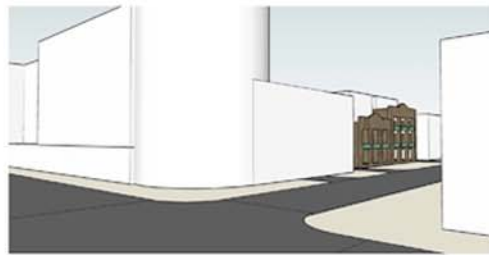
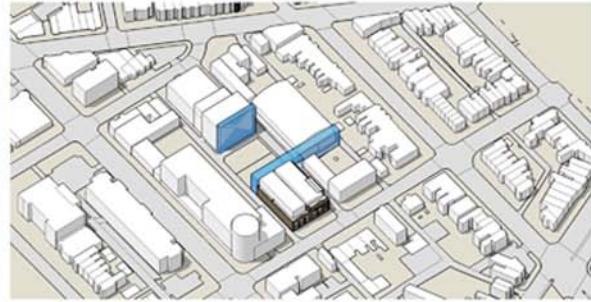
**Figure 80: Massing Study Two**

**[Author]**

**This series of diagrams showed the organization of the program around a central courtyard, allowing for minimal additions to the existing structures.**



Separate Addition Massing Model



View From 7th Street



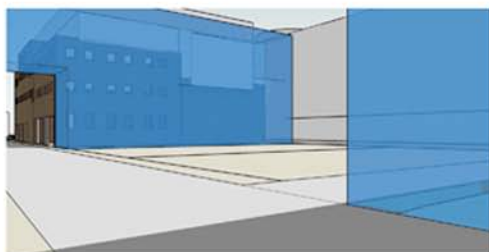
View From S and Wiltberger Street



View On Wiltberger Looking North



View On Wiltberger Looking South



View of Working Courtyard Looking Southwest



Massing Study 2

**Figure 81: Massing Study Three**

**[Author]**

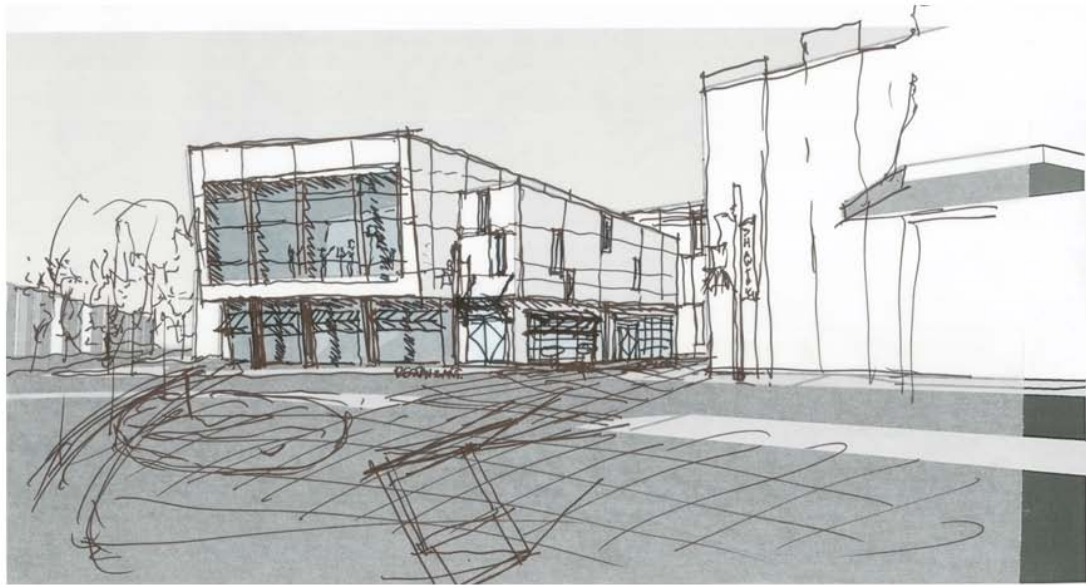
**This massing study shows the potential for a large courtyard space that regulates the condition where the rear of the Hostess factory and the Howard theatre face one another.**

These studies ultimately determined that smaller additions, which regularized the spaces on Wiltberger Street, would be most appropriate for the school's campus. The third massing study was adapted to include new buildings on the northeast and southeast portions of the site, while adjusting the scale of the building additions. Once the basic massing strategy was determined the focus of the project shifted to developing the character of Wiltberger Street while simultaneously developing adaptive reuse strategies.

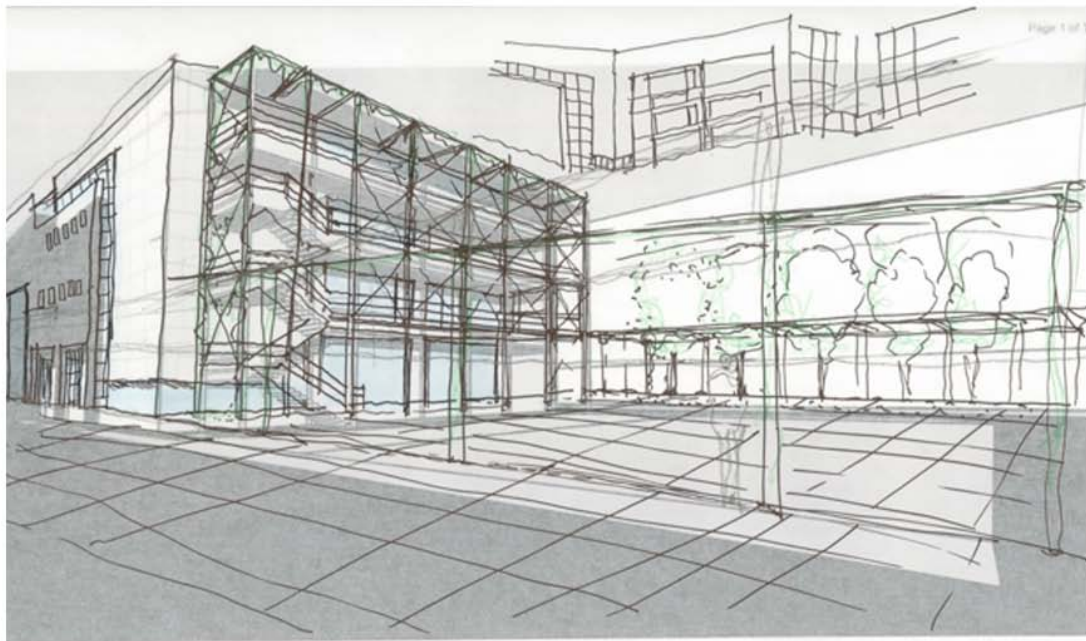


**Figure 82: Process Perspective of Hostess Building as the Culinary School** [Author]  
This image was used to envision the role of the Hostess building as part of the vocational school program. A series of analysis were developed in order to determine the appropriate location of the building program within the existing buildings and new buildings of the campus.





**Howad Gateway Process Sketch**



**Working Courtyard Process Sketch**

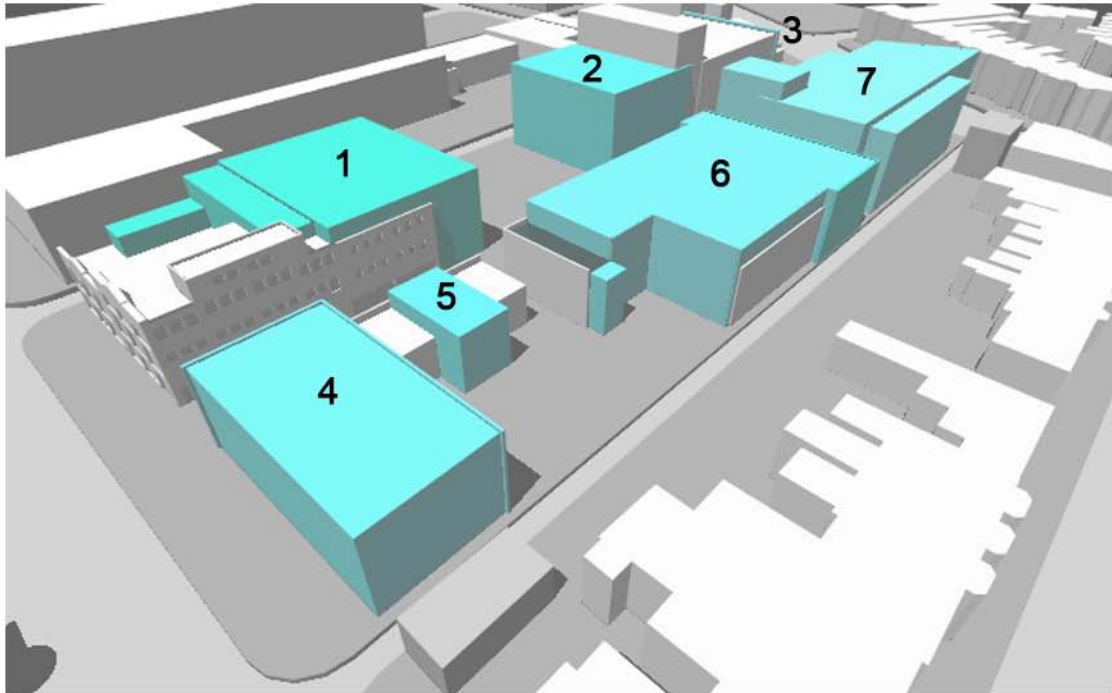


**Figure 83: Process Sketches**

**[Author]**

## **Adaptive Reuse Strategies**

The notion of adaptive reuse was a constant struggle in the initial stages of design, due to the complex nature of the vocational school program and the types of spaces it required. Once the site shifted to include both sides of Wiltberger Street there was an increased opportunity for developing meaningful strategies with which to add on to existing structures, as well as juxtaposing new buildings in a historical context. The strategies for adaptive reuse focused on the overlap between old and new and the way in which building additions could create places of spatial overlap within existing volumes. Although the condition of the existing structures varied, the strategy for adaptation remained consistent, with the introduction of new volumes slipping either into or around the existing structures.



1. A rear addition slips into the existing volume of Hostess, extending over the roof creating a secondary volume on the two story portion of the Hostess building. The new addition fronts the open space between the Hostess building and Howard theatre.

2. A new rear addition slips around the existing volume of the Howard theatre, creating a new facade on the rear of the building.

3. A new facade is placed on the Howard theatre, re-opening windows and providing a new canopy for the entrance.

4. A new building slips behind the plane of the facade left by the removal of one of the row homes.

5. A new volume is slid into the row homes to create a larger, unified space juxtaposed to the cellular structure of the row homes.

6. The existing volume of the warehouse is altered to allow for new program. A small addition is slid into the southern portion of the building, with new masses adding to the roof of the structure.

7. A new building is placed on the Northern portion of the site to balance the scale of the Howard theatre.

Figure 84: Adaptive Reuse and Building Addition Strategy

[Author]

## **Final Building Design**

The final design relied on creating an urban campus centered on Wiltberger street and integrating the adaptive reuse of four structures, with the introduction of two new structures to the site. An emphasis was placed on creating gateways at the northern and southern ends of Wiltberger Street to announce the presence of the school, as well as provide access to major public streets, which many of the program elements required.

The northern portion of the site became the entertainment gateway, juxtaposing a new building across from the Howard theatre. The new building housed the culinary school, where the restaurant and bakery created the opportunity for street activity on T Street, while simultaneously pulling the program around the corner and down Wiltberger street. The cosmetology lab completed the ground floor of the new structure, which housed the gymnasium and fitness center above.

The mid-block warehouse building was adapted to include the automotive trades, due to its existing dimensions and adjacency to the alley. Continuing the notion of adaptive reuse, the building was further added to with the landscape school on the roof, utilizing the roof area for greenhouses and a large green roof for planting.

A larger courtyard was created at the center of the campus, which organized the various buildings and provided relief on Wiltberger Street. The automotive building took advantage of this proximity to the courtyard with garage doors that span the length of the courtyard, allowing the space to bleed into the building. The building trades also took advantage of garage doors, not only allowing for a seamless connection with the courtyard, but providing functional means with which to move materials through the buildings. A system of scaffolding was developed to move materials and people up

through the building trades, which sponsored a frame language that was used to unite the campus buildings together. The courtyard was developed not only as a place for the building trades to work, but also as a neighborhood amenity where markets and various other cultural events could occur.

The southernmost portion of the site became the academic gateway to the campus. The row homes were adapted into the childcare center that connected to the new building that housed health occupations, with the clinic on the ground floor, and the computer and criminal justice classrooms above. Since the initial design proposals focused on the adaptive reuse of the Hostess building, it became the academic head house for the campus. The ground floor houses the administrative suite as well as a gallery, which displays the work of the students at the school and throughout the community. The guidance suite and seminar rooms for the business school complete the second floor and the library is placed on the third floor within the existing building, as well as a new addition that was added to the lower portion of the Hostess building.





**Figure 85: Site Plan**

**[Author]**

The site plan proposes infilling vacant sites near the vocational school, while adapting existing structures such as the CVS and Howard office building into mixed use structures, which utilize the existing buildings.



Figure 86: Ground Level Plan

[Author]



Figure 87: Second Level Plan

[Author]



Figure 88: Third Level Plan

[Author]



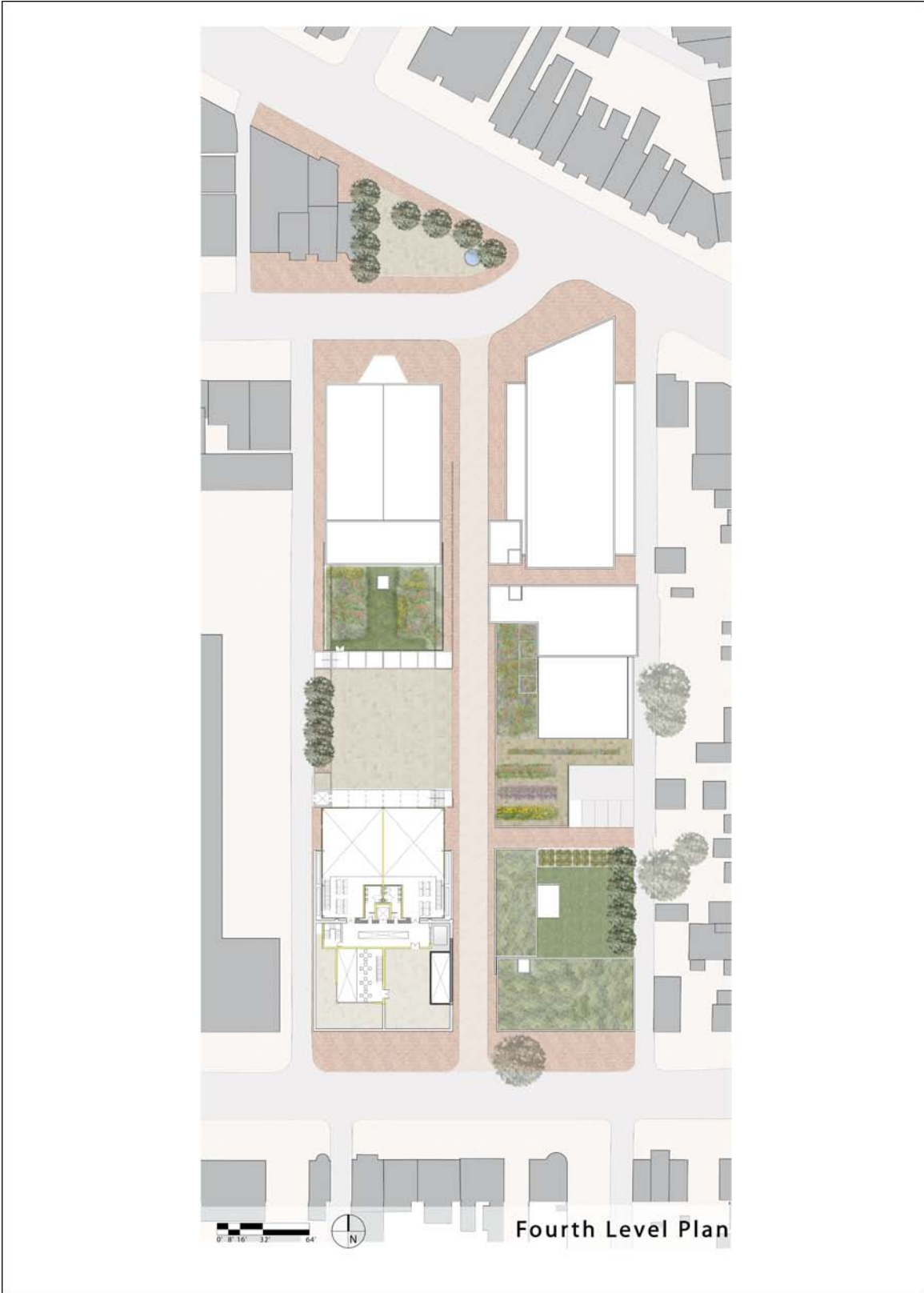
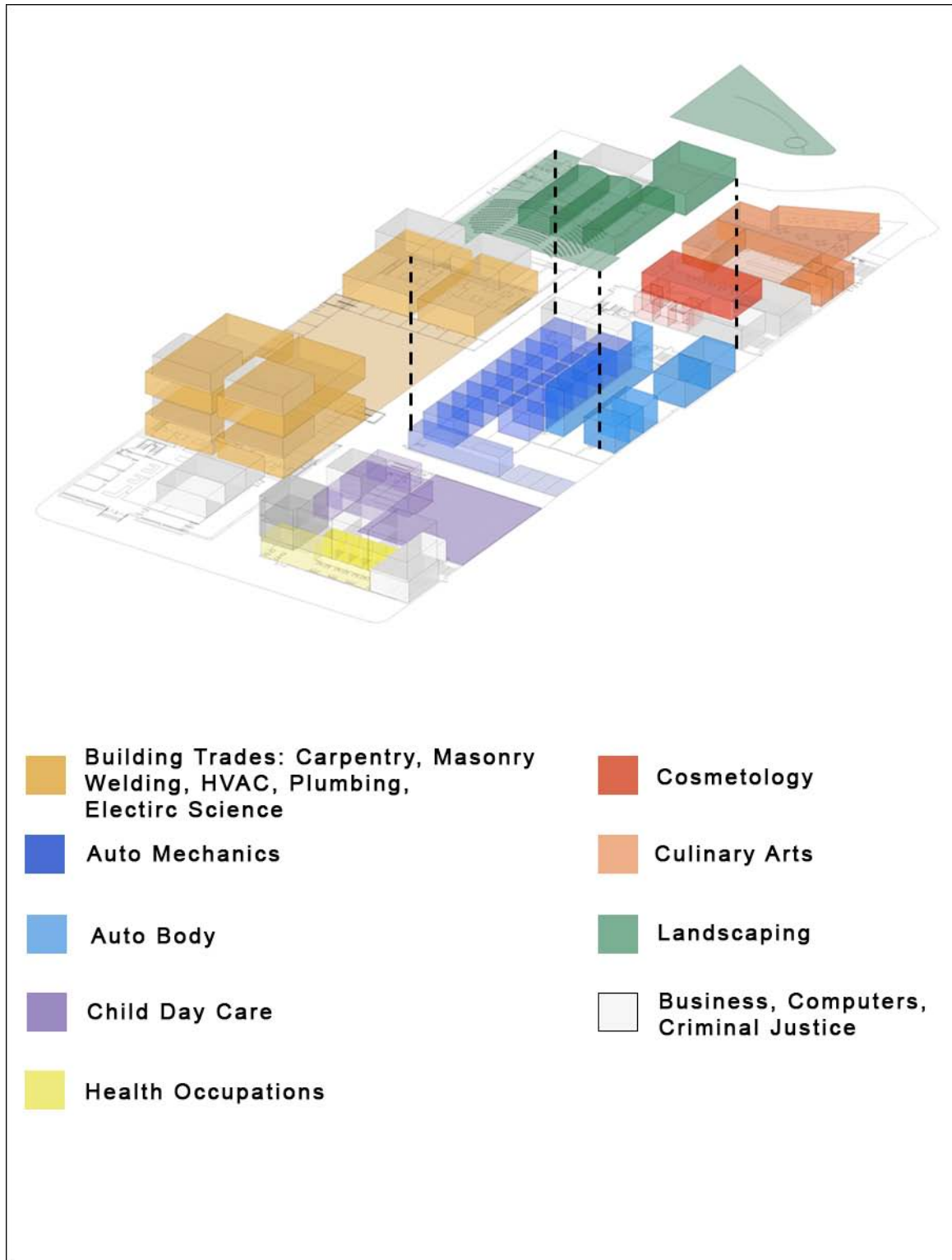


Figure 89: Fourth Level Plan

[Author]





**Figure 90: Trade Locator Diagram** [Author]  
 This diagram indicates the location of the various vocational labs and classrooms within the site.



Figure 91: Transverse Site Sections

[Author]



**Figure 92: Longitudinal Site Section**

[Author]

The section through the Hostess building and the Howard theatre shows how the courtyard becomes the spatial organizer with which the building trade classrooms open out to.



**Proposed S Street Elevation**

**Proposed T Street Elevation**

**Figure 93: Proposed Gateway Elevations**

[Author]

A language was developed to unite the new additions and buildings throughout the campus, utilizing stainless steel metal panels and a frame system that grew out of the scaffolding language of the courtyard.



**Hostess Gateway**



**Howard Theatre Gateway**

**Figure 94: Gateway Perspectives**

**[Author]**





**View North on Wiltberger Street**



**View Of Campus from Scaffolding**

**Figure 95: Wiltberger Street and Campus Perspectives**

**[Author]**





**Courtyard During School Hours**



**Courtyard on the weekend as a market**

**Figure 96: Courtyard Perspectives**

**[Author]**



**Figure 97: Perspective Inside Working Lab** [Author]  
 This perspective shows the slot space created between the new building insertion and the existing outer wall of the Hostess building.

#### Lessons Learned:

- Vocational schools seamlessly adapt to the community school model, providing increased opportunity for community interaction with the school and its students;
- Urban sites require the program to be dealt with creatively since there is limited site area and limited opportunities to create large open spaces;
- The design must allow the site and existing buildings to influence the overall organization of the school and the location of the program within existing buildings on the site;
- Adapting existing buildings with the vocational school program allowed for simultaneously reclaiming a vibrant hub within a neighborhood, while maximizing the impact on the site's commercial, educational and cultural needs, due to the complex pedagogy of the vocational school;
- The program of the school can become the catalyst for further neighborhood development, providing the necessary foundation and infrastructure for growth.

**Figure 98: Lessons Learned**

[Author]

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<sup>1</sup> Pritzker Prize.. “Richard Meier: Pritzker Architecture Prize Laureate 1984.” 12 January 2007  
<<http://www.pritzkerprize.com/meier.htm>>

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