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Sustainable architecture : addressing the conditions of poverty and homelessness

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SUSTAINABLE ARCHITECTURE:
ADDRESSING THE CONDITIONS OF POVERTY AND HOMELESSNESS

A Thesis

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Master of Architecture

in

The School of Architecture

by
Taylor Claude Alphonso
B.S., University of Louisiana at Lafayette, 2011
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This work is sincerely dedicated to my parents. They have been my driving force by my side through my entire educational career. I owe any and all success to them.

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ABSTRACT

Any large city faces the challenge of addressing homelessness and poverty. The most common action taken to address such conditions is providing temporary shelter accompanied by assistance through welfare programs; these are not permanent solutions. They do not assist the impoverished in establishing themselves in the community as the shelters are temporary, and ignore the fact that many lack the required education along with job and life skills to ultimately establish independence. Many cities do not offer affordable educational opportunities to this demographic, and they tend to overlook the importance the actual facility may have on the encouraging and promoting experience. Engaging and responsive educational facilities, specifically vocational, hold the power to influence an individual's educational experience, providing positive outcomes for not only that individual, but the surrounding community as well.

This thesis identifies the current state of poverty and homelessness within the city of New Orleans, Louisiana, while also exemplifying the need for vocational education, which has proven to improve similar conditions. Architecturally, it presents a generalized design of a vocational education facility that will reuse an existing site and its buildings to not only benefit the surrounding community, which is in a rebuilding effort, but also the impoverished by providing a means of education, shelter, training, and even work. As an additional benefit, the process of adaptively reusing an existing site addresses the ecological need of living in a more sustainable manner and embodies how this approach has the potential to better the living conditions of the community as a whole.

CHAPTER 1: INTRODUCTION

Today, sustainability of the natural environment and resource management dominates current issues in the building industries. Cities all over the United States are now becoming innovators in the search for sustainable solutions for energy, water, land and other resource needs. As many search for sustainable solutions, one solution seems apparent: adaptively reusing existing buildings, sites, and structures. Reusing buildings and sites not only addresses the economic issues of new building practices and the ecological need for living in a more sustainable manner, but it also strengthens the community's significance as the original vernacular expresses the culture of the cities origins. The following thesis will represent how sustainable architecture is able to address these issues in a struggling city such as New Orleans, Louisiana. By using existing resources, the implementation of one vocational education facility, inspired by unique architectural spaces, has the ability to impact a large struggling population, while also progressing the city in an optimistic direction.

1.1 ADAPTIVE REUSE

Adaptive reuse is not a new sustainable solution. For this thesis, the definition of adaptive reuse will be the process of reusing an old site or building for a purpose other than that of which it was intended. Within this process, there are a few considerations that must be addressed:

Economic Aspect - The economic aspect of adaptive reuse is usually the first considered. Companies and organizations that look for sustainable solutions are continually seeking ways to approach their business' processes using more sustainable methodologies. Adaptively reusing buildings and sites presents a viable approach, however, as the concept of reusing a buildings structure, salvageable materials, etc. always seems like the best option, it also has downfalls. For

example, there can be hidden costs in reusing an old building such as unknown contaminants, structural and material degradation, and/or the modifications required by current and future building codes. For this project investigation, it is assumed that there are no issues with the proposed site except code modifications. Existing building assessments have been conducted and the structure of the buildings are in good condition. The Montwani family, a family who moved to the south to open T-shirt and souvenir shops in the busy city of New Orleans, owns the buildings. The first floors of the two buildings located on Canal Street house a tourist shop. This shop currently contributes to the economy of New Orleans as it attracts large amounts of local and tourist pedestrians walking down Canal Street.

Community Value - The community value of a site is also an aspect that must be considered when discussing the reuse of a building or site. The buildings along Canal Street hold high community value as economic generators. They supply many of the tourists and locals with souvenirs. From gag gifts to sporting apparel, whatever the occasion, the Montwani families' shops continue to flourish and give back to the economy. The infamous Canal Street is known for its unique tourist retail experience, and without these shops, this portion of Canal, nestled between the French quarter and the Central Business District (CBD), would be lacking any true contribution as the floors above the shop are currently unused and without any purpose. The insertion of an educational facility by adaptively reusing an existing site and its buildings within the heart of a tourist economy will contribute to the community by involving the other yet overlooked and underserved surrounding population, the homeless and poor. To provide and educational facility that serves this population will only increase community value and importance, as they could become a new consumer and/or employee for the retail fabric. Populating an underutilized building will also benefit the tourist community and the current

rebuilding effort being implemented within the city. The challenge in this is designing a vocational education facility that motivates such a unique demographic to want to be educated, while also welcoming in the mixed used community of its site.

Historical Value - There are not many other streets in New Orleans that are more recognizable than Canal Street. This unique, extremely wide street, forms the boundary of New Orleans's oldest neighborhood, the French Quarter. In 1803, after the Louisiana Purchase was completed, varying cultures began to make their way into the city from the Mississippi River and the Port of New Orleans. Of those individuals, the masses were separated into two cultures (i.e., Kentucky and Midwestern states). To divide these two cultures, a canal located along the present day Canal Street, was to be constructed. The construction of the canal never occurred. The street that took its place was named in its honor (i.e., Canal Street). One end of Canal Street terminates at the Mississippi River. "The foot of Canal Street", a reference for the riverfront area housing the Canal Street ferry, is a transportation hub offering a direct route to Algiers Point, an 18th century neighborhood located across the river. Canal Street's other terminating site is in Mid-City, near the "Cemetery" area. The largely famous street has three lanes of moving traffic in each direction. Double streetcars run down the median of the street. The downtown area of Canal Street acts as the city's public transportation hub as major streetcars and bus lines assemble. Canal Street is currently recognized as the widest roadway in America to be classified as a street (e.g., 171 feet in width).¹

Canal Street is one of the few areas in New Orleans that was not affected by the flooding created from Hurricane Katrina. Although most of the area remained dry, there are quite a few buildings that have been left unattended due to depopulation. Though most are structurally sound, many continue to slowly deteriorate from lack of attention. Thus, it is important to hold

the original vernacular of the street and uphold the cultural architecture, which dates back to the late 1800s. Any means to protect and restore these beautiful buildings will only benefit the historical aspect of the city of New Orleans. The buildings hold a street dialect that express a strong cultural language. The proposed project will make an effort to fully restore the exterior to the original design in the drawings found in Tulane University's Southeastern Architectural Archives dating back to 1901, with the ultimate goal being to fully pay homage to the unique built environment created from years and years of expressed culture.

Urban Value - Adaptive reuse is also looked at as an extremely effective way to reduce suburban sprawl. New Orleans, Louisiana, a city that is slowly rebuilding its inner core after the devastation Hurricane Katrina caused in 2005, is in dire need to restore density and reuse old existing buildings to prevent continued sprawl into surrounding suburban and rural neighborhoods. As developers, architects, and builders continue to back restoration efforts within the city, there continues to be a gap between those truly needing shelter in such an area, and those whom the new buildings are being marketed towards. The poor in these areas, those that originally had a means to low cost shelter, now cannot afford the luxurious residential buildings being built.

1.2 ADULT EDUCATION

The only means of adult education within this area is Delgado Nursing School, Louisiana State University Medical School, and Tulane University Medical School, which are all facilities and services that are not offered to the disadvantaged individuals. With the absence of these specified needed institutional facilities, the existing population is left with no means to pursue educational advancements, providing an atmosphere for high poverty and homelessness rates. With high poverty and homelessness rates comes a high crime rate. This was proven in a study

conducted by the US Accountability Office in 2007. Study officials found that they were able to directly associate an increase in property damage with an increase in the poverty rate.¹² New Orleans ranks extremely high in almost all crime statistics. Its crime index is 11 (100 being the safest). It's median for violent crimes per 1000 residents is 7.57. The National median is 4. New Orleans averages 83 crimes committed per square mile.⁹ All cities that have similar numbers in relation to crime and property damage, all have one thing in common; a large impoverished population.

It is extremely important for an impoverished population to have the opportunity to be educated. Educated individuals, those that are capable of reputable work and earning themselves a respectable living, will less likely have the need or inclination to commit such crimes. Until these individuals become employed, eliminating the temptations of committing crimes as they become more focused on earning income, these crime statistics in New Orleans will not drastically be reduced. Each year these rates are not reduced, the city will continue to struggle. Vocational schools have proved in the past to assist unemployment numbers in the positive direction. In a study conducted by Eric A. Hanushek of Stanford University, he identifies that "The pursuit of vocational education has decreased the chance of that individual becoming unemployed not only at a young age, but even into one's late 50s by over fifty percent."²

1.3 ARCHITECTURAL ASSISTANCE

The architecture of the facility must assist the pupils with learning. Many may not relate architecture aiding education, however, it can powerfully assist with an individuals ability to be able to grasp new concepts, information, facts, etc. However, for this to be possible, many issues and considerations must be addressed. For example, an impoverished adult is a unique individual. Most have spent some part of their life living on the streets, questioning where or

when they may receive their next meal. These individuals are unlike conventional students and learn in unique ways. The design must take this into account, as the architecture cannot represent a traditional educational facility. The designer must identify what types of spatial conditions are needed, as the conditions will be exclusive to the impoverished adult community. As almost all of these individuals will be from the immediate local community, both proximal and cultural, the architecture will have specific requirements that must be met to satisfy the distinctive characteristics. The requirements will influence the exterior conditions, as well as the interior conditions. It must acknowledge the stigmas of vocational schools and homeless shelters and attempt to resolve those stigmas by making the facility part of the surrounding community (i.e., the same community that at one time looked down upon these impoverished individuals).

1.4 CURRENT INITIATIVES

This thesis will present a design of a vocational education facility that will reuse an existing site and its buildings in the city of New Orleans, Louisiana to not only benefit the surrounding community which is in a rebuilding effort, but also the impoverished by providing a means of education, shelter, training, and even work. The city offers several existing social services for poor and homeless adults, making the need for a vocational school viable. Mayor Mitch Landrieu recently stated, that New Orleans needs to address the needs of each homeless person through a 10-year “Plan to End Homelessness.”³ In his plan is a road map for how the city will address its astronomical homeless population. One of the main points the Mayor articulates is the ability to provide these individuals with an opportunity to find employment. However, without any type of training, stable housing, or normalcy, many employers are not open to the idea of employing these individuals. This architectural project has the ability to address job training to ease employer concerns.

The site chosen for the exploration of the vocational school program is in the inner city of New Orleans located on the corner of Canal Street and Camp Street in the Central Business District. There is already an initiative for enhancing the quality of life in the Iberville-Treme neighborhood, including the desire to improve job-training programs called “Choice Neighborhoods.”⁴ President Obama recently released a report called *Creating Pathways to Opportunity*, which touches base on this initiative:

“In New Orleans, Choice Neighborhoods will spur the revitalization of the Iberville/Tremé neighborhood, where fifty-two percent of families live in poverty, with a plan centered on the transformation of distressed, highly-concentrated public housing into mixed-income housing that preserves the historic character of the neighborhood. The partnership, led by the City of New Orleans and its housing authority, will take advantage of the neighborhood’s adjacency to the French Quarter, bringing back the streetcar named Desire, and expanding the reach of New Orleans’ strong tourism economy to include the musical and cultural heart of Tremé. A new hospital, clinic, and biomedical research facility, tied to integrated job training, will create critical employment opportunities for neighborhood residents and expand access to affordable health care. And through the Choice Neighborhoods partnership with the Recovery School District, Louisiana’s fastest-improving school district, children growing up in the revitalized neighborhood will have access to the quality educational opportunities they need to achieve their potential. All of this work is aligned by a \$30.5 million Choice Neighborhoods grant that leverages over \$1 billion in private, non-profit, and other investments into the community, driving all of the partners to a coordinated effort to end intergenerational poverty.”⁴

This plan addresses quite a few of the aspects that lead to poverty such as, affordable housing, affordable healthcare, potential for new jobs, quality education for children, and even low-cost transportation. As the federal government will address these issues, it is assumed that positive outcomes in regards to families living in poverty will be the result. However, one key issue is not addressed: adult education/job training. Without this, these individuals may never truly be able to pull themselves out of living in poverty. Providing them with low-cost living,

low-cost education for their children, low-cost transportation, and low-cost healthcare will provide them with an opportunity to afford life's necessities and keep their families from living off the street; however, this is not a permanent solution.

1.5 PROPOSED PROJECT

The proposed project will not only address some issues that the “Choice Neighborhood” initiative has outlined as priorities, but will focus on adult education. Architecturally, it will present a design of a vocational education facility by reusing existing buildings and its current site in the city of New Orleans. The design will specifically cater to an impoverished population; individuals who demand specific spatial conditions for their unique learning environment. By adaptively reusing the projects site and its buildings, the project will also exemplify the positive impact of addressing the ecological need of living in a more sustainable manner and the positive impact that also has on a struggling city (i.e., paying homage to the unique built environment, which originated from years and years of expressed culture).

CHAPTER 2: THE STATE OF POVERTY AND HOMELESSNESS

2.1 IMPACTS OF HURRICANE KATRINA

On August 29th 2005, Hurricane Katrina inflicted massive damage on the states of Louisiana, Alabama, and Mississippi. While the physical damage in all these areas was indescribable, the effects were exacerbated in the city of New Orleans as the levee system was breached at multiple locations, causing massive flooding in many areas. From the poor neighborhoods in Mid-City and the Lower Ninth Ward all the way to the middle-class neighborhoods of Lakeview, many residents were forced from their homes. On August 30th, the United States of America awoke to media coverage of the increasing damage in New Orleans on national television, which showed floodwaters covering much of the city and American citizens stranded on the rooftops of their homes.

These dire circumstances continued to deteriorate as local, state, and federal agencies left many residents to fend for themselves. The faces depicted in national media coverage looked increasingly desperate each day while news coverage continued into the following weekend. As that weekend wore on, viewers from around the world could not believe what they were seeing: that these horrendous conditions could exist in the United States. It also became increasingly clear that a disproportionate number of people victimized by Katrina had been extremely disadvantaged even before the storm, and had lost what little they possessed to the raging floodwaters. Questions then arose as to why government response to the storm was so slow and insufficient. Critics began to speculate that government officials were hoping to change the demographic characteristics of pre-Katrina New Orleans by giving the poor and disenfranchised no other alternative but to leave the only homes they had ever known and move to another region

of the state or country, thus, dispersing the poverty and misery to someplace – anyplace - else.⁵ In fact, that is what occurred in many neighborhoods.

According to a June 2006 Brookings report, the largest population losses in hurricane-impacted areas of the Gulf Coast were in the New Orleans metro area and in Orleans parish, which incorporates most of the city. At the time this report was published, it provided evidence that the current population was more white, less poor, and more transitory than the pre-hurricane population. However, other gulf metropolitan communities in Louisiana, such as Baton Rouge, took in these fleeing residents experiencing shifts in their demographic characteristics, and suggesting that these individuals had not permanently moved to other regions of the country.⁶

Though thousands were able to evacuate, many residents simply were not able to leave. While some reporters claimed that those stranded in New Orleans had not even attempted to leave, others acknowledged that many residents had no choice as they could not afford to escape or were not provided the necessary assistance to do so. Although it was the worst crisis of its kind in the U.S., Katrina was not the first weather emergency in which poverty had a severe impact on the residents' ability to prepare for the situation, cope with it, and recover from it in the long term.

In 2005, the South Florida Sun-Sentinel conducted an investigation of the Federal Emergency Management Agency (FEMA) and found that repeated cuts in federal funding for the National Hurricane Center had greatly hampered its capacity to predict the path and severity of hurricanes. The Sun-Sentinel also found that when hurricanes are predicted, or do hit, it is the tone of the government that helps or hinders an adequate response, and most of this response - or lack thereof - is shown to have the worst effects on the poor.⁷

For example, Governor Jeb Bush of Florida encouraged citizens to "take personal responsibility" in preparing for the hurricane season of 2005, just prior to Katrina. Preparedness was defined as stocking up on all the equipment, food, water, and medicine necessary to ride out the storms, or making sure they had enough gas in their cars to evacuate if need be. But, the question became: What does this mean to the poor, disabled, and elderly whose food stamps or Social Security were spent earlier in the month, who also need medication that their Medicare and Medicaid will not allow them to stock up on, and who do not have cars to fill up with gas even if they had the money for gas, but would instead need to take public transportation, which might not even be available? These people, the poor and near poor, are typically the populations found within urban areas that struggle during hurricane events.

These same factors also played a role in evacuations when Hurricane Katrina hit New Orleans. Jane Daugherty, a well-known journalist, studied the impoverished in New Orleans after Katrina. She confirms that the poor had no choice but to stay put, as they could not afford to leave, mainly because they could not afford the necessary supplies. She also points out that poverty is not the only issue, and that other demographics contributed to the problem. Daugherty characterizes two specific groups most gravely affected in the aftermath of Katrina in New Orleans: (1) the "elderly person, who lives alone and spends almost every dollar of their Social Security check on housing, prescriptions and food," and (2) the "single mother with a couple of pre-school children who takes the bus to work, gets food stamps to help feed her kids, and whose medical care is paid by Medicaid because her job doesn't include health care benefits." Another author also points out "the majority of poor residents who were trapped in the Superdome for days without food and water were African American, which is why it took so long for the news media to report on the deplorable conditions and the extreme need for help."⁸

So it was not just poverty itself, which is defined by income levels, but also factors that often correlate with poverty that either kept the citizens of New Orleans from evacuating and/or made them more anxious to return to what was left of their homes and belongings. Some of these factors (e.g., race, gender, age) are common influences known to instigate poverty in the U.S., while others (e.g., health, housing, education, jobs, income) are the results of poverty. This thesis will focus on how architecture has the ability to address these issues at two levels, the community and the individual. It will also focus on how this concept can address other similar conditions within other communities providing the possibility of a long-term positive impact on poverty and homeless conditions.

The following information will cover the current state of poverty and homelessness within the United States. It will acknowledge perceptions of these large demographics and also previous attempts at lessening these numbers. This information will be followed by specifics relating to New Orleans as a city, and then look closer at the project's site located along prominent Canal Street. It will then recognize the need for adult education by acknowledging the impact an education can have on disadvantaged individuals. Specifically, it will examine vocational education and how this educational structure could possibly provide struggling cities such as New Orleans with a means to end such large numbers of poverty and homelessness within the population.

2.2 THE STATE OF POVERTY

According to the United States Census, in 2010, over 37 million people, approximately 12.6% of the total population, lived in poverty.⁹ In the US, poverty is measured by a specific income standard. This standard does not consider material hardships or financial assets. The official measure is a dollar amount that correlates to family size and does not take into account

varying living costs. The 2012 poverty guidelines can be found in Table 1. These guidelines are the numbers in which they measure and determine eligibility for governmental programs aiding in financial assistance. However, there is a notable flaw in the system. The first poverty measure was decided in 1960. It was based on research, which simply indicated that families spent about one-third of their entire incomes on food. Thus, multiplying the calculated food costs by three sets the final poverty level. This is an extremely conservative measure, however, the only changes in the poverty levels are from addressing annual inflation.

Table 1: 2012 Poverty Guidelines

Persons in Household	Poverty Guideline
1	\$11,170
2	\$15,130
3	\$19,090
4	\$23,050
5	\$27,010
6	\$30,970
7	\$34,930
8	\$38,890
For families/households with more than 8 persons, add \$3,960 for each additional person.	

Since the poverty level specified by the federal government unacceptably underestimates the high costs of supporting families, researchers continue to devote time into developing a more suitable and rational system. Through this research, the National Center for Children in Poverty (NCCP) was established. The NCCP developed a budget (Basic Needs Budget) that considers the basic daily living expenses. All expenses are based on extremely modest costs. For example, the

NCCP budget does not allocate money to purchase life/disability insurance, which would help a family withstand a job loss or similar financial emergency. This budget also does not assist in future family financial success (i.e., accumulating a savings fund to allow for home purchases or even investment in a child's education). Thus, this budget only allows families/individuals to be able to afford the everyday basic needs and living expenses, and never allows for a means to "get ahead". It is noted that families typically need an official income of twice the poverty level (i.e., \$42,000 for a family of four) to meet basic needs, however, in high-cost cities such as New York, it may take an income of over three times the poverty level to make ends meet.¹¹ This is notably much higher than the federal level, making it obvious drastic changes must occur within the current system established.

With the U.S. government declaring approximately 37 million individuals and families in poverty by the current standards, it is obvious that this number should be largely increased, if not doubled. While the struggling population attempts to make ends meet through governmental assistance, it is apparent other families/individuals who also deserve assistance are being overlooked. The chance of the poverty line increasing not because of inflation is very slim, as this is an issue the government has been aware of for the past few decades and with the ever growing national debt, it has become evident that the solution lies outside of the poverty line. The only true solution to poverty is by helping those in it and near it establish stability through education leading to employment. This concept will be explored more deeply in the upcoming chapters.

2.2.1 Poverty as an Urban Problem

It is a fact that poverty exists everywhere. To think that one act or initiative has the power to solve the United State's problem of poverty among individuals is juvenile. It is an extremely

complicated subject as previously noted and must be addressed through context of that area and its surrounding cultures.

It has been proven that due to demographic shifts in the American population, the largest number of individuals living in poverty reside in urban areas. American cities in the 1960s experienced a large change in the demographics of urban populations due to the emergence of the “white flight”. Large groups, almost all white middle class individuals, were presented with the model of living in suburban areas, owning their homes, the land their homes reside on, and buying personal vehicles to commute back and forth to their jobs. The price of modern cars was affordable to the middle class individuals even with large families. Each family moved into these areas, built a single family home, bought a car, and the result was urban sprawl. Suburban neighborhoods began popping up everywhere any developer could get his hands on low cost land. These families, as they adjusted to their new homes and easy transportation methods, could not ever think about once again living in dirty, crowded, loud cities – which is how they were perceived. However, the developers who were developing these suburban neighborhoods did not take into account the negative impacts this sudden shift may have on the inner urban cities. As those in the middle and upper class continued to move out, prospects for employment dwindled in the urban areas as jobs moved with the others to the suburbs.¹²

2.2.2 Perceptions of the Poor

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. It has been suggested before that the poor only know what it is like to be poor. They lack the skills, drive, and want, to achieve or gain independence for themselves. 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. 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.¹³ Labels are known and easy placed on those of the poor status. A few very common misconceptions of the poor are: “People are lazy – there is a direct correlation between how hard you work and how much money you make, thus, if poor people would work harder, they would not be poor.” This is not necessary true, as many individuals lack job experience, are not capable of working due to health conditions, or simply are working extremely hard currently and due to lack of qualifications, income is at a minimum. Another is that “Poor people can not be trusted with money- all of their money is wasted on unnecessary things such as alcohol, TV, and even sometimes drugs.” Though this is sometimes the case, it is not always true either. Numerous families have only one parent. Sometimes that parent is working two and three jobs per week, making a decent amount of money. However, having children, bills, and unwanted expenses, that money made will be spent quickly to cover all of the necessities, once again leaving the family in struggling circumstances just like the previous months. Another misconception is that “I know what it is like to be poor – during high school/college I ate ramen noodles every day and was barely able to pay my rent!” This misconception, one that Michael Darby brings up in his book *Reducing Poverty in America*, is one of the most common. However, the truth is, if you were able to attend a high school or college, there’s a chance that you were already being helped financially to do so, and if the circumstances were to become dangerous where your well-being was at risk, there was someone there to lend a helping hand whether it be your parents, guardian, family member, or even a friend. Most people relate these times in their life with enjoyable experiences as the

responsibilities at this point in your life are not comparable to those as an adult, especially an adult raising a family.¹²

It is a tough task to not mislabel the poor and impoverished. As many say, it can easily be classified as an unwinnable subject as many possess a pre-determined slant and bias towards the matter. However, it is important to note that no good can come from one being labeled or classified as poor. Almost all struggle to stay up-to-date with health check-ups and medications. Many cannot provide steady shelter. Others cannot feed children in their families. It is a unique life and one that no one should have to experience. There are many documented attempts at trying to solve this issue within the U.S. though most have not provided much success. The following information will cover current concepts that are being implemented throughout the nation.

2.2.3 Current Solutions to Poverty

Initiatives to reduce or perhaps end poverty in the U.S. have been pervasive in American social policies since the 1930s. The Great Depression caused a severe loss of personal property and widespread unemployment throughout the U.S., leading them to establish policies to alleviate these complications. President Franklin Roosevelt established the New Deals Programs which provided social security, unemployment insurance, and Aid to Families with Dependent Children (AFDC), marking the first time the government took responsibility for providing basic services to its citizens.¹² During the 1960s, President Lyndon B. Johnson introduced the War on Poverty legislation during his State of the Union address. This legislation was a response to a national poverty rate, which had reached an all-time high of nineteen percent.¹² The result of the speech was the passing of the Economic Opportunity Act. This act established the Office of

Economic Opportunity (OEO). The OEO was put in place to administer local federal funds in applications to battle against poverty.¹⁵

In William O'Hare's book *A New Look at Poverty in America*, he notes that poverty policies tend to change every 30 years as each generation tackles the poverty problem, making the 1990s the most updated wave of policies to aid the poor.¹² This indicates that now, 22 years later, we are more than half way through the current policies; the policies that are not providing any relief to the poor population. According to this cycle and the previous changes implemented, we are currently 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.¹²

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 him or herself 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 programs 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."¹² 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."¹² This preoccupation with financial assistance emphasizes the ease with which money can temporarily eradicate problems. In Darby's book, Douglas Besharov notes that welfare dependency has "taken on a life of its own", with 82% of individuals/families receiving aid that will last five years, if not more. Out of that 82%, it is noted that at least 65% will continue to receive aid for eight or more years.¹² Scholars who

criticize the current welfare system continue to articulate that the main issue remains that the present welfare system has little impact on raising the poverty line.¹² It is important to note that one-quarter of the poor population do not participate in welfare programs. 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 don’t have the ability to move those individuals out of the poverty situations they find themselves in.¹²

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 childcare they need in order to encourage the poor to obtain better jobs. Currently, President Obama stands behind the American Recovery and Reinvestment Act. This policy officially states that it is “broad investments to alleviate the poverty made worse by the current economic crisis.”¹³ However, the criticism of the policy is that most of its financial contributions are not truly investments (e.g., one of the initiatives to fight hunger includes a \$20 billion increase in funds allocated to the Supplemental Nutrition Assistance Program (SNAP), also known as Food Stamps). Though these finances being allocated to such services may be presently helping individuals, in the long run it is not providing those individuals with a way to be able to provide these necessities for their own families. It is simply taking into account that they do not have enough income, and responding by allocating funds to supplement the discrepancy. This never attempts to address the underlying problem of poverty itself. However, the Act does exemplify one positive investment. To increase job-training enterprises, \$3.95 billion is allocated to the Workforce Investment System (WIS). The WIS supports green jobs, youth and adult summer jobs, along with other opportunities. These types of investments, ones with future returns by using education to better the individuals’ futures show true substance and

promising outcomes. The issue with these funds is that they target only younger demographics that are usually without families to provide for. The Act needs to place focus on adults as well, as the older age group is where the largest percent of individuals in poverty can be found.

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.¹² Thus, 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.

2.3 THE STATE OF HOMELESSNESS

The most visible of the poor population are those that are homeless, living in the streets of crowded urban cities. Homelessness is a national epidemic, that effects millions of individuals throughout the U.S. Sources are not able to come to specific numbers of homeless individuals living on the streets for obvious reasons, but it is estimated that at anytime the number can be as high as 4 million.¹⁷ The discrepancy lies in 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.¹⁷ The years between 2009 and 2011, which were considered a time of economic crisis, homelessness decreased by 1 percent. However, numerous studies offer factual information providing evidence to back the proposed criticism of the decrease being a result from allocating immense funds to federal resources that aim to prevent homelessness and quickly re-house those who find themselves homeless. Many social scientist suggest this specific investment was allocated from President Barack Obama with the notion that presenting a decline in the homeless population to the American public would help an image of progress in the future presidential election.¹⁷

Economically, homelessness occurs when individuals are unable to pay for housing. This can be due to the fact of low income, housing costs, or both. In a demographic sense, anyone of any age can be affected by homelessness; however, there are groups of people who are at a larger risk than others. For example, “doubled up” individuals (i.e., those that live with friends, family, or other non-relatives) increased by 13 percent from 6 million in 2009 to 6.8 million in 2011. When looking back to 2005, this demographic increased by over 50 percent.¹⁷ In addition to people living doubled up, individuals recently released from prison and young adults who have recently been emancipated from the foster care system are also at risk of homelessness. The probability of a person in the U.S. to experience homelessness once in an entire year is 1 in 194.¹⁸

Homelessness has become an extreme issue in the U.S. Like poverty, there are no quick fixes to permanently solve the high homelessness rates, however, addressing poverty will also address homelessness as they are interrelated. The following information will address homelessness within urban areas, perceptions of the homeless, and also current solutions to high homeless rates.

2.3.1 Homelessness as an Urban Problem

Homelessness by definition is an individual’s lack of fixed nighttime residence.¹⁹ This lack of residence is the cause of the rise in homelessness within urban areas. As previously mentioned, white flight largely impacted the number of the poor living in urban cities, and consequently impacts the number of homeless living within urban cities. Author Doug Timmer identifies that the rise in urban homelessness has occurred because of the “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.”¹⁹ Individuals on the streets begging for others’ money and goods, panhandling, has increased the public awareness of this problem. In New Orleans, specifically, these individuals are visible in the masses, usually located around the French Quarter-downtown area, in the attempt to influence the visiting tourists into providing them with some type of relief.

2.3.2 Perceptions of the Homeless

In her book *Reckoning with Homelessness*, author Kim Hopper states that homelessness occurs due to a range of factors such as “scarce housing, poorly planned and badly implemented policies of relocation and support, dismal prospects of work, exhausted or alienated kin.”²⁰ The problem with trying to remedy the homeless condition is that there are misconceptions as to who are the homeless. Understanding who are America’s homeless populations will allow for future remedies, both long and short-term.

There are almost always negative associations when referring to the homeless, with most viewing them as “the wandering loner who may be an alcoholic or mentally disabled” and the “derelicts of society.”¹⁷ The homeless population today represents an extremely broad cross section of American society, ranging from young and old, single individuals and families, mentally ill and physically disabled, and able-bodied individuals. A volunteer employee who worked for the office of Catholic Charities, Hunter Scheller, in New Orleans, Louisiana, 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 the win the competition for housing in a tighter housing market.” As previously stated, many social scientists are looking at poverty and homelessness as a culture. Individuals who fall into these crises tend to embrace the “culture” that accompanies it. As they become accustomed to

this challenging lifestyle, they lose any recollection as to what it is like to be a stable, self-providing individual.

2.3.3 Current Solutions to Homelessness

The homeless population in the U.S. creates a large financial burden on taxpayers. It was estimated that collectively local taxpayers spend up to \$40,000 annually per homeless person.¹⁴ The majority of that money is spent on police calls, hospital visits and other social services for the homeless individual.¹⁴ Currently, there are six solutions to homelessness says author Diane Nilan.²¹ Each solution has its pros and cons. This section will provide the positives of each solution.

Trade Fairs for the Homeless - In 2004, advocates in San Francisco conducted an experiment. Renting a local convention center and persuading almost every community service provider in their city to establish a booth, they opened a trade fair for the city's homeless population. In addition to the long and short term housing programs available to the individuals, the program provided clothing, shoes, free phone calls, counseling, government identification cards, and additional everyday needs. The event offered free music, food, and even valet services for the individuals' shopping carts or personal transportation devices so they could feel safe roaming the numerous aisles. This program proved to be so successful that San Francisco now assembles the same event six times each year. The program's success was identified in many media outlets, inspiring 32 other cities to join and sponsor a "homeless connect day" as well.²¹

Raise the Welfare Rates - It is obvious that most people become homeless due to the fact that they cannot afford their rent. And though many hate the idea of paying higher taxes for welfare numbers to increase, the fact is that it is cheaper to help individuals pay their rent than save them after they fail and become homeless. Studies suggest that rates should be raised by fifty percent

while indexing them to inflation.²¹ It has been found that raising welfare rates by fifty percent would cost only about one-sixth of the government's recent budget surplus.²¹

Train Young and Old Workers - The most at-risk individuals (to become homeless) are those who are newly released from social institutions (e.g., jail, foster care). Most of these individuals lack basic employment skills, which usually leads to unemployment, if not homelessness. Vancouver has created an innovative program called "BladeRunners", which is a training program that is aimed particularly at at-risk youth. The program focuses on construction and interconnected trades. The program places young people on paying internships, allowing them to earn hands-on experience. The proposed project will supplement these types of initiatives as it aims at an older age group.²¹

Spread the Love - The best practice to attempt to solve homelessness allows and assists the individuals to return to their original communities (those they lived in before becoming homeless). Research indicates that individuals who are moved to "scattered site" temporary housing in their previous communities almost always find ways to reintegrate themselves back into mainstream society faster than those who choose the contrary. This reinforces the idea that homelessness within urban cities must be individually addressed and the solution must be targeted at allowing those to provide for themselves within their current cities they reside in.²¹

Buy a Few Hotels – If all of the temporarily homeless individuals in the U.S. were given enough money to pay for shelter and if all of the healthy homeless were moved to scattered-site housing, there would still be a large number of homeless individuals, those who suffer from severe mental illnesses and/or drug-addicts, who still do not have permanent housing. Since

these individuals are the hardest to house, it makes sense to house these individuals rather than continuously treat them on streets.²¹

Give Addicts Time to Heal – During the 2005 homeless census, it was found that more than half of the individuals who were contacted were addicted to drugs or alcohol.²¹ As previously stated, and repeated by those who work with the homeless, the population hardest to house are those who are battling drug and alcohol addictions. Thus, most of these individuals find themselves in repeated circumstances (e.g., detox centers, treatment centers, welfare housing, living on the street, and then back to detox centers). It was found that numerous amounts of addicts living on the streets have repeated this cycle more than ten times.²¹ Thus, it is obvious these individuals need another option if they ever intend to better themselves, such as time to recover at a center dedicated to this specific situation. Recovery houses are different from treatment centers as they offer group counseling and 12-step addict programs rather than a typical medical staff following treatment procedures. These recovery houses are a significantly less expensive route rather than permanent housing.²¹

Though none of these “solutions” have provided permanent results, each have had a positive impact in one city or another. With the identification of these six current solutions, the proposed project will supplement the current initiatives, creating the possibility of a more permanent solution. It will take into consideration the successes of the current concepts and implement those into a stable situation with the ability to put individuals on the right track through education without the constant struggle of once again reverting back to homelessness.

2.4 TODAY’S NEW ORLEANS

New Orleans has one of the highest crime rates in the US. In a study conducted by the US Accountability Office in 2007, it was proven with much research that high crime rates are a

direct result of high poverty and homeless rates.¹² It is obvious New Orleans continues to struggle with a high poverty and homeless rate. It is extremely important for this impoverished population to have the opportunity to be educated. Educated individuals, those that are capable of reputable work and earning themselves a respectable living, will less likely have the time to commit such crimes. Until these individuals become employed, eliminating the temptations of committing these crimes as they become more focused on earning income, these crime rate numbers in New Orleans will not drastically be reduced. Each year these rates are not reduced, the city will continue to struggle. There needs to be a plan to end this trend.

As previously noted, the only means of adult education within this area is Delgado Nursing School, Louisiana State University Medical School, and Tulane University Medical School, which are all facilities and services that are not offered to the disadvantaged individuals. Without educational resources readily available in downtown New Orleans, poverty and homelessness rates are less likely to diminish. Vocational schools have proved in the past to assist unemployment numbers in the positive direction.

The next section will state why there is a need for vocational education in New Orleans. It will then provide examples of current vocational education models.

2.5 THE NEED FOR ADULT EDUCATION

Scholars, as well as practitioners, believe that policies to aid the poor and homeless population must change within the next few years or struggles in these areas will continue to increase. There continues to be an emphasis on altering policies to engage this issue at the root of the problem instead of using money for temporary relief. The cycle of poverty clearly emphasizes that current policies are allowing for a perpetuation of poverty and dependence on governmental financial support. Understanding how important education is to breaking the

poverty and homelessness cycle can begin to shape new policies and social services that will begin to end the condition permanently.

In his book, author Michael Darby emphasized 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.”¹³ Currently, U.S. educational programs are aimed at helping impoverished children, neglecting the adults who usually take the larger burden from 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.”¹³

Providing these impoverished individuals the opportunity of being educated will shift the financial dependency off of the government and onto the individual, as they will now have opportunities to become independent when full-time employment is achieved.

2.6 VOCATIONAL EDUCATION

2.6.1 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 trade-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.²² 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.²³ 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, and to discover a satisfying role in an occupational area.²⁴ Instead of providing temporary 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.²² Vocational education is responsive to not only the needs of individuals, but to the needs of society for ending the cycle of poverty.

2.6.2 Vocational education models

Vocational education is not a new concept. There is evidence of federal support of vocational education initiatives dating back to as early as 1862.²² This specified educational structure is also not limited to the United States, but is a worldwide method for educating the workforce. The vocational education systems abroad, however, differs greatly from the vocational models in the United States. Vocational schools in the United States are either geared towards 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 of vocational education to transform an individual to contribute positively to society. 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.²³ 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. Germanic vocational schools rely on workshops to introduce the skills necessary for operation of equipment, as well as hands-on practice with skills. 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. 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. 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. Vocational education in all of the Nordic countries aims to provide the core skills necessary to succeed in society. 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. 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.²³

2.7 THE NEW AMERICAN VOCATIONAL EDUCATION MODEL

The U.S. should study Europe's two-tiered vocational education system in order to develop an adequate model for impoverished adults. Slowly, technical schools are gaining recognition within the American education system; however, the recognition has yet to include vocational education. Certain non-profit organizations have recently made a push for vocational education to be recognized for its rehabilitation programs. These programs give impoverished adults, or adults with disabilities, the vocational training necessary to begin working within a normalized society. Unity of Greater New Orleans is an example of a non-profit organization in New Orleans, LA, 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 14. The curriculum supports their need for not only vocational skills, but also life skills including money management, and basic education skills including English, English as a second language, reading, and math. 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.

CHAPTER 3: PRECEDENTS: VOCATIONAL SCHOOLS & SPATIAL EXAMPLES

3.1 VOCATIONAL SCHOOL PRECEDENTS

The design of vocational schools offers the opportunity for unique solutions, which systematize complex programs within one site. Unlike ordinary schools, vocational schools must organize multiple specialized spaces in a way that allows the building to be coherent, as it unifies many diverse disciplines under one single roof. The following vocational schools have been investigated with the intent to understand their various organizational concepts.

3.1.1 The Ohringen School

Behnisch and Partners designed the Ohringen School by utilizing the rural site while also emphasizing the curving and angular forms. The school is organized around a center hall that opens to an exterior courtyard. The courtyard, centrally located, provides the students and teachers with a meeting place at the most convenient of spaces. The curving building houses classrooms on the outer ring, and circulation and ancillary rooms on the interior ring. This design is a successful example of utilizing a central axis within a site. Because of the range in disciplines taught at vocational schools, it makes sense to have a neutral area within the site for common practices. The site being considered in this study does not house a large footprint like the Ohringen School, thus the concept of a neutral commonplace will be utilized (The Ohringen School can be seen in Figures 1 and 2).



Figure 1: Ohringen School – Site Plan²⁶

The Ohringen School is organized around a central spine. Unlike traditional spines used to organize programs, this space takes on a curved form.

3.1.2 Robert Morgan Vocational Technical School

The Robert Morgan Vocational Technical School in Dade County, Florida, is a high school for students interested in vocational education. The school also has designated time periods in which adults too can participate in vocational and technical education. The school is organized along a centralized mall. The vocational education programs, most of which are freestanding structures detached from one another, surround both sides of the mall. The architect choose to group the smaller programs, such as business accounting, data processing, business data, etc. together, whereas the larger programs such as commercial cooking and welding are located in their own facilities.



Figure 2: Ohringen School – Open Courtyard²⁸

This open courtyard space organizes the surrounding programs of a unique school (Ohringen) located in a traditional rural location. It utilizes curved and angular forms to create transition areas that become apparent to its inhabitants.

The idea of separating and joining programs with one another is a key concept when designing any educational facility. The programs, which are to be joined or adjacent to one another, must have a correlation with one another as well. This ensures that coherence is

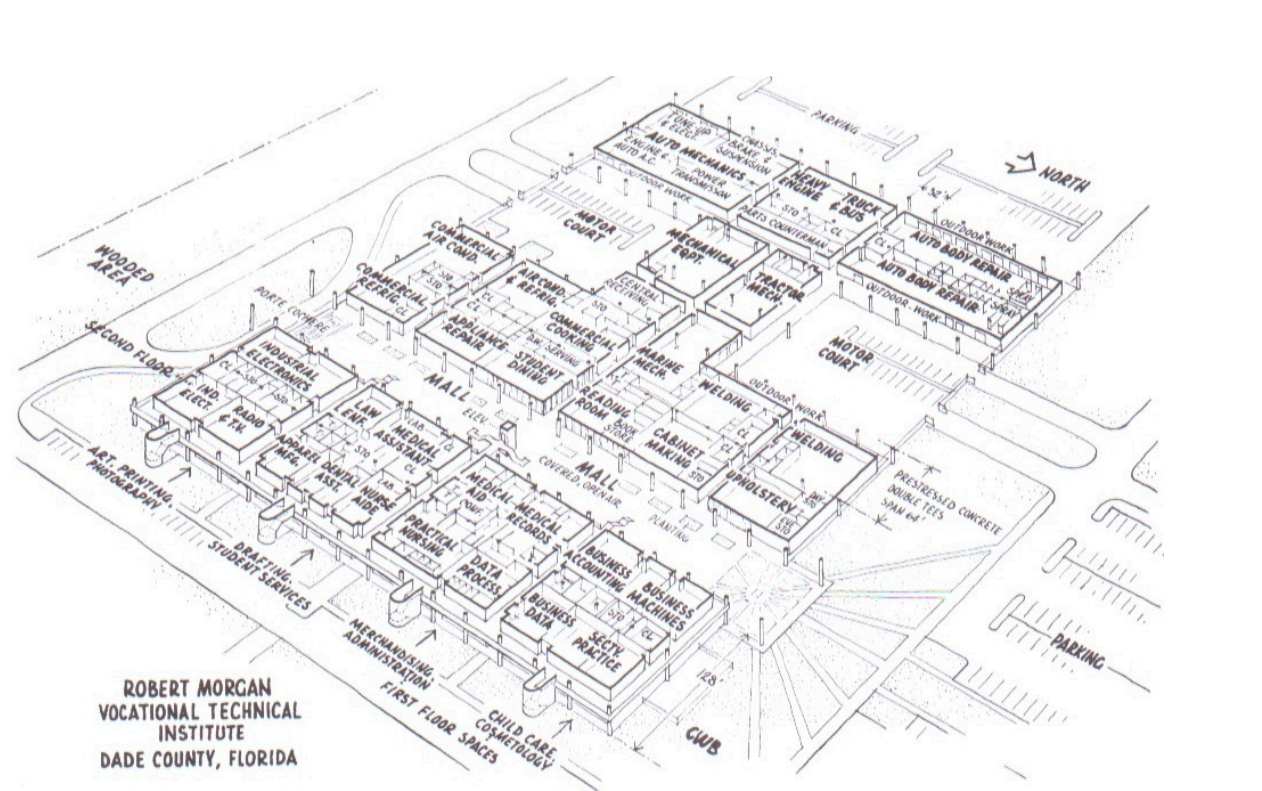


Figure 3: Robert Morgan Technical Institute – Program Plan²⁸

The Robert Morgan Technical Institute's programs are organized by individual structures. These structures are ordered along a mall, which runs throughout the entire width of the facilities.

3.1.3 Chelsea High School

Chelsea High School is a mixture of vocational education and liberal arts education. A long organizing spine acting as a mall separates much of the school's program, like the Robert Morgan educational facility. The various vocational programs are separated into four different houses. Each of the houses is capable of accompanying multiply programs at separate times. The other facilities on the site, those of which are mainly for the liberal arts students, are considered shared facilities. This concept of sharing facilities due to limitation in campus size is a unique, yet important one.

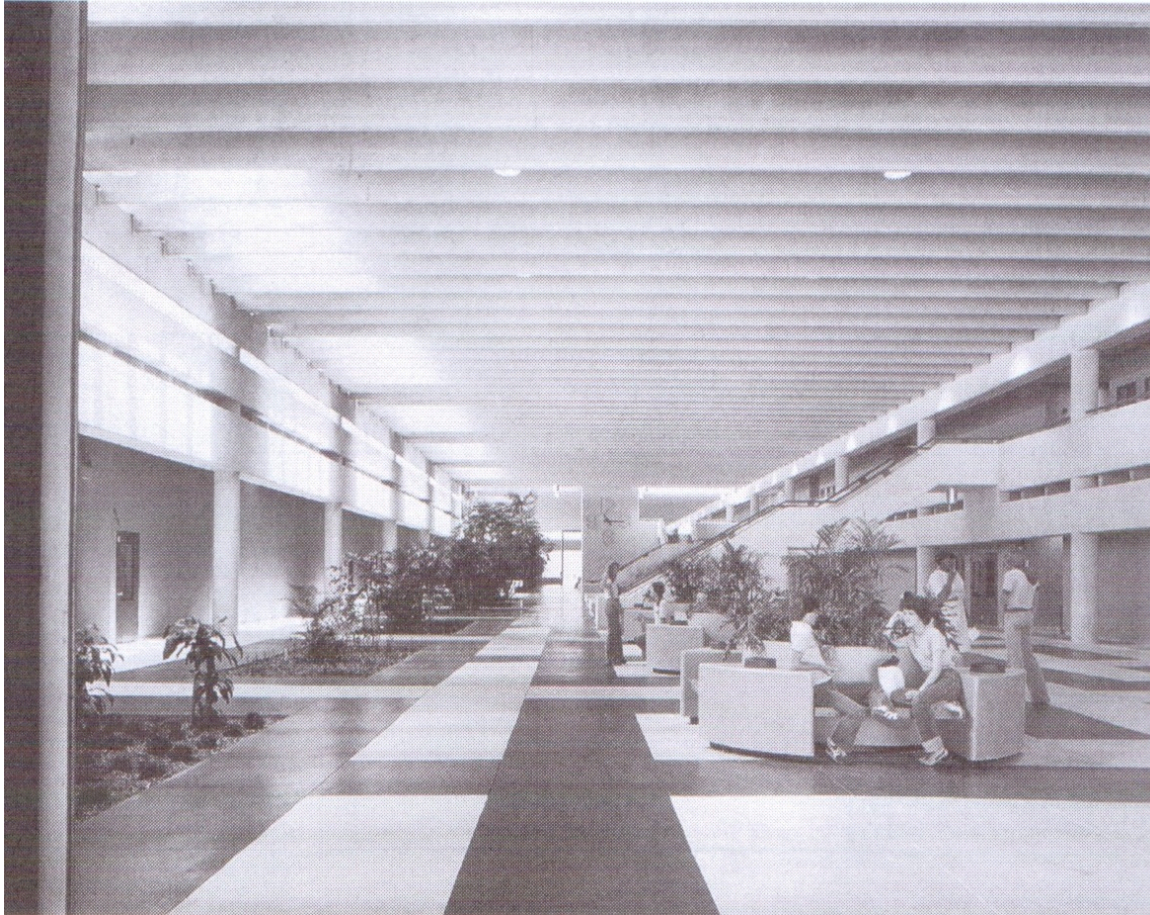


Figure 4: Robert Morgan Technical Institute – Mall²⁶

The Robert Morgan Technical Institute's mall runs the length of the campus and is a great element that creates a buffer between programs while also leaving a space for gathering.

Though the Canal Street site may not identically recreate this situation, it is important to identify the ability to share already programmed facilities.

3.1.4 Fort Collins High School

Fort Collins High School, though not a traditional technical or vocational school hybrid, is a great precedent. The high school was commissioned as new construction with one request to meet other than the traditional high school program.

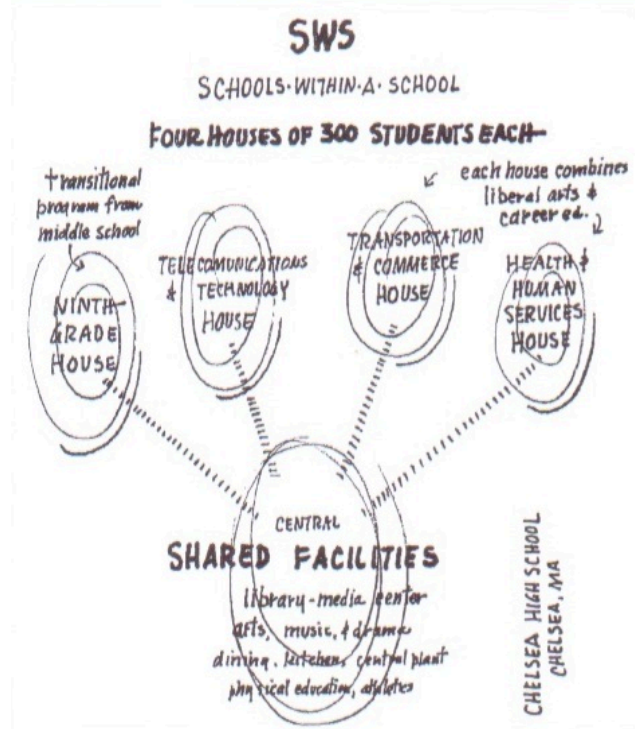


Figure 5: Chelsea High School – Building Concept: Shared Facilities²⁶
 The Architects of Chelsea High School based their design from the concept of “Shared Facilities.” This diagram illustrates that concept.



Figure 6: Chelsea High School – Elevation²⁶
 Though the popular design element of a central spine throughout the buildings was not a main consideration, it is evident that the architects wanted to separate specified programs and those that are shared. This can be seen in elevation.



Figure 7: Chelsea High School – Classroom “Houses”²⁶

The classrooms, known as houses each hold different career paths for the different student levels.

The city needed a community center. The Architects, Architectural Horizons and Perkins and Will, came together to create a design to bring not only students in the area to the school, but also the community. This concept will be applied to this project, as the facility will also engage with the surrounding community.

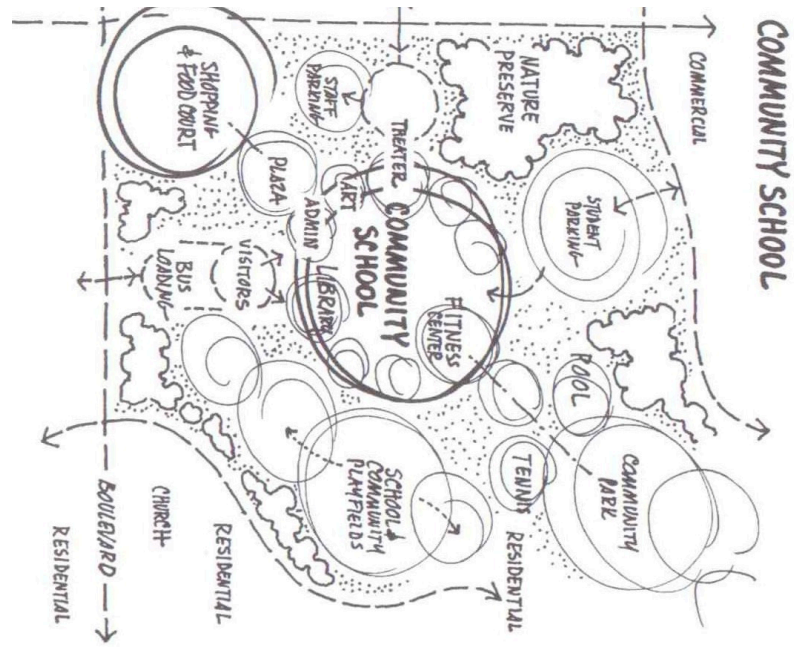


Figure 8: Fort Collins – Community School Diagram²⁶

The Architects for Fort Collins High School created this diagram to emphasize and illustrate just how a community and a school can work together.

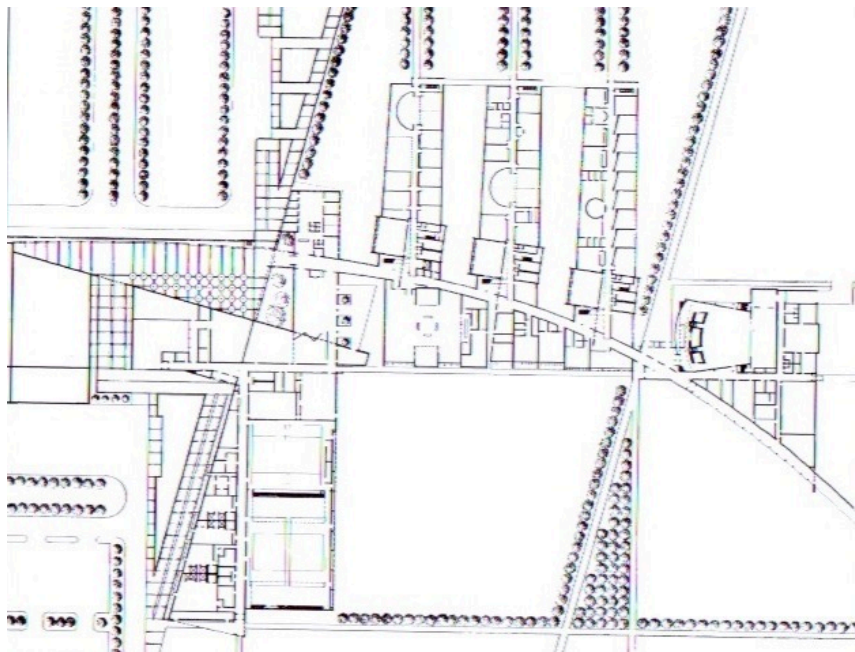


Figure 9: Fort Collins – Plan²⁶

The Architects for Fort Collins High School created this diagram to emphasize and illustrate just how a community and a school can work together.



Figure 10: Fort Collins – Community School Diagram²⁶

The Architects for Fort Collins High School created this diagram to emphasize and illustrate just how a community and a school can work together.

Each of these precedents holds unique and informative design decisions that will inform and influence decisions regarding the program and layout of the facilities within the existing site.

3.2 SPATIAL PRECEDENTS

The unique and diverse program that coincides with vocational education gives the opportunity for extremely rich spatial conditions. Rather than focusing only on how program affects specific spatial environments, it is always beneficial for designers to also consider how spatial conditions can influence program. Spaces can take on many different forms, giving off many different feelings to its inhabitants. The following spaces were researched in an attempt to understand how a space can influence an educational program.

3.2.1 Libraries

Libraries are a necessity in all educational facilities. They are the building blocks of learning and aid much of the research in today's educational community. It is essential in libraries designers allow for natural day light to enter into the reading and study areas, but not directly affect the stacks, as this can diminish the life of books due to direct exposure to sunlight. Figure 11 through 13 exemplify these conditions.

3.2.2 Cafeterias

Cafeterias are a necessity in any building that will house people for numerous hours at a time. In the case of the proposed vocational school, the cafeteria will play an essential role in aiding the participating individuals into a normal lifestyle, as many of them are not accustomed having food available on a regular basis.



Figure 11: The State Library of Des Moines³⁰

The Des Moines State Library was designed so day light can enter into the large atrium area where study takes place, however the stacks are out of the sun's waves and are lit by artificial lighting.



Figure 12: The New York Public Library³¹

The New York Public Library utilizes the technique of having the stacks located along the same walls as the windows, out of sunlight.



Figure 13: The Richmond Hill Library³²

The Richmond Hill Library places the reading and study tables adjacent to the windows while the stacks are set back.

The cafeteria/café in the vocational school must be an informal space, unlike traditional school cafeterias, where the individuals will be able to eat, relax, and communicate with one another. The following spaces exemplify those characteristics.

3.2.3 Atriums

Atriums can take on many different shapes, sizes, and overall forms. An atrium's design usually correlates with the program and use of the building. In the case of the vocational school, the only available atrium space will be located behind the buildings.



Figure 14: Ferris State University³³

This cafeteria space expresses more of a café experience, where its students can come and relax.



Figure 15: Unknown University³⁴

This cafeteria space takes on a neighborhood theme to make its' occupants feel more tranquil.

This space will be glassed in and will use one of the existing exterior facades of the building located at 600 Canal Street. In order to be able to adequately design this space, like conditions must be studied. Figure 16 and Figure 17 exemplify this concept.



Figure 16: Harvard Medical School Atrium³⁵

Harvard actually uses this unique atrium space as a café. This concept has proven to be successful.

3.2.4 Communal Spaces

Like cafeterias, communal spaces act as an area for students to relax and unwind from the stresses of education. With the targeted demographic enduring a more complicated lifestyle than that of an average individual, stress levels are assumed to be higher. Communal spaces must be open areas that invite conversing and relaxation while architecturally breaking the monotony of corridors while also providing places of repose along circulation paths. Figure 18 and Figure 19 exemplify these qualities.



Figure 17: Wellesley College³⁶

The Science Center at Wellesley College had an atrium addition to the building, which used and existing brick and stone façade.



Figure 18: Ohlone College in San Francisco³⁷

This communal space is large and invites the inhabitants to sit and leisure. The materials and color palette used give a warm and inviting feeling.



Figure 19: Nido Student Living³⁸

This communal space is a bit smaller and is centered on recreation and activities. The space is lit well by daylight and is of light colors to give an open feel.

CHAPTER 4: SUSTAINABILITY

4.1 ADAPTIVE REUSE

Adaptively reusing a building enforces the idea in which our nation is trying to push, that of moving in the “green” direction (i.e., being more conscious of the ecological footprint resulting from consumer use). In this thesis, the proposed project will not only push for this sustainable aspect, but also move further in regards of the community impact. With the site having such a central location, reusing the existing buildings lends to a positive impact on the surrounding community. This concept will be explained in depth within this chapter.

Adaptive reuse is not a new practice. It is conventionally defined as the process of adapting old structures for new purposes. When this idea is coupled with influencing an urban community, allowing for the building’s site and its components to also be reused, you are then introducing a larger response, which has the ability to affect its surroundings by providing those struggling with a means to better themselves, such as the case of vocational education facilities. For communities to fully engage in adapting to a more sustainable conceptual direction, the reuse of existing sites, parks, landmarks, and streets must also be considered. When this happens, adaptive reuse has the ability to truly be expansive. For this investigation, the adaptive reuse concept will be used to give back and influence the community by offering sustainable growth through the economy, community value, and historical importance of the site.

Economically, it makes sense that the existing buildings on the site can be reused. If a building’s core, including materials and structure can all be salvaged, much money can be saved for the owner. The owners, the Montwanies, a family who moved to the south to open T-shirt and souvenir shops in the busy city of New Orleans, own the shop on the first floor of the two buildings along Canal Street. This shop will stay as they contribute positively to the tourist

economy of New Orleans. This is important to the aspect of adaptively reusing the buildings as in situations such as these, it must be identified by the owner/designer where it is appropriate to keep existing programs rather than re-programming the entire buildings' spaces. This topic will also be examined, as the role of the tourism industry will play large role in the educational program's influence on the participants of the vocational school.

Community value is also relevant when discussing the reuse of a building or site. The retail space along Canal Street holds high community value as it supplies many of the tourists and locals with the necessary souvenirs. From gag gifts to sporting apparel, whatever the occasion, the Montwani's shop continues to flourish and give back to the economy. The infamous Canal Street is known for its unique retail experience. As its location falls between the French Quarter and CBD, it is adjacent and near numerous hotels housing New Orleans' visiting guests. This location makes the site fundamental, as it is located in the densest area of the city populated with tourists. The insertion of an educational facility by adaptively reusing an existing site and its buildings, which are within the heart of a tourist economy, will contribute to the community by involving an overlooked underserved surrounding population consisting of homeless, uneducated individuals. These large populations of homeless people make up much of the present density along Canal Street and the surrounding neighborhoods; however, they do not contribute to the adjacent tourist economy. To educate these individuals will only increase community value and importance. They would then become a new consumer for community retail to market towards as they become able to contribute financially as work stability arises.

When discussing historical importance, it is not hard to make a case for Canal Street. There are not many other streets in New Orleans that are more recognizable. The buildings along the street date back to the early 1800s, which display numerous material typologies, creating a

unique atmosphere that must be experienced to understand. This is one of the few areas in New Orleans that was not affected by the flooding created from Hurricane Katrina; however, many of the nearby surrounding areas were greatly affected. With that said, there are quite a few buildings that have been left unattended due to depopulation, which can be contributed to the extensive time individuals were not allowed back into the city after Hurricane Katrina. Though most are structurally sound, many continue to slowly deteriorate from lack of attention. Understanding this, it is important to hold the original vernacular of the street and uphold the famous architecture, which dates back to the late 1800s. Any means to protect and restore these beautiful buildings will only benefit the historical aspect of the city of New Orleans. These beautiful buildings hold a street dialect that expresses a strong cultural language. These buildings, especially those that are nationally recognized, such as the case in the Morris Building (600 Canal Street), are extremely important in preserving the image of what Canal Street is to the City of New Orleans. The proposed project will make an effort to fully pay homage to the unique built environment created from years and years of expressed culture.

Adaptive reuse is also looked at as an extremely effective way to reduce urban sprawl. New Orleans, Louisiana, a city which is slowly rebuilding its inner core after the devastation Hurricane Katrina caused in 2005, is in dire need to restore and reuse old existing buildings to prevent continued sprawl into surrounding suburban and flood prone neighborhoods. The city must recognize that it is extremely important to preserve the tourist culture of these dense areas, as this is the backbone to the success of the city. By reusing the existing fabric within these areas, Canal Street in particular, allows for these future developments to contribute to preservation efforts.

4.2 INFLUENCE ON COMMUNITY

Sustainability does not only correspond to the built environment. Communities continue to be influenced positively and negatively through sustainability. These influences affect communities at different areas, which can be separated and analyzed in four major categories: Human Health, Environmental Quality, Social Justice, and Economic Vitality.

4.2.1 Human Health

Human health plays a large role within community sustainability. The health of the human population must be maintained and safeguarded in order for the community to remain sustainable. This statement is confirmed by considering a community where the majority of the population is sick and unproductive, or a community where the death rate surpasses the birth rate. In both cases, it is obvious the state of health will not withstand the progression of a community over a long period of time.

Community level sustainability is directly correlated to the size and health of the citizen population. If a community is healthy, it can (1) better care for the environment, (2) contribute to economic growth, and (3) foster social parity. At the individual level, the populations can ensure that valuable economic resources needed for other aspects of life, such as (1) economic development, (2) social welfare, and (3) environmental protection, continue to be readily available rather than being diverted to health care or an unproductive workforce.

This directly correlates to the demographic being studied. Homeless and impoverished individuals tend to live very unhealthy lifestyles. Whether it be due to lack of nutrition, or simply because of unfavorable choices leading to drug and alcohol addictions, these people must begin to live in better health if they have a plan to better themselves in the years to come. Health is the first step to recovering from such a detrimental lifestyle. The program of the facility will engage

with its students' health issues by offering health care options with guidance from physical and mental assistance.

4.2.2 Environmental Quality

Environmental quality is a topic that must be addressed when referencing sustainability. To truly define sustainability, one must account for environmental quality as well as its relationship with the other components of sustainability. With this understanding, we can look at 'Environmental Sustainability' as the balance between manipulating the environment to meet as many human needs as possible while preserving the natural processes of the environment. To visualize this concept of community environmental quality, reference Figure 20.

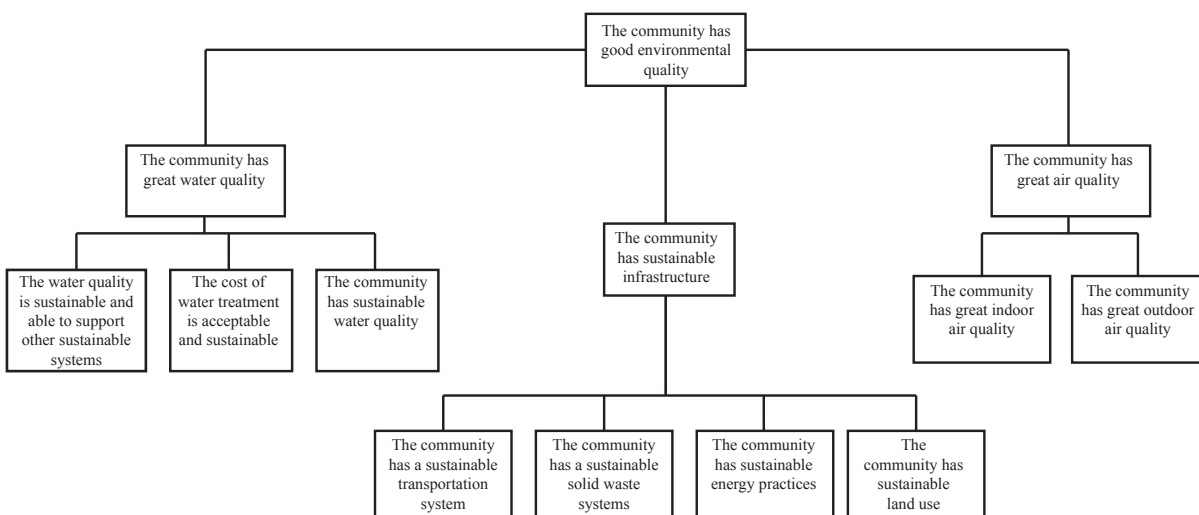


Figure 20: Sustainability - Environmental Quality

4.2.3 Social Justice

Social justice in a sustainable sense can be defined as the proper assertion of a distribution of social advantages and burdens.²¹ In other words, the general population must share an equally measured quality of life, with differences being satisfactorily justifiable. Thus,

there should be no group within the population that received any significant benefits or difficulties related to human health, representation, education, etc.²¹ To successfully obtain social justice within a community requires the absolute dedication of the distribution of “goods and bads” within the entire community. Social justice is not only desirable in itself, but social dissimilarities are the main causes of community and environmental degradation.²¹

The poor and homeless are excessively affected by such problems. In a recent study conducted in 2010, governmental data revealed that Black Americans are 80% more likely than Caucasian Americans to live in areas that pose potential dangers (e.g., industrial areas causing industrial pollution).²¹ This directly affects New Orleans as the black community represents 60.2% of the entire city population.³

These inequalities (social) also exist in medical treatment and governmental representation. Instead of these situations, a truly “equal” society provides a just and satisfactory quality of life to all its parties as it ensures that all individuals have access to an equal market, workforce, and healthy environment. The impoverished population is classified by many as a lower social class, unable to provide for themselves. As their self worth and independence grows, the possibility of reaching a more just society increases.

4.2.4 Economic Vitality

Economic vitality is the result of a sustainable economy. A sustainable economy provides the monetary resources to necessarily support the community as a whole. This support consist of a taxation system that provides a sufficient base to run community services and assistance as well as a wage system that provides the community members with sufficient wages, ultimately providing capital needed for community growth as well as those needed to support the current needs of the community.¹⁹ Without this sufficient taxation system, a community would struggle

to successfully provide its inhabitants with parks and recreations, police stations, and numerous other public amenities. Thus, without a sustainable economy, communities are incapable of providing residing citizens with social welfare programs, along with the citizens being unable to afford to donate earned wages to altruistic causes.

Considering these conclusions, it can be noted that an abundantly sustainable community has undeviating impacts on social justice and human health, with a direct connection to the renewable use of environmental resources. Thus, it is distinguished that the economy of a community influences almost all aspects of sustainability, proving that economic vitality should be considered a major factor in creating a sustainable community.

Architecture has the ability to influence the economic vitality of a community, especially at the lowest level, the individual. A built space has the power to work from the lowest level to the highest. Designed space allows for an influential atmosphere and experience. That experience, education in this case, can then positively impact an individual's life beyond intention. As one's health betters, their social eminence follows. It is after that where they began to contribute to the community through progressive economic and environmental vitality. These influences are cyclical just as the life cycle of a building. This is where scholars have developed the terminology for green, sustainable living. The impacts and influences go beyond recycling goods and reusing buildings.¹⁹ Living sustainably is a process, which must continuously be fed to keep moving in the right direction. The homeless and impoverish demographic of New Orleans has the ability to engage in this process; it begins with education.

CHAPTER 5: COMMUNITY BUILT THROUGH PROGRAM

5.1 VOCATIONAL EDUCATION'S ROLE

With many variations in vocational school models, there are numerous ways to design the vocational school curriculum. As the curriculum of the school is determined, specific spatial conditions follow. With this understanding, the design, must try to maximize square footage use and make spaces interchangeable and able to fulfill more than just one program. Using this concept allows the vocational school to serve a greater and more diverse population. While planning spaces for education, especially vocational education aimed at adults, it is extremely important to incorporate spaces for “learning life”. These spaces are what contribute to individuals’ ability to learn the needed life skills to be able to successfully engage with the encompassing community. Author John Thompson advocates that the necessary foundation of vocational school begins with education in traditional subjects such as math, science, communications, social sciences, and then is followed by more specific trade-based training.²⁴

The educational fields offered and how that education transfers to the encompassing community, including both services for the public and private sectors, characterize vocational education facilities. The school establishes a relationship with partnering businesses within the community to gain from their current available resources and to be able to potentially employ and/or provide future services to those educated within the vocational school. This connection the school builds with local businesses and organizations allows for the students to experience a more formal work and business atmosphere. This relationship also gives the opportunity to obtain private funding for the vocational school while offering services for the local community. For example, the retail spaces on the first floor of the school can be training grounds for those interested in retail sales, management, and tourism. The wages earned from the working hours in

the retail store could go towards funding the vocational school. Architecturally, leasable space located within buildings has proven to increase the value of that building within the community.

The vocational school and its students' success are also contingent on vocational guidance. It is important to provide students with realistic information about their education and employment prospects, along with necessary guidance to help them identify their existing and potential skills. Guidance is especially essential for impoverished adults as it gives them the opportunity to identify existing skills, which were gained at an earlier time in their life. This realization plays a large role when an individual lacking in confidence is trying to establish stability within their community. Therefore, guidance spaces are included in the necessary programs needed within the facility, allowing for the students to be able to receive the additional services that are needed.

With all of these needed spaces for specific programs, there must be a designed curriculum so all programs run smoothly when transitioning from one to another. This thesis will not specifically address the curriculum, but will only suggest that the traditional two-year vocational school curriculum be the curriculum of choice. This curriculum allows the students to choose after two years between moving on to job placement beginning new or better careers, or continuing their education at other schools. This is important to this project as it influences the layout of program within the facility.

This curriculum will plan for small classes with no more than 25 students per class. More applied courses will be around half this size to ensure safety. Fewer students per class allows for more intimate connections between the students and teachers. The main differences between these classes will be the classroom sizes.

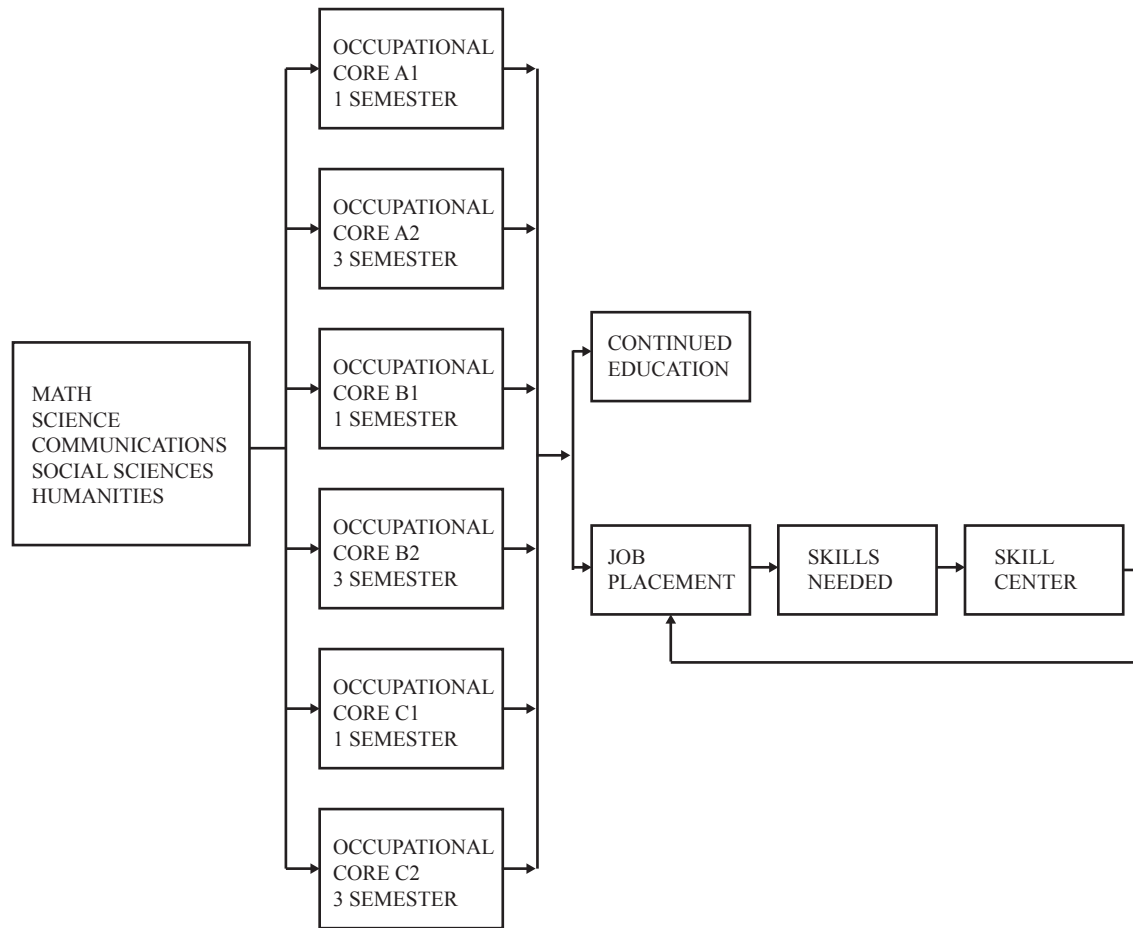


Figure 21: 2 Year Vocational Education Curriculum²²

The more applied courses will require a much larger area, whereas the lecture courses, which hold more students, will be smaller in size but house students in a traditional classroom atmosphere with personal desks.

5.1.1 A Community Center

As previously discussed, the vocational school will act also as a community center that not only educates the students enrolled, but also provides services for the surrounding community. The facility will provide both public and private spaces for school and community functions. The community characteristics, defined by author Prakash Nair, are suggested as follows:

- Located in a place that is close to the heart of its community;
- Ties to community businesses, organizations, industries and recreational amenities as a way to extend the school's learning potential beyond its own four walls;
- The design of the school itself as a welcoming place for the community;
- Extension of school hours so that facilities are open early in the morning and at night;²⁵

This model reduces the feeling of a closed educational facility. It is not just a facility that opens in the morning, invites students to be educated, and then closes in the evening like a business; which is the current model for most American universities. Instead, this project will incorporate the public and private demographics, two very different and distinct social classes. However, by blurring the line between private and public spaces, security issues arise. This is why only a few spaces can be used as 'shared' spaces and some must be 'student spaces' only.

The design of the vocational school incorporates the ideas of a community school. The facility can be seen as a meeting ground for the 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. Author William C. Brubaker introduces this theory through a diagram that illustrates the ability of community schools to reach out into the community while the community simultaneously has the ability to use the facilities at the school. This diagram can be seen in Figure 22.

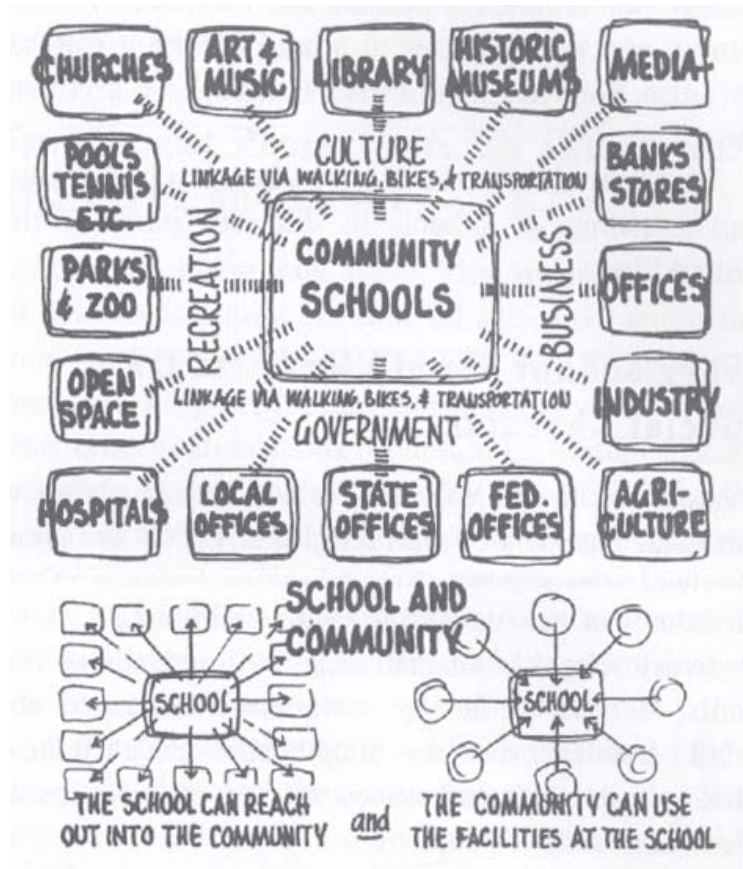


Figure 22: Diagram of Community School Theory²⁶

This school will enforce in its design the theory introduced by Brubaker as well as the ‘emerging trends’ he describes. These trends are:

- Flexibility of space allowing for variety in learning methods.
- Specialized schools that respond to specific curricula and disciplines.
- Community school as a center for citizens of all ages, providing a variety of social services.
- Recycling outdated buildings for new educational uses.²⁶

These trends are influencing factors in program determination and will be addressed once again further in this chapter.

5.1.2 Program Objectives

The primary goal of a school is to educate its students, regardless of what demographic the students represent. When designing a school, especially a vocational school, to not only educate individuals, but to positively affect a community to rebuild and move in the right direction, programs and spaces become much more important. By incorporating these individuals into the tourist-attracted regions of the city, they are allowed to engage with the community through the program-community interactions that will be available to them (these will be addressed).

This vocational school is designed using Gillie's theory of "Narrow Based" vocational programs, which is simply defined as programs that individuals choose, which are field specific. These programs offer courses that are more oriented to specific-field job training while still offering light general education. This is the best model for this investigation because of the unique tourist and business environment in which it is situated. This demographic has been involved with some form of education earlier in their childhood lives, and by lightly bringing back the principle concepts, they will be able to recall this knowledge without covering all aspects. This will all be accomplished while gaining their major knowledge in the specific field they choose. A diagram of this theory from Gillie's book can be found in Figure 23 (the author has revised it).

The school's facility will provide spaces for all of the necessary programs. This includes job-specific learning/training centers, life skills learning, mixed common spaces where students can come to relax and dialogue, and even hands-on shops and laboratories for the trade specific classrooms/work areas.

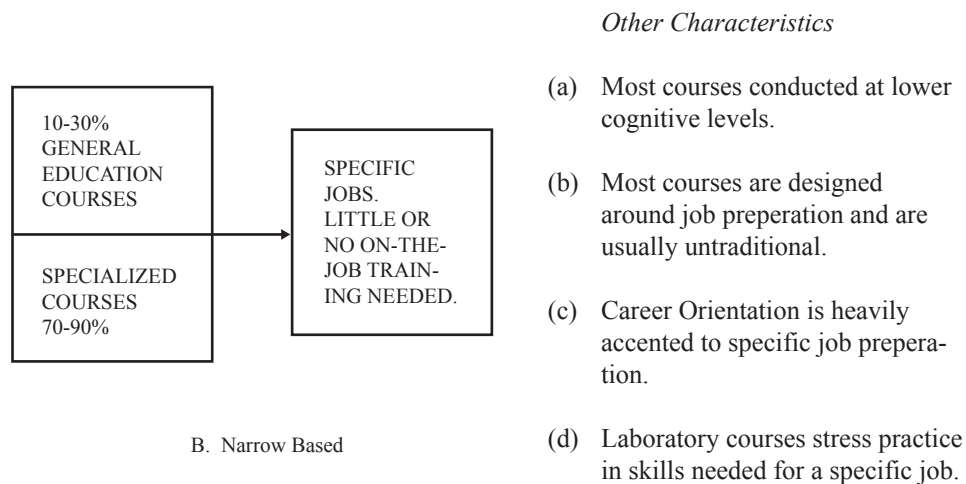


Figure 23: Narrow Based Theory

The students will have the opportunity to choose their specific field/trade they enter. These fields can be seen below in the diagram. These available programs offered are automotive technologies, building and construction technologies, computer technologies, culinary arts, childcare, landscape and turf maintenance, maritime, and tourism. These fields were selected to not only represent traditional vocational programs, but also take into account the community, as the intention is to allow the individuals to be educated in fields that can allow for employment within New Orleans and the immediate surrounding economies. More specifically, the tourism, maritime, and culinary fields directly relate to the city's most dominating economies.

5.1.3 Program Description

Provided below is the facility program. Size, relationships and overlaps follow each major programed space. Relationships to the curriculum are also noted.

Building Entrance (1,250 sf) - The vocational school will have one main entrance. This entrance is for the students and public. This main entrance is along Canal Street. The students, public, and visiting guests will utilize this entrance.

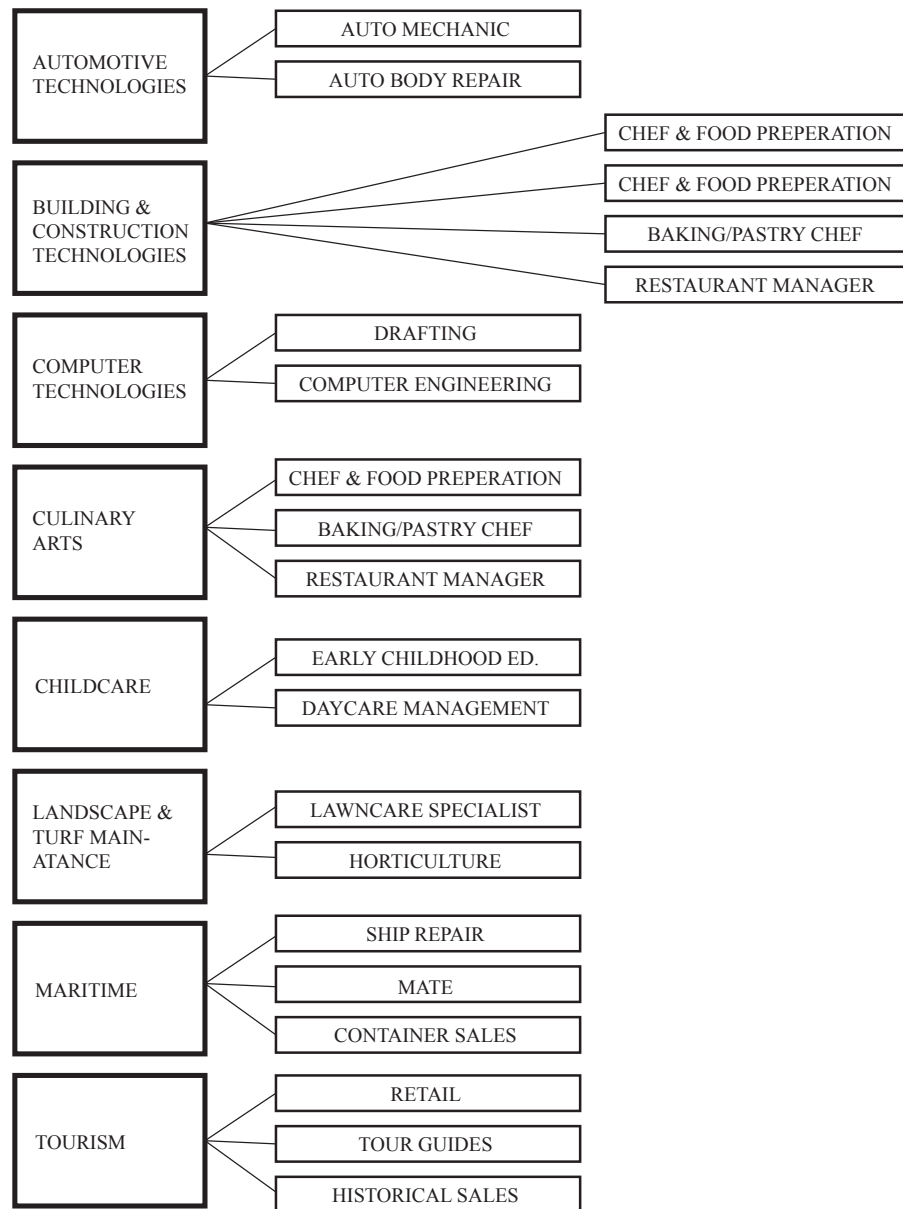


Figure 24: Vocational School Programs Diagram

Courtyard (4,000 sf) - The courtyard area is located behind the facilities between the surrounding buildings. It utilizes the commonplace interior courtyard style that is conventional in New Orleans. This space will be lit through natural light and will extend vertically organizing the building through section.

This space is fundamental to the learning environment as it gives the inhabitants an informal meeting space to relax and converse.

Automotive & Building and Construction Technology (10,720 sf) - The Automotive Technology and Building and Construction Technology programs will share a common workspace. Though these are two completely different fields, the needed workspaces that are similar and can adjust from one discipline to another. These spaces will be located adjacent to the street for vehicular and large material traffic to be accommodated in the shop through service elevators. The Automotive Technology program will involve diagnostics and repair of common automobiles and their components. Ventilation will be a necessity.

Table 2: Automotive Technology

Auto Mechanics Lab	5,300 sf
Auto Mechanics Classroom	600 sf
Auto Body Lab	3,000 sf
Auto Body Classroom	600 sf
Teacher Storage	200 sf
Equipment Storage	800 sf
Personal Storage	220 sf

When Automotive Technology is not in session, Building and Construction Technology will follow, using the same space. No personal belonging will be able to be left and the storage spaces will be divided into two, one for each discipline so tools, parts, etc. do not get mixed.

Table 3: Building and Construction Technology 1

Carpentry, Masonry & Welding	
CMW Lab	5,300 sf
Equipment Storage	400 sf
Personal Storage	110 sf
Teacher Storage	200 sf

Table 4: Building and Construction Technology 2

Mechanical, Electrical & Plumbing	
MEP Lab	3,000 sf
Equipment Storage	400 sf
Personal Storage	110 sf
Teacher Storage	200 sf

This space will be a large open area, representing the atmosphere of workshops. By allowing the students to learn in environments similar to real-world experiences enables a much smoother transition after graduation.

Computer Technology (3,000 sf) - As New Orleans continues to see entrepreneurship numbers increase, open positions for computer technology continue to grow. Knowing how these computers operate, being able to design programs to make them more efficient, and even have the capability to repair damaged or outdated computers will only benefit the students of the vocational school to be better prepared for future work. Students in the Computer Technology program will learn computer network systems, software applications, web-development, data processing, computer design-repair, and computer based drafting. This space will be an open working environment. Individual computers will be available to the students, however the work completed will be saved on individual student folders on a shared server. The space must provide daylight and space for students to take breaks from their work.

Table 5: Computer Technology

Computer Technology Lab	2,000 sf
CT Classroom	600 sf
Equipment Storage	100 sf
Personal Storage	150 sf
Teacher Storage	150 sf

Culinary Arts (6,000 sf) - With such a strong industry in New Orleans, the Culinary Arts program will provide students with the ability to learn applicable techniques in the culinary trade along with restaurant management. A community restaurant will be the focal point of this program. It will be adjacent to Camp Street located on the lower floor of the building. This location is fundamental as dense populations of tourist travel down Canal Street daily and will pass the restaurants signage and identifying information. The open cooking space, which is not located behind the community restaurant, will also serve the public for after-hours cooking courses. These courses, along with the community kitchen, will aid in the finances needed to keep the vocational school open year round.

Table 6: Culinary Arts

Restaurant	2,000 sf
Culinary Arts Lab	2,500 sf
Dry Storage	500 sf
Freezer	100 sf
Cooler	100 sf
Bakery	500 sf
Personal Storage	150 sf
Teacher Storage	150 sf

Childcare (5,820 sf) - The childcare program educates individuals so they can pursue a career in childcare services. This program will double as another income gaining program through a day care center for the surrounding neighborhood. The program will be mainly located on the 7th floor of the 600 Canal building. This site was chosen due to the fact that an outdoor play area will be created on the green roof system located on the roof of that building. It is expected that the community-offered childcare services would stay busy as the impoverished population tends to be encompassed of large families, including numerous small children.

Table 7: Childcare

Indoor Day-Care Center	3,000 sf
Classroom	500 sf
Small Kitchen	200 sf
Personal Storage	70 sf
Teacher Storage	50 sf
Rooftop Play Area	3,000 sf

Landscape and Turf Maintenance & Maritime (4,450 sf) - The two programs Landscape and Turf Maintenance and Maritime will share the same spaces, but will be occupied by only one program at a time. The Landscape program will educate the students on lawn care and horticulture, preparing them to work with a landscape company or pursue the idea of one day opening up a small business in lawn maintenance. The Maritime program will offer courses in ship repair, mates, and container sales. Both of these industries, maritime especially, are dominant in the New Orleans economy due to the warm climate and high import/export action that occurs at the port of New Orleans, respectively. Educating individuals in these fields will almost ensure the possibility of future employment after the educational experience has been completed (i.e. graduated).

Table 8: Landscape and Turf Maintenance

LTM Lab/Classroom	3,800 sf
Equipment Storage	400 sf
Personal Storage	150 sf
Teacher Storage	100 sf

Table 9: Maritime

Maritime Lab/Classroom	3,800 sf
Equipment Storage	400 sf
Personal Storage	150 sf
Teacher Storage	100 sf

Tourism (4,870 sf) - The tourism industry is the largest industry in the downtown/Central Business District Area of New Orleans. The vocational school will offer a tourism program, which educates individuals on retail and historical sales as well as conducting tours throughout the city. The tours curriculum will be classroom studies as well as real life experience. The income from the tours conducted will feed back into the schools financial system. The retail stores located at the first level of the 600 Canal Street building will provide sales revenue along with student/employee income, which will also feed back into the schools financial system.

Table 10: Tourism

Retail Store	4,100 sf
Classroom	600 sf
Personal Storage	100 sf
Teacher Storage	70 sf

Library (4,200 sf) - The library will act as an educational resource with books and quiet study rooms, as well as a computer lab. The computer lab will be open to all students who register with the library to gain access. Unlike traditional libraries, books will not be available for check-out and must be used during library hours, which will extend into late evenings.

Table 11: Library

Stacks	3,000 sf
Quiet Rooms	700 sf
Librarian	100 sf
Computer lab	400 sf

Lecture Hall (9,500 sf) - The lecture hall is one of the vital components, which serves as the link between the students and public. The hall will also serve as a community center.

Table 12: Lecture Hall

Auditorium	7,000 sf
Lobby	2,000 sf
Projection Room	250 sf
Storage/Dressing Rooms	250 sf

Cafeteria/Café (5,600 sf) - The cafe space is where the adult students are able to eat and interact daily. Not only will lunch be served like tradition schools, but morning breakfast will be offered, along will small take home meals for individuals and their families. The kitchen used to prepare the meals is the same kitchen that prepares the meals for the restaurant. Due to restaurant demand, the student meals must be prepared during “light” hours of the restaurant.

Informal Communal Space (1,750 sf) - Informal communal spaces, along with the atrium, will be available on every other floor starting on the second floor. They will be furnished with tables, couches, and will be located on outer walls to let in natural daylight and give views to the always-electric Canal Street. They are student only spaces, and will provide the students with the ability to interact and converse with the other students. This is fundamental as this demographic tends to not have much informal interaction with other individuals in the same social situation that they face.

Building Maintenance (2,000 sf) - Like all buildings, maintenance is required to prolong the quality and condition of the building. There will be a maintenance office to receive all maintenance requests, along with a janitor closets and storage rooms.

Table 13: Building Maintenance

Maintenance Office	200 sf
Janitor Closets 10 @ 50 sf	500 sf
Storage Rooms 8 @ 100 sf	800 sf
Heavy Tools	500 sf

Administrative Office (1,800 sf) - The administrative office will be the running helm of the large school. It will handle all applicants and process all necessary paperwork. This office will be located in the main entrance of the school. The front of the office will be a reception area that acts as the entrance into the entire building for the public and visitors – unless entering into the retail, restaurant, or day care centers directly.

Guidance Office (500 sf) - The guidance office will be located near the main entrance next to the administrative office. There will be two guidance counselors present at all time when the school is open. These counselors are a necessity to a demographic pursuing future careers.

The existing spaces are typical code compliance areas, which consists of 14 restrooms (2,800 sf), mechanical rooms (6,348 sf), and circulation (16,020 sf) to encompass the entire facilities square footage total, which is approximately 91,628 square feet.

5.2 THE ROLE OF THE PROGRAM IN NEW ORLEANS

This school's program was designed so it could be adapted to any site with only slight modifications adapting the community specific program fields to meet those of the community in interest. In order to test the role of the vocational school as a community-building facility, a site in New Orleans, Louisiana was chosen. The site is along the famous Canal Street, located near the Mississippi River. The program brings an opportunity for job training to support the city's on-going initiatives and contribute to a change in the high rates of homelessness and poverty. With dense diverse neighborhoods in the downtown New Orleans area, a foundation for a community-based vocational school will be provided and the positive impacts will flourish to the surrounding area. In this context, the program and site of the school will be able to reinforce one another, creating a stronger sense of community. For example, individuals that graduate from the vocational school will then move to career encompassing full-time employment in the local

industries (i.e. tourism, maritime, etc.), which in turn bring not only the community to higher value from the individual aspect, but also from the community-wide aspect as the economy has the ability to once again flourish.

In an architectural sense, the site, unique facility, and design are well suited to contribute to such a distinctive area by bringing forth the importance of not only bettering the community through a socio-economic intervention, but also bettering the community through a sustainable intervention by reusing existing significant buildings located on such an identifiable site to re-solidify the superior built fabric. This intervention will enforce the strong cultural importance of this space and elevate the community value once again to near pre-Katrina levels.

CHAPTER 6: SITE

6.1 SITE DETERMINATES

The New Orleans vocational education school is aimed at solving a larger problem than just that of New Orleans's. Its goal is to provide a model for "like cities" to improve homeless and poor population numbers. However, such a project cannot succeed without the proper support from the community in which it has been sited. Certain sites demand specific criteria to ensure success. To select the proper site within New Orleans, a specific criterion was generated from studies on struggling communities. This criteria is as follows:

1. Concentration of Poor and Homeless Individuals

The urban area must have dense concentrations of poor and homeless individuals in order for a significant change to actually be observed (i.e., dense population will have larger populations of poor and homeless, therefore the probability, or possibility of impact will be larger).

2. Public Transportation is Already Present

To try and establish a school system for impoverished individuals without public transportation will prove unsuccessful (i.e., the individuals will not be able to travel to the site). New Orleans's public bus transportation system along with its trolley car transportation system is available to all individuals.

3. Buildings Must be Sound and Represent New Orleans Heritage

The main building, located at 600 Canal Street, was designed by famous southern architect, Thomas Sully, and is located on historic Canal Street (i.e., the buildings have the ability to pay homage to the built environment and original culture).

4. Diverse Population Must be Present

New Orleans is known for its creole culture, which in short simply means, a “mixture” of different elements that make up one. The population, regardless of social status, is very diverse (i.e., diverse populations create unique atmospheres – accepting atmospheres – capable of accepting change).

This criterion led to the selection of the buildings located on the corner of Camp and Canal Street. The site will pay homage to the community while the community helps encourage its growth through its many outlets.

6.2 NEW ORLEANS, LA: A CITY OF OPPORTUNITY

New Orleans, Louisiana is a unique place. It is a diverse, strong cultured community-driven city. Locating the vocation education school in the city holds the precedent for other similar cities such as Chicago, New York, and even San Francisco.

New Orleans is a major United States port and the largest city and metropolitan area in Louisiana. It is approximately 350 square miles in size.²⁷ According to the 2010 U.S. Census, the population of the city is 343,829.²⁷ The population of the metropolitan area has a population of 1,167,764, making it the 46th largest metropolitan area in the United States.²⁷ The city is located in southeastern Louisiana, running directly adjacent to the Mississippi River.

The proposed site for this investigation is located along Canal Street, the threshold between the Central Business District and French Quarter. This site is near the river and many of the most famous tourist attractions within the city. Figure 25 illustrates the central placement of the site within the numerous neighborhoods in the New Orleans Metropolitan area. This central placement is fundamental in the ideology of implanting such a drastic programed facility, which exemplifies community growth in the face of the surrounding population.

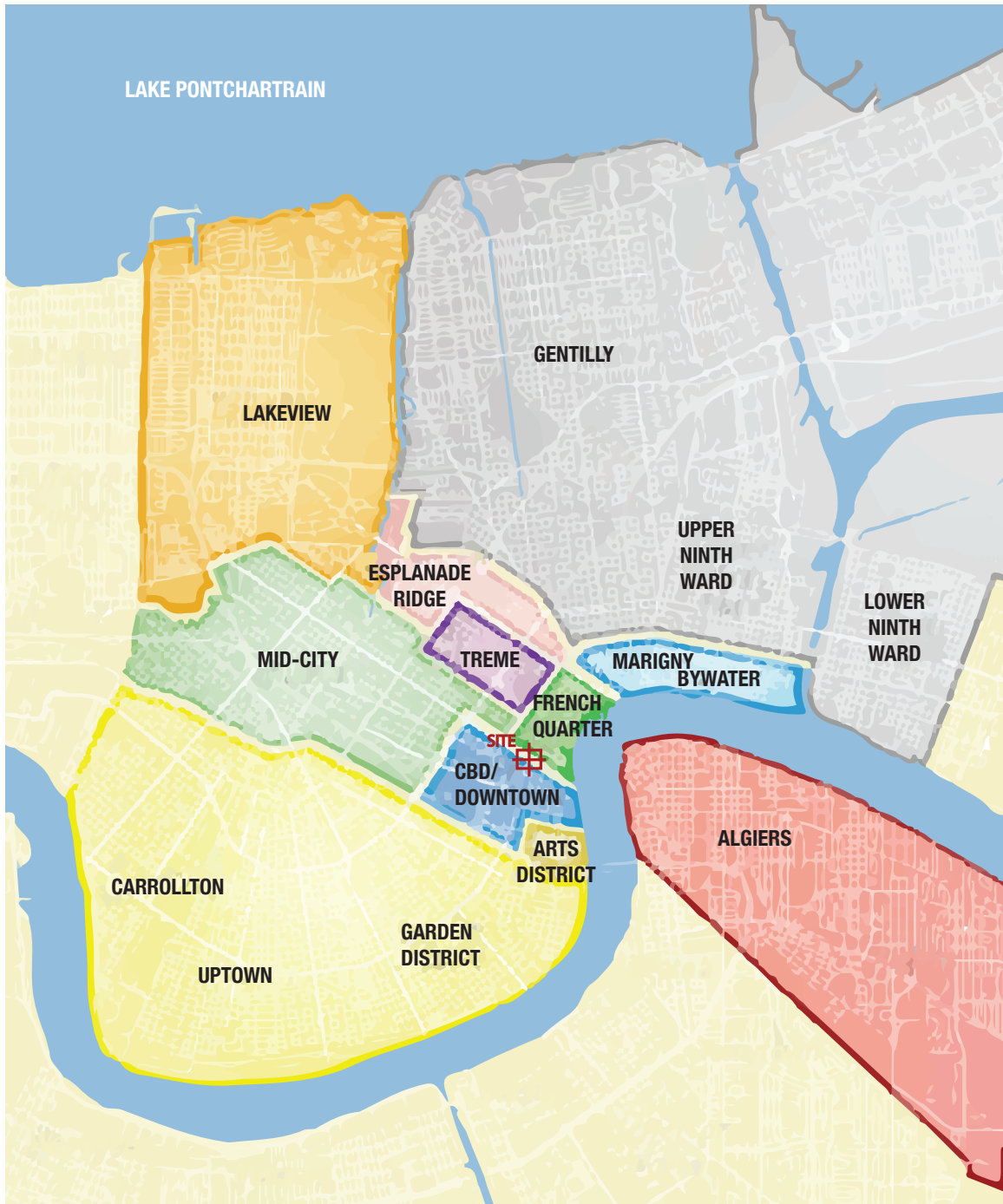


Figure 25: Site Location with Surrounding Neighborhoods

Figure 26 is a detailed map that illustrates the site within its threshold position between the CBD and French Quarter to better understand the street placement of the site. The full site is

composed of three existing buildings, two along Canal Street and one wrapping the corner along Camp Street.



Figure 26: New Orleans Detail Map (Adapted from [27])

This area of New Orleans is mainly known for its tourism industry. It is composed of numerous restaurants, hotels, casinos, etc. After Hurricane Katrina hit in 2005, this and the surrounding area became a place where large portions of the city's homeless live and roam. Providing educational opportunities will give the city of New Orleans the chance to lower these

numbers and provide its permanent residents with opportunities to better their lives as previously stated in an earlier chapter (Chapter 4: Community Built Through Program).

6.3 CANAL ST: A BUFFER BETWEEN TWO NEIGHBORHOODS

The Central Business District / Downtown area in New Orleans is a vibrant place. This neighborhood was chosen because it has the diversity and infrastructure needed to support the vocational school. It is an area with a rich history that allowed for a diverse group of people, building typologies, and a strong sense of community. There are several bus stops and trolley stops, making this area very easily accessible citywide. This area can be defined as the “Heart of the City” as public transportation and city organization (i.e., river, streets, etc) flow into this one central location. Figure 27 simply outlines the immediate context of the site along Canal Street.



Figure 27: Arial Map: Dashed ²⁹

6.3.1 Residential Typologies

The CBD and French Quarter neighborhoods directly surrounding the site have a fairly consistent mix of housing-style typologies (i.e., material palettes). High density, luxury apartments as well as mixed-use apartments are dispersed throughout the neighborhoods. There seems to be a predominant use of traditional brick in the residential typologies, however, slowly new materials such as metal panels, steel, and architectural glass are beginning to be introduced to give a more contemporary feel (See Figure 28).

6.3.2 Commercial Typologies

The commercial-style typologies in the neighborhoods directly surrounding the site range from small tourist-aimed local businesses to large hotels and chain stores. Most of the commercial buildings hold the same traditional brick and stone clad facades and material palettes as the residential buildings (See Figure 29).

6.3.3 Institutional Typologies

Along with commercial and residential buildings, institutional facilities and their style-typologies can be found on Canal Street and the surrounding neighborhood. The material palettes vary depending on the program of the building (See Figure 30).

The CBD and downtown neighborhoods compromise a large area of the city of New Orleans. The Bywater area – North of the site, the Mid-city area – West of the site, and the Warehouse district – South of the site, surround the two neighborhoods. Canal Street is the buffer between them, creating a grand central axis along the widest street (officially classified as a street) in the United States.



A brick and stone clad luxury apartment building on Gravier St. near Canal Street.



A plaster and stone clad small residential apartment building on Gravier St. near Canal Street.



A painted stone clad small apartment building with retail on the first floor located on Canal Street.



A large painted stone clad single family home on Natchez St. near Canal Street. Single family homes are rare in this area.

Figure 28: Residential Typologies



The Sheraton Hotel located on Canal Street. A newer building using glass as its main material on its facade.



The red painted stone clad of the Marriott Hotel located on Canal Street.



PJ's Coffee located on Canal Street has kept the original detailed architecture of the plaster and stone front facade.



Adler's Jewelers located on Canal Street has also kept the original detailed architecture of the plaster and stone front facade.

Figure 29: Commercial Typologies



The UNO Technology Center high-rise on Canal Street. Its materials are glass and stone clad.



The stone Tulane University School of Health and Tropic Medicine building located on Canal Street.



The Audubun Insectarium located on Canal Street very near the project site. This building's main material is \neq grey sand stone.



The Joy Theatre on Canal street is currently being refurbished. The existing brick building is being plastered in select locations.

Figure 30: Institutional Typologies

The selected site along Canal Street can be described simply as the “Heart of the City” within New Orleans as it falls in the middle of many unique organizational areas. These surrounding

areas have a direct connection to the site as the public transportation (i.e. Streetcars) is provided to those who do not have the luxury of having private transportation. The following figures (Figure 31, Figure 32, Figure 33, and Figure 34) acknowledge the significance of the site and its location within the city.

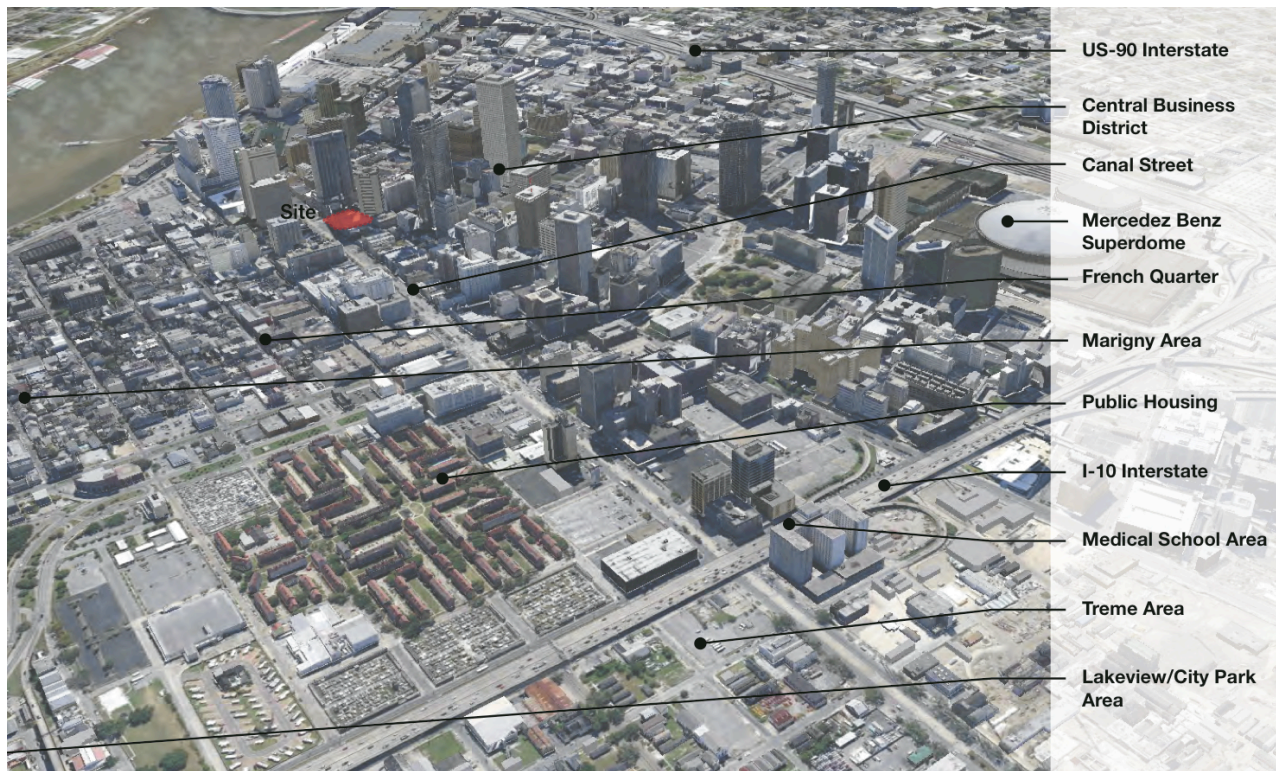


Figure 31: Site Aerial

This aerial photo exemplifies the notion that the site is located in the heart of the city. It is surrounded by numerous neighborhoods with several agendas (i.e. tourism, maritime, residency)

6.4 PROJECT SITE: 600 CANAL STREET

The Morris Building and the two others adjacent on the selected site provide a unique opportunity for re-development. Located in the heart of the CDB/Downtown area, the three buildings wrap the West corner of Canal and Camp Street. This project site will also use the abandoned and damaged rear building that is adjacent to the 600 Canal Street building along Camp Street.



Figure 32: Site Significance

This photo denotes the significance of the site by identifying major conditions and places around the site and how they interact with the site.

With the site being located directly in the middle between the two surrounding neighborhoods (the Central Business District & French Quarter), it has the ability to serve both demographics and respond to both materialistic typologies, which were investigated earlier in this chapter. This adds to the uniqueness of the site selected. As previously noted, this area can be looked at as the “Heart of the City”. It engages with the surrounding communities as a hub of interaction between tourists and locals, providing public transportation and city organizational efforts, where the aim is to funnel individuals into one key location.

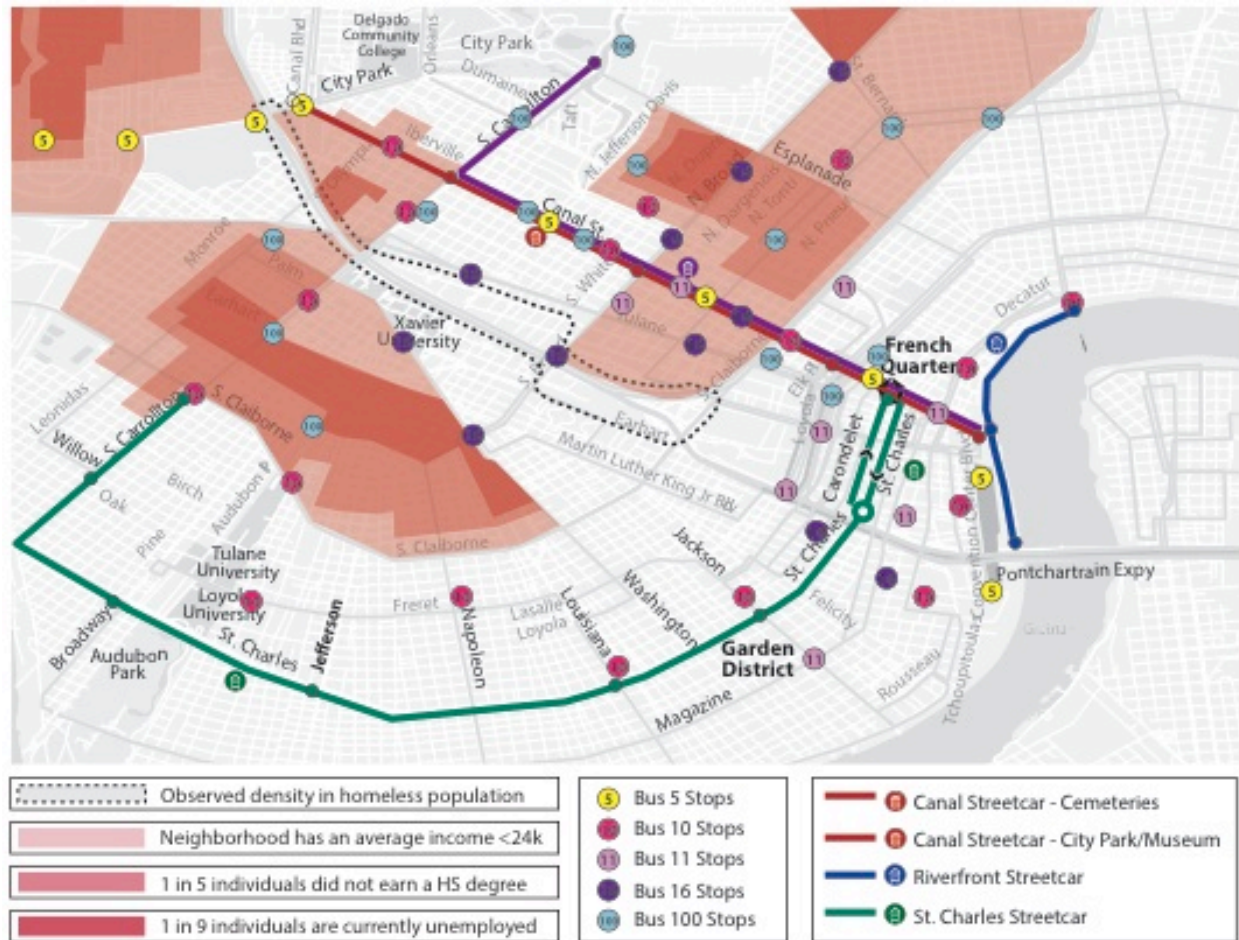


Figure 33: “Heart of the City” Connection

This figure examines the connections from outer-lying areas of the city into the site. It also identifies the density of struggling surrounding areas. These connections are extremely important and vital to the success of the school as needing individuals not living near the facility are provided transportation to and from their homes.

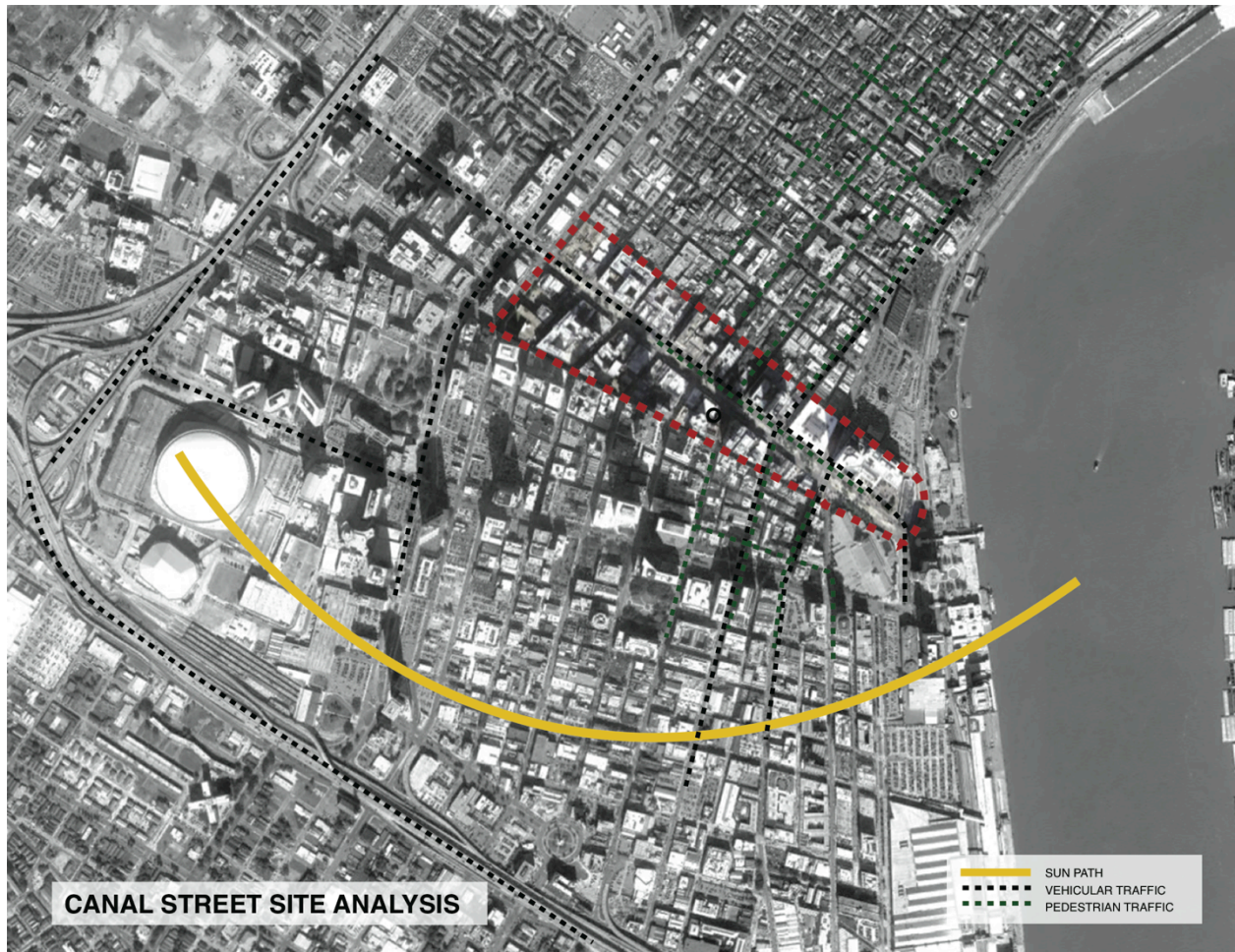


Figure 34: Site: Sun Path & Traffic

This aerial photo identifies the sun path, which correlates to the site. It also recognizes the vehicular and pedestrian traffic flow throughout the site and surrounding area.

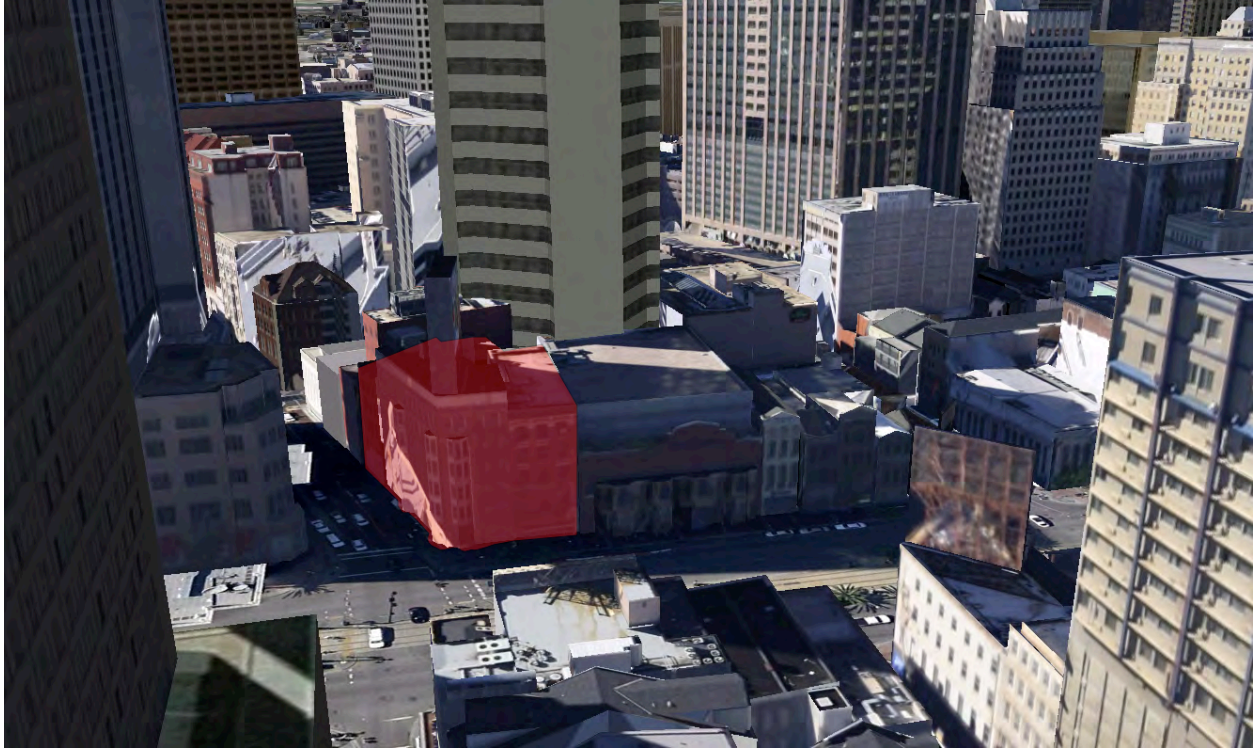


Figure 35: Site: Buildings

This figure shows the three buildings included in the full site. This encompasses two along Canal Street (one on the corner of Canal and Camp Street) and one along Camp Street.

CHAPTER 7: CONCLUSIONS

7.1 N.O., LA VOCATIONAL EDUCATION FACILITY

The vocational education facility must interact with New Orleans and its impoverished inhabitants in a way that stimulates and encourages them to want to be educated to better their lives. Architecturally, a facility with such great intentions must be addressed externally and internally. Externally, the facility must engage the street. It must blend in with the urban fabric, creating a comfortable atmosphere, but also a recognizable one. Figure 36 illustrates a section cut through Canal Street. Though some conditions are exaggerated, the urban wall on each side of the street is visible as it locks in the public transportation and pedestrian walkway routes (i.e., cars, streetcars, sidewalks).



Figure 36: Street Section

This condition can also be analyzed as the threshold between the exterior and interior spaces. With the façade of the building acting as this threshold, the material palette cannot be determined until the spaces, both interior and exterior, are defined. For this project, the focus of

the building response will be on the first floor interaction. This floor not only engages with the local community through the impoverished demographic, but also engages the community through retail space and a restaurant, which aims towards visiting tourist and locals. However, before investigating the first floor interactions, the entire building facades must be examined.

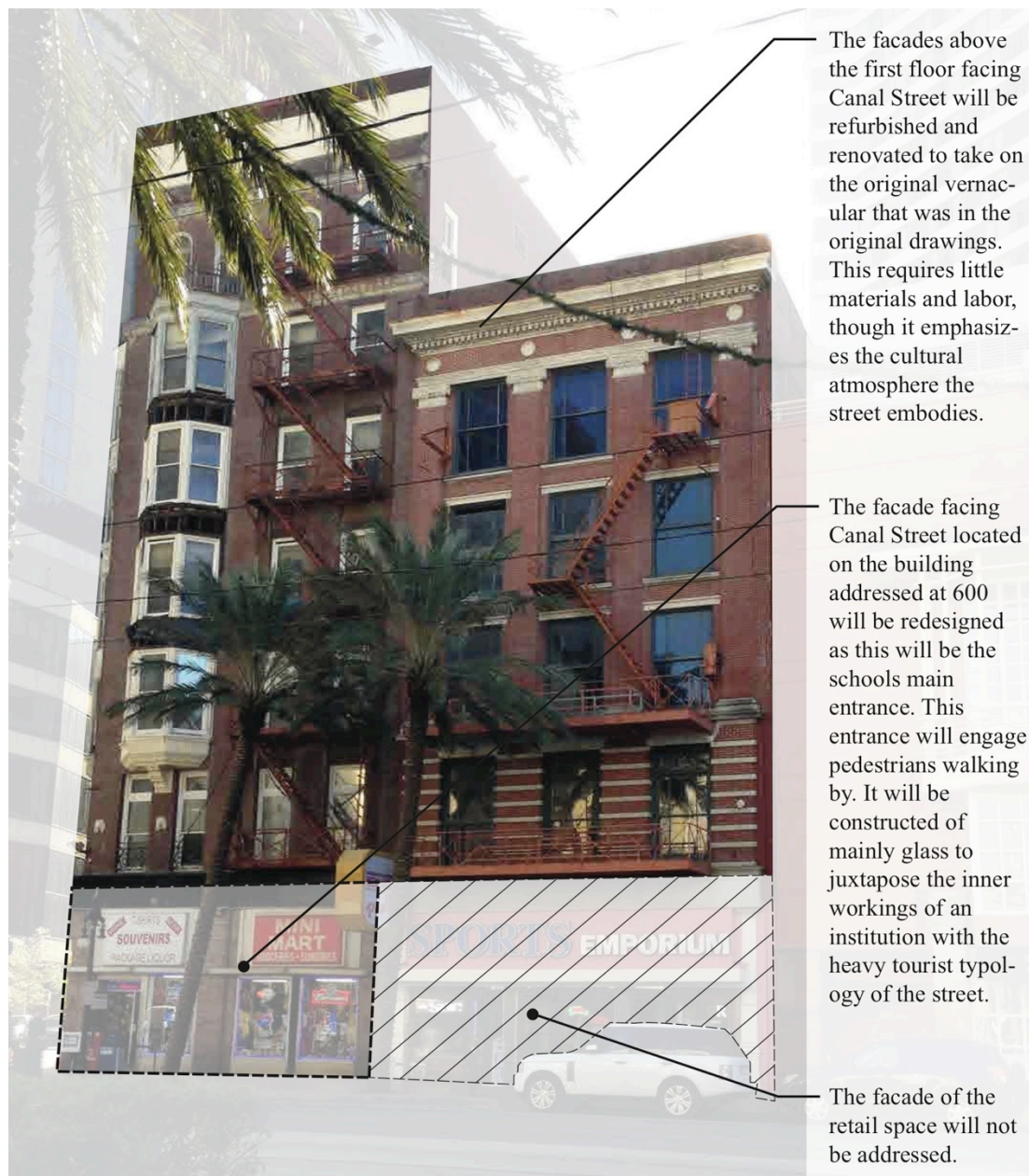


Figure 37: Façade Investigation 1



Figure 38: Façade Investigation 2

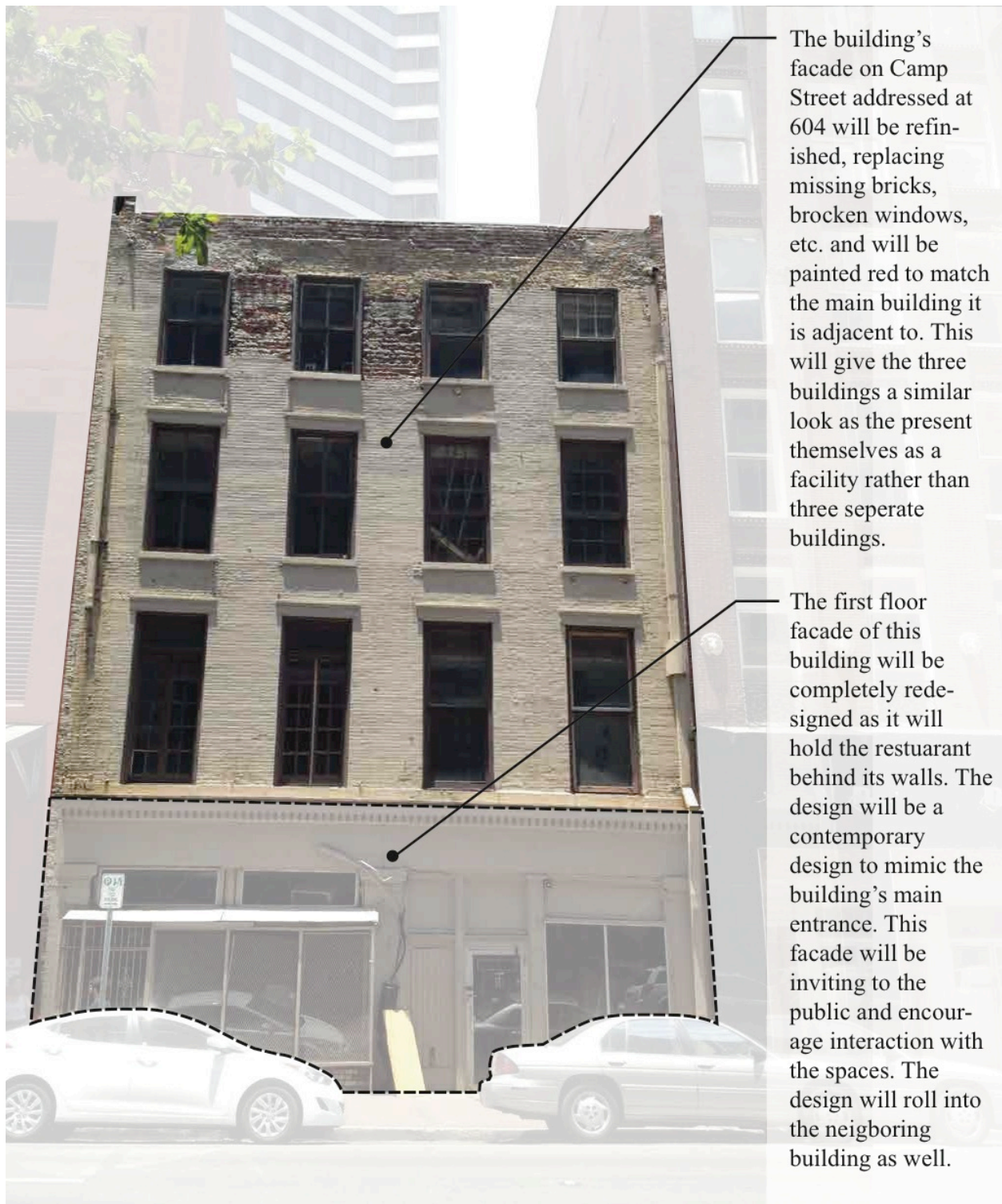


Figure 39: Façade Investigation 3

To further investigate the façade-program interaction, the first floor of the facility must be analyzed. Figure 40 diagrams the wrapping of the first floor façade and how those

corresponding interior spaces are defined. It is found that the separation of the public and private spaces occur further within the building. Understanding this, it is apparent that unique design decisions must be made to signify the different spaces.

This significance in spatial property change will be made through the use of materials. As the facility represents the notion that struggling individuals are being offered services to better themselves, the material palette will represent the same. In other words, the newly designed exterior 1st floor façade will consist of polished, clean materials such as treated and painted wood, treated steel, and clean, clear glass. In contrast, the interior material palette will consist of the same materials, but will be in their raw, original state. By creating this unique setting, the juxtaposition of the two stages of the materials represent and provide the encompassing atmosphere of a raw, unfinished state progressing and growing into its finished and polished state (i.e., individuals graduating from the school, moving into the community workforce, providing permanent housing for themselves.)

The following subsection will identify the specific facility programs, the spaces they encompass, and how those spaces interact with one another. It should be noted that the interior material palette for the following facility floors will resemble the same interior material palette defined within this section for the first floor.

7.1.1 Full Facility Program

As noted in chapter 5 (section 5.1.3 Program Description), multiple programs must work within one collective space. Education facilities are great at exemplifying this and this model will not fall short of what others have been able to achieve.

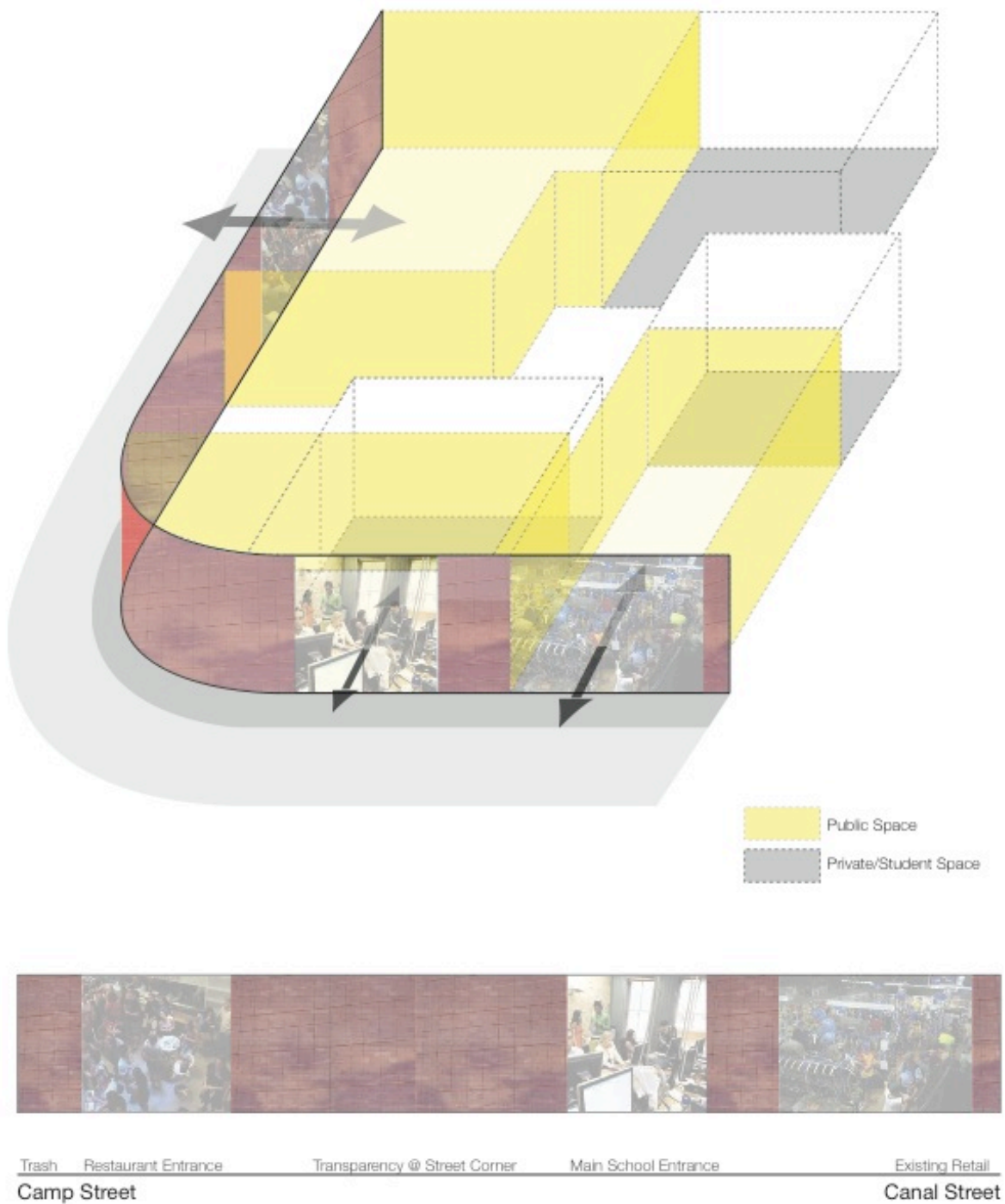


Figure 40: 1st Floor Facade-Program Interaction

Floor by floor, the following illustrations will show specific programmatic elements of the facility and how they intertwine with the larger picture of the building acting as a whole.

First Floor - The entrance to the building is located on the first floor adjacent to Canal Street. This space is grand and encompasses New Orleans style artwork and media to accentuate the tourist experience. However, when moving through the main entryway, strict educational programs exist.

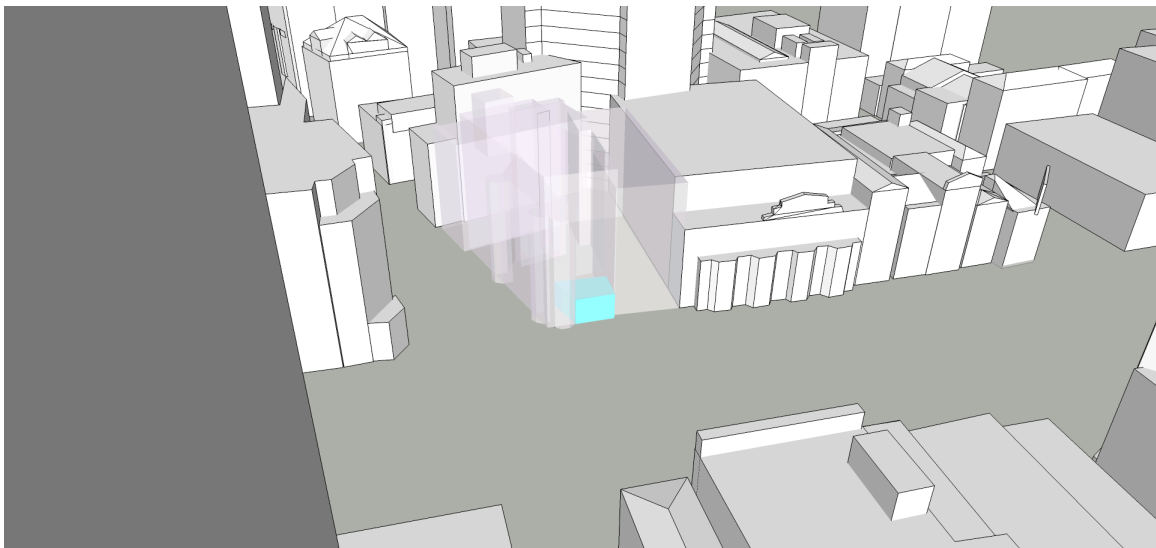


Figure 41: Main Building Entrance

The administration and guidance offices are located on the first floor directly adjacent to the entrance. This space is a private space, not available to the open public.

The restaurant and culinary arts program is also located on the first floor. It is open to everyday patrons and also serves as a classroom for students who have chosen to participate in the program.

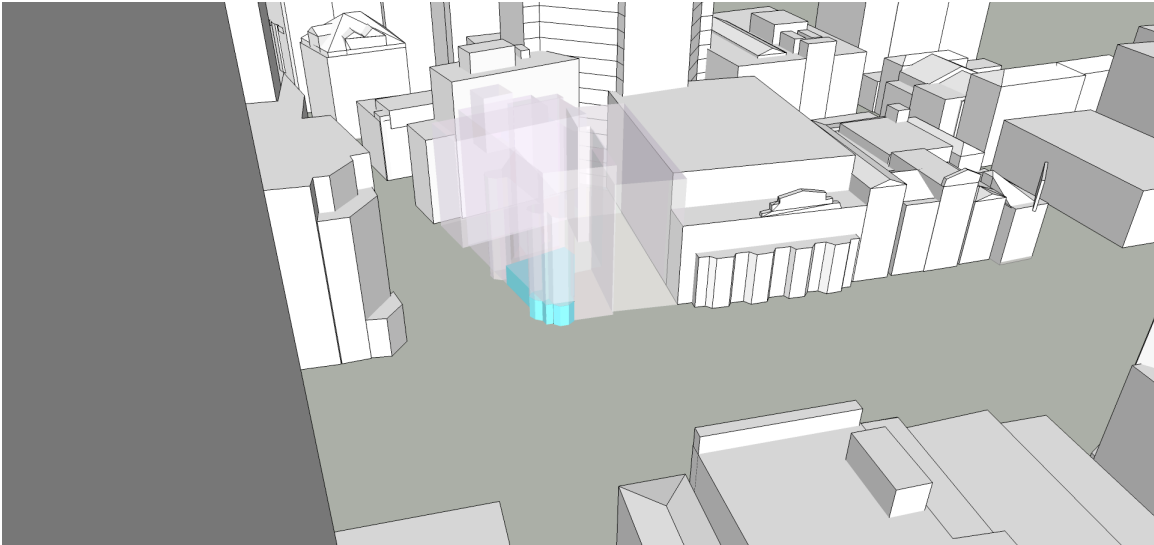


Figure 42: Administration/Guidance Office

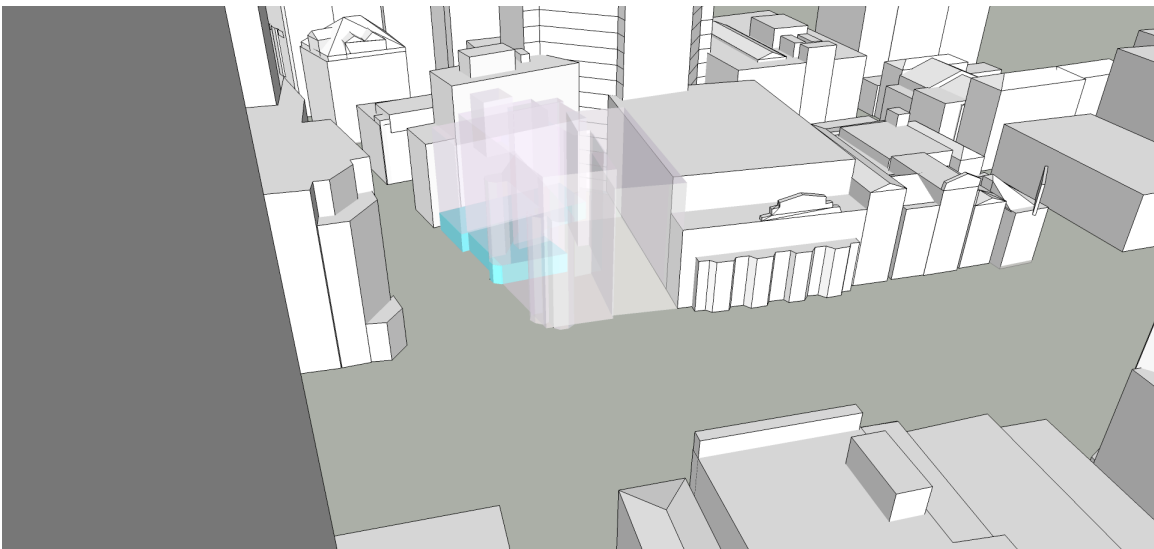


Figure 43: Restaurant – Culinary Arts

The retail and tourism program, located on the first floor, have the same concept as the restaurant. Students are able to learn in a classroom environment, and then are asked to transfer those skills to the real world; in this case, the retail space is a t-shirt and souvenir shop.

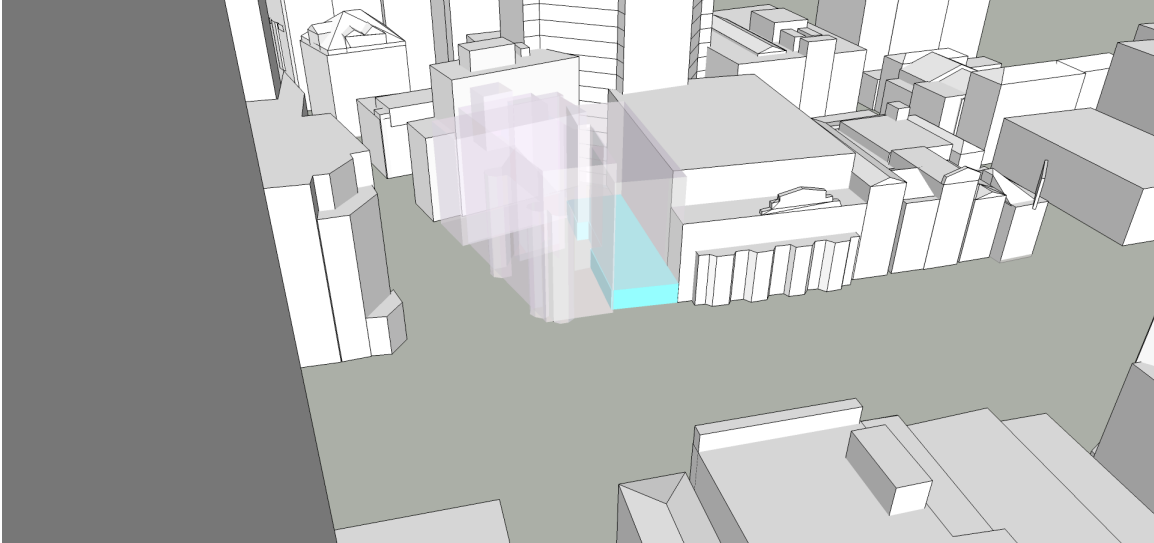


Figure 44: Retail – Tourism

Second Floor - The library, connected to the main entrance, but located on the floor above, is a dual serving library. The library serves the students just as in any traditional education setting.

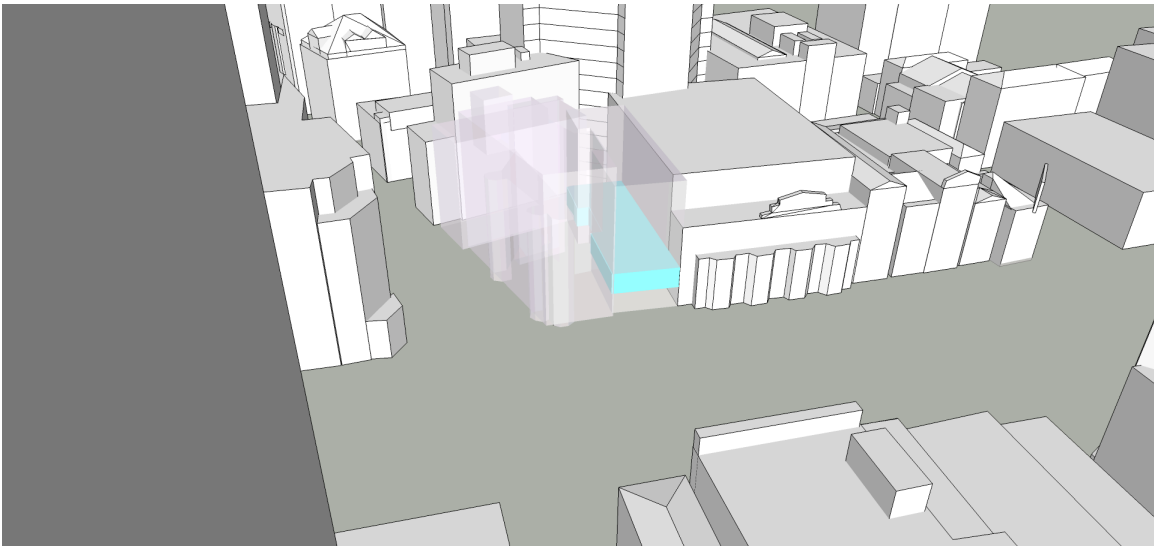


Figure 45: Library

The cafe is located on the second floor, where it serves all of the participating students and staff. This space is located adjacent to Camp street in order for this space to be able to be

serviced – trash pick up, goods drop off, etc. The café is provided its cooked meals from the same kitchen that services the restaurant on the first floor.

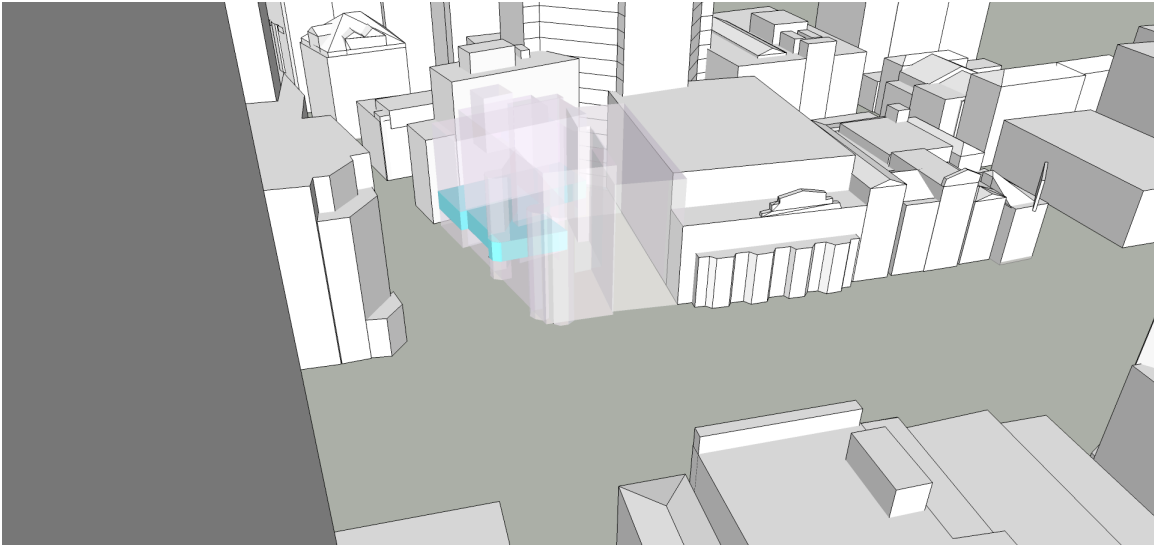


Figure 46: Cafe

The courtyard/atrium space is located on the second floor. It is enclosed in glass and open to the 7th floor, allowing for views above. This space is important as it gives the students a place to relax, eat, and unwind from the stresses of life and education through a common informal mixed-use area.

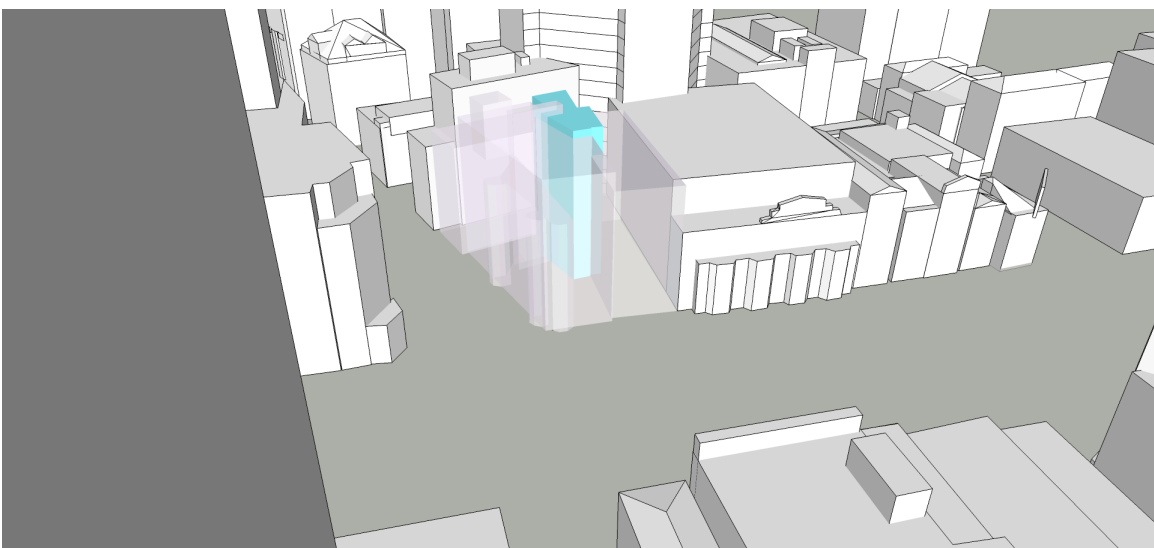


Figure 47: Atrium – Courtyard

Third Floor - The computer tech program is located above the library on the third floor adjacent to Canal Street.

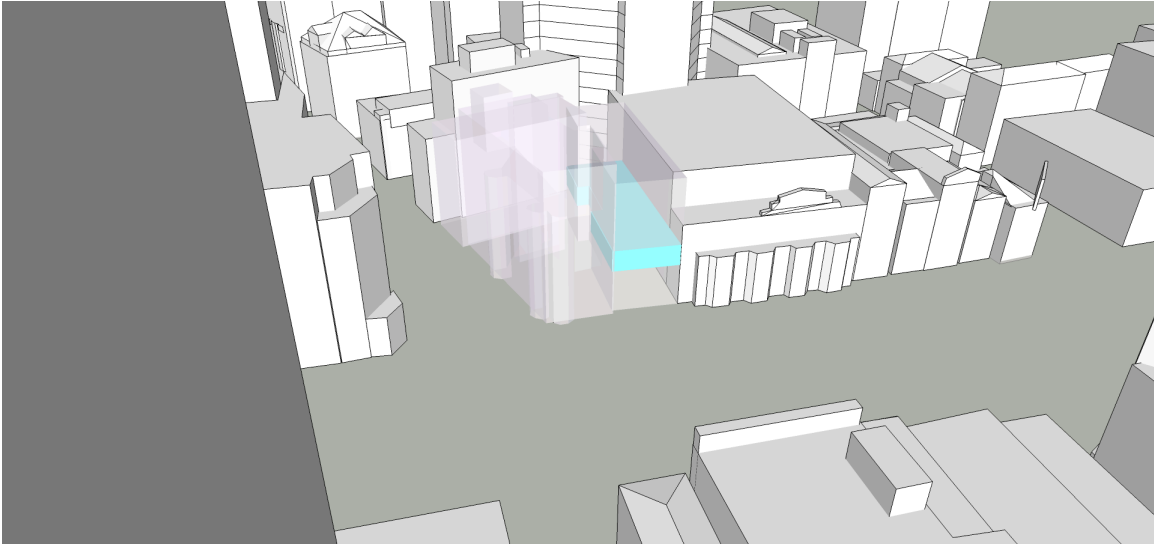


Figure 48: Computer Tech

The lecture hall is another main component of the facility. Not only is it a large space that serves the students, but also, when not occupied, serves the public by making the space available for numerous events such as town meetings, small concerts, and even local plays.

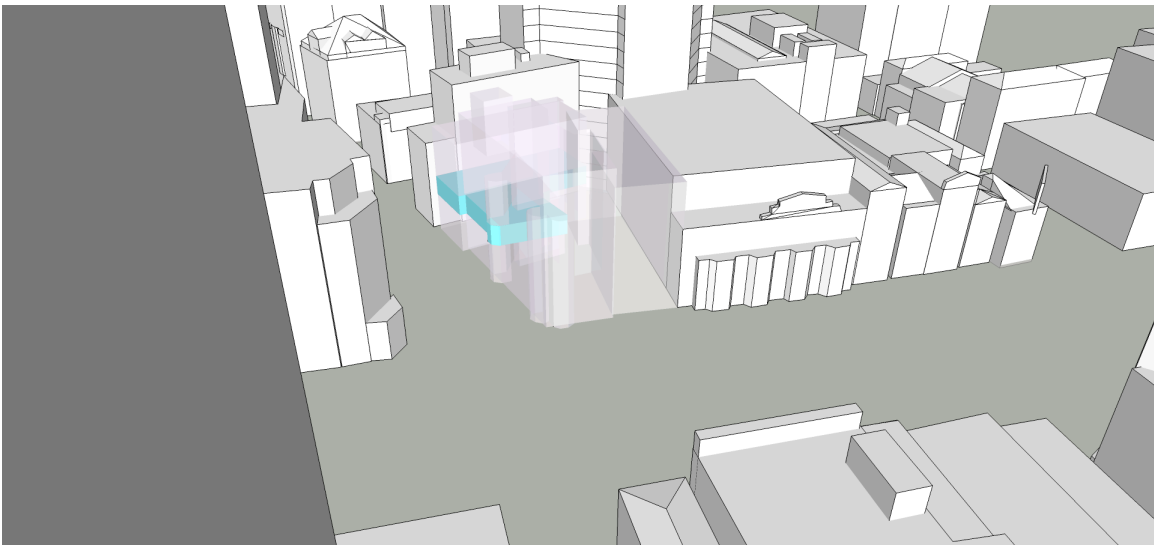


Figure 49: Lecture Hall

Fourth Floor - The fourth floor of the facility holds the automotive and building and construction programs. These spaces encompass the entire floor save circulation, maintenance, restrooms, and a large informal open communal space.

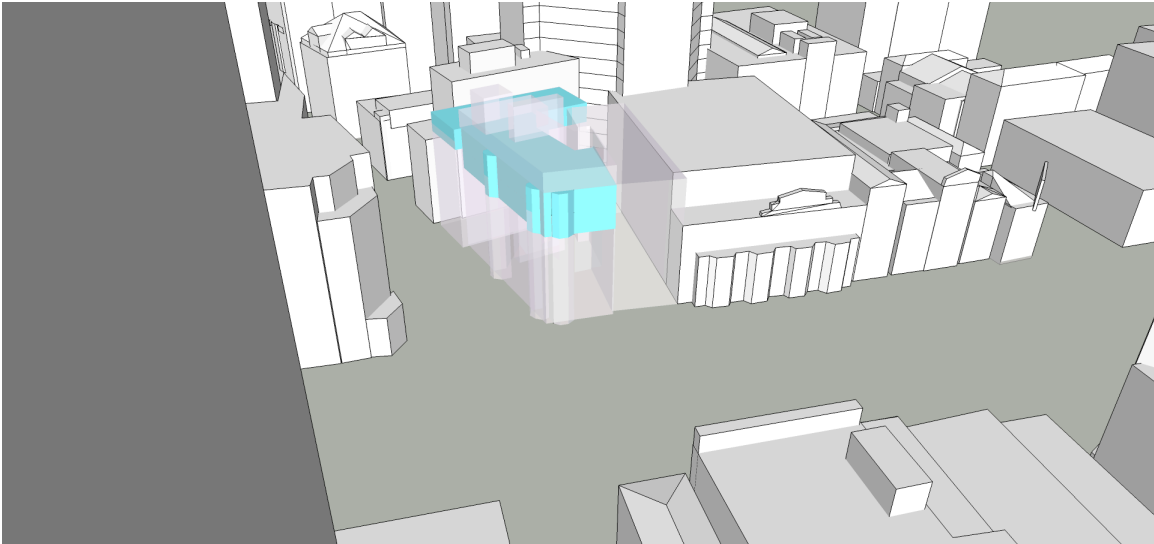


Figure 50: Automotive & Building and Construction

Fifth Floor - The fifth floor also houses a small portion of the automotive and building and construction programs as these programs take up the largest area of all the programs and spans two separate floors.

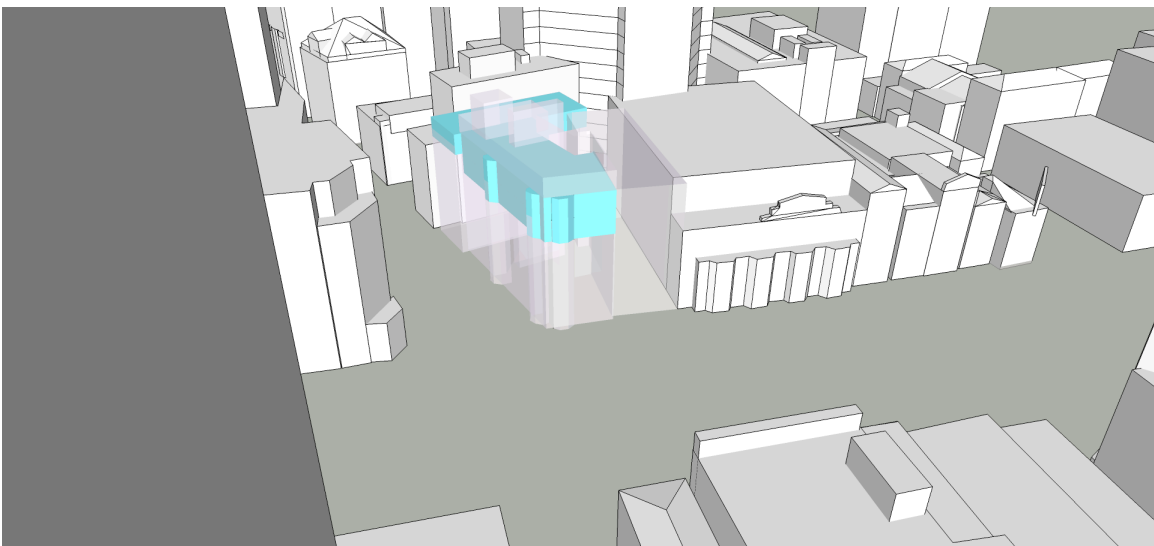


Figure 51: Automotive & Building and Construction (cont.)

The landscape and maintenance program, like the automotive and building and construction programs, span two floors. The fifth floor holds most of the program in the 602 addressed building located on Canal Street.

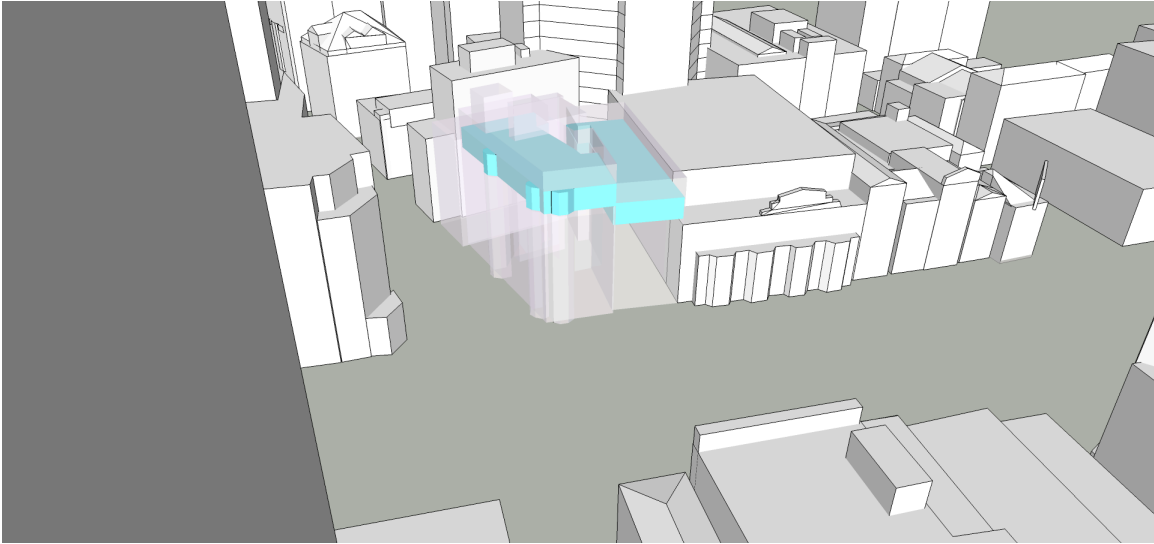


Figure 52: Landscape and Maintenance 1

Sixth Floor - As previously noted, the landscape and maintenance program spans two floors. It embodies the entire 6th floor, as the only building with floor space higher than a fifth floor is the 600 addressed building along Canal Street.

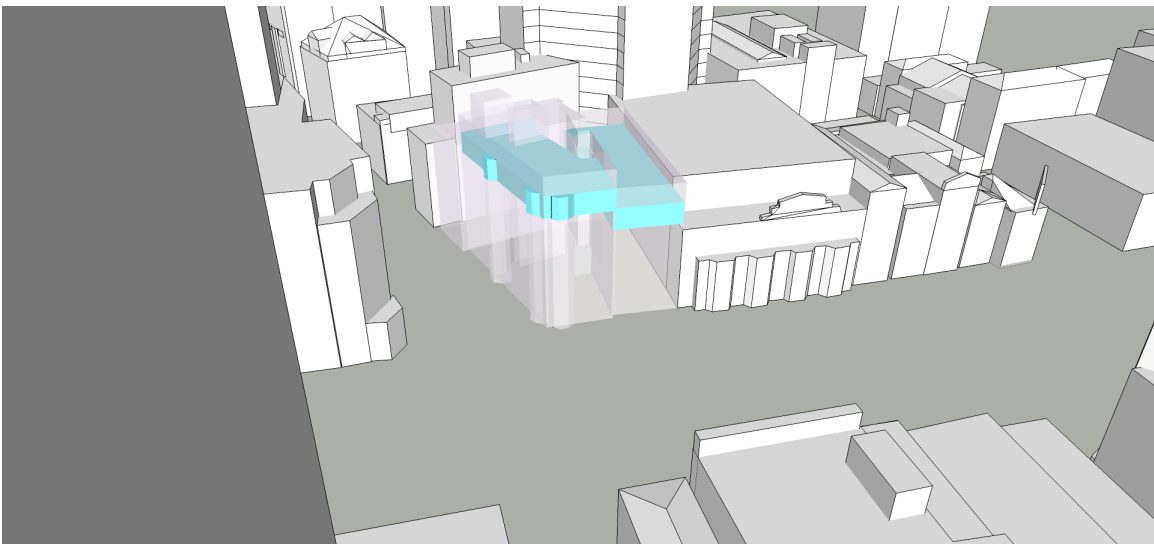


Figure 53: Landscape and Maintenance 2

Seventh Floor - The seventh floor houses the childcare program with an everyday daycare. The daycare will be available for the participating students who have young children, as well as those with young children in the neighborhood, who are considered impoverished and underprivileged individuals. The center will be ran by licensed early educators but will also be a learning classroom for students interested in childcare and early education.

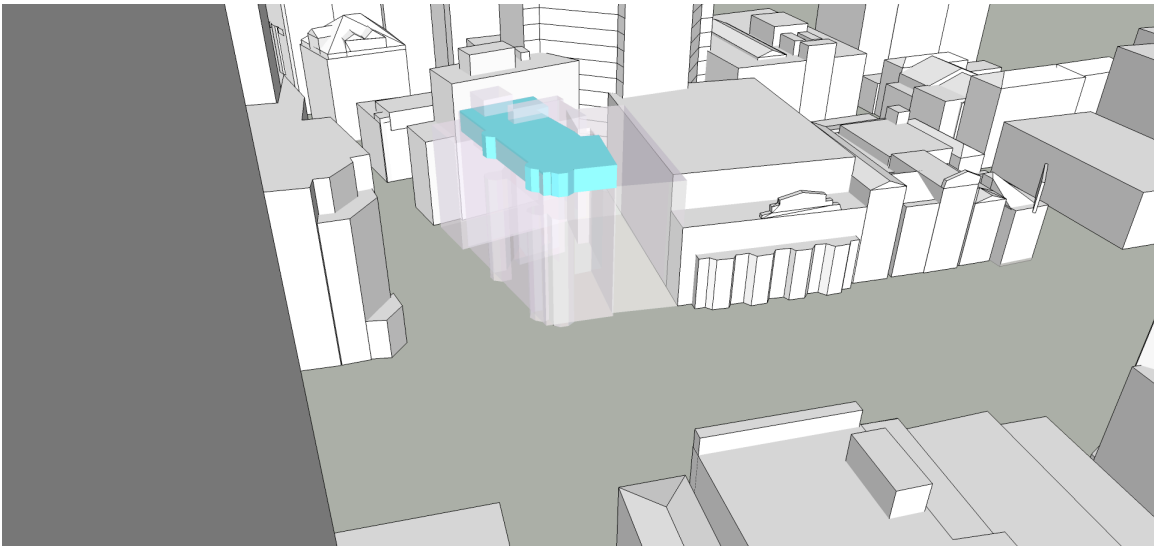


Figure 54: Childcare

7.2 A MODEL FOR “LIKE CITIES”

The research and project presented in this thesis focuses directly on the selected site within New Orleans. However, the intent for this thesis is to propose a model for “like cities” (i.e., cities in similar situations compared to New Orleans). In order to be able to implement the application of a similar facility in similar cities, certain design considerations must be studied. These considerations fall under two categories: (1) Facility Specific and (2) Individual Specific.

Facility specific design considerations are decisions made in order for the facility to fit within its proposed site. These decisions identify needed connections and engagements to ensure a vocational education facility's success. These considerations are as follows:

Engage with the public – Engagement with the public is an aspect to consider for many situations. In this instance, the engagement with the public references the public use of the building, particularly in the retail and restaurant area. When facilities offer public amenities and services such as food and/or retail shopping, there are certain issues that must be addressed for these spaces to efficiently and successfully work within the larger system. In this facility, specific issues addressed were how individuals would be drawn to the restaurant, how the restaurant would be serviced, and how the entrance of the building and retail space would resemble and flow with the façade fabric present along Canal Street. In order to solve these issues, existing conditions along the site and surrounding areas were surveyed. The conclusions were: (1) To replicate the existing façade fabric condition, institutions along Canal Street would be examined. It was found that entrances fall directly on the sidewalk, a condition replicated in this facility's design. (2) In order to bring individuals to the restaurant, signage, just as in numerous other restaurant's conditions near the site, would be used. (3) To provide the restaurant needed services, a separate service door, which enters the kitchen, would be used. A diagram that illustrates these conclusions can be seen in Figure 55.

Classroom Transparency – Another key facet to consider when public amenities are offered is the classroom aspect. In this case, the restaurant and retail space are the consideration. Along with these services offered to the public, classrooms must be present for new students to examine and study the interaction between student and customer.

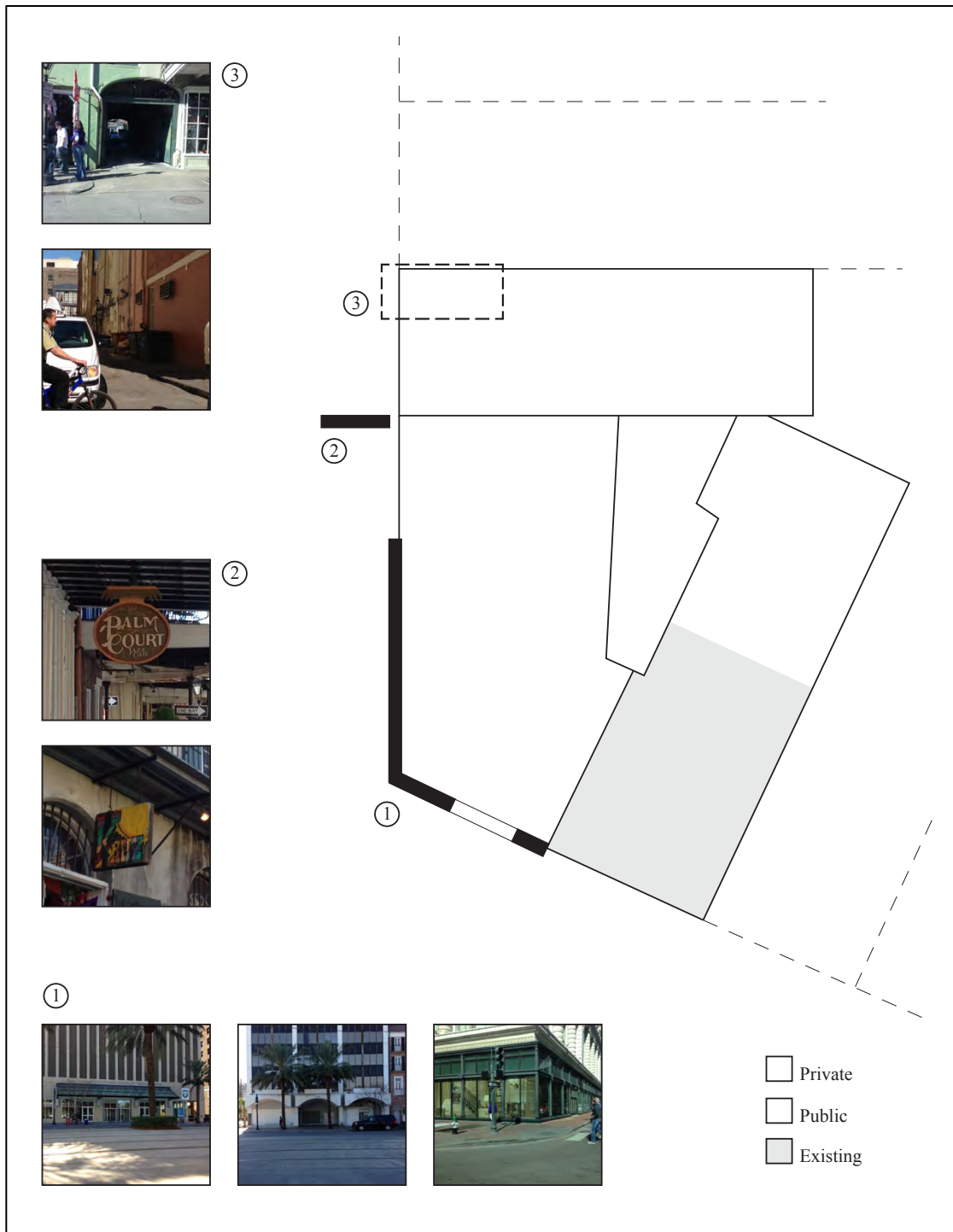


Figure 55: Public Engagement Investigation

Specifically in this facility, the solution to this issue is derived by taking advantage of the extremely high first floor floor-to-ceiling heights, which offer observation deck-like areas. These areas allow students to study the customer-employee relationship.

Connections to the city – When implementing similar facilities in similar cities, one major concern to consider is the connections between the site and city. More specifically, how does the facility connect to the street? How does the facility connect to the city as a whole? And how are the found disconnects solved? In the case of the New Orleans facility, these connections are examined in Chapter 6: Site. The public transportation system creates a central infrastructure that unites the needed surrounding struggling areas, allowing all individuals with interest and a hope for a better life the ability to pursue such.

Individual specific design considerations are specific design decisions made in order for the facility to thrive as it serves a unique demographic. These decisions identify personal needs to provide the students of the facility a dwelling that serves as a place of refuge and progress. These considerations are as follows:

Personal Hygiene – As homeless and poor individuals struggle to sustain a healthy lifestyle, personal hygiene tends to decline. All similar facilities, regardless of location, must address the issue of hygiene. The facility in this thesis has implemented within the numerous bathrooms a “washing station”. The washing stations offer multiple showers, individual deodorizing soaps, disposable toothbrushes, and a manual clothes washer. By implementing these stations within all adult vocational education facilities, it allows the impoverished, especially those living on the streets, the opportunity to experience the beginnings of a new life. In a poetic sense, they are slowing cleansing themselves of the previous lifestyle, moving to an independent secure life on their own.

Personal Belongings – To successfully allow homeless individuals the opportunity to be educated, find work, and then ultimately find permanent shelter, their existing lifestyle must be taken into consideration. Like-cities that implement similar facilities must take into account the homeless individual's belongs, which usually consist of everything that individual owns. Since these things are the people's only possessions, they tend to be extremely protective. In the New Orleans vocational education facility, each classroom will house personal belonging storage bins. The storage bins will provide temporary storage for the time the students spend in the classroom. If the students would like to store things for longer time periods (e.g., a full day) their things must be checked in and stored with the front office.

Transportation – Though public transportation is addressed in facility specific considerations, this is also an individual specific consideration that must be addressed in order for a facility to be sufficiently successful in any large city. For example, the facility in this thesis will provide its individuals with prepaid passes for any public transportation method they choose to bring them from their residing location to the facility. The money that is placed on these cards will be from their earned wages from working in the restaurant, retail store, or childcare center. It is a requirement that any student needing transportation assistance must work in one of three wage earning opportunities within the school.

7.3 RECOMMENDATIONS

This thesis focuses on a vocational education facility located in the central location of Canal Street in the city of New Orleans. It examines design decisions that can be translated and reexamined per specified location. The intent of the project is to provide a future model or template of a sustainable, efficient, and sufficient educational facility to benefit a large city and its community, which is struggling from a substantial homeless and poor population. The proposed project identifies key issues and concerns with this application, and responds to those concerns and considerations in an architectural sense directly related with the city of New Orleans.

It is suggested that this research be further examined. More specifically, two dimensions of the project should be pushed for supplementary consideration. First, the design of the facility located in New Orleans should be accurately designed to work within the New Orleans School Board regulations. Since this thesis only focuses on generalized design decisions, it would be difficult for the proposed project to be implemented in the school board system. Carefully, the three building's assessments should be analyzed for code IBC compliance issues. After existing codes compliance is met, the New Orleans School Board's compliance should be considered, allowing for a new vocational education facility design to be a possible outcome. The final design of this facility should then be presented to the state along with this document to provide full research and background.

The second recommendation, which furthers the research considered, is to examine the social and economic aspect of this architectural response. Social scientists have produced numerous studies regarding education as well as poor and homeless lifestyles. However, very few studies have been conducted regarding both synchronously. This thesis makes numerous

assumptions regarding the positive impacts of the architectural response and installation of an educational facility within a cities urban core. To justify these assumptions, the social implications must prove to be positive.

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