"CRIME" & THE BUILT ENVIRONMENT

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ACKNOWLEDGEMENTS

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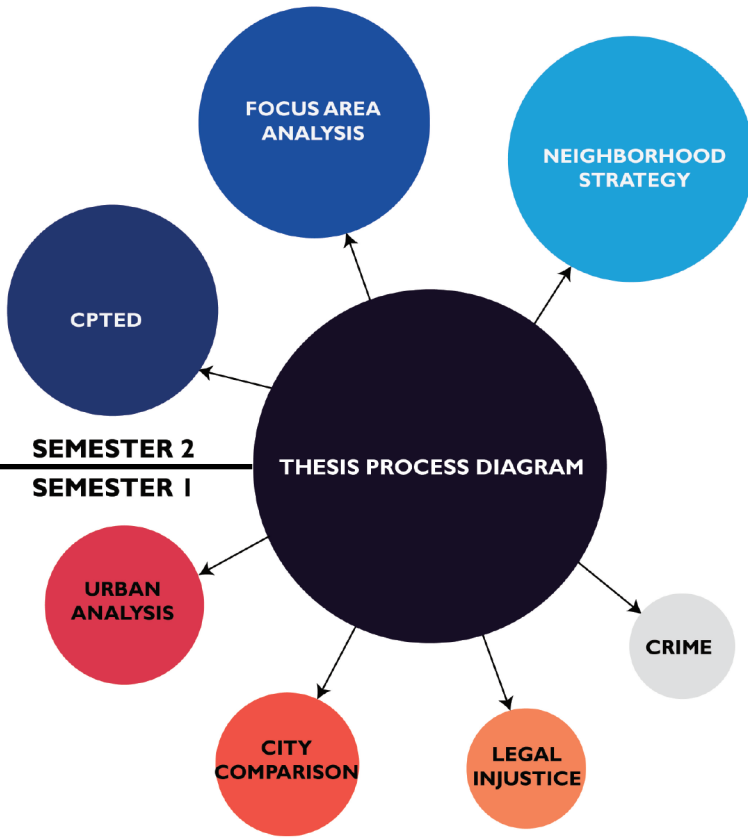
INTRODUCTION

"When a man is denied the right to live the life he believes in, he has no choice but to become an outlaw."

-Nelson Mandela

1.1 Crime & the Built Environment

The purpose of studying Crime and the Built Environment is to examine the correlation between political, economic, and institutional injustices and resulting low income areas in America. Historically, political decisions have been made with a prejudice towards African-Americans to segregate, displace, and oppress. The realities of segregation in our current society was achieved using tools such as racial zoning under a lawful umbrella to systematically keep African American populations divided from Caucasians. When segregation was not successful in deteriorating the quality of life for African-Americans, greater forms of legal injustice such as eminent domain were enforced to uproot African-Americans from their domestic communities to unfamiliar pastures with inferior access to resources and services.

Currently, there is an economic and institutional divide that prevents minorities from garnering proper employment, education, health, and food access. Moreover, the rift between law enforcement and African-American communities entices various forms of crime from both parties but often, the injustice that is delivered by law enforcement receives no consequence. As a singular entity, architecture is not capable of addressing these problems but when coupled with urban design and community efforts it's possible to make positive changes. An analysis of political, economic, and institutional systems will be done to identify improvised public realms that can be improved through innovative design methodologies.
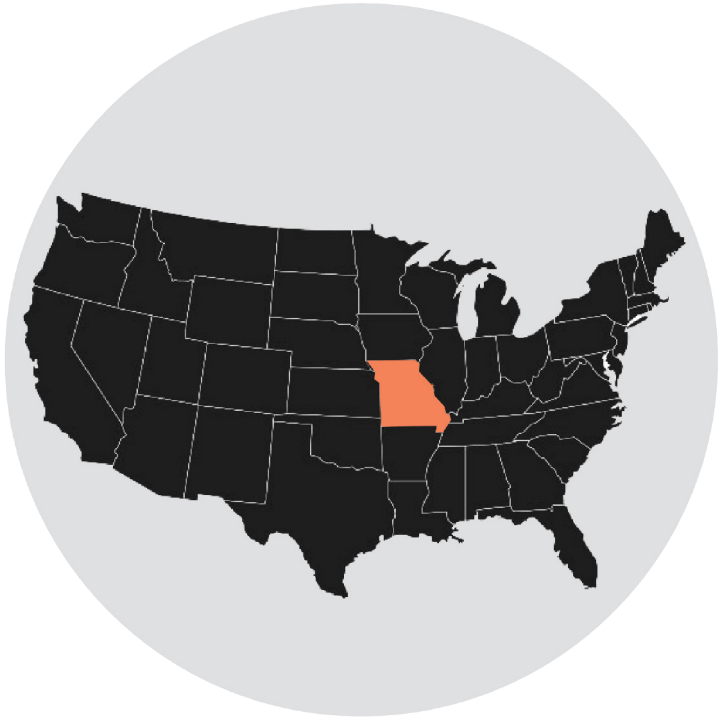
Map of America

Map of Missouri

Map of St. Louis

Map of Pagedale

1.2 Thesis Question

How can urban design, architecture, and community unite to produce interventions that improve environments which are plagued with "crime" due to discriminatory government policies, economic practices, and institutional racism? Prior to delineating a path to possible solutions, it is imperative to define crime because what governing bodies regulate effectively encompasses activities that happen outside of their operations. However, this is unacceptable because a wide spectrum of injustices has been done by governing bodies under a legal cloak.

1.3 "Crime"

Crime is defined as an omission or an action that constitutes an offense that may be persecuted by the state and punishable by law. However, this definition of crime is inadequate for this thesis because the state and law have historically displayed a negative bias towards African-Americans. Therefore, crime in this thesis will be defined as an action or activity, although not illegal is wrong. These actions segregate people, displace minorities, and degrade the built environment. One of the most discussed environments that was inflicted by crime due to legal injustice is the Pruitt Igoe development in St. Louis, Missouri.

1.4 Area of Study

St. Louis, Missouri is a good area of study because Pruitt Igoe (Figures 1, 2,3, & 4) is the first-time design students are introduced to a built environment that failed due to inadequate government policy, urban and architectural design. In addition, the affordable housing project is synonymously associated with crime when it is the subject of conversation.

Figure 1, Children playing on swing set in Pruitt Igoe

Figure 2, Interior Vandalism in a Pruitt Igoe apartment

Figure 3, Demolition of Pruitt Igoe

Figure 4, Demolition of Pruitt Igoe

Chapter 2

LEGAL INJUSTICE

"Poverty is the parent of revolution and crime."

-Aristotle

2.1 Zoning

The movement of 6 million African-Americans out of the Southern rural United States from 1916 to 1940 brought a significant population change to multiple urban hubs across the nation. African-Americans sought refuge in these hubs with knowledge that slavery laws were not as stringent. Unfortunately, they were met racially discriminatory laws that were created to prevent their integration into these areas. Missouri was one of the urban hubs that imposed these laws onto African-American immigrants.

Zoning, a landmark law that was created in 1885 to regulate the height of buildings as exhibited in the Barclay Vessey building (Figure 5) became one of the initial means to segregate ethnic groups in Missouri. In 1915, the supreme court sanctioned police power over land use which banished African-Americans from purchasing homes in neighborhood that were more than 75% white. This form of police authority over land use is called racial zoning and it continued until it was prohibited by the federal government in 1917.

Figure 5, Barclay Vessey Building, New York

2.2 SLREE Covenant

The prohibition of racial zoning in 1917 came around the same time as the induction of the Saint Louis Real Estate Exchange (SLREE) restrictions. The Saint Louis Real Estate Exchange covenant (Figure 6) didn't permit the selling, leasing, or renting of homes to African-Americans. This left African-Americans with very few housing options regardless of the funds they had available to them. Approximately 80,000 African-Americans had funds to attain better housing but had their purchasing power denied. Unable to find adequate living quarters, tensions rose among the citizens of St. Louis until the restrictive housing laws were prohibited by the Federal Government. The SLREE covenant was short lived but it was implemented long enough to pave a way for redlining.

Figure 6, SLREE Logo

2.3 Redlining

Redlining is the systematic denial of various services to residents of a specific, often racially associated, neighborhoods or communities, either directly or through the selective raising of prices. In its conception, it was presented to the public as a housing assessment based on physical condition by the Home Owners Association in St. Louis. In actuality, the zones were rated based on the density of African-Americans. The areas that were identified as green were labeled best due to the scarcity of African-Americans, light green desirable, yellow declining, and orange hazardous (Figure 7). The density of African-Americans in St. Louis to present day is still significant in the areas that were designated as declining and hazardous. The effects of redlining were decreased property
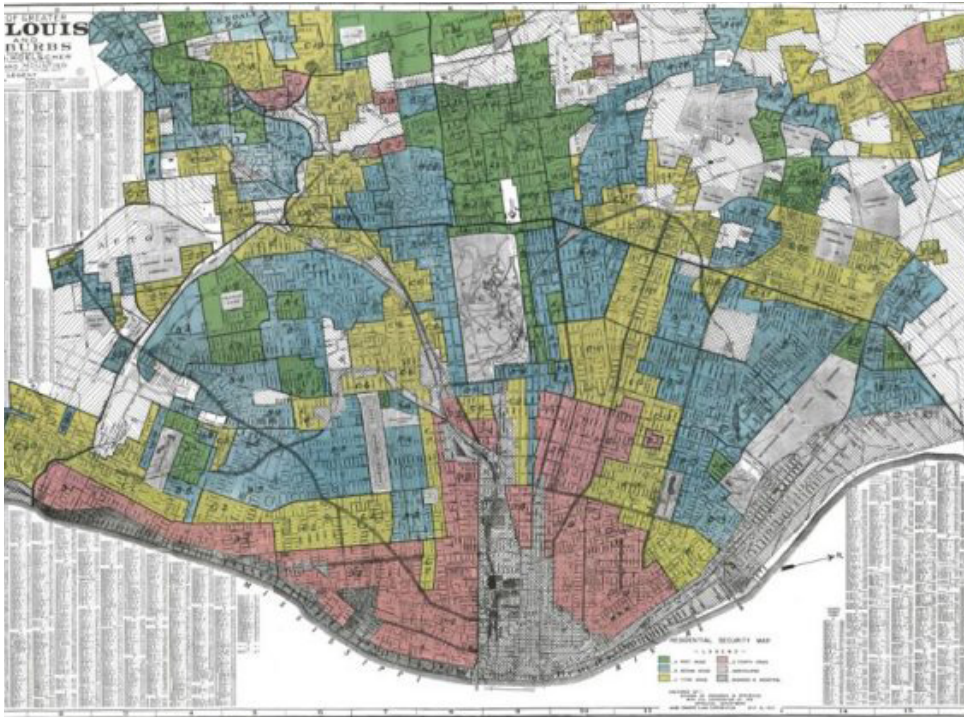
Figure 7, Redlining map of St. Louis, Missouri

values and denial of resources such as mortgage loans. In 1956, the Federal Housing Administration made low mortgage rates available to citizens, but the availability of these loans was dependent on the borrowers housing condition and as a result only 2% of the housing subsidies were made available to African-Americans. The stringent terms for mortgage loans are an example of how redlining was used to exclude targeted racial populations from economical privileges.

2.4 Eminent Domain

Redlining brought blight to multiple African-American communities and the government sought to replace these communities with new development. The method that was created to make this possible is known as urban renewal, negro removal, or eminent domain. Eminent domain is the right of the government or its agent to expropriate private property for public use, with payment or promise to provide new multi-family development. Essentially, the government would displace neighborhoods with a promise to give them a unit in a new housing development or funds to acquire housing in a new area. Unfortunately, the new housing developments often never came to fruition and when they did, the government did not have a financial plan for their maintenance.

      An example of a development that failed due to lack of government funding is the Pruitt Igoe housing development. There were numerous problems associated with the housing developments but the displaced families that attained housing in new communities faced their own set of difficulties regarding resource allocation. Some of the areas the African-Americans were removed from due to eminent domain were Kinlock, Mcree Town, Mill Creek Valley, and Meacham Park. Kinlock was replaced by an airport, Mcree Town by highway 44, Mill Creek Valley by highway 64/40, Elmwood Park by a housing development called Olivette, and Meacham Park by a housing development called Kirkwood. Most of the displaced families from these areas found shelter in the Wellston and Pagedale areas. A detailed study on the current demographics of Pagedale will be done in the Urban Analysis chapter of this book but an analysis on the current conditions of St. Louis takes precedent. This analysis will identify the parallels of areas below poverty and government policy and institutional racism.
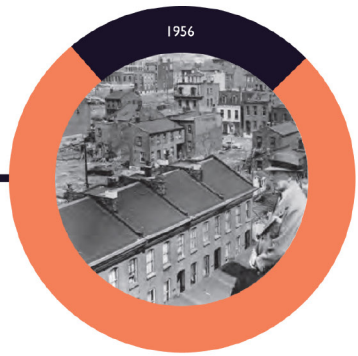
Racial Zoning Prohibited

1917

Racial Zoning

SLREE Covenant

1915

Zoning

1885

1917

Great Migration

1916

SLREE Covenant Prohibited

1917
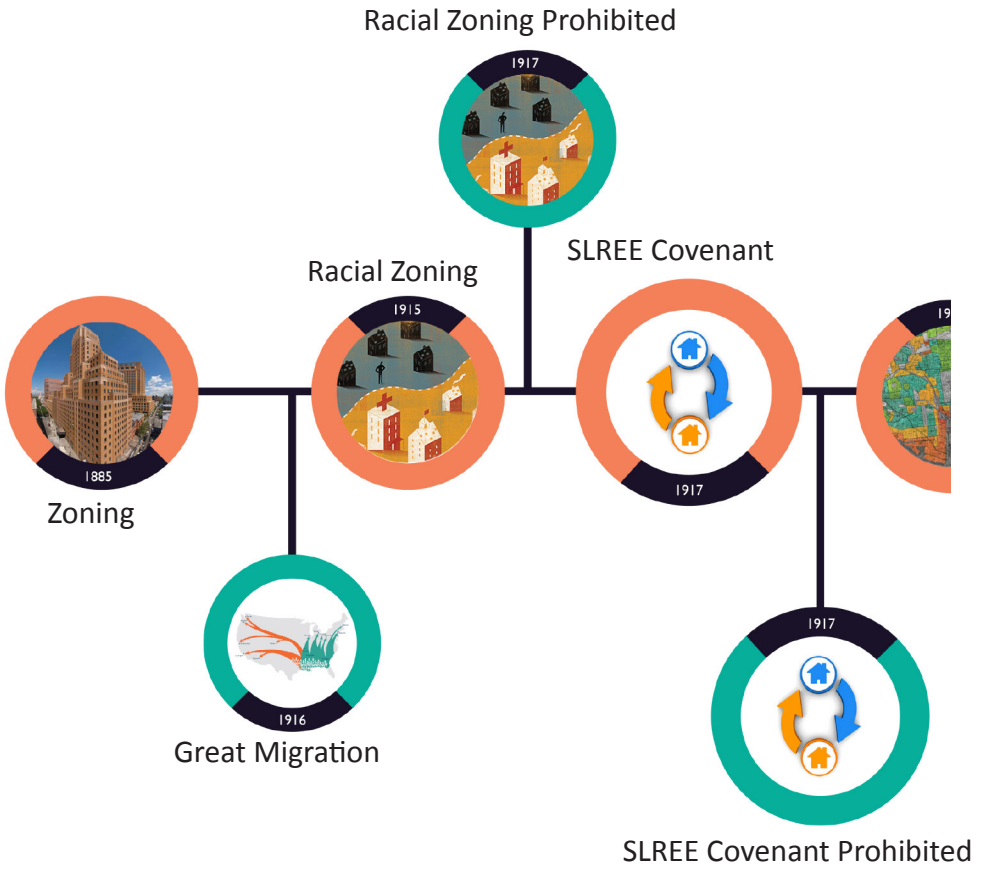
Redlining Prohibited

Section 235

34

Redlining

1956

Eminent Domain

ST. LOUIS TODAY

"To have once been a criminal is no disgrace. To remain a criminal is the disgrace"

-Malcolm X

3.1 Exclusion

St. Louis County is an area where strict housing restrictions were placed on African-Americans in areas with a Caucasian population over 70 percent. Currently, St. Louis County represents the most exclusionary area in all of St. Louis (Figure 8), followed by South St. Louis City, and North St. Louis County where the density if of African-Americans is the highest.
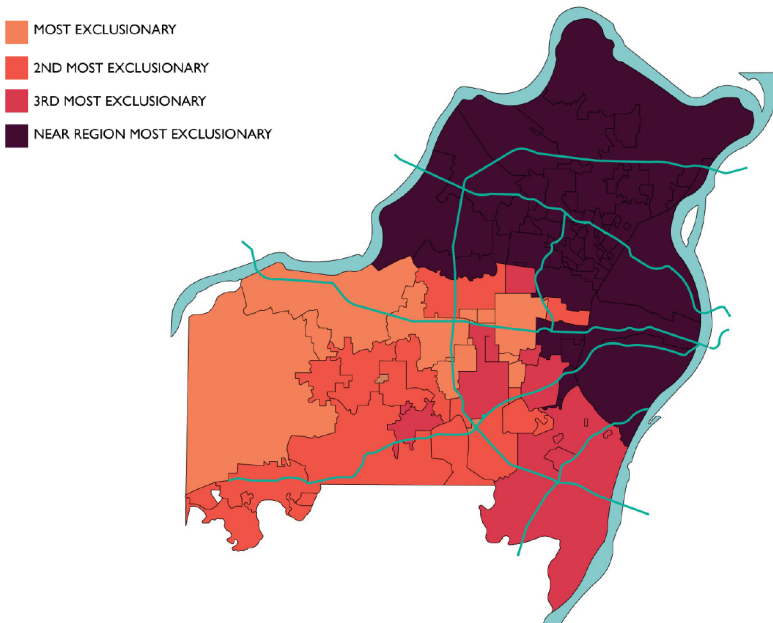

Figure 8, Exclusionary Map (American Soceity Survey)

3.2 Education

Educational performance varies across St. Louis due to the correlation between it and educational resources. In relation to the most exclusionary areas, the highest performing schools (Figure 9) are predominantly areas that are majority Caucasian. These exclusionary areas have properly valued housing stocks that results in high property taxes which is the primary funding source for educational resources in their domestic schools. However, the taxes low income areas pay should be enough for their schools to have the resources students need. The issue that low-income areas face is the redirection of taxes towards development incentives such as tax increment financing. TIF's redirect tax revenues which are normally used for schools and services to help finance development. Unfortunately, these developments often occur in
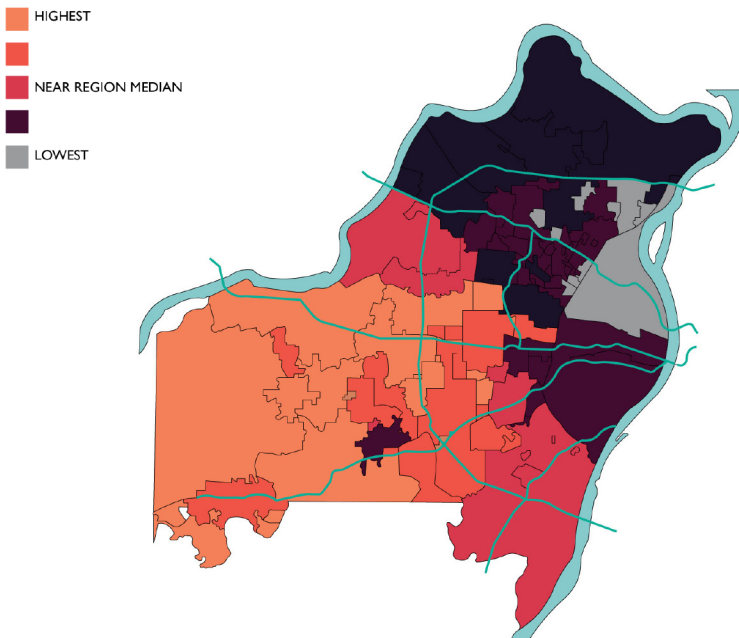
Figure 9, Educational Performance (American Soceity Survey)

neighborhoods that already have a plethora of assets which leaves the minority neighborhoods without educational resources and development. Therefore, tax increment financial should be target resource for projects in low income communities.

3.3 Public Transit Disconnect

Public transit availability is an issue that plagues all of St. Louis County. Although, these issues are not well represented statically because the average car per household in South St. Louis County is 2 in comparison to 1 for North St. Louis County. Public transit availability is only an obstacle for the African-American residents in the North and Figure 10 shows that public transit is only available in St. Louis City and the core of St. Louis County.
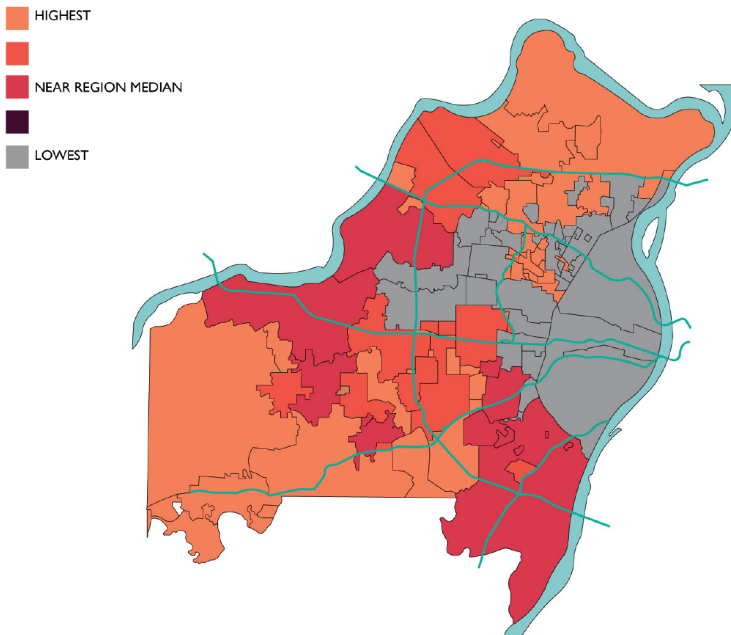

Figure 10, Public Transit Disconnect (American Soceity Survey)

3.4 Food & Retail Access

Food & retail access are scare in North St. Louis City, North St. Louis County, and South St. Louis County. These public resources are accessible at the core of St. Louis where public transportation and healthcare physicians are dense. Access to food and retail is an issue for residents in North St. Louis City and County because of public transportation scarcity and minimal vehicular transportation per household. The residents that live on the South side of St. Louis County have adequate vehicular transportation which is well accommodated by a multitude of highway infrastructure options that run through the core of the city. Multi-use shopping centers have been identified as a high demand resource for areas that suffer from inadequate access to food and retail. Figure 11 shows a map of these current conditions
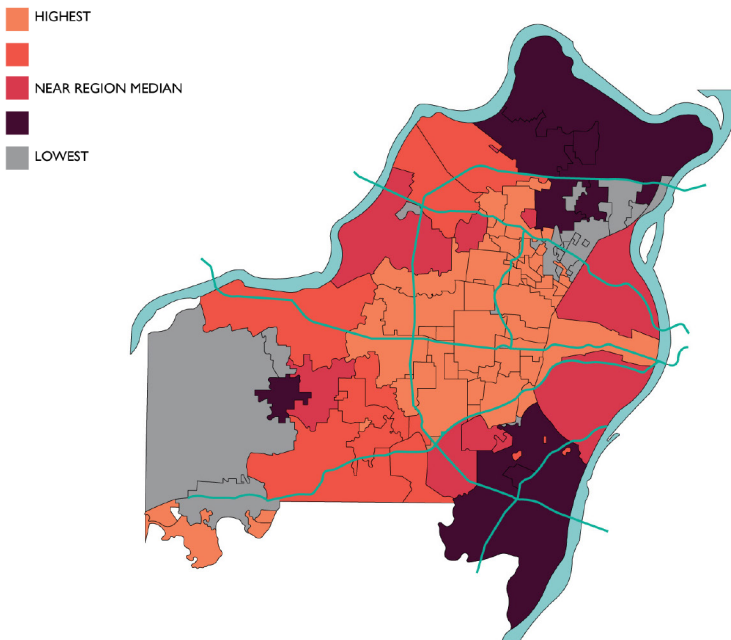

Figure 11, Food & Retail Access (American Soceity Survey)

3.5 The Medical Gap

Like public transportation, access to physicians is limited to the core of St. Louis which burdens African-Americans that reside in North Saint Louis County with long rides to their family physicians. Furthermore, Medicare is inaccessible to these residents who are often the ones that live in low-income, African American neighborhoods.

In summary, historical injustices by governing bodies and real estate companies have shaped St. Louis into what it is today. The areas that were reserved for Caucasians benefited from incentives such as low mortgage rates and have flourished in comparison to those that were identified as hazardous and denied access to resources and services. To further study the effect of institutional racism and resource allocation processes, an in-dept study will be done on two economically contrasting neighborhoods that have a high African-American population. One of the neighborhoods (Pagedale) is an area where African-Americans moved to after they were removed from their homes due to eminent domain.

3.6 Neighborhood Case Studies

Greendale (Figure 12) is a small city on the Northeast side of St. Louis with a population of 651 residents. There is a total of 312 households with a racial makeup that is 28.0% White, 68.5% African American, 0.8% Asian, 0.9% from other races, and 18% from two or more races (Figure 15). The native residents of Greendale immigrated to the area after an earthquake displaced them from New Madrid in 1818. At the time there were three property owners that were limited to A. Peterson, J.B.C Lucus, and the German Evangelical Lutheran Congregation. These owners and organizations were the initiators of housing developments which began on Greendale Drive. As housing demands increased in the area more development occurred south of Greendale Drive from 1940 to 1947.

Development towards the South continued until its final stages at Zion Cemetery was annexed by Wellston. When development came to a halt, most of the household heads were male but there's been an increasing number of female-headed households in recent years.

Like Greendale, Pagedale (Figure 13) is one of the cities that African-Americans migrated to when they were displaced by eminent domain. Pagedale began as farmlands that were used for apple, peach, and pear orchards. The earliest lumber based residential developments occurred around Page and Kingsland Avenue. As the built environment grew, the demand for transportation rose and the city responded with a street car that travelled from Hodiamont Avenue towards Creve Coeur and Olive Boulevard. Multiple neighborhood assets such as the Hazel Hill School was developed around the streetcar post completion. Other major assets which accelerated the population growth was the development of the Wagner Electric Plant, Lumber Company, Stix, and the Fuller Warehouse.

Access to housing, mobility, and employment was followed with recreational areas such as Baerveldt Park. In 1960, the flight of industrial companies led to a decrease in the population which led to the removal of the restriction on African-Americans to only attain housing on Whitney Avenue. When they settled in their new households the residents fell victim to a large amount of mortgage foreclosures. To overcome these issues the city partnered up with Beyond Housing, a regional non-profit community development and housing organization. The partnership brought over 100 new homes and 200 owner-occupied rehabilitations. In 2002, the city attained its city Hall along Ferguson Avenue. Five years later the first grocery store was opened.

With the conclusion of the brief histories for the cities being compared, the statistical examination will begin with race and ethnicity which shows a 70 percent plus African American population (Figure 14) for Greendale and over 95 percent for Pagedale (Figure 15). The highest employment industries for Greendale are health, social, and

administrative in comparison to sales and administrative for Pagedale. The annual household income for Greendale is $43, 667 (Figure 16) which is a little less than double the $27, 000 (Figure 17) for Pagedale. The annual salaries earned in each city is evident in-home ownership which is at 68 percent for Greendale (Figure 18) and 48 percent for Pagedale (Figure 19). The property taxes on the homes for both cities range from $800-1500 dollars (Figures 20 &21) which is concerning considering the residents in Pagedale earn significantly less than those in Greendale. Moreover, Greendales land use displays a residential landscape that lacks business therefore the earnings per household must be coming from work outside the city that requires vehicular transportation. There are approximately 2 cars per household in Greendale (Figure 22) which is double the vehicular availability per household in Pagedale (Figure 23). The availability of cars per household could have some correlation to the age groups typologies where the highest age group population for Greendale is 45-54 (Figure 24) and 5-17 for Pagedale (Figure 25) which makes up 20 percent of its population.

There were no immediate educational performance attainment statistics for Pagedale but over 90 percent of the residents in Greendale have a high school education. There are non-statistical elements that contribute to Greendale success and one of them is its organized governing structure which consists of one mayor and 2 alder persons that regulate zoning codes, street lighting, and stormwater infrastructure. Most of its stormwater infrastructure is a result of its tree city designation which identifies them as a people that take pride in their landscape features. The households are close to assets such as educational facilities (University of Missouri) and mobile infrastructure. Moreover, the benefits from neighboring city services that include but are not limited to outdoor recreational activities at St. Vincent Park, the Normandy School District Alliance, Pagedale's police force, and the Mid-County Fire District. Finally, the city has a 22 resident handbook that ensures that traditional issues such as blight do not arise.
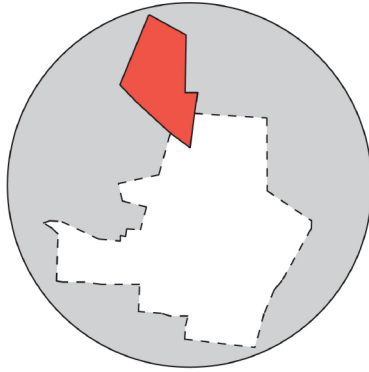
KEY MAP, GREENDALE IN RED

Greendale Drive

Figure 12, Building Density Map of Greendale

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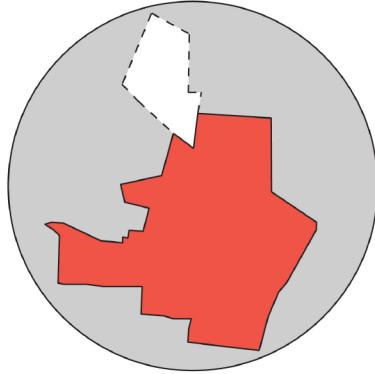
KEY MAP, PAGEDALE IN RED

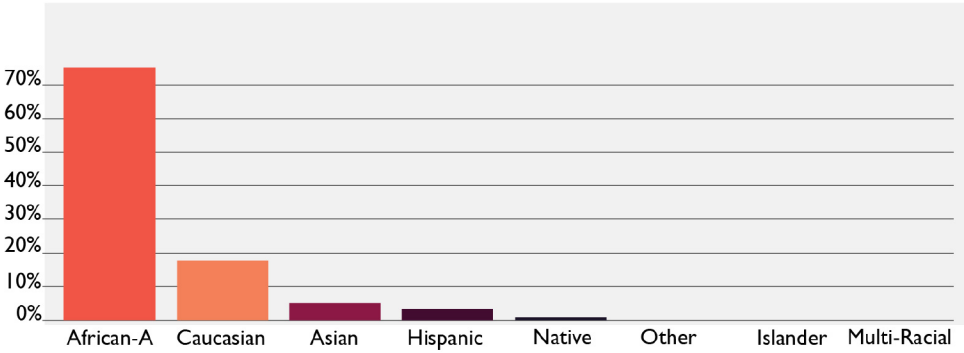Figure 13, Building Density Map of Pagedale

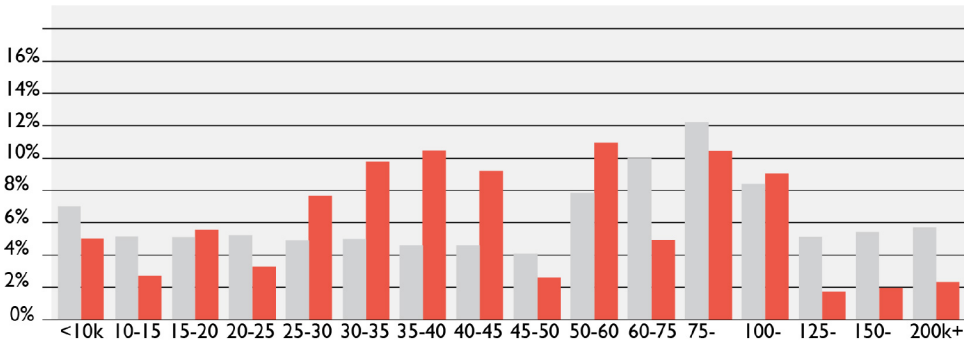Figure 14, Greendale Race & Ethnicity (Data USA)

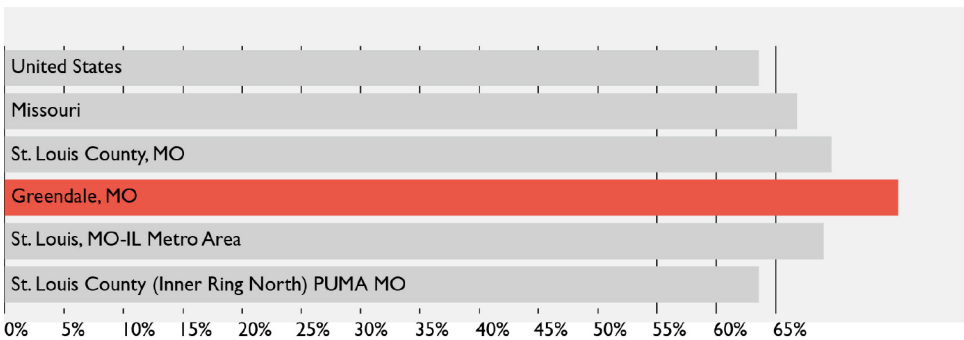Figure 16, Greendale Household Income (Data USA)

Figure 18, Greendale Rent vs Own (Data USA)

Figure 15, Pagedale Race & Ethnicity (Data USA)
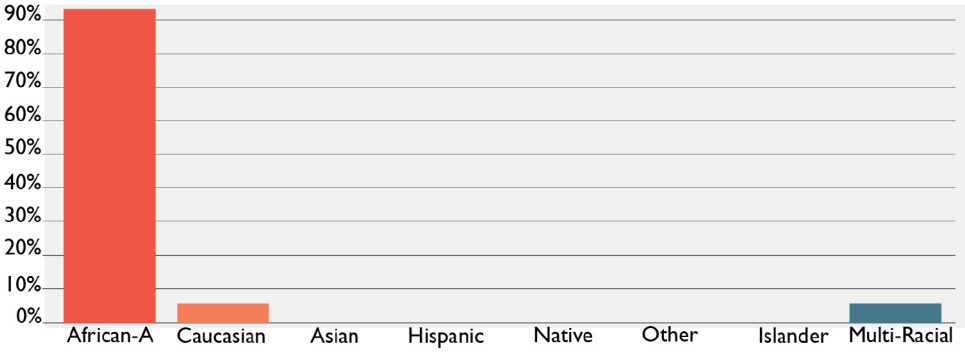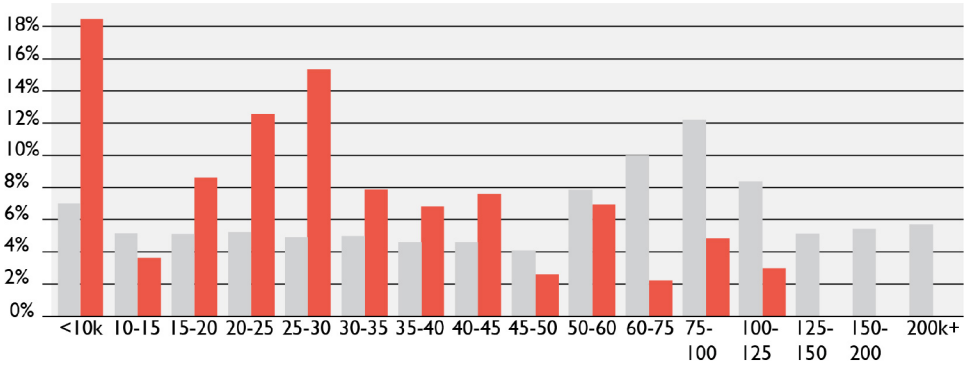

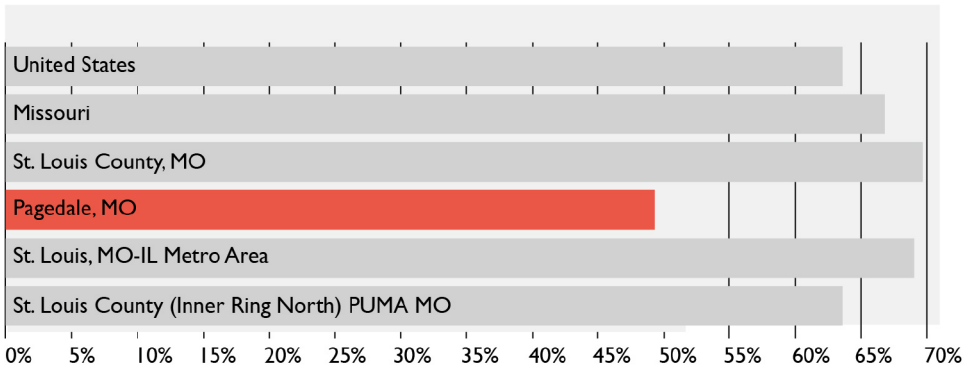Figure 17, Pagedale Household Income (Data USA)
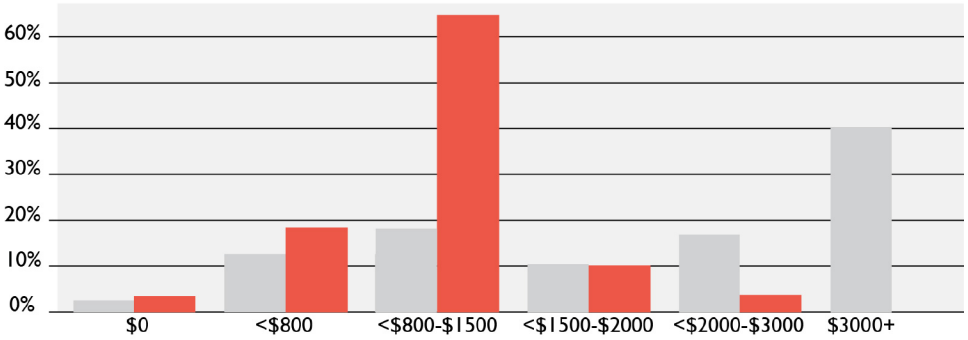

Figure 19, Pagedale Rent vs Own (Data USA)

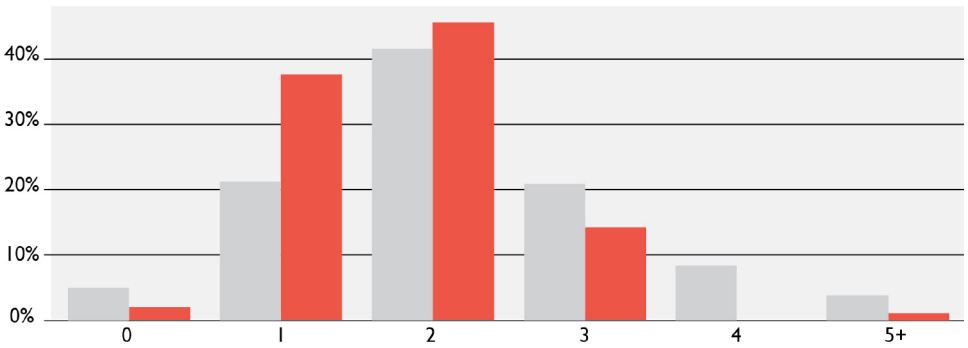Figure 20, Greendale Property Taxes (Data USA)

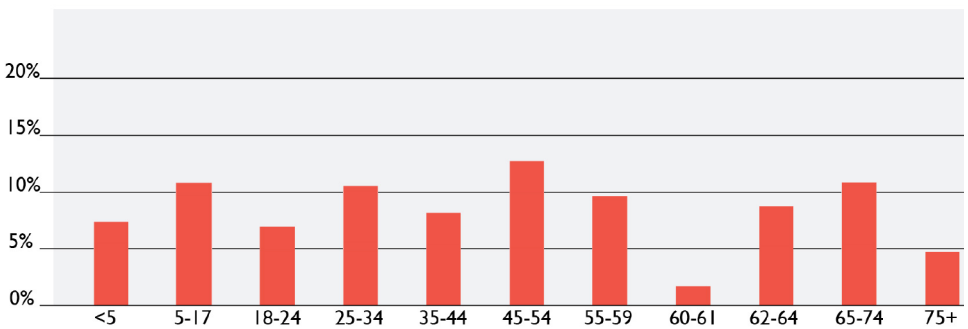Figure 22, Greendale Car Ownership (Data USA)

Figure 24, Greendale Age Nativity (Data USA)

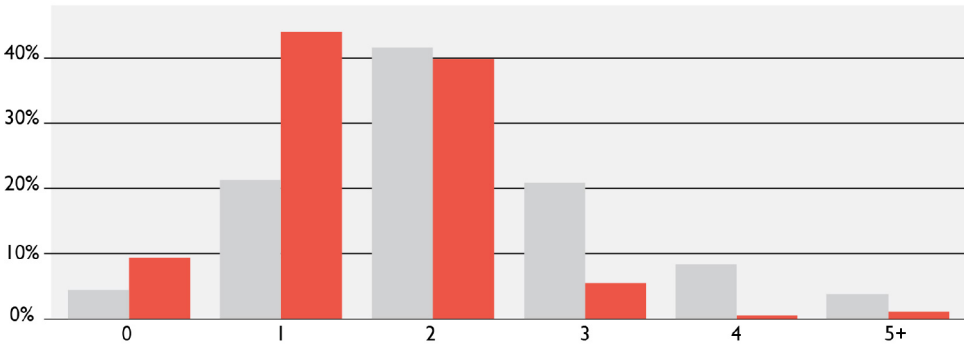Figure 21, Pagedale Property Taxes (Data USA)
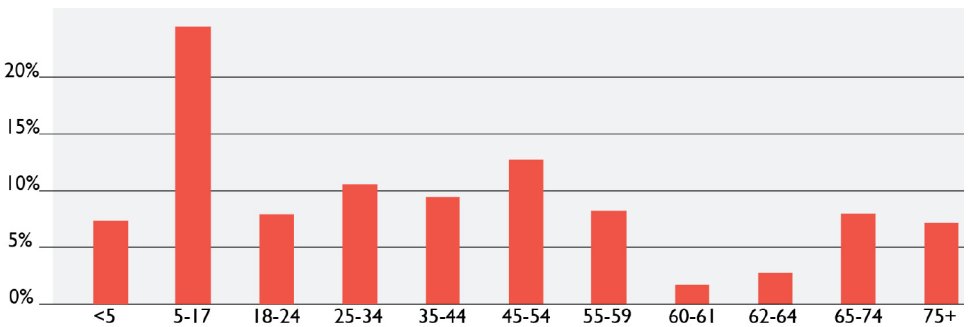

Figure 23, Pagedale Car Ownership (Data USA)

Figure 25, Pagedale Age Nativity (Data USA)

Unlike Greendale, Pagedale's identity is rooted in their resiliency, this refers to the pride they take in being able to stand alone. They've historically been business centered but with the flight of major businesses in the 1960's their collective identity became less apparent. Presently, the city has seen heavy development on Page Avenue and this is reigniting the pride that one would find within this community as a people who are highly capable of self-elevation. The development efforts on Page Avenue is testament to resources such as the 24:1 land trust which secures land within the city to ensure that any development that occurs is beneficial and not one that would extract money from the area. The 24:1 community land trust is part of Beyond Housing which is an organization that provides education, health, employment, and financial services.

The city has a good set of resources and services to continue development but some of the immediate issues that require solutions are lack of healthcare facilities, and affordable healthcare plans. It's often difficult to attain healthcare facilities that can provide the services for these areas because of their undervalued housing stock which attracts large-scale project developers who like to capitalize on cheap land and depressing housing values. Depressing house values are also reflected in the housing fines (Figure 29) home owners face due to blight. The housing fines are a paradox because the households that are affected have low income and cannot afford regular maintenance. The state of the households is the effect of redlining which decreased property values and prevented the owners from attaining reasonable mortgage rates. Finally, the city has its own police force which is a common practice for municipalities within the St Louis County area because they're able to regulate things such as the speed limits to generate funds. However, police community relations are not at an optimal level because of the passing of 21-year-old female African-American Kimberly Randle-King who died in a cell at the Pagedale police station. Protests followed her passing (Figure 28) because the local population didn't believe the police departments explanation that it was suicide.
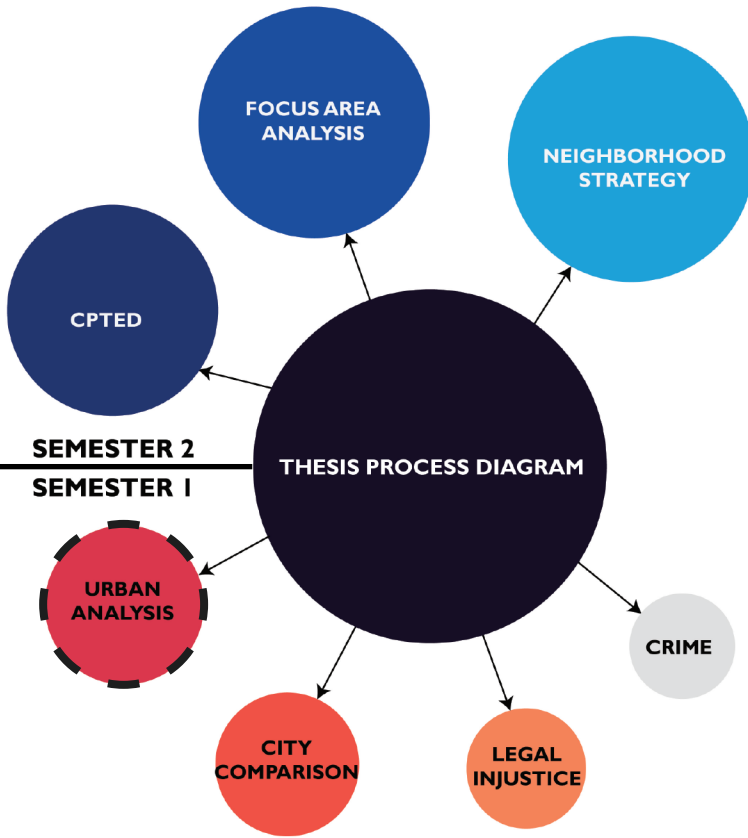
Figure 26, Protest outside Pagedale's police station

Figure 27, Image of a resident experiencing housing fines

Moreover, the African-American community in St. Louis was still grieving from the passing of Michael Brown which occurred in Ferguson.The variety of issues in the city is something that cannot be initially addressed through urban or architectural design, but the area has numerous resource reform initiatives that could be utilized to initiate the design process. Aside from the city's internal resources there are incentives such as low-income housing tax credits that can immediately help the residents facing blight fines upkeep their homes. Greenlining mortgage-lending is a resource than can help them obtain affordable mortgages which will put them in a position to properly acclimate to their neighborhoods without having to worry about additional funds for property maintenance. Furthermore, low-income communities can negotiate with developers for specific neighborhood improvements.

To summarize, Greendale is a city with a high population of African-Americans, residents have an adequate level of education, availability to mobile transportation and infrastructure, a high percentage of home ownership, and an identity that is rooted in their green city designation. The level of employment is above average, and the housing stock has significant value that generates taxes that make a major impact when allocated towards education or development. Likewise, Pagedale is a city with a high population of African-Americans who have an adequate level of education but minimal transportation per household, a low percentage of home ownership, and an identity that is rooted in their resiliency. The level of employment in Pagedale is below average and their housing stock is undervalued. The statistical data and resources available for development in Pagedale are things that will be utilized in the strategic neighborhood planning phase of this book.

FOCUS AREA ANALYSIS

NEIGHBORHOOD STRATEGY

CPTED

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SEMESTER 1

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"There's no way to rule innocent men. The only power any government has is the power to crack down on criminals. Well, when there aren't enough criminals, one makes them. One declares so many things to be a crime that it becomes impossible for men to live without breaking laws."

-Ayn Rand

4.1 Site Selection

The case studies conducted on Greendale and Pagedale suggest that the lather is the city that requires design intervention due to the various forms of economic injustices and hardships that the residents are currently facing. This chapter begins a detailed analysis of Pagedale's built environment with the intention of identifying issues that contribute to negative behavior and the type of interventions that can be used.

4.2 Land use

The land use map displayed in (Figure 28) looks at the development typologies in Pagedale. The city has a mixture of residential, business, and industrial development with large parcels of land that is dedicated to the public. The oldest residential developments are South of Page Avenue and new developments continue to expand on the North side of the city. The business corridors are primarily on Page Avenue, Ferguson Avenue, and St. Charles Rock Road. The industrial complex is at the center of the city. Educational facilities are subject to the South and outdoor recreation spaces North

RESIDENTIAL
RETAIL
INSTITUTIONAL
INDUSTRIAL
PARKS & RECREATION
BETHANY CEMETERY
FOCUS AREA
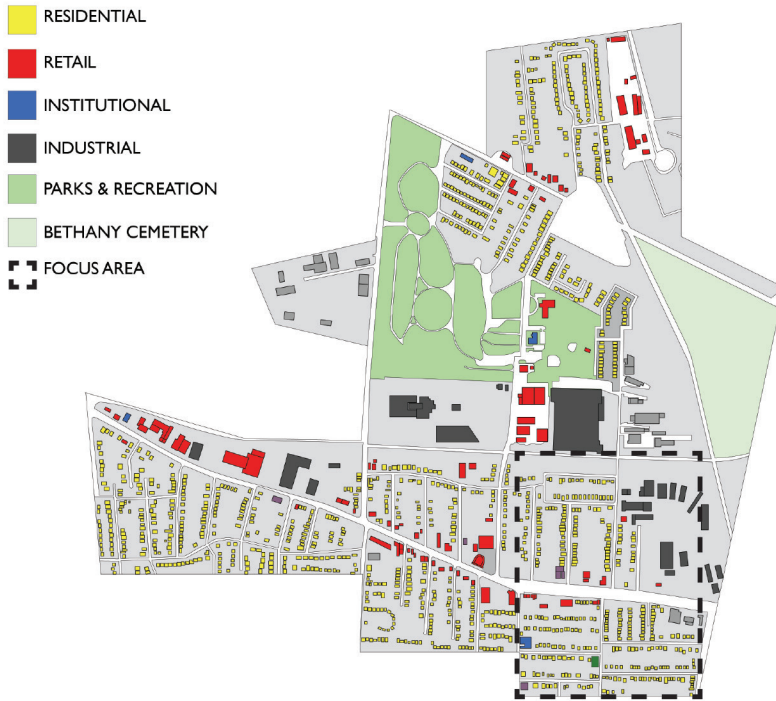
Figure 28, Land Use Map

The developments that are highly demanded and would bring land use diversity are multi-use grocery stores, health centers, multi-family residences, and entertainment centers. The city recently attained its first grocery store (Save-a-lot) and healthcare center (Affina Healthcare) but the demand for these services is significantly high and additional developments would be ideal. The movements through the city from neighboring areas is represented in the location of business and retail..

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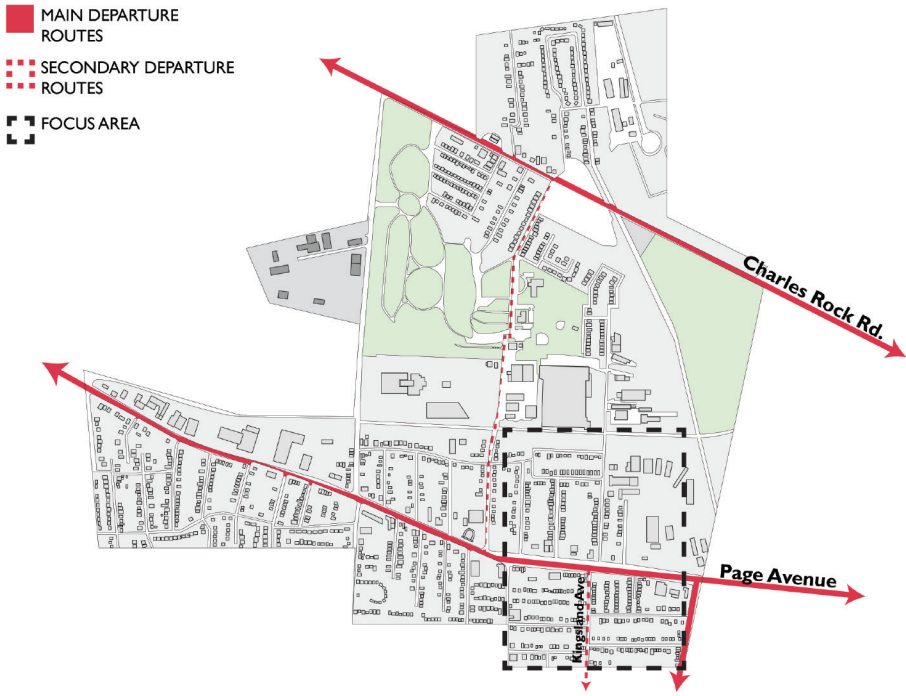
Figure 29, Ease of Access Study

4.3 Ease of Movement

Page Avenue, Ferguson Avenue, and St. Charles Rock are retail oriented streets that experience high vehicular travel which lends itself to criminal incidents. Furthermore, the connection that these streets have to adjacent mobile infrastructure make them ideal passage ways for offenders. Secondary streets such as Kingsland are subject to elevated levels of crime because the residences in these corridors can be accessed from all cardinal directions and the alleyways that connect to parking

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garages are ideal locations for crime. Like Kingsland Avenue, Ferguson is a North-South connection in the city and its adjacency to public recreational areas is cause for its elevated levels of domestic crime.

4.4 Opportunity Hypothesis

Crimes are likely to occur on business corridors and neighborhoods with significant blight and alleyways. The business corridors are on main streets that connect to highways which makes entry and escape easy. Furthermore, opportunities of crime in improvised areas are more appealing to offenders because their appearance suggest a lack of investment and surveillance.

4.5 Mechanisms of Opportunity Change

Preliminary ways to deal with domestic crime is to implement the four mechanisms of opportunity change (Figure 30) which consist of movement control, surveillance, activity support and motivational reinforcement. Movement control encompasses the reduction of unethical behavior in the built environment by increasing the perceived risk to offenders, the setting can be restricted or controlled. Surveillance consists of putting the offender under the threat of being observed, and therefore identified or apprehended. Activity support consists of encouraging existing activities and introducing new ones to help users become familiar with each other. Motivational reinforcement consists of interventions that help deter crime, these interventions can be as minimal as a neighborhood watch which can help residents convince insurance companies to lower their premiums. With exception to motivational reinforcement, the 4 mechanisms of change are utilized in crime prevention through environmental design which is the strategy that will be used to deter crime in Pagedale's built environment.

Movement control

Transform Page Avenue and St. Charles Rock into slow zones to encourage walkability and natural surveillance.

Surveillance

Encouraging walkability on vulnerable corridors, improve street lighting, groom vegetation, and coordinate business hours.

Activity Support

Encourage existing activities and introduce new ones such as pocket packs, urban farms, and community gardens to help legitimate users become familiar with each other.

Motivational Reinforcement

Put the offender under the threat of being observed by encouraging community connectivity and cohesion.

Figure 30, Mechanisms of Change Diagram

4.6 Identify Problems

There are a multitude of crimes that occur in Pagedale's public realm and they include but are not limited to unjust government policy, institutional racism, and police brutality. This chapter will cover crimes that occur in the built environment, some which are regulated and punishable by the state. These crimes are identified as violent and property crimes (Figure 31). Violent crimes encompass aggravated assault, robbery, and homicide. Property crimes include larceny, burglary, and auto theft. Annually, 68% of the property crimes that occur in Pagedale are larceny, 19% burglary, 11% auto theft, and 2% assault. Likewise, the annual percentage distribution for violent crimes is 64% aggravated assault, and 32% robbery. Referencing Figure 32, a majority of violent and property crimes occur on business corridors. The exception to this pattern is crimes that occur along secondary streets like Kingsland Street where the oldest housing stock is.

The opportunity hypothesis in chapter 4 suggested that crimes would happen on the business corridors. In addition, the opportunity hypothesis suggested that crimes would be heavy in areas that are impoverished because blight is synonymous with crime. To mitigate crime within these areas it is imperative that crime prevention initiatives begin at a neighborhood scale and scale down to street corridors.

The focus area within these studies will be situated around Kingsland Avenue (Figure 34 & 35) because the residential area has a lot of historic significance with regards to how it has always been home the African-American population pre great migration era. Also, the presence of crime in the area is a major concern because the environment is well maintained, and the housing stock appears adequate. The focus area has been designated by a dark hidden line in Figure 31 and 32 because it's necessary to understand the issues the city faces holistically and at a neighborhood scale because effective solutions are implemented a multiple scales.

44

LARCENY

ASSAULT, AGGRAVATED

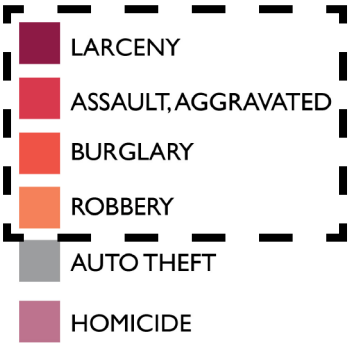BURGLARY

ROBBERY

AUTO THEFT

HOMICIDE

Figure 31, September Crime Map

The elements that will be studied at a city-wide scale are parks, vegetation, mobility, neighborhoods assets, vacancy, streetscaping, and lighting. An analysis of parks and vegetation will provide information on the types of recreational activities in the area, the proximity residents have to them, and the visual freedom associated with the paths to the destinations. Having a variety of activities in a residential area is essential to community cohesion therefore the ideal neighborhood should have a set of recreational activities. A mobility analysis will provide intel on how legitimate and illegitimate users move around within the area, public transportation availability, and accommodation for all forms of transportation.

A neighborhood asset analysis should shed light on anchor points within the community and potential spaces for community gathering. Vacancy has a direct correlation to blight so identifying vacant lots is essential to the programming activities and initiatives to improve the image of an area. Streetscaping initiatives often create a sense of ownership within a neighborhood because it establishes nodes and thresholds in order to signal illicit users of the area and its identity. Furthermore, it regulates access control, mobility, lighting, and walkability so this analysis should reveal a variety of things that are working or need physical improvement in order to achieve a desired result for the focus area. That said, this is an optimal time to introduce Crime Prevention Through Environmental Design because it's the method in which solutions will be derived to mitigate crime within the built environment.
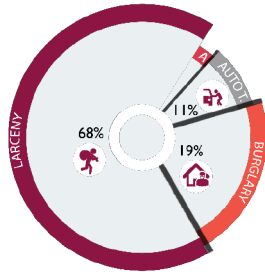
LARCENY

ASSAULT, AGGRAVATED
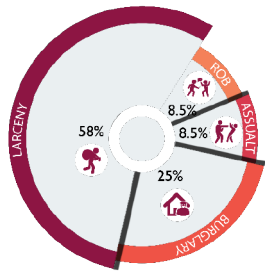
BURGLARY

ROBBERY

AUTO THEFT

HOMICIDE

Figure 32, August Crime Map
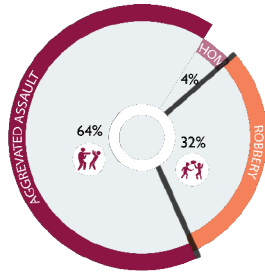
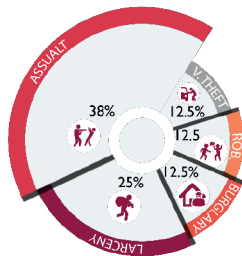**Violent Crime: Apr-Sep 18'**
Pagedale, Missouri

Property Crime: Apr-Sep 18'

September Crimes 18'

August Crimes 18'

Figure 33, Crime Classification Diagram

Figure 34, Kingsland Avenue Corridor

Figure 35, Kingsland Avenue Corridor

Chapter 5
CPTED

"Some people steal to stay alive, and some steal to feel alive. Simple as that."
-V.E. Schwab, A Darker Shade of Magic

5.1 Origin of CPTED

Jane Jacobs was an American-Canadian journalist, author, and activist that made notable contributions to urban studies, sociology, and economics. In her book The Death and Life of Great American Cities she argued that urban renewal does not respect the needs of city-dwellers. The concept of urban renewal was introduced in chapter 2 as eminent domain. Aside from her contributions to urban studies, Jane Jacobs introduced the sociological concept of "eyes on the street", this concept encompasses heavy pedestrian activity in corridors that experience crime to provide natural surveillance and decrease opportunities for crime. Jane Jacobs received heavy criticism for her concepts which stemmed from her lack of education but city planners such as Oscar Newman saw the merit in her work and would later operationalize her eyes on the street concept into Defensible Space.

Defensible Space was created in 1973 and is defined as a residential environment with physical characteristics that function to allow inhabitants to become key agents in ensuring their security. It achieves community regulation through the four programmatic elements which are territorial reinforcement, surveillance, image & milieu, and geographical juxtaposition (Figure 36). Territorial reinforcement refers to signage, streetscape improvements, and symbolic barriers to signal a change in environment. Surveillance is a means for social control for legitimate users and it is achieved by maximizing visibility, increasing the ability to see and be seen and fostering social interactions.
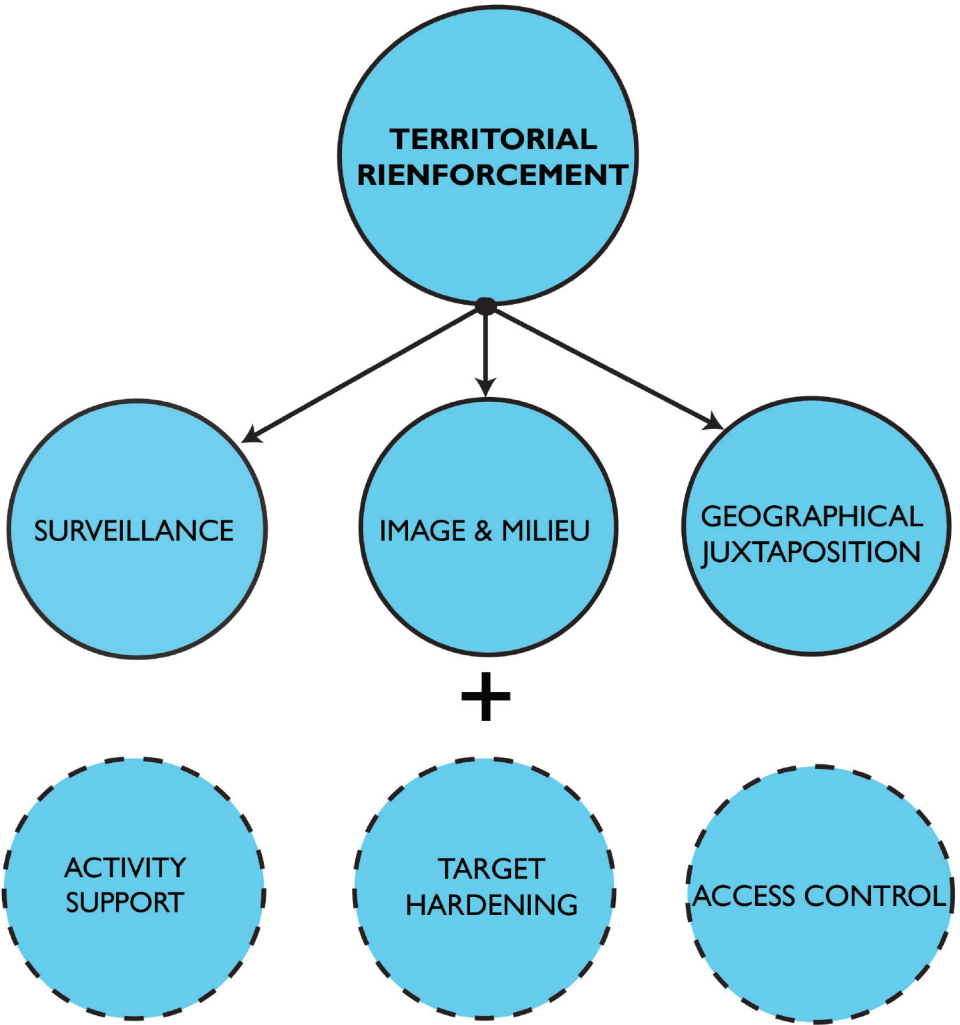
Figure 36, Defensible Space Diagram

Image and milieu refers to positive image creation and routine management. This concept was elevated by George L. Kelling's Broken Window Theory which stated that if nuisance can live it will encourage more blight and vandalism. The last defensible space mechanism is geographical juxtaposition and it is used to assess the potential influence on crime levels of users in proximity and users that generate crime.

5.2 CPTED Generation 1

Oscar Newman's Defensible Space mechanisms influenced the conception of Crime Prevention Through Environmental Design generation 1 which added activity support, access control, and target hardening as additional control mechanisms (Figure 36). Activity support is the programming of spaces and physical elements such as signage to encourage positive behavior and notify users of activities that are safe and not safe. Access control is social control for legitimate users, and it is achieved by using design to delineate where people are intended to be. Target hardening is access control at a micro scale where physical barriers such as security doors are used to separate private and public. In the conception of CPTED 1 (Figure 37) the emphasis on geographical juxtaposition was lost and its implementation varied based on the parties designing out crime.

CPTED Generation 1 was successful where it was implemented properly but there were significant cases where it was oversimplified and the entirely of the mechanisms were not used or too much emphasis placed on one. Often, it is target hardening that is applied too intensely, and it signals users that the area they are in is unsafe. Furthermore, CPTED one didn't include community initiatives and various assumptions were made for legitimate users. The criticism of CPTED one continued until 1997 when Greg Saville and Gerry Cleaveland introduced community initiatives to evolve it into what is currently known as Crime Prevention Through Environmental Design 2.

CPTED generation 2 (Figure 38) envelopes community development categories that include identity, inclusion, community connectivity, community cohesion, neighborhood capacity, community culture, resident participation, urban meeting places, and human scale. The community development initiatives are self-explanatory therefore an indept explanation of each element will not be necessary, but it is imperative to note that no immediate changes were made to CPTED one regardless of the criticisms it received in the mid-20th century. Currently, CPTED is utilized in a variety of states that have benefited its precise implementation but the denial of it is still prevalent in a multitude of designers and urban planners therefore the areas it has been historically criticized will be reinvented for the purposes of this thesis.
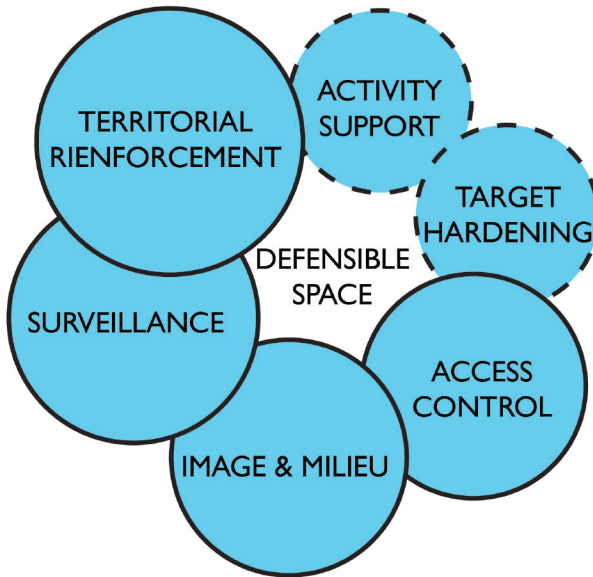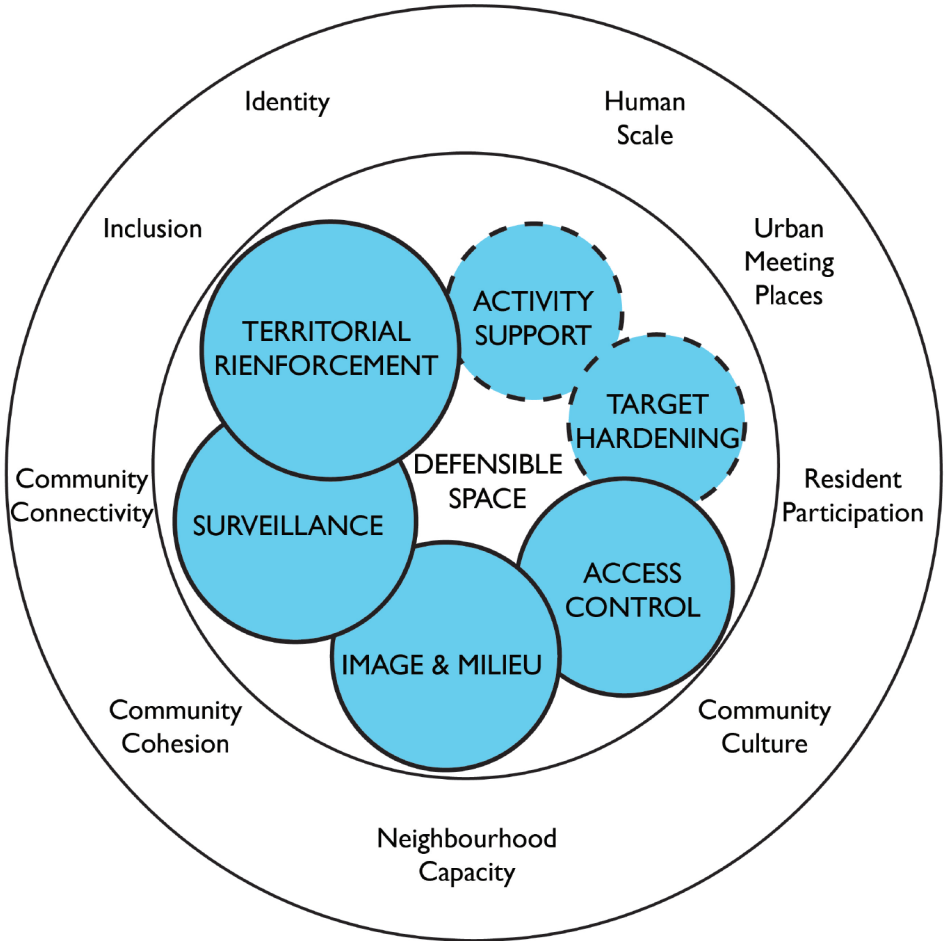

Figure 37, CPTED Generation 1

Figure 38, CPTED Generation 2

5.3 Critique of CPTED

The reinvention of CPTED will mainly revolve around generation 1 to update surveillance, image and milieu, and target hardening. Surveillance is typically broken down into mechanical surveillance, security personnel, and natural surveillance. The latter forms of surveillance are cost heavy and labor intensive therefore surveillance will be redefined as natural surveillance to encourage users to self-regulate. Image and milieu will be redefined as perception of space with an emphasis on vacancy because it is the largest canvas for blight and which affects how people feel as they experience a place.
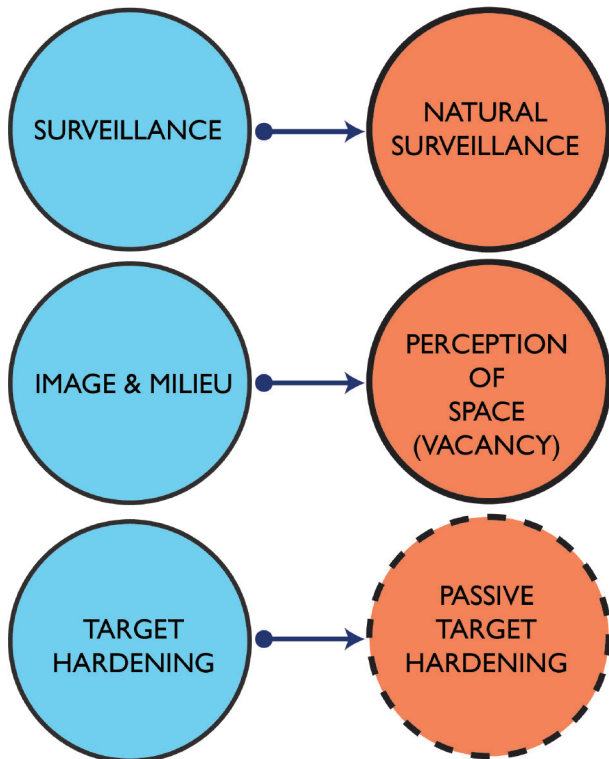

Figure 39, CPTED 1 redefinition

Target hardening is effective in its function but the manner in which it is perceived has been the root cause of criticisms of CPTED therefore it will be redefined as passive target hardening where physical elements that are used to demarcate public and private are embedded with additional functions which can serve for elevate the aesthetic of an area for example. The reinvention of these concepts is displayed in Figures 39 and 40. Note that the community development initiatives are not displayed in the diagram because the critique of CPTED focused on generation one.
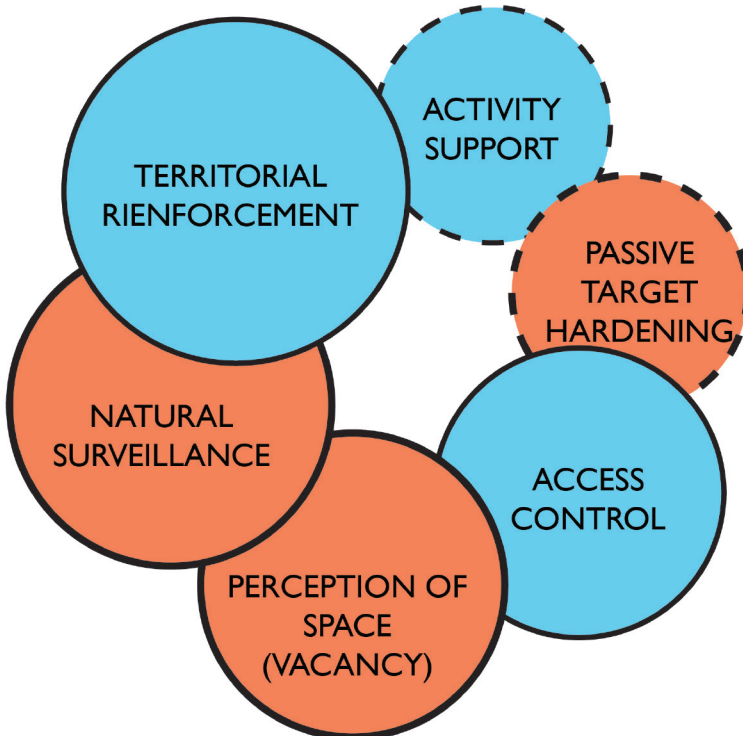

Figure 40, Thesis CPTED Generation 1

5.4 CPTED Strategy Examples

With the refinement of CPTED generation 1, there will be a series of visual examples to elaborate on each concept. These examples are based in various states where their implementation made significant positive impacts to the built environment. The first CPTED strategy that is visually displayed is territorial reinforcement because the remaining strategies were derived from it. It was used in California's Henrico Community where streetscaping initiatives such as decorative light fixtures, flags, and alternating sidewalk materials (Figure 41 & 42) are used to signal non-legitimate users of a vital and dedicated community.

Figure 41, Territorial Rienforcement

Figure 42, Territorial Rienforcement

58

Figure 43, Perception of Space (Before)

Figure 44, Perception of Space (After)

Similarly, the community maintains its image and milieu through rigorous landscaping alterations which is displayed in the multi-family housing complex in Figures 43 and 44. The next two crime prevention strategies are situated in Detroit, Michigan where natural surveillance is achieved at Rivard PLaza (Figure 45 & 46) by maximizing visibility through the concept of seeing and being seen. Likewise, access control to the city's Dequindre Cut is achieved using landscaping, fencing, and pavement design to delineate where people are intended to be (Figure 47 & 48). Furthermore, clearly defined entrances and exits are coupled with a clear definition of borders to solidify how people move through the area.

Figure 45, Natural Surveillance (Before)

Figure 46, Natural Surveillance (After)
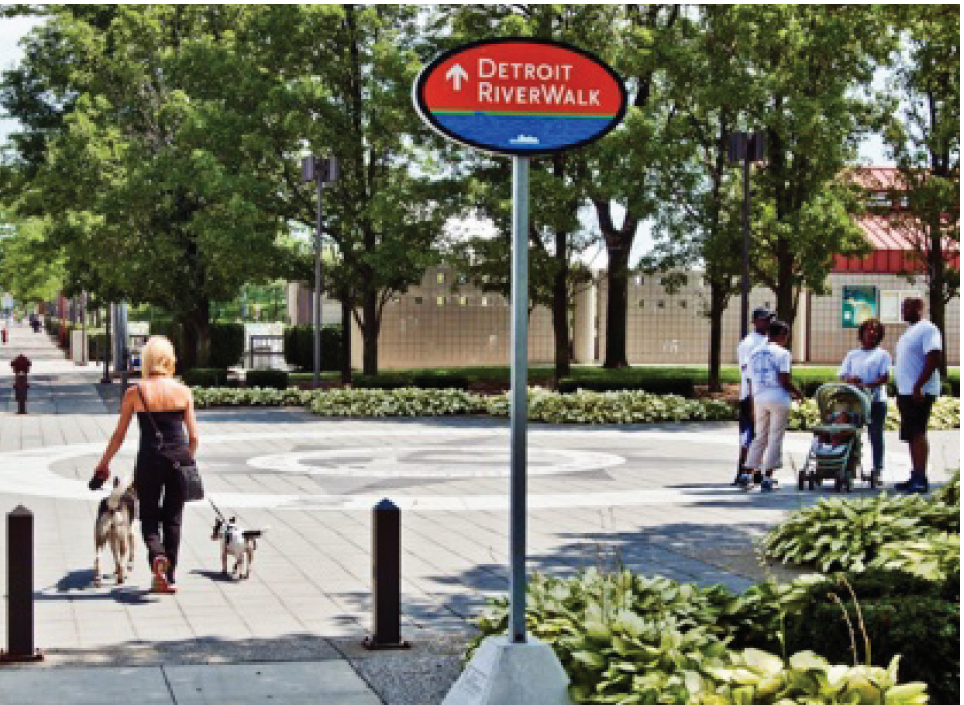
Figure 47, Access Control

Figure 48, Access Control

The last two CPTED examples are situated in Cheyene, Wyoming and Chandler, Arizona. The vertical barrier between the bleachers and the public space adjacent to it at the Okie Blanchard Sports Complex in Cheyene, Wyoming (Figures 48 & 49) is a great example of passive target hardening. In this example, perforated aluminum is engraved with silhouettes of active football players to separate private and public while simultaneously providing a visual canvas that informs people that they have arrived at the arena. The last CPTED strategy is activity support and it is displayed in Figures 50 and 51 as an underutilized building facade that gets retrofitted into a rock-climbing wall to attract teenagers who function to enhance the natural surveillance of the area.

Figure 49, Passive Target Hardening

Figure 50, Passive Target Hardening

Figure 51, Activity Support (Before)

Figure 52, Activity Support (After)

Chapter 6
FOCUS AREA ANALYSIS

*"For the powerful, crimes are those that others commit"*
-Noam Chomsky

6.1 Parks and Vegetation

Pagedale is serviced by six major parks which include St. Vincent and Baerveldt Park to the North, Amhertst and Pagedale Park 1 to the Southeast, and Miller and Heman Park to the Southwest (Figure 53). The parks that are utilized most in Pagedale are St. Vincent, Baerveldt and Pagedale Park 1. However, St. Vincent and Baerveldt Park's proximity to the residences on the South side of the city is inadequate and the same can be said for the relationship of Pagedale Park 1 and the people the reside in the North.

The landscape composition of Baerveldt Park and Pagedale Park 1 varies in scale, landscape features, users permitted, and other elements such as lighting. In contrast to Baerveldt Park, Pagedale's Park 1 is a pocket pak that contains a plane of hardscape, minimal playground equipment, and it's only accessible to the residents of the city. There's an existing signage that states that the park is reserved for residents of the city and there's a tall fence around the property. The park functions well but it can be improved by designing to incorporate additional activities, landscape features to reduce stormwater runoff, park lighting to improve natural surveillance, and passive target hardening techniques to maintain the separation of private and public while providing a canvas for local artists to create murals that elevate the afro centric image.

FOCUS
AREA

3

1

MILLER PARK

1/4 MILE RADIUS

1/2 MILE RADIUS

HEMAN PARK
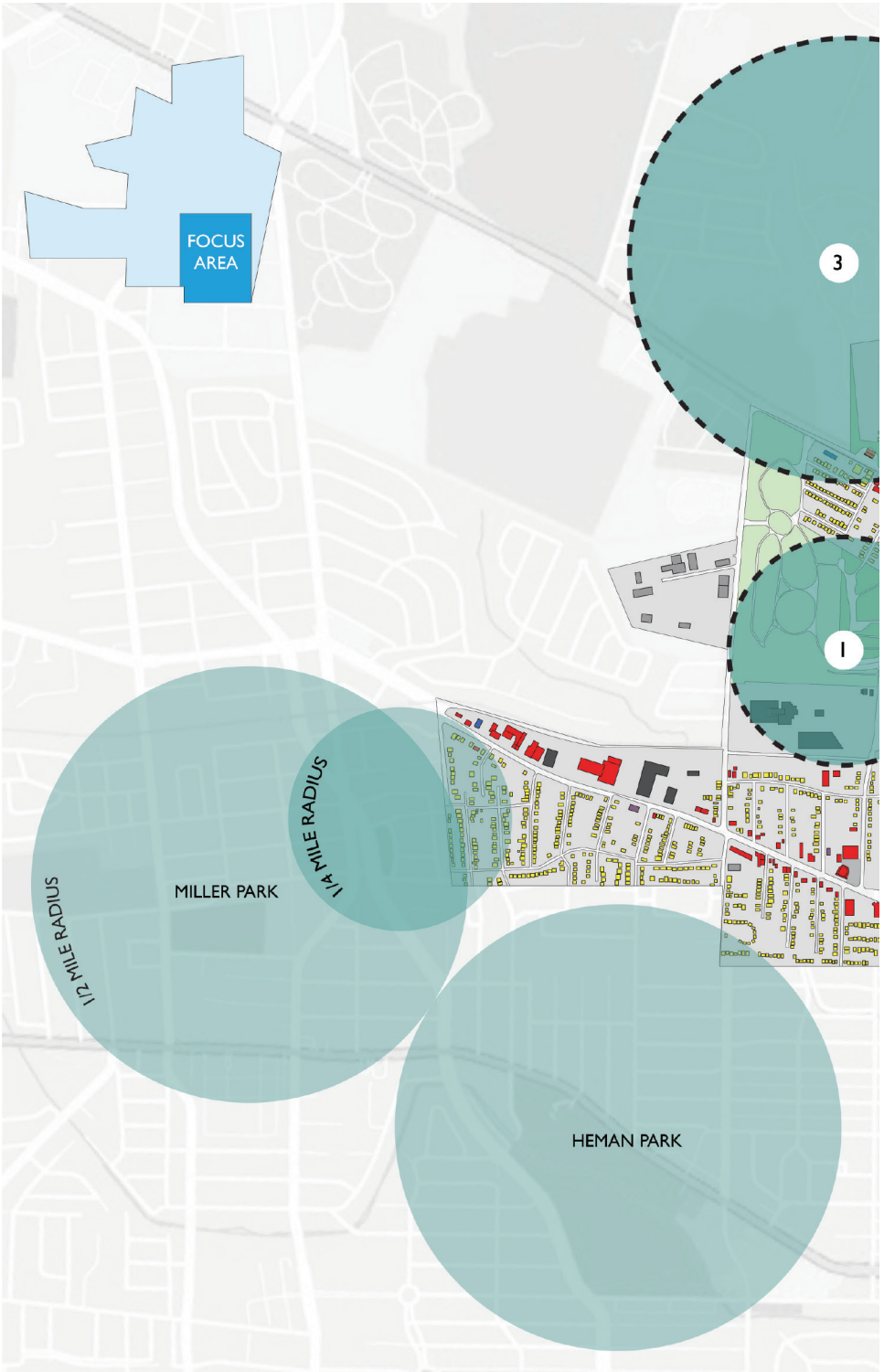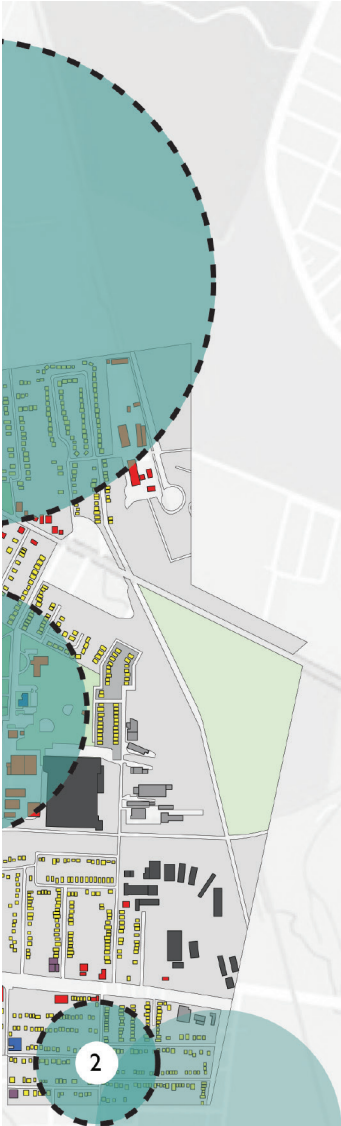
1 BAERVELDT PARK

2 PAGEDALE PLAYGROUND 1

3 ST. VINCENT PARK

2 AMHERST PARK

Pagedale Park 1 (Figure 54) is a good area to implement activity support strategies because it falls within the 10-minute walking distance for the focus area. Moreover, the area contains a significant number of overgrown trees (Figure 55) in residential corridors that obstruct visibility from built forms, sidewalks, and alleyways. There's an existing Tree Grant from the Missouri Department of Conservation to improve trees within
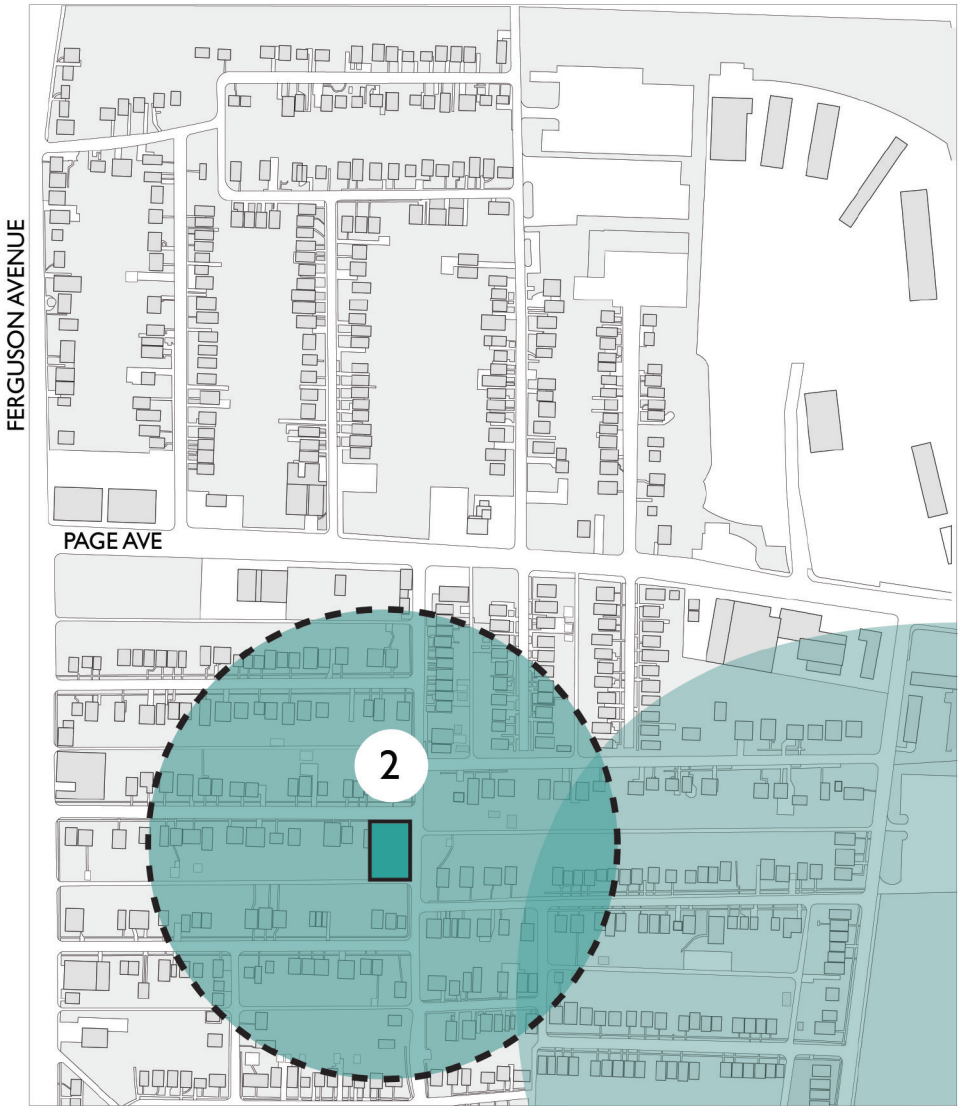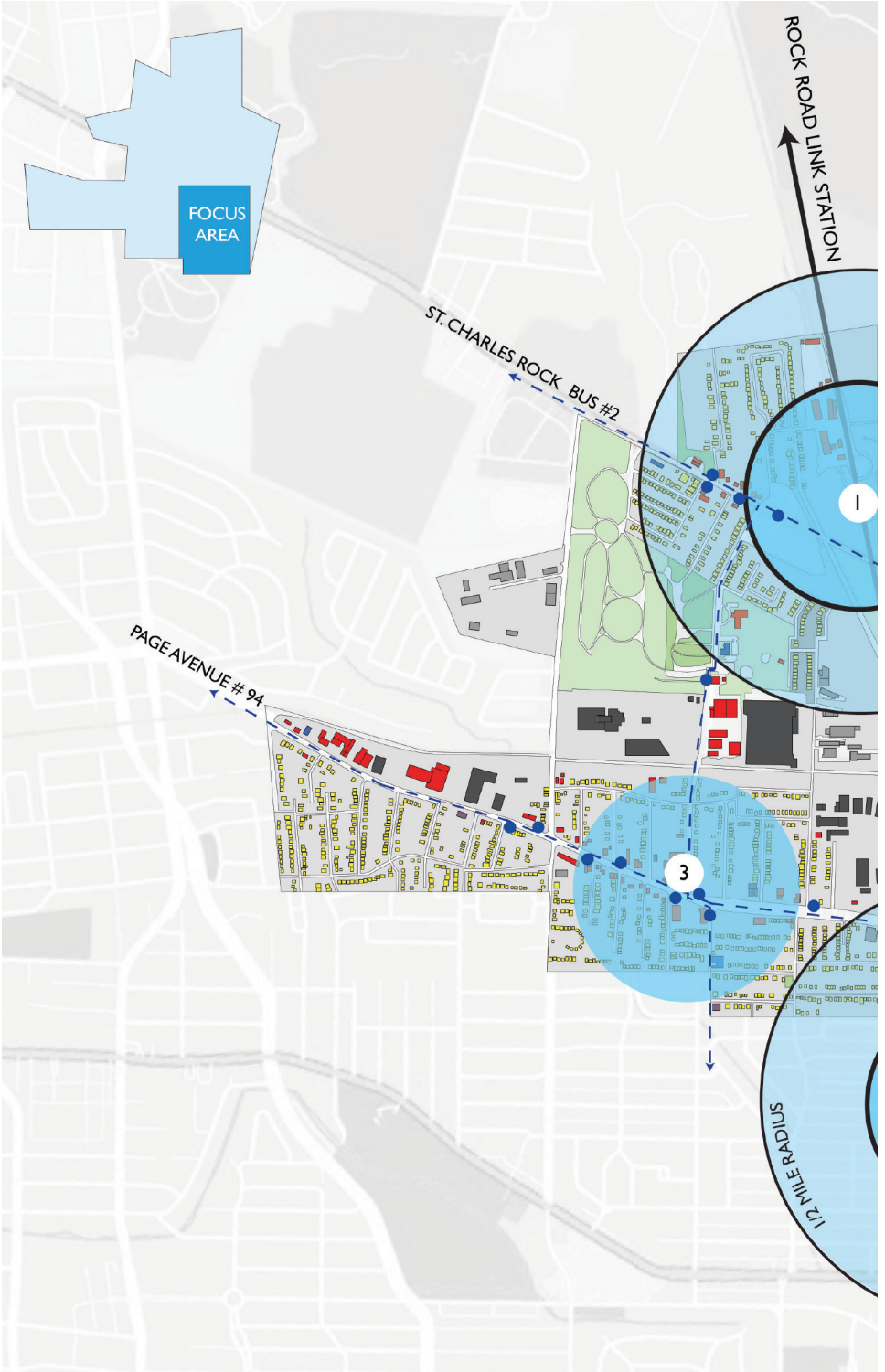

Figure 54, Parks & Open Spaces (Focus Area)

the 24:1 community. and it provides upwards to $10,000 to each municipality. There's $70, 000 available to be invested in the 10 municipalities this year. Main corridors such as Page Avenue lack street trees which makes it appear as a place that is not geared for walkability therefore the perception of the space could be improved with the addition of elements such as street trees and bio retention pits.

HEALTHY TREES TO STAY   OVERGROWN TREES : TRIM OR REMOVE

Figure 55, Tree Deterioration Study (Focus Area)

FOCUS
AREA

ROCK ROAD LINK STATION

ST. CHARLES ROCK   BUS #2

PAGE AVENUE # 94

1/2 MILE RADIUS

1

3

1 ROCK ROAD LINK STATION

2 WELLSTON LINK STATION

3 BUS 94 & 2 INTERSECTION

1/4 MILE RADIUS

6.2 Mobility

Pagedale is serviced by a light rail which is known as the Metrolink, it stops at St. Charles Rock Station on the North side of the city (Figure 56). The rail line is an effective form of transportation that connects residents to neighboring cities and to the core of downtown St. Louis City. The city can capitalize on this form of transportation by increasing the frequency of bus 2 which runs on Ferguson Avenue towards St. Charles Rock. Bus number 2 is the only Metrobus line that runs North south in the city but there are other buses such as the 94 which runs frequently on Page Avenue. There's a reasonable amount of bus stops for bus 94 but the existing locations will have to be improved and new ones added as the corridor experiences more development. The major intersection for the two buses is at Ferguson and Page Avenue therefore there should be serious consideration for this area to attain developments that will enable it to become a public hub where people passing through the city can be enticed to take a break and indulge in the services available.

Aside from the automotive forms of transportation in the city, there is a need for safe routes for travelling pedestrians. An introduction of bicycle lanes would encourage the form on transportation in the city and the area of study specifically where bicycle lanes are non-existent (Figure 57). Furthermore, the sidewalk conditions within the residential area are unsafe because they are not well maintained and there are numerous discontinuities (Figure 58). The introduction of new bus stops, bicycle lanes, and improved sidewalks are a costly endeavor therefore funding will have to be attained at a state level to achieve the desired results.
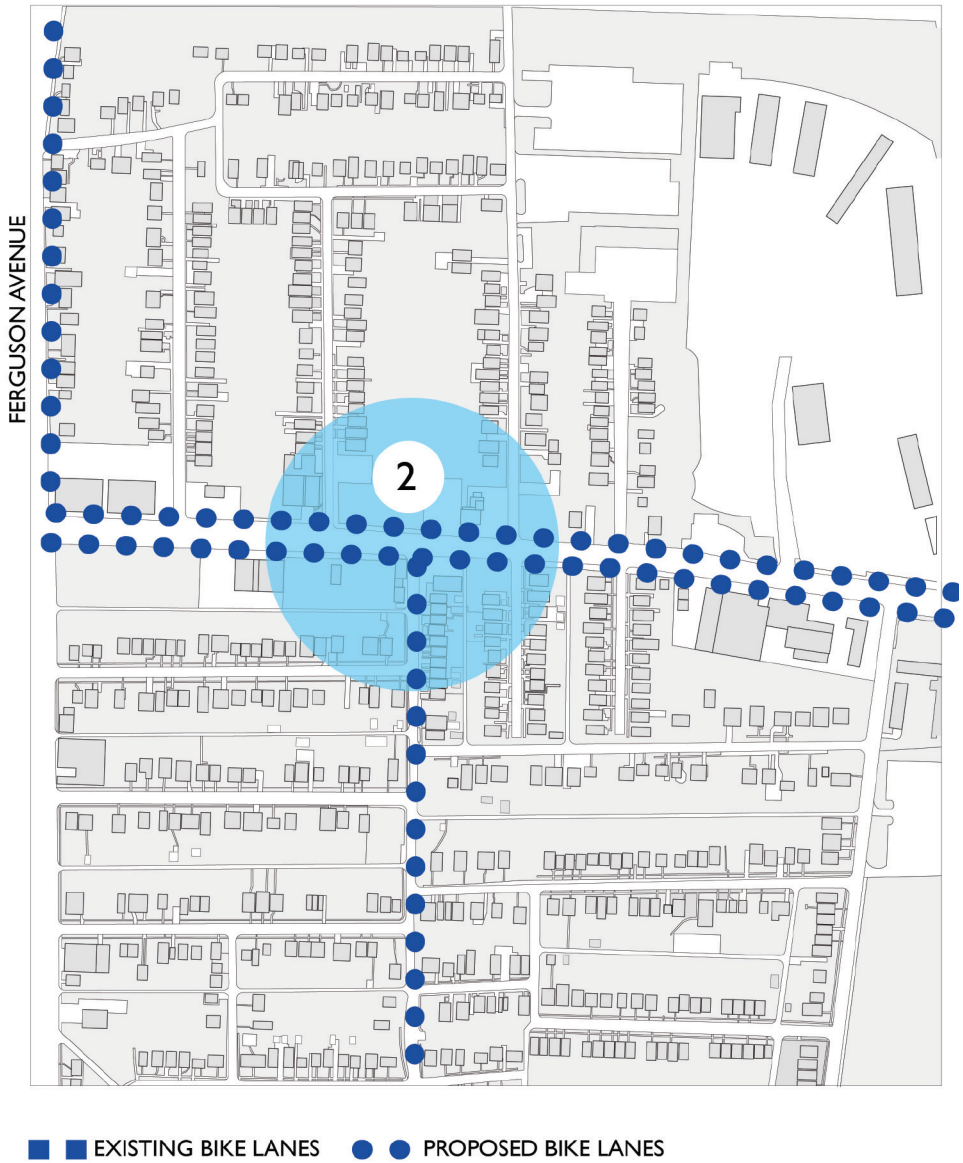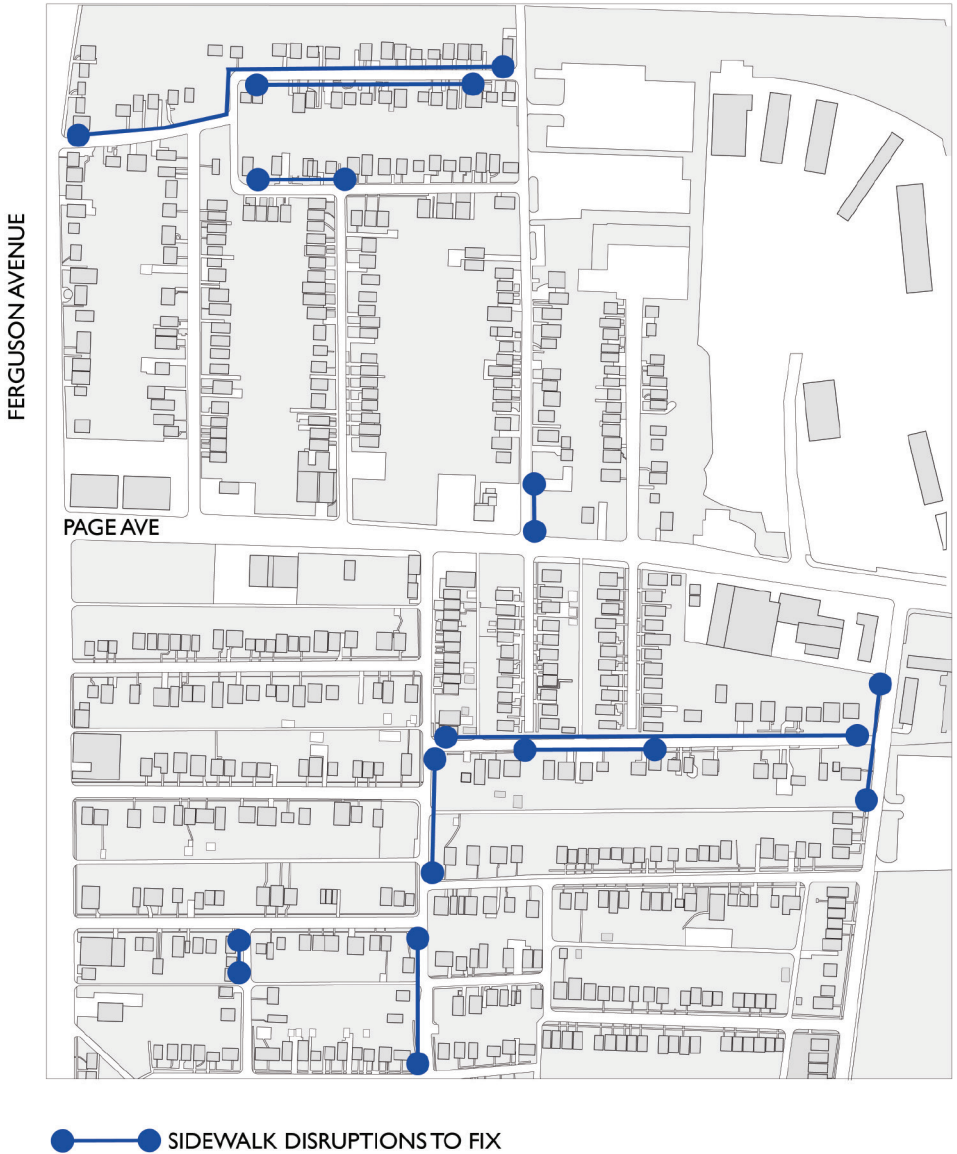
Figure 57, Bicycle Lane Study (Focus Area)

FERGUSON AVENUE

PAGE AVE

SIDEWALK DISRUPTIONS TO FIX

Figure 58, Tree Deterioration Study (Focus Area)

6.3 Assets & Vacancy

Pagedale has various assets which include but are not limited to its city hall, police station, church's, manufacturing companies, retail stores, and entertainment centers. Most of the notable assets such as the 24:1 Cafe Coffee House were developed in the last 8 years with the support of Beyond Housing. The 24:1 Cafe is ran by Robert Cleveland (Figure 59) who is a chef that was born and raised in the city. He was instrumental to the development of this thesis because the dialogue that was had with him in my visit to St. Louis was very informative in a manner that covered education, development, age, identity, and employment. In addition, the restaurant provided mouthwatering dishes that I would highly recommend. A quote from Robert on the identity on Pagedale is that it "is one that can stand on its own. They are proud because they do and did have businesses that were stable.

Currently proud of the development and it is bringing life to and giving the community self-pride". This sense of pride is evident in programs such as ManUp St. Louis which is a non-profit organization that provides mentorship to young African-Americans by paring them up with seasoned professionals. The organization also hosts a number of their events at the 24:1 Cafe Coffee House in the evening's courtesy of Robert. Chris (Figure 60) was the pioneer of the organization and in an interview with him he mentioned that he was inspired to do it by a young adult that continuously requested mentorship from him. At the time of the request he felt he was not able to do so but the young adult evidently inspired him to start up the influential non-profit and build it up with his colleagues into what it is today.

Figure 59, Robert Cleveland Standing infront of the 24:1 Cafe

Name: Robert Cleveland

Age: 36

Occupation: Chef & Retail Store Manager

Background: Robert grew up near University City

About: Robert & Jim Thomas partnered with Beyond Housing and the 24:1 Community Land Trust to retrofit an existing auto repair shop into a cafe. The Land Trust currently owns the operation but it's a long-term investment for them so they don't expect immediate returns.

Roberts thoughts on Pagedale: "People still say, 'Oh, that's Pagedale. That's a high crime area,'" he says. "People don't really know what's going on over here until you get someone like me who's from here and can bring them in. Then they're like, 'Wow, I haven't been over here in years.'"

Figure 60, Chris and other professionals at a ManUp meeting

Name: Christopher B. Hill

Education: Studied Communication Arts at Harris-Stowe State University

Occupation: Boys and Girls Club of Greater St. Louis

About: Chris serves as an Associate Minister of the vastly growing "Worship Center" in North St. Louis. He also is the CEO of his own business and empowerment brand called PUSH. In 2017, Chris Founded Manup St. Louis, a mentoring organization for all men, but specifically men of color to provide a safe space for men to come and grow into agents of change for their community.

Aside from the 24:1 Cafe Coffeehouse (4) there are other 24:1 development initiative such as the Affina Healthcare (1) and Theatre (2) which are highly utilized by the residents in the city. Other assets in the focus area include but are not limited to the St. Lewis Church (3), the Excel Center (5), Pagedale Playground 1(6), Miracle Motors (7), and the Eco Recycling (8) plant which employees a multitude of domestic residents to assist with their concrete recycling operations.
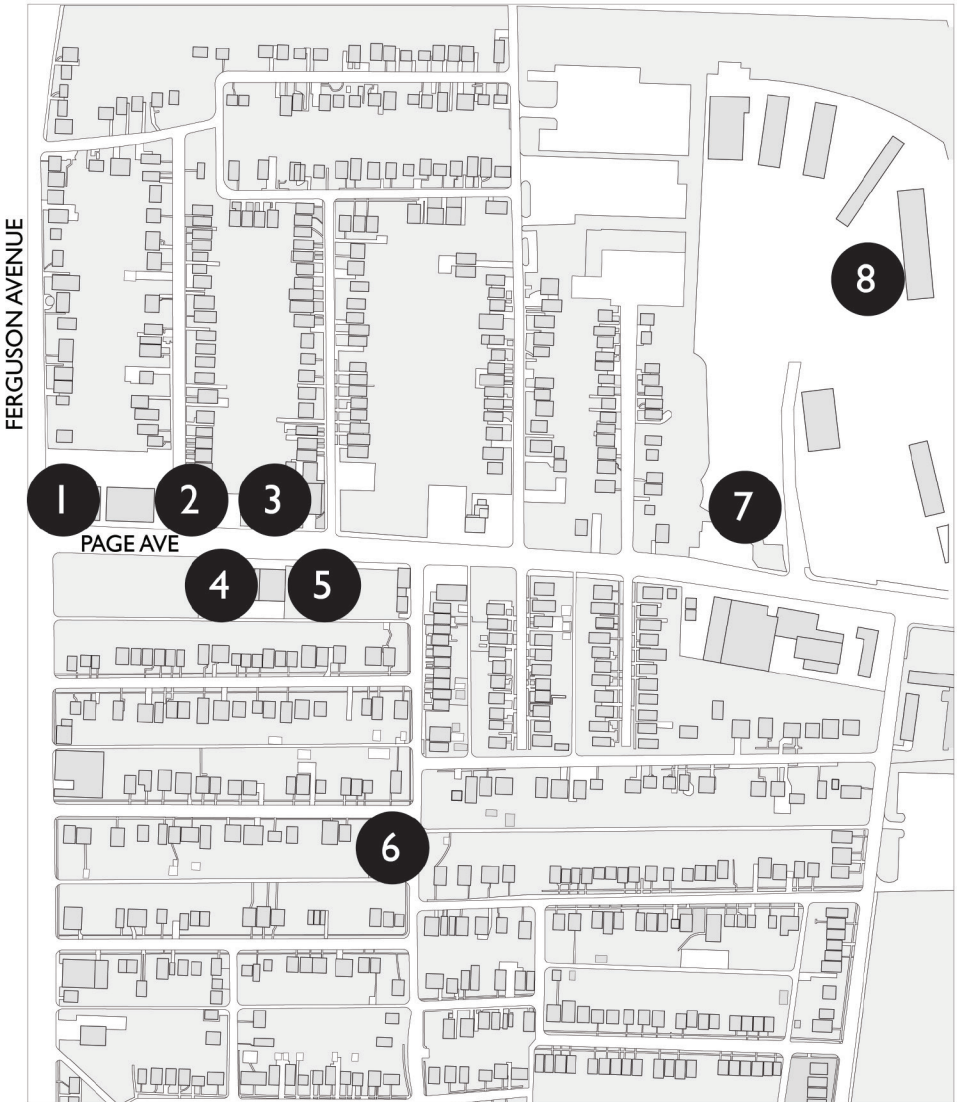

Figure 61, Asset Map (Focus Area)

Within these assets there are numerous vacant lots that are present on the business corridors and residential districts. Generally, vacant lots lend themselves to blight therefore proposals such as new development, stormwater parks, urban farms, community gardens, mow to own initiatives will be programmed to ensure that the image of the lots are well maintained. Some of the proposed sites are displayed in Figure 63.
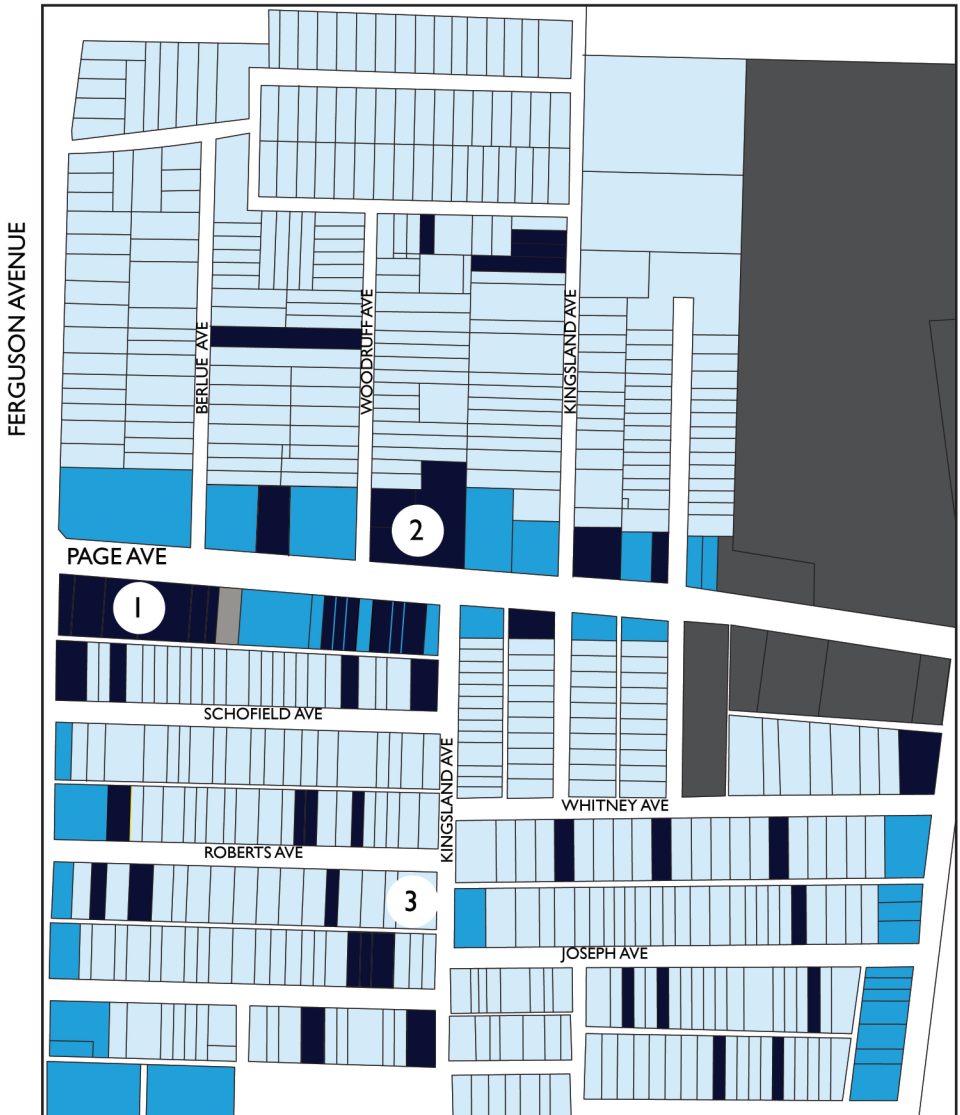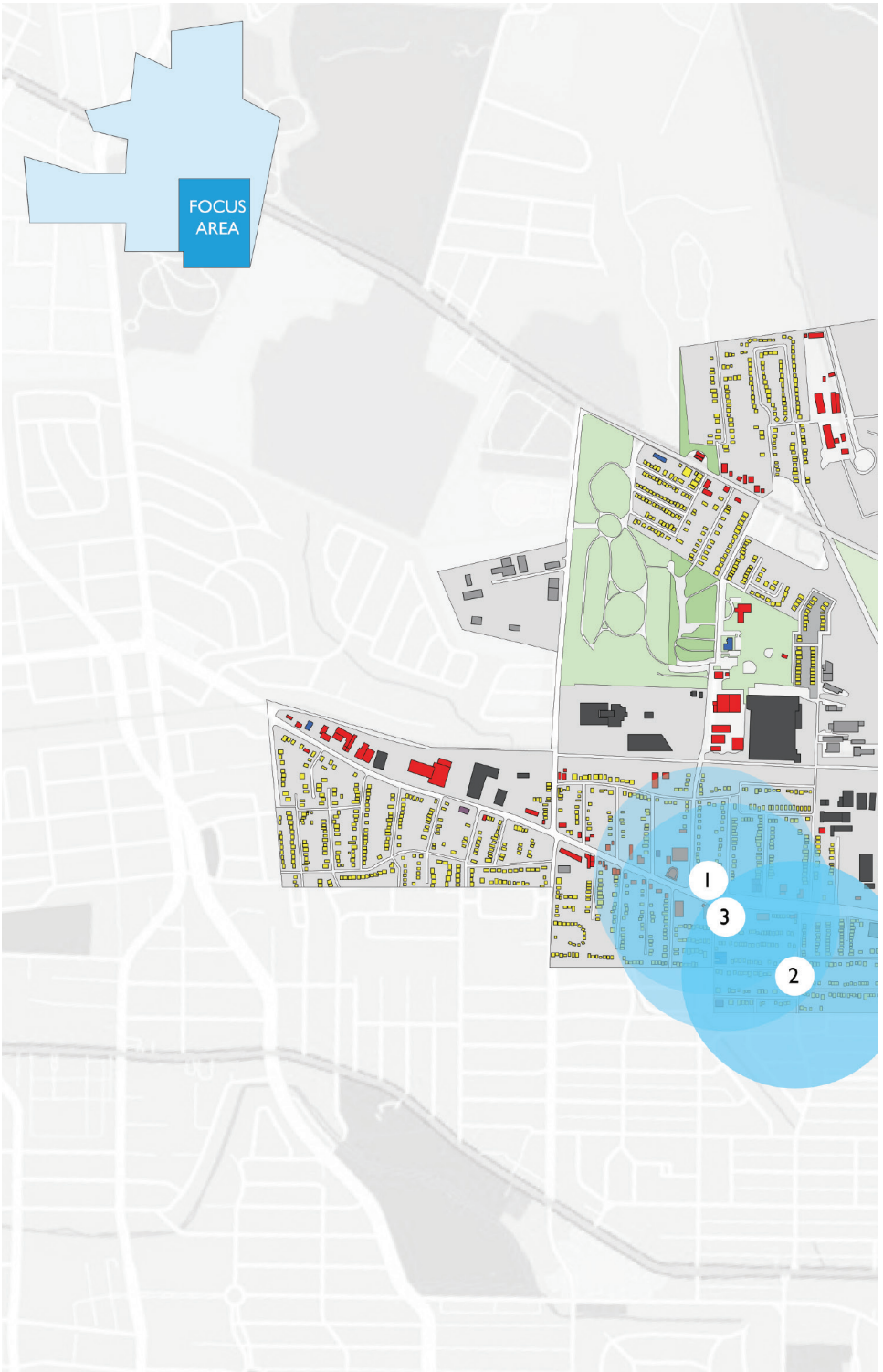

Figure 62, Vacancy Map (Focus Area)

FOCUS
AREA

1 6715 PAGE AVENUE

2 6756 PAGE AVENUE

3 6728 VERNON AVENUE

6.4 Streetscaping & Lighting

Page Avenue is characterized by wide streets that are underutilized and don't promote walkability. There are secondary two-way residential streets that branch of it. The two street types contain metal halide street lights but the frequency of the location of lights need to be improved on Page Avenue because of its width. Figure 64 shows the location of existing street lights and proposed destinations for LED ones.

Perex Maxwell

Aside from lighting, the transformation of these streets includes the addition of bike lanes, bio retentions, greenways, and vegetated medians. The goal for Page Avenue is to reduce the amount of travel lanes and provide more street parking and safe paths of travel for pedestrians. Likewise, residential streets such as Kingsland Avenue will be embedded with new bicycle lanes and continuous sidewalks.
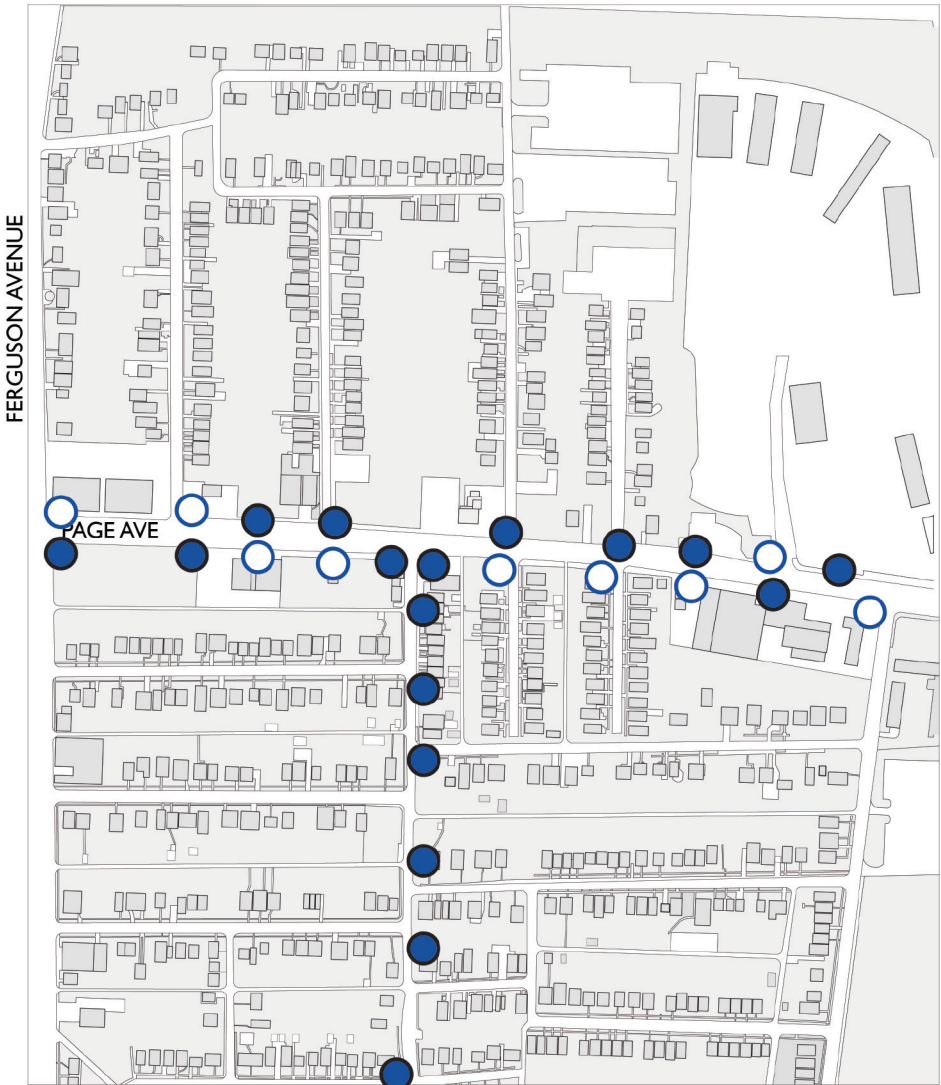
● EXISTING STREET LIGHTS   ○ PROPOSED STREET LIGHTS

Figure 64, Street Light Study (Focus Area)

Existing Street Lights (Kingsland Avenue)

Propopsed Street Lxights with a pedestrian wing (Livernois Ave, Detroit)

SIDE WLK.	BUF.	TRAVEL LANE	TRAVEL LANE	SIDE WLK.
5'	3'	36'		4'
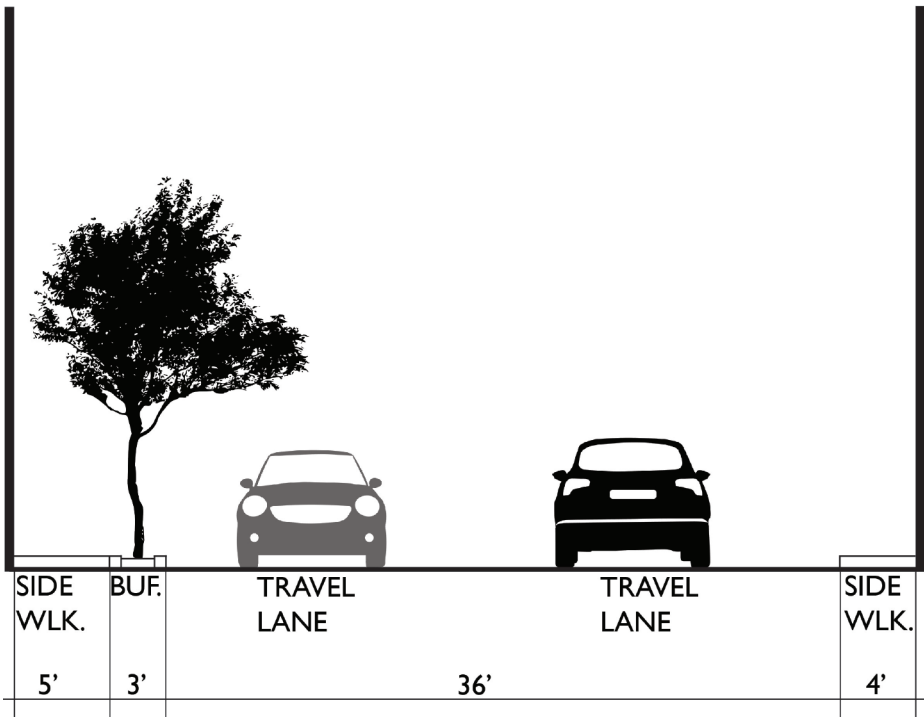
Figure 65, Kingsland Avenue (Before)

SIDE WLK.	BIO. RET.	TRAVEL LANE	TRAVEL LANE	BIKE LANE	BIO. RET.	SIDE WLK.
4'	5'	12'	12'	6'	5'	4'
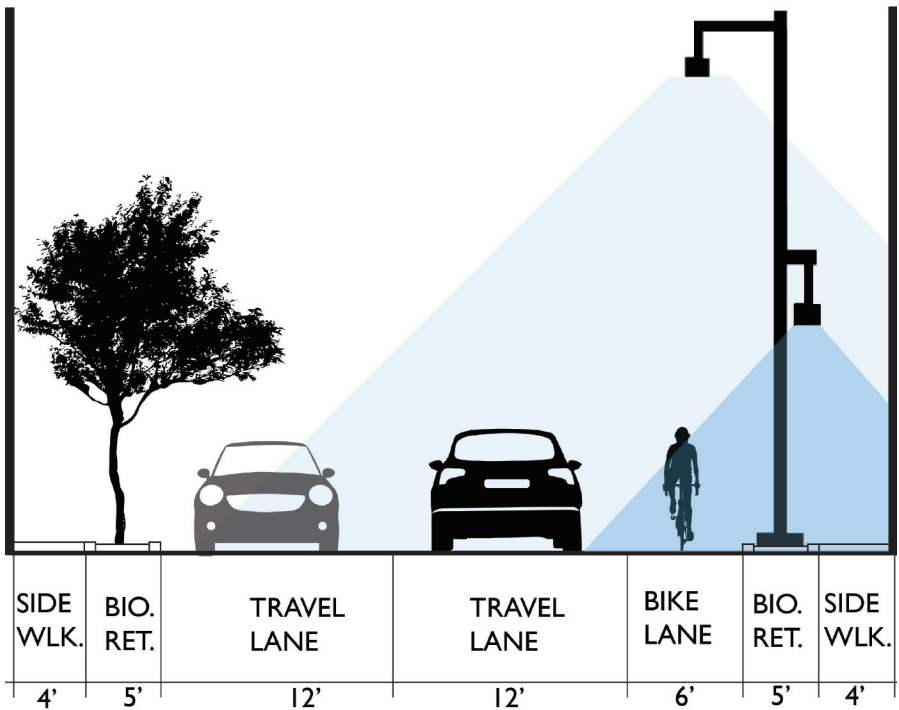
Figure 66, Kingsland Avenue (After)

SIDE WALK	PARKING	TRAVEL LANE	TRAVEL LANE
6'	16'	12'	12'
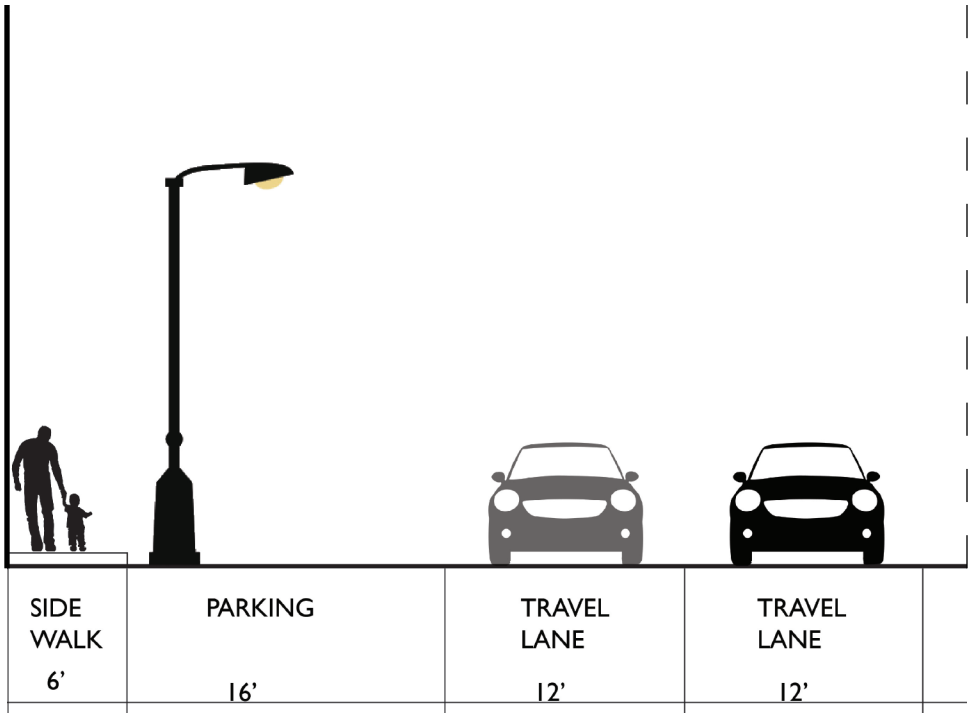
Figure 67, Page Avenue (Before)

SIDE WALK	BIO. RET.	ST VINCENT GREENWAY	BIO. RET.	STREET PARKING		
6'	6'	10'	6'	8'		2'

Figure 68, Page Avenue (After)

TURN LANE	TRAVEL LANE	TRAVEL LANE	PARKING	SID WA
12'	12'	12'	12'	6'

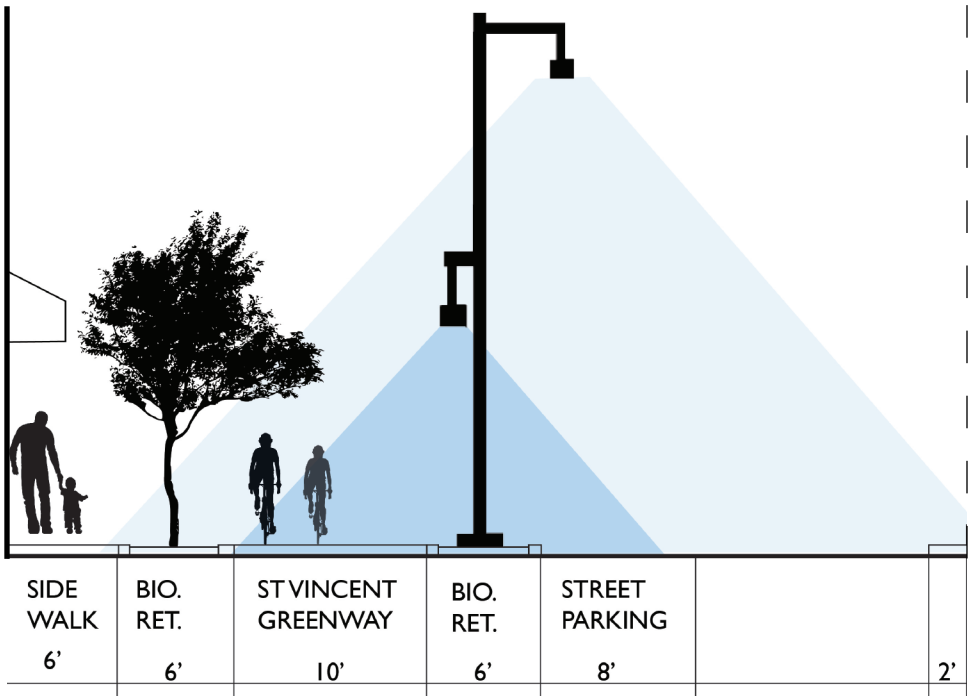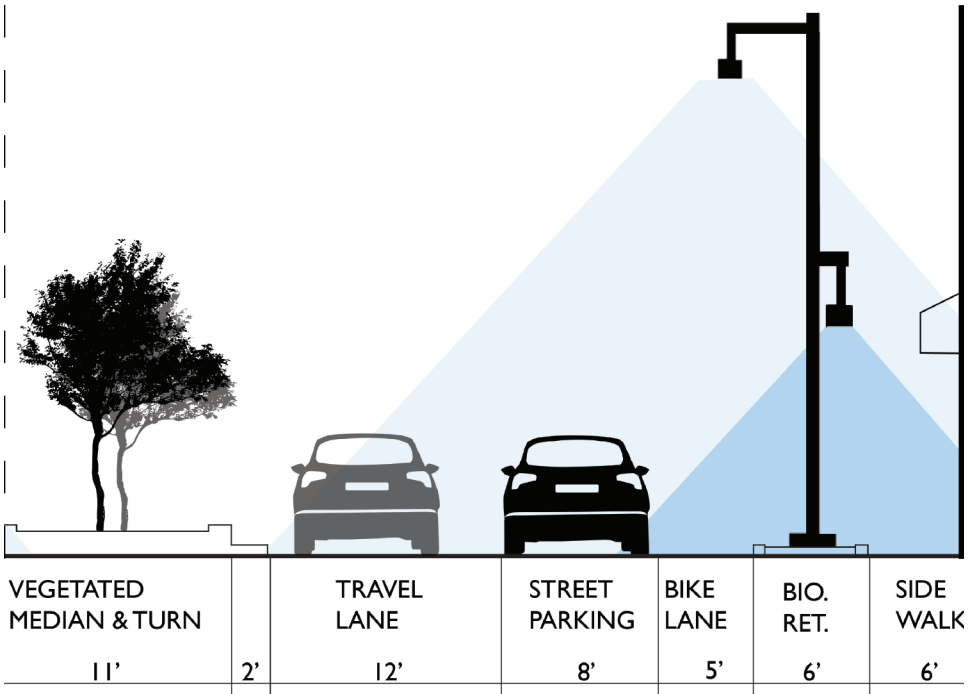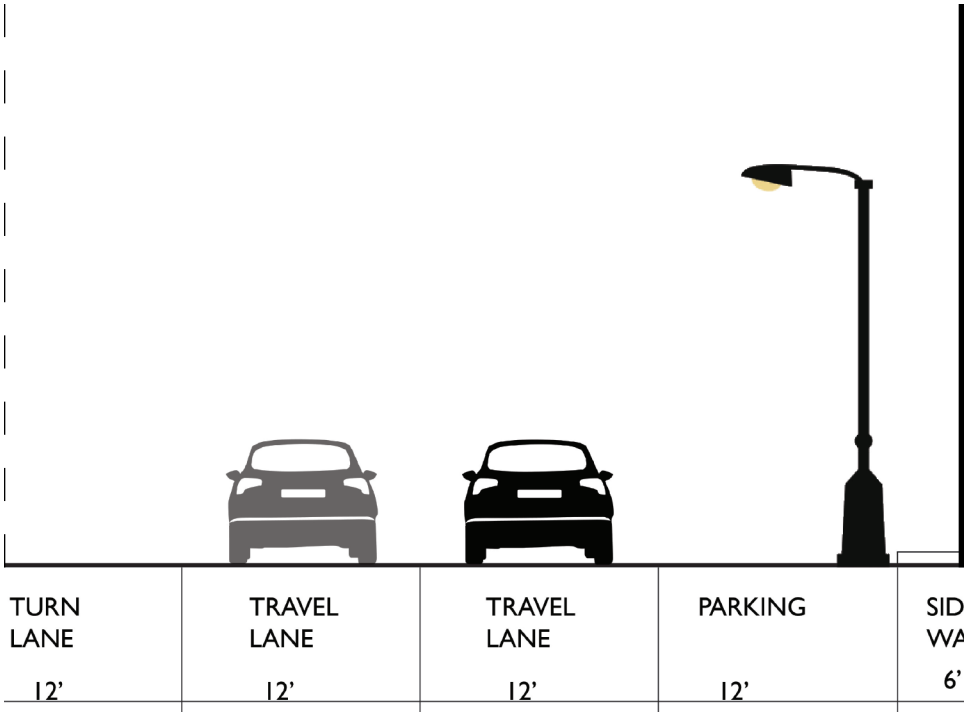| VEGETATED MEDIAN & TURN		TRAVEL LANE	STREET PARKING	BIKE LANE	BIO. RET.	SIDE WALK
11'	2'	12'	8'	5'	6'	6'

Chapter 7
STRATEGIC NEIGHBOURHOOD PLAN

"To convince an entire race that their liberation resides in the denial of one's will is the greatest crime in history
-Dennis Duku

7.1 Neighborhood Strategy

The neighborhood strategy consists of nodes, art corridors, streetscape improvements, building developments, sustainability driven pocket parks, community-oriented programs, street front typologies, and CPTED strategies to bond the various initiatives. The East oriented node to Pagedale will occur at Sutter Avenue and Page Avenue where the operations of the Eco Recycling company underwhelms individuals as they enter the city. Streetscaping initiatives include the introduction of slow zones through the reduction of speed limits, lane reduction, elevated crosswalks, and paved material alternatives. Moreover, the addition of new LED lights will lend itself to natural surveillance.

Mixed-use buildings, multi-family housing, community centers, and retail will work towards meeting market demands and cater to the needs of the young adults. These developments would also infill vacant lots and enable Page Avenue to become an area with sections of continuous storefront and permeable building fronts while eliminating the vulnerability that's associated with vacancy. Green alleys will uplift the image of the area and provide monitored paths of travel. Furthermore, they will complement stormwater parks that accommodate various activities to alleviate stormwater runoff. Mow to own initiatives will encourage community members to maintain parcels within their neighborhoods to ensure that blight does not encourage negative behavior. Likewise, urban farms and community gardens will improve the perception of the area and encourage cohesion.
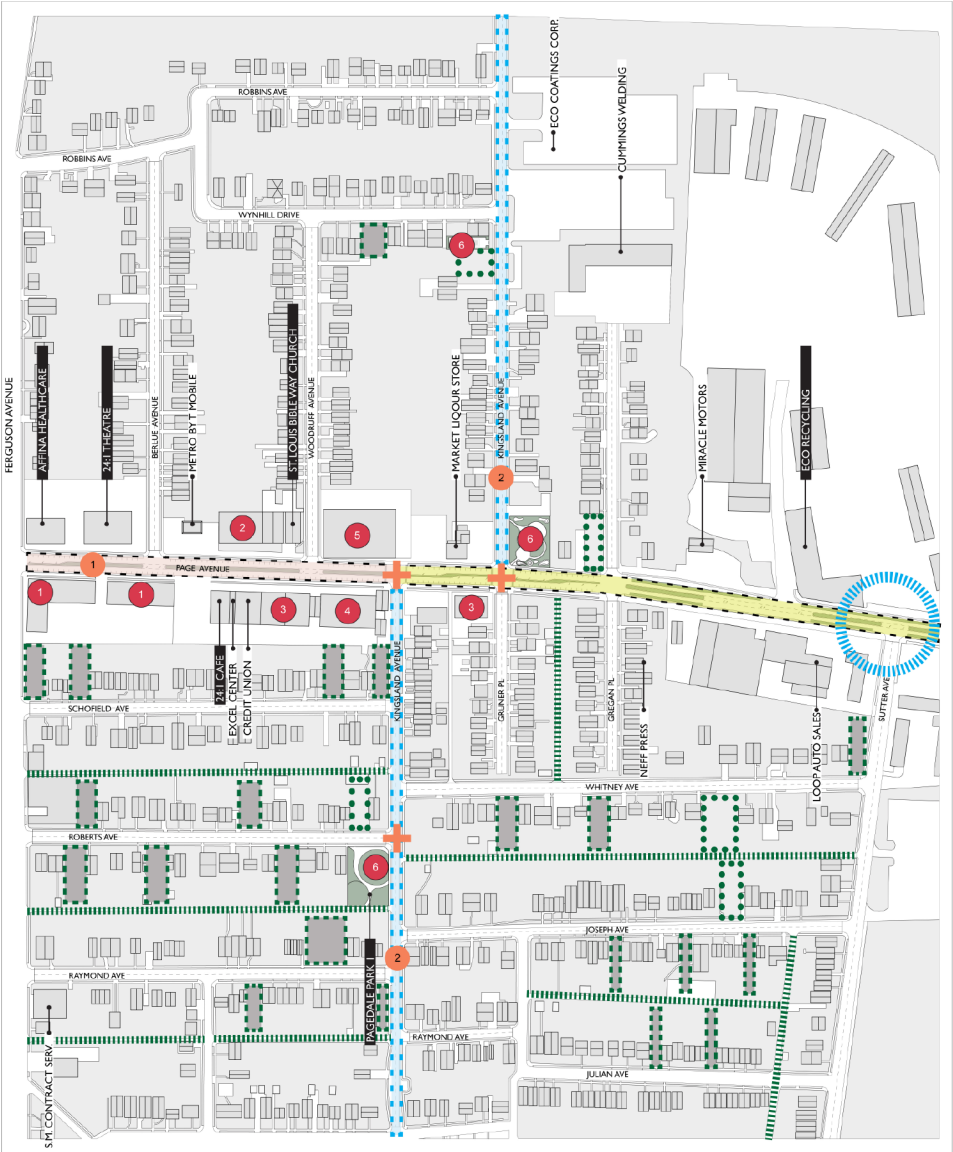
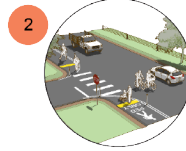Figure 69, Strategic Neighborhood Map
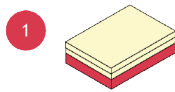
STREETS

1 PAGE AVE SECTION

2 KINGSLAND AVE SECTION

ELEVATED CROSSWALK

4 POROUS PAVING

DEVELOPMENT

1 RETAIL & RESIDENCE
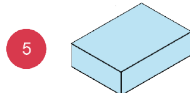
2 RETAIL & OFFICE

3 RETAIL

4 MULTI-RESIDENCE

5 COMMUNITY CENTER
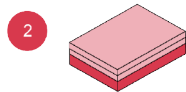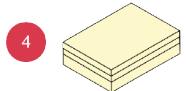
6 STORM-WATER PARK

PROGRAM

GREEN ALLEY

MOW TO OWN

FARM/GARDEN

NODE

ART CORRIDOR

NEIGHBORHOOD TYPOLOGIES

ANCHORS

ASSETS

CONTINUOUS STOREFRONT

PERMEABLE STOREFRONT

Strategic Neighborhood Map Legend

7.2 Page Avenue Corridor

The strategy for Page Avenue is to turn it into a safe street that promotes various modes of mobility, businesses, outdoor activities, and sustainable features. The first step revolves around the conversion of the Sutter and Page Avenue into a node that contains a landscape buffe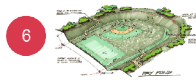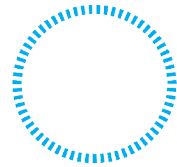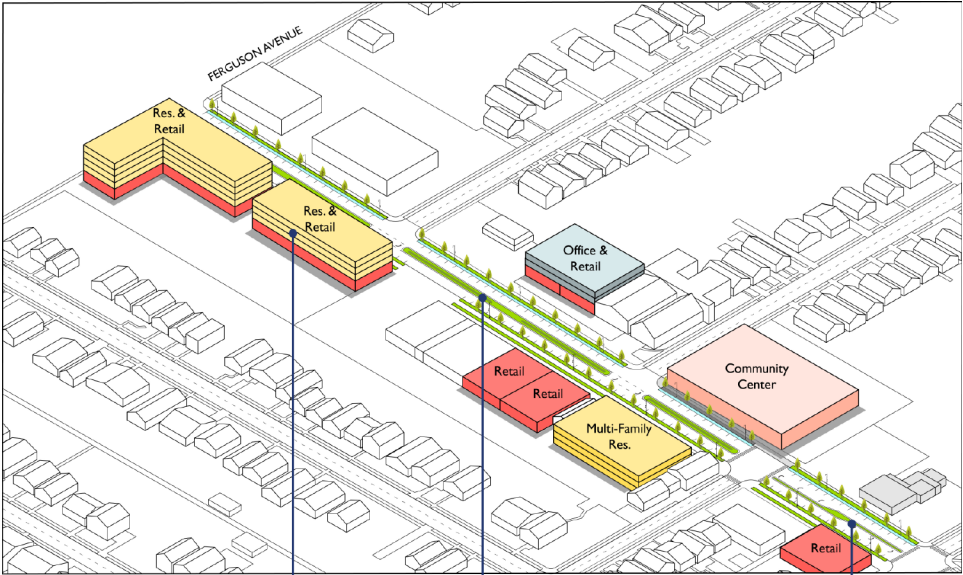r to mask the activities of the Eco Recycling company. In addition, the facade of the Eco Recycling building closest to Page Avenue will be converted into a mural which represents the identity of Pagedale "Pagedale's identity is one that can stand on its own...currently proud of the development and it bringing life and giving the community self-pride". The city's identity can be displayed through artwork such as Kehinde Wiley's painting of Anthony of Pauda which depicts the working African-American.

The second step of this process pertains to the reduction of the travel lanes through the addition of vegetated medians, street parking, buffered bicycle lanes, and new double-sided LED streetlights to illuminate the streets and the sidewalks. The next step pertains to new developments that fill vacancy and introduce building typologies that start to cater to the market demands of the area. These developments can occur with the assistance of Beyond Housing , the 24:1 Community Land Trust, and Tax Increment Financing.

The programming of pocket parks provides a place for activity and community interaction. The 5 crime prevention techniques used on the corridor are activity support, perception of space, natural surveillance, territorial reinforcement, and access control. Activity support is achieved through the development of pocket parks, urban farms, and community gardens. Perception of space is elevated by converting blighted vacant lots into neighborhood assets with routine maintenance. New LED streetlights and coordinated business hours are active forms of natural surveillance. The node at Sutter and Page is a form of territorial reinforcement. Lastly, access control is used to convert the underutilized road into a street that accommodates various forms of mobility.

FERGUSON AVENUE

Res. & Retail

Res. & Retail

Office & Retail

Retail

Retail

Community Center

Multi-Family Res.

Retail

ACTIVITY SUPPORT
-Pocket parks, urban farms, & gardens to encourage community cohesion.

PERCEPTION OF SPACE
-Convert blighted vacant lots into neighborhood assets with routine maintenance.

NATURAL SURVEILLANCE
-LED lights on both sides of the street.
-Coordinate business hours.

TERRITORIAL REINFORCEMENT
-Neighborhood node.
-Vegetated buffer in front of concrete recycling field.

ACCESS CONTROL
-Slow zones at continuous storefront areas, reduce lanes
-Accommodate various forms of mobility

Pocket Park

Eco Recycling
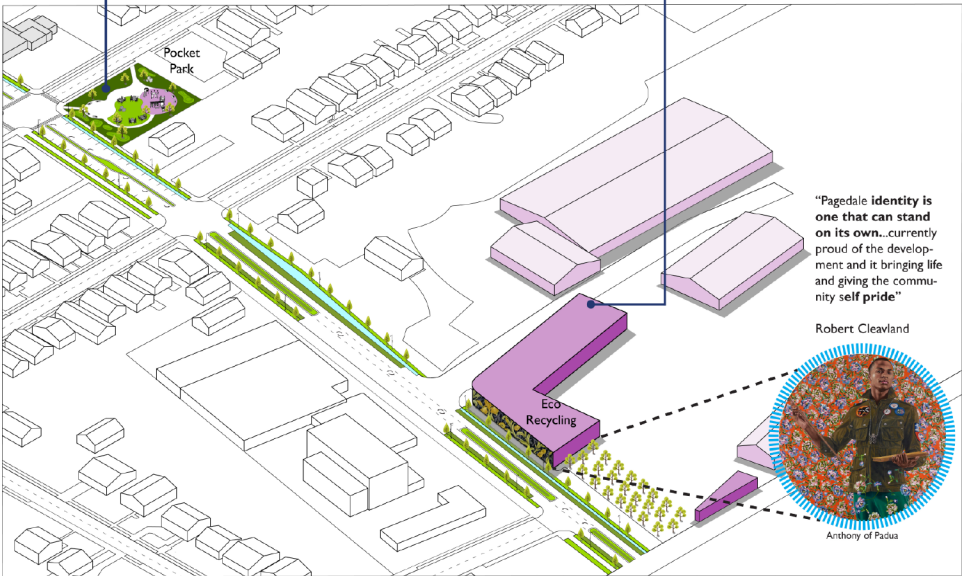
"Pagedale **identity is one that can stand on its own**...currently proud of the development and it bringing life and giving the community **self pride**"

Robert Cleavland

Anthony of Padua

Figure 70, Pagedale Corridor Axon

7.3 Kingsland Avenue Corridor

The strategy for Kingsland Avenue is to turn it into an art corridor that promotes passive architecture, artistic expression, various modes of mobility, outdoor activities, and sustainable features. The first step revolves around the conversion of Pagedale Park 1 into a multi-activity area with passive architecture, new landscape features, improved lighting, and seating arrangements. This will be followed by CPTED strategies to improve the perception of the area and reduce opportunities for crime.

The next step will be to convert the wire fences that residents use to demarcate their property into artistic expressions such as perforated metal or opaque fences that can be utilized by artists. The 5 CPTED strategies that are used on the Kingsland Avenue corridor are natural surveillance, access control, activity support, passive target hardening, and perception of space. Natural surveillance will be achieved by replacing the current streetlights to LED ones, the same can be said with the addition of park lights for Pagedale Park 1. Access to the park will be controlled by maintaining its entrance on a secondary street which contains a sign that informs non-legitimate users that it is exclusive to the city. Activity support initiatives such as urban farms and community gardens are placed strategically to capitalize on vacant lots. The utilization of these lots will improve the perception of the area if they continue to be well maintained. Finally, passive target hardening is achieved by converting existing wire fences into wooden fences for artists to display work that is empowering to the community for example.
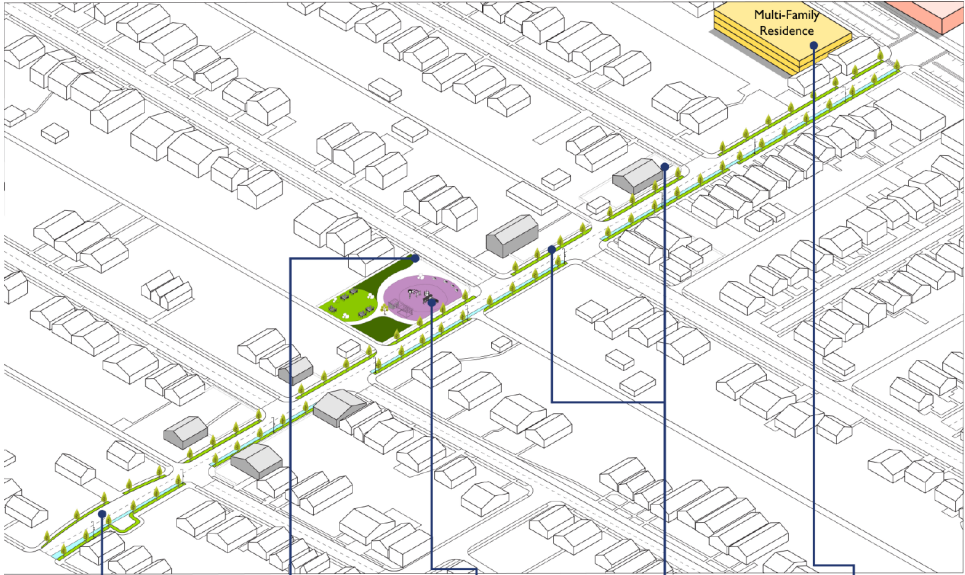
NATURAL SURVEILLANCE	ACCESS CONTROL	ACTIVITY SUPPORT	PASSIVE TARGET HARDENING	PERCEPTION OF SPACE
-Replace metal halide lights with LED.	-Secondary street access -Signage designating private park	-Pocket parks, urban farms, and gardens to encourage community cohesion.	-Artistic dividers demarcating public and private.	-Convert blighted vacant lots into neighborhood assets with routine maintenance.

NATURAL SURVEILLANCE   ACCESS CONTROL   ACTIVITY SUPPORT   PERCEPTION OF SPACE

RAIN GARDEN
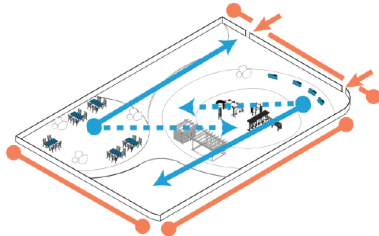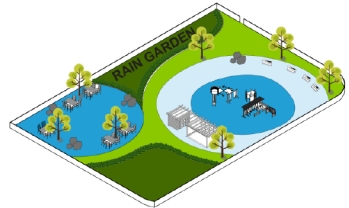
PASSIVE TARGET HARDENING   TERRITORIAL REINFORCEMENT

PRIVATE SPACE

PUBLIC SPACE

PAGEDALE PARK 1

Figure 71, Kingsland Avenue Corridor Axon

Conclusion

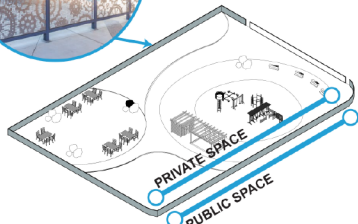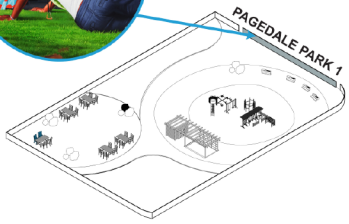Crime is as an action or activity, although not illegal is wrong. These actions segregate people, displace minorities, and degrades the built environment. The legal injustice towards African-Americans by governing bodies and institutions has created a multitude of low-income areas that underperform educationally, have high unemployment rates, inadequate food and resource access, health services, and public transportation. The lack of these resources and services plagues low-income areas with negative behavior that can be offset through Crime Prevention and Environmental Design. CPTED was reinvented in this thesis to cater to the area in a manner that worked cohesively with a neighborhood strategy that responds to the existing environment.

The addition of nodes, art corridors, streetscape improvements, building developments, sustainability driven pocket parks, community-oriented programs, street front typologies, and CPTED strategies have laid a platform for the improvement areas of Pagedale's built environment. These improvements will uplift the perception of the rea and empower its residents to maintain the new standard. As the world population continues to grow and overcrowding begins to affect cities, the need to empower communities to self-regulate through methods such as CPTED will become a necessity and its application will create a multitude of environments that promote healthy activities, standards of living, and empower communities to attain ownership of their environment and hold governing bodies accountable.

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