

An aerial photograph of a residential neighborhood with several houses and trees. A long, narrow alleyway is highlighted in a bright orange color, running diagonally from the top left towards the bottom center of the image. The houses have dark roofs and are surrounded by greenery.

Altered Alleys

The Alteration of Underutilized
Alleyways in Russell Woods

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ABSTRACT

Through the development of the urban setting, spaces are created to service the growing city. Over the course of urban development, those spaces fall out of use for a multitude of reasons: technological advancement, socioeconomic development, government policy, etc. Regardless of the deciding factor which leads to the decline in use of a space, the impact of its misuse often serves as a detriment to the community which surrounds it. It then may become necessary for the use of the space to be adapted so as to both service the surrounding community in a positive fashion, as-well-as begin to promote positive growth within the neighborhood.

A particular case study of these neglected spaces is the residential alleyway. Located in the neighborhood of Russell Woods in the city of Detroit, the proposal for the alteration of the city's alleys spans from Broadstreet Ave. from the west, to Dexter Ave. in the east and from Sturtevant Ave. in the south to Glendale Ave. in the north. This section of alleyway formerly serviced the city's utility's needs and garage access to the residents; however, the functions for which this alley was originally built to service is no longer utilized through the alleyway and therefore has led to the neglect of the former utility by the city. This thesis study, however, is not necessarily confined to this specific neighborhood. The ubiquity of the alleyway condition leads to a ubiquitous design consideration. In the process of adapting the use of one particular site, such implementation may begin to take place on a larger scale throughout not just the city of Detroit, but many other cities in the United States which may be suffering from similar conditions.

THESIS STATEMENT


As cities grow and develop, the infrastructure required to facilitate that growth expands and develops as well. However, eventually the utilities which were designed to service the city begin to degrade, either through changes in technology, logistics, government policy, or other factors. As these key elements of infrastructure degrade and fall into disrepair they become misused, or even unusable. At the termination of their use by the city, often these utilities fall into neglect and disrepair. When this occurs, the utility itself then risks becoming a detriment to the community it once serviced, even if it is out of use. In such a situation, it becomes necessary to adapt and reuse the former utility to benefit the surrounding community, allowing it to be converted from a detriment, to a commodity.

INTRODUCTION

As a city grows, the utilities which service its industry and residents must grow and develop with the ever-changing urban fabric. The city of Detroit is no different. Over the course of several decades from the early to mid-20th century, the city of Detroit expanded to its peak capacity of 1.85 million people in 1950. In its expansion, the city required hundreds of miles of alleyways, bisecting both residential and commercial blocks, to service this growing population. However, due to a multitude of factors the population of Detroit began to gradually decline and, as of 2016, the population of the city was approximately 677,000 residents (MacDonald, 2016). With such a drastic decline in population over the last 56 years, many of the utilities which serviced areas within the city now sit with little use being required of them. In many other cases, the historic function of these utilities is defunct and outdated. With a city which does not possess the available resources or desire to maintain these utilities, it falls upon the residents to utilize them in whichever manner possible.


QUESTIONS


Where is the alleyway located?



The alleyways which are the subject of this thesis is located in the neighborhood of Russell Woods spanning throughout nine blocks bordered by Broadstreet Ave. to the east, Dexter Ave. to the west, Sturtevant Ave. to the south, and Glendale Ave. to the north.


Why was this location chosen?





This particular set of alleyways were chosen due to its proximity to Russell Woods Park, which hosts an annual public jazz festival every summer. In conjunction to that, due to the city's current RFP (Request for Proposal) for the Neighborhoods for Russell Woods and Nardin Park, there is an active effort to revitalize the commercial corridor along Dexter Ave. Which falls within the possible scope of this proposal.


Why do alleyways fall into disrepair?



There is no singular reason an alley may fall into disrepair. Like many utilities, the change in the way of living facilitates an adaptation in public services which are provided by the utilities.

How can the alleyway be reused?





There are many differing solutions to the redevelopment and reuse of the alleyway; however, any proposed reuse of the space must take into account both the historic and current use of the space, while still considering the surrounding residents and the future of the community.

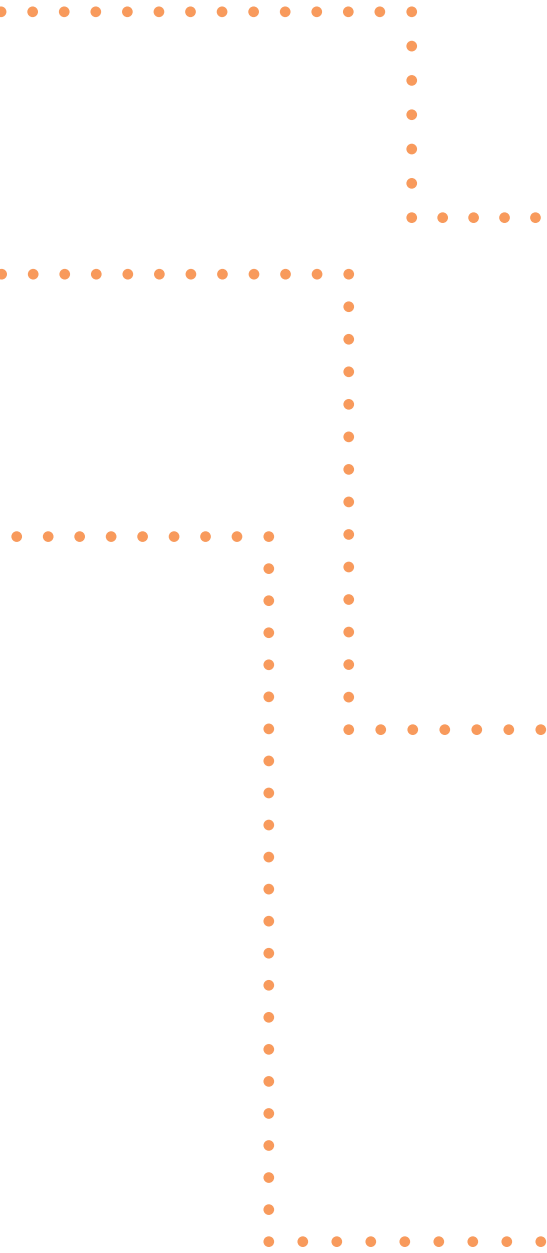
DETERMINING THE SITE

Russell Woods / Nardin Park

Jefferson Chalmers

Campau / Banglatown

In beginning this thesis process, it became apparent that a key aid in discovering an area of study would be that of the Detroit Planning and Development Office and their release of neighborhood RFP's (Requests for Proposal). The RFP process highlights neighborhoods which the city has deemed in need of revitalization and intervention on behalf of the city in an effort to aid in economic redevelopment of the area and of Detroit as a whole. In reviewing the RFP requests by the city, three neighborhood proposals were selected for further review: Campau / Banglatown, Russell Woods / Nardin Park, and Jefferson Chalmers. All three of these neighborhoods posed differing challenges and ranged in size and location within the city. All three requests, however, had the main requirement of a land stewardship plan for their respective neighborhoods.



In researching the three RFP's one stood out as the most promising, that being Russell Woods / Nardin Park. In the Russell Woods / Nardin Park RFP, it appeared that the involvement of the neighborhood's residents was paramount in the drafting of the document. Such key aspects of the RFP are as follows:

- [] Embrace diverse levels of occupancy, economic strength sectors, historic preservation, and open space issues.
- [] Fortification of existing housing stock.
- [] Improve landscape and overall vibrancy and allow for open space for surrounding neighborhoods.
- [] Residents voiced desire for Dexter Ave. to become a local commercial district and for Livernois Ave. to become an economic development hub with the possibility of light industrial and workforce development initiatives. ("Russell Woods" 2017)

It was from this insight into the city's future plan for the neighborhood, that the decision was made to focus solely on the neighborhood of Russell Woods for this thesis.

Throughout the research of this thesis, multiple visits were made to the neighborhood of Russell Woods, which is located west of Livernois Ave. and south of the Davidson freeway two miles south of the campus of The University of Detroit Mercy. The neighborhood was largely constructed during the 1920's and 1930's during times of great population growth within the city, which grew by 113% and 58% respectively. The early residents of the neighborhood were largely of Anglo and Jewish backgrounds; however, by the late 1950's the demographics of the neighborhood had shifted to that of largely middle-class African-American residents. Some of the notable residents of the neighborhood include Dudley Randal (former Poet-Laurite of Detroit and founder of the Broadstreet Press), Carl Owen (an internationally renowned artist), Brazeel Dennard (composer and founder of the Brazeel Dennard Chorale), and Florence Ballard, Diana Ross, and Mary Wilson (former members of "The Supremes") (Historic District).

During the visits to the neighborhood of Russell Woods, it was concluded that in respect to the surrounding area, the housing stock of Russell Woods is in relatively good condition with minimal vacant lots. Any vacancies caused by the absence of a structure largely appeared to be maintained by the lot's two adjacent neighbors. In instances where there are vacant homes in the area, they do not appear to be beyond repair and are relatively well maintained. It was, however, observed that the alleyways

which bisect each of the blocks within the neighborhood had fallen into disrepair and neglect for one reason or another, and that they were in dire need of attention. It was from these visits to the neighborhood that the main focus within the area would be that of the alleyways which bridged between Broadstreet and Dexter to the East and West, and from Fullerton to Sturtevant to the North and South.

It is difficult to determine the entirety of the historic use of this alleyway; however, some aspects of its use are apparent due to the nature of the time both it, and the neighborhood was constructed. The main use of the alley was for the residents to access their garages which, at the time, did not possess a driveway to the street. Multiple other uses of the site also include: sanitation access, electric utility access, coal deliveries, garbage pickup, and community space. Over the course of the development of the city and technology, several of these uses began to become obsolete. Coal was no longer delivered to homes in the area due to the rise in the use of natural gas and electric heating, garbage pickup was moved to the street due to larger vehicles being used, and many cars could no longer turn into their garages due to the larger turning circles required for modern automobiles. The main function of the alleyway was now only that of utility access to the individual homes on the block; however, even after the major uses of the space were no longer necessary, many of the residents used them as an extension of their back yard, allowing their children to play, or community

members to gather behind the houses in these alleys. Though, over the course of several decades the alleyway largely fell out of use for the residents while it subsequently fell into disrepair.

Leslie Street



Glendale Avenue







EARLY CASE STUDIES

Early in the process of this thesis study, part of the original design intent was to create a proposal that would become a supplement to the city RFP process. Such a proposal was intended to occur at the midpoint of the awarded proposal, after a design team had been selected by the city, but before any permanent design implementation had begun. Such an intervention would have a temporary lifespan with the main goal of attempting to achieve some of the criteria outlined within the RFP, while also changing the public perception of the area in which the intervention was constructed. It was with this direction in mind that these case studies were conducted.

Christo and Jean Claude

The Floating Piers

It was with the premise of utilizing temporary structures that the Floating Piers by Christo and Jean Claude were chosen as one of the early case studies in the thesis process.

The Floating Piers was an installation that spanned the course of several months on lake Iseo and merged into the fabric of the adjacent towns. It's goal, more than being an art installation, was to begin to challenge the public perception of the lake and the relationship it had in connecting the towns of Sulzano, Monte Isola, and the Island of San Paolo. The pier was constructed of temporary plastic floats which coated the walkable platform, and vibrant orange fabric which made up the walkable surface. This fabric spanned the entirety of the installation, creating a visual connection between the separate destinations which the pier connected.

The ultimate success of the Floating Piers cannot solely be attributed to the act of connecting three locations with the use of a temporary platform: the main driver behind the project's success was that it allowed the user to experience the lake in a wholly new fashion. By allowing the pedestrian to walk directly from the town to the nearby Isla San Paolo, it allowed the user to develop a new perception of the spaces in which they inhabit and the possible connections which may begin to bridge between spaces. (Christo)





Street Cinema

Street Cinema was a temporary street theatre by Omri Revesz which was designed for the 2017 Venice Biennale. It was designed and built to celebrate the art of early Soviet cinematography and the nation's practice of film distribution to the masses.

In the early Soviet Union, Lenin saw how impactful the new art of cinematography could be in sharing the new government's ideals to the masses; however, much of the Soviet Union at the time consisted of rural towns and villages with little or no access to film or electricity. To overcome this obstacle, the Soviet government created a method of installing temporary traveling theaters which would go from town to town to distribute and showcase propaganda films. It is this aspect of early Soviet cinematography which the Street Cinema project attempts to capitalize on.

The temporary structure, whose construction consists of mostly wood and cloth, is designed to modify its length and openness to accommodate differing programs and viewings. Its structure, more akin to that of an accordion, is designed to compress and expand to fit the needs of the users and program. (Revesz, Street)

Sou Fujimoto

The Wooden House

The Wooden House by Sou Fujimoto is not, unlike the other early case studies, a temporary structure; however, it is a structure with temporal space which is largely why it was included into this early thesis process. To elaborate further, the construction of the wooden house was not designed with the intention of dismantling the structure; rather, the construction of the building directly influenced the structure of the interior spaces. By utilizing a standard building material (that being the wooden timbers) and modifying their length and orientation, the degree with which these elements intrude into the interior space of the structure creates a more abstract, improvised space.

In creating these spaces within the Wooden House in the way that Fujimoto did, it does not allow for a single space to possess a prescribed function. The program within the individual spaces created by these wooden elements is only derived from the action which the spaces current user is partaking in. Due to this, the spaces within become more temporal than temporary or permanent. By allowing the user to prescribe their own program to not only the structure, but the individual spaces housed within, it allows for a perception of the space which is beholden only to the individual. This allows multiple individuals to create a personalized space within the structure that within itself is temporary. (Fujimoto, Wooden House)

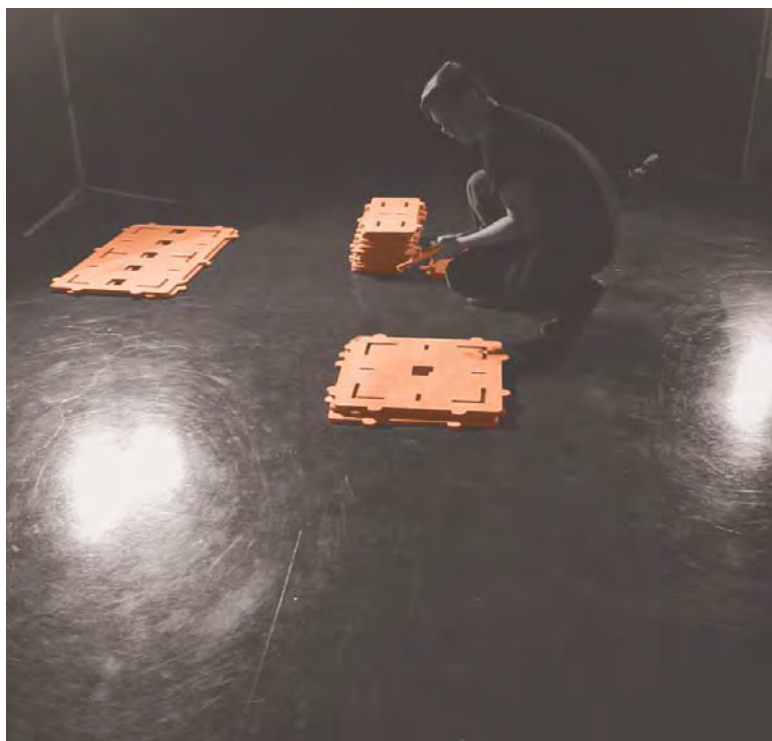


SKETCH PROBLEM ONE

In conjunction to the study of the Russell Woods alleyway, and based off of the early case study work, it was important to begin to understand in what capacity a design intervention can be implemented within the space. This was a relatively small, but full scale, study on a possible intervention which could be deployed in an area where the parameters and needs may not necessarily be set, or are in a state of continuous change. This scenario for design criteria was chosen to fit within the nature of the developing neighborhood, community, and alleyway, but attempted to avoid any site-specific constraints such as topography, site context, or boundaries.

Through the two-week design and prototyping stage for the sketch problem, the design parameters developed into a scheme to design and build a set of replicable parts which could be flat packed and assembled into various sets of furniture. These were by no means designed for aesthetics or comfort, but as a proof of concept in the improvised assembly of elements to create a functioning installation with multiple configurations, programs, and forms. The sketch problem was to be made from $\frac{1}{2}$ " furniture plywood which would be CNC cut into similar sections all measuring 1', 2' or 3' by 2' panels. The panels were cut in such a way that any two or more panels could be slotted into one another to expand upon the overall form. With each panel added or removed, both the form and function of the piece changes; therefore, theoretically the elements of the piece could be assembled to suit many differing needs. In the case of this scenario, the sketch problem culminated in the creation of a bench, table, and stool from these three similar, interlocking elements.

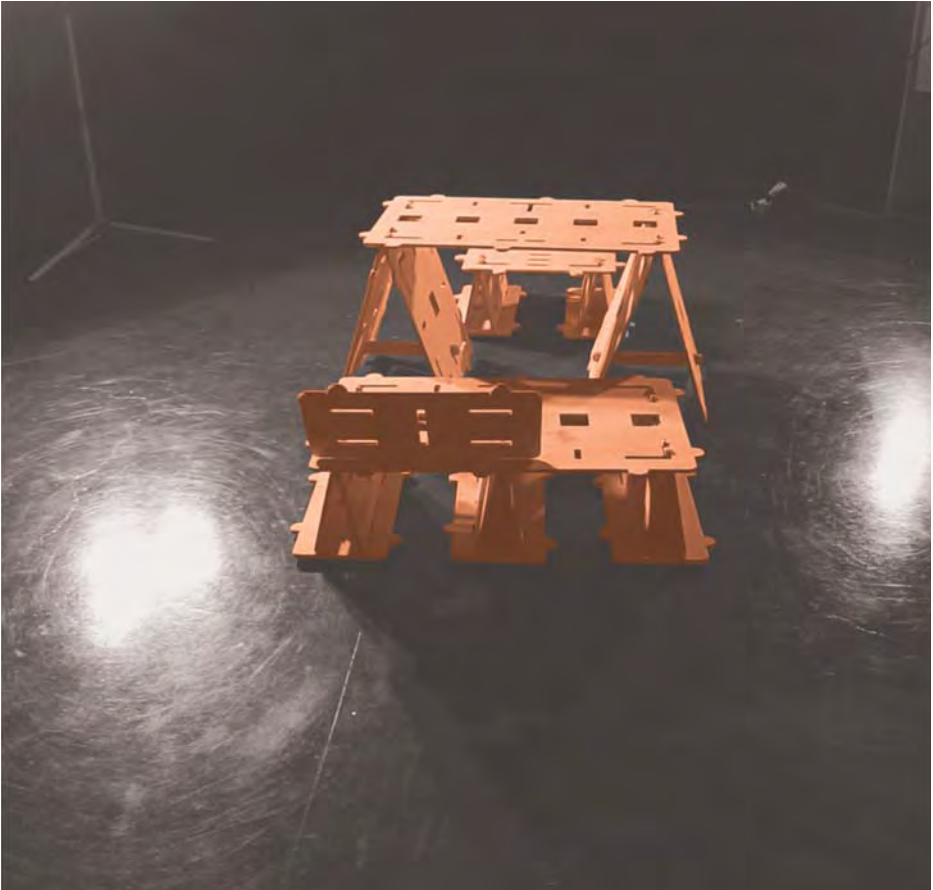
While the overall goal of the process was realized, the project was by no means near its completion. Several things were learned in the creation of this sketch problem, namely that to design an installation which serves the main purpose of improvised use and assembly, it should not be designed for the designer. In doing so, it has the ability to create the preconception that such elements are to be assembled in a specific manner, wholly defeating the purpose of the exercise and



the intention of the design.

Another future design consideration to be made would be in the choice of materiality and of connections. In terms of materiality, the ½" plywood was not entirely suited to the nature of the project. While it did create for ease of material availability and manipulation, it was not well suited to the task at hand; often splitting and indenting under pressure. It was also a poorly suited material to the outdoor environment, eventually degrading beyond usefulness if not maintained.

The connections of the elements of the piece were also in need of further design consideration. Through the two prototyping phases which this project underwent, some changes were made to facilitate more useful and easier connections between elements; however, even after those changes were implemented, it was evident that the method in which the connections were designed hindered the possibilities of assembly. Connections between two faces of a single panel were either difficult, or impractical. Panels were also unable to be connected along their edges, meaning the maximum size of an element was entirely dependent on the size of the largest panel. The connection joints, in many cases, were also flimsy and would require two or more elements to lock the connection into place. It is through these observations that any future development of this sketch problem must consider.



CASE STUDY TWO

After the completion of the sketch problem, the decision was made to alter the direction of the thesis from having the end goal of designing a temporary intervention, to that of a more permanent design solution for the Russell Woods alleyways. This consideration was made after further review of the neighborhood RFP and finding that there was no current direct consideration of the neighborhood alleyways outlined within the document. Due to this fact, it seemed more appropriate to propose a permanent intervention within the alleys which would be a supplement to the future RFP. It was with this direction in mind that a new set of case studies was conducted.

The City of Chicago

Chicago Green Alley Handbook

After refining the topic of the thesis, it became necessary to return to examining relevant case studies in an attempt to further refine and reinforce the new direction the project was heading. To do so, one of the first case studies that was examined was the Chicago Green Alley Handbook.

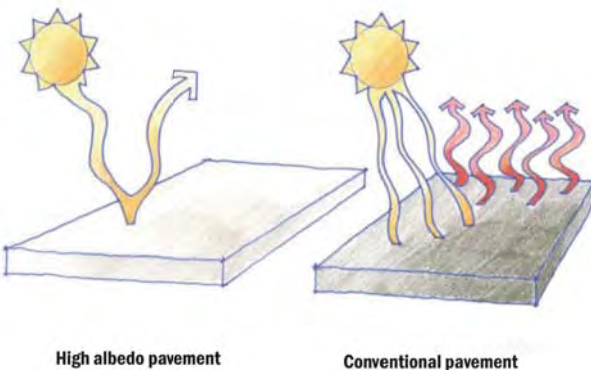
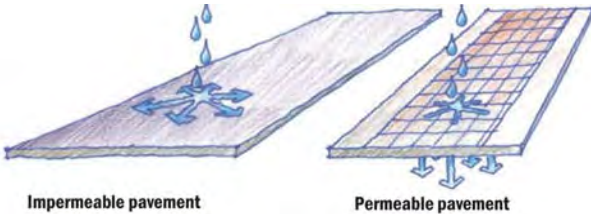
The document which was published by the city of Chicago outlines a set of alley modifications which have the ultimate goal of implementing environmentally sustainable infrastructure design. The handbook outlines means and methods by which not only the city, but also the individual resident may begin to curb the issue of storm water runoff, the heat island effect, and water collection through the modification of existing residential alleyways throughout the city's neighborhoods.

The proposal lays out an implementation plan in which the ubiquitous condition of the residential alleyway within the city of Chicago can begin to shift from a sole utilitarian purpose, to a passive environmental intervention. By proposing a phased system of modifying the alleyways, the city of Chicago to aid in creating not only a more sustainable utility, but also a more ecologically conscious city at the level of the individual resident. (Chicago Green Alley Handbook)

**Sustainable Solutions
within the Alley Right of Way**



The City is committed to creating a greener, more sustainable environment by using best management practices in alley improvements and construction. Some or all of the following techniques will be used when designing green alleys.





The Miami Underline

The Miami Underline is a project proposed by James Corner's Field Operations to adapt and convert approximately nine miles of underutilized space below the city's light rail infrastructure into a usable park, exercise, and gathering spaces as-well-as a transportation hub. The proposal has many similarities to the thesis project in that it is attempting to convert a neglected and unused piece of urban infrastructure into a commodity for the city and surrounding community. The scale of the Underline project, however, dwarfs that of the alley proposal in both size and scope. While the proposal for the Russell Woods alleyways ultimately spans 1.5 miles of 20 foot wide alleyway, the Underline spans nearly 9 miles of land which varies in width from 25 feet to over 200 feet in some areas.

Ultimately, the Underline is a project which demonstrates a similar condition to that of this thesis, while posing larger scale interventions which, without this specific case study, may not have been considered as possible opportunities for the adaptation of the alleyways in the Russell Woods neighborhood. The insight provided from this project, especially in reference to it's connection with nature in some areas, greatly influenced the development of the Russell Woods proposal. ("THE UNDERLINE")

The City of Portland

Portland Alley Allies

The city of Portland Oregon is facing issues not dissimilar to that of Russell Woods when it comes to the need for adaptation in their residential alleyways. To combat this issue, several community organizations formed the Portland Alley Allies which served to create a comprehensive study of the neighborhoods, their subsequent alleys, and their conditions. After doing so, the Alley Allies compiled the information which they found into three comprehensive documents which outlined their scope and methods, research and survey findings, and their proposed alleyway interventions.

Through analyzing the study and proposals laid out within the three documents which the Alley Allies published, it gave further insight and justification as to possible interventions which were beginning to be developed and were also derived from other precedent and case studies.

However, the major difference between the Alley Allies and the Russell Woods neighborhood is both the demographic and economic situations which effect both neighborhoods. The neighborhood in Portland Oregon possess far better access to methods of transit and market spaces, where-as the Russell Woods neighborhood and surrounding areas does not have nearly the same access. Moving forward, these differences were considered. (Alley Allies)



INITIAL ALLEYWAY DESIGN

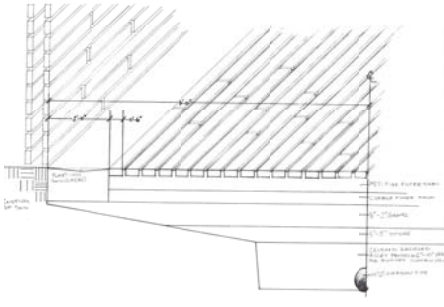
In the beginning phases of alleyway design, the decision was made to experiment with the concept of re-purposing the alleyway by focusing on a select 300' section which spanned between Leslie St. and Glendale Ave. During the process of designing this stretch of alleyway that initial ideas and concepts would be showcased to inform the ultimate 1.5 mile proposal later in the thesis project.

The experience and knowledge gained from both the research into the Russell Woods neighborhood and alleyway, the sketch problem, and the second round of case studies, the decision was made to begin designing and developing a proposal for the reuse of the Leslie-Glendale alley in Russell Woods. It was evident early on that in order to create a proposal for the alleyway, more investigation was needed in defining the surrounding context and elements which were directly adjacent to the alley.

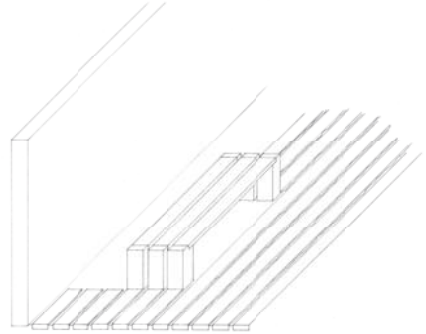
To begin analyzing the alleyway further, multiple site visits were made and measurements taken of the site and its surroundings to begin to sketch possible interventions and to construct a digital 3D representation of the space and its elements aided with the help of the city's Sanborn maps dating from the 1950's. Importance and accuracy were given to the elements which made up and directly abutted the alleyway, such as: sidewalks, pavement, alley fencing, garages, and directly adjacent homes. Measurements and photographs of these elements were taken and meticulously modeled in Autodesk Revit over the course of a week to digitally recreate the alleyway for future design process and implementation. Additionally, while this was being done, a condition assessment to determine the requirements of the future design intervention was being done.

One of the major deciding factors in assessing the condition of the alleyway was the state of its pavement.

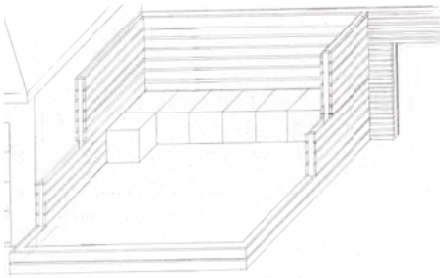




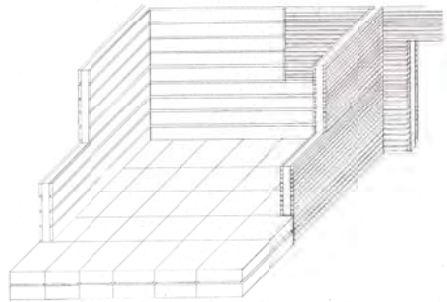
Alley Surface Condition



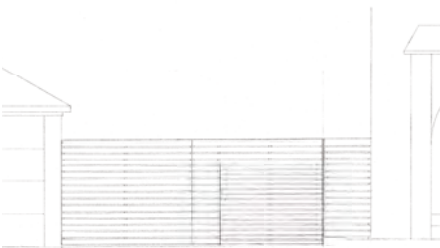
Alley Bench



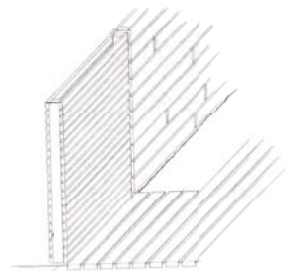
Alley Stage 1



Alley Stage 2



Alley Gate



Residential Gate

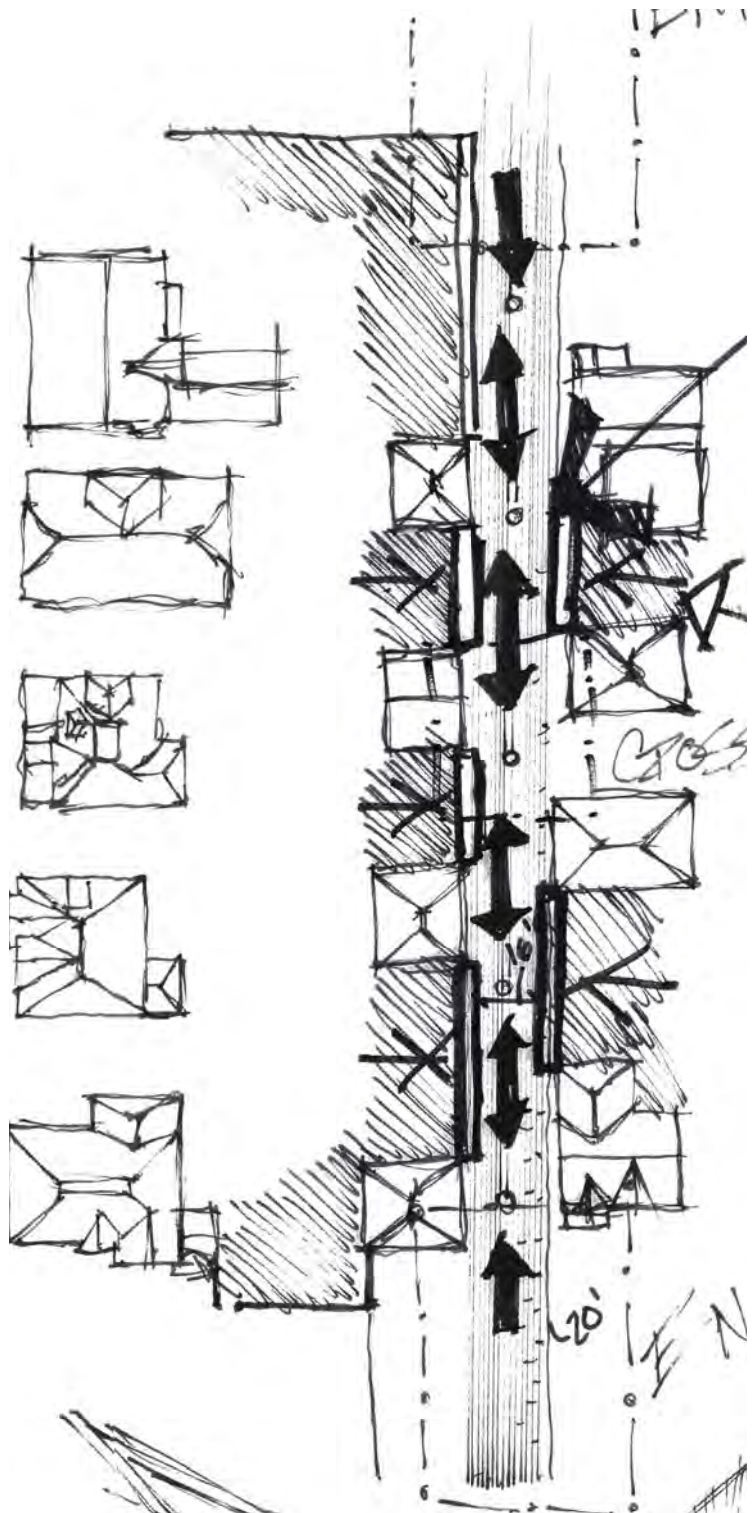
The paving which was used within the alley was a non-permeable mixture of concrete and asphalt which was poorly patched and repaved several times over the decades. It was in poor maintenance, leading to cracking in the pavement and multiple potholes. In some instances, the pavement was so damaged that several large plants began growing from the damaged sections. In order to facilitate the reuse of the alley, a more durable and less maintenance intensive paving system would need to be implemented.

The housing which abutted the alleyway, in contrast, was in good condition, with all structures being occupied and maintained. However, the garage fronts which still faced the interior of the alley were not maintained to the same state, and would require some form of attention to renovate or maintain them. The fencing as well, which extended to the end of the lot was in many cases, neither uniform, nor consistent with the fencing which neighbored or opposed it along the site. In several cases, the fencing was implemented to act as an imposing barrier to the viewer within the alleyway, and as a visual buffer to those within the yard, so-as-not to view the alleyway. It was evident that in order to allow for a community use for the site, a less imposing and more unified frontage would be required.

One of the most important considerations to be made in the renovation and adaptation of use for this alley is that, with the other alleys in Russell Woods, there

is no property easement to the surrounding lots. This means that regardless of who owns the lot which is adjacent to the alley, the city retains ownership and control over the alleyway and its use, as-well-as the burden of maintenance. The lack of the ability for individual ownership and maintenance is the key reason behind the decline of the alleyway within the neighborhood. To address this issue, there are several approaches which could be made: converting all city owned land into easement for the surrounding neighbors, holding the city accountable for the maintenance of the alleyway, or by creating a community initiative to maintain and clean the alleyway to the best ability of the residents.

In creating a new plan for the site, it seemed necessary to not only implement a plan which required as little continuous maintenance as possible, but also adhered to environmentally sustainable building practices which would ensure a more ecological a replicable plan for the future designs implementation. In designing a new system of alleyway paving, it was decided to begin to implement some of the design principles from the Chicago Green Alley Handbook, namely that of permeable paving surfaces to aid in city rainwater runoff management, in conjunction with the use of residential bioswales to treat water runoff (Chicago).





Leslie St.

[OPEN]



Glendale Ave.

[CLOSED]

It was decided that long narrow concrete pavers with recycled slag aggregate would be utilized to repave the surface of the alleyway, with the subsurface paving being a permeable mixture of sand, gravel, and the pulverized and recycled paving of the previous surface to allow for water drainage and possible retention. Along the width of the alleyway (which varied between 16'-20') the residential yard frontage would be separated from the alleyway with 2' bioswales which spanned the entire length of the runoff area of the adjacent yard. However, each resident retained both privacy and access to the alleyway through a fence and gate which resembled the linearity of the paving surface, while also allowing for a more pedestrian friendly frontage.

The reintroduction of the first sketch problem would be done at the intersection of the Leslie-Glendale alley with the section of alleyway which ran to Petoskey Avenue. The intersection was immediately abutted by a garage on either side of the alleyway, creating a defined border and transition to the next stretch of the alley. It was here that some of the experience gained from the previous sketch problem would be reintroduced. At this intersection it was proposed that a performance stage which was to work in conjunction to the annual jazz festival (which is held down the block in Russell Woods Park) was to be constructed. During times of performance, the stage could be assembled to facilitate the needs of the performer; however, during the remainder of the year, the elements which

made up the base of the stage could be freely rearranged to form community gathering spaces for the residents. It was here that the idea of improvised assembly was to be utilized for the alleyway in the hopes that the space could be modified and adapted to the ever-changing needs of its program and of the community.

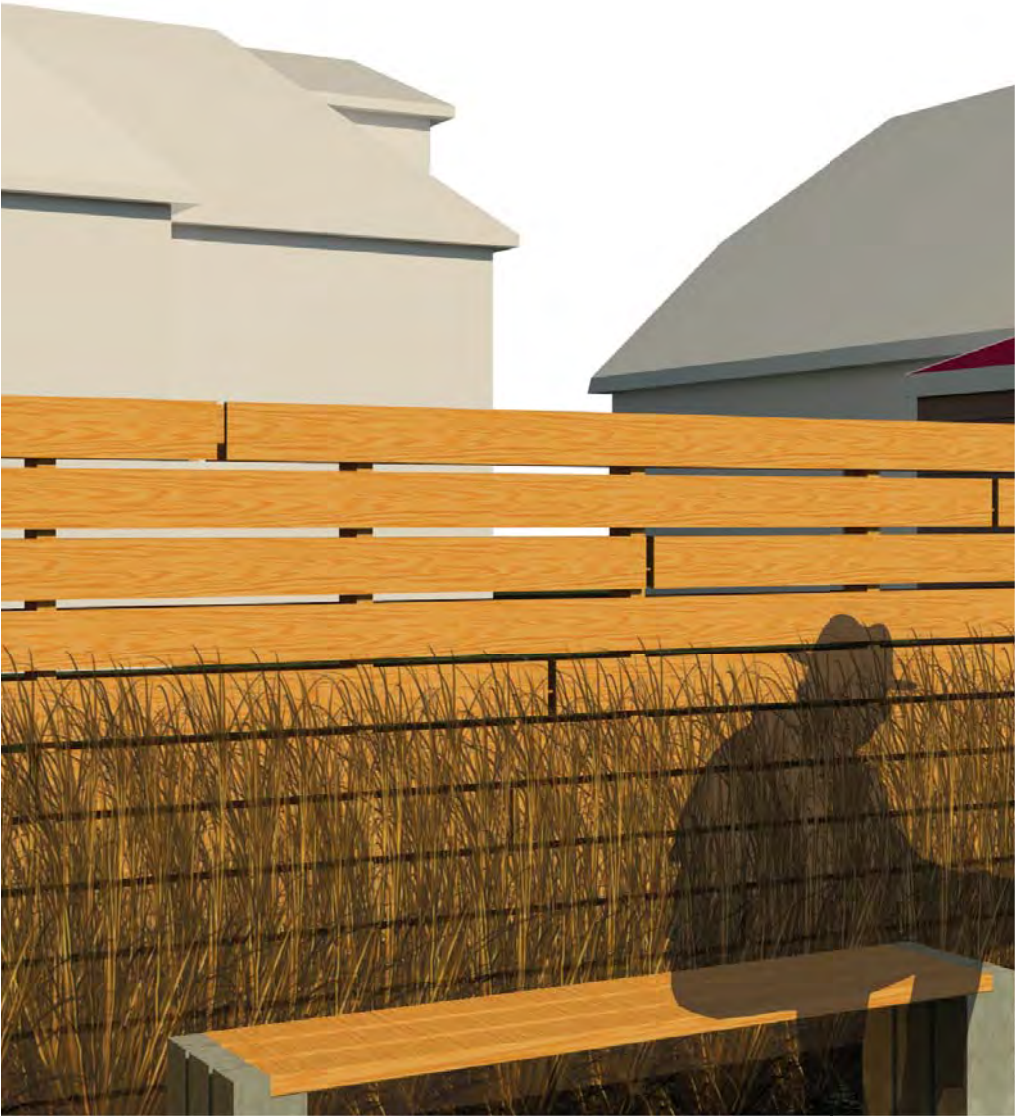
The ultimate intention for the adaptation and reuse of the alleyway is to facilitate public interaction within the space. The main concern for the community stakeholders is the plans for their alleyway in the proposals which are being created for the city. Historically, this was not only a location for utility services, but also an area where residents and neighbors could interact. The intention is to return the alley to a space of public interaction and pedestrian movement. In ensuring a more humanistic approach to the alleyway, it also ensures that the alleyway shall be utilized and maintained in the future, and not allowed to return to disrepair.

It is, however, recognized that the alleyway may still be a private space to the residents of the block. In ensuring the ability to retain a sense of privacy, the alleyway has the ability to be blocked from either vehicular traffic, pedestrian traffic, or both. In times when the alleyway is closed to the public outside of the block, it may still be possible for the residents to utilize the space through the use of gates at the end of each lot which is adjacent to the alley. It would be during these times when the alley is closed that it can become an extension

of the back yard of the resident, while still allowing travel from one end of the block to the other. However, with that said, it is the main intention that the alleyway remain open to the public for the majority of use, and only closed for certain occasions.

It is through the implementation of these, or other design changes, that the alleyway may be transformed into a commodity for the community, rather than an abandoned and neglected public utility. It is imperative that any design intervention within the alleyways of Russell Woods represent and respond to the ever changing needs of the community to ensure a sustainable use and utilization by the residents.





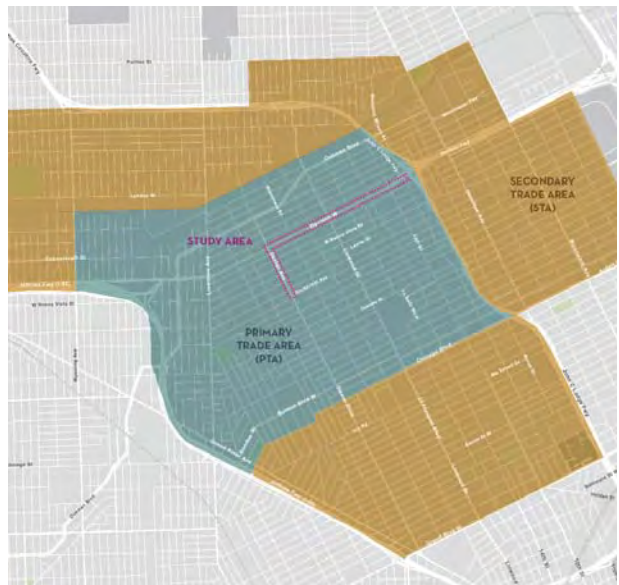


DEXTER AVE. MARKET STUDY

Over the course of the RFP process for the Russell Woods / Nardin Park district, the Detroit Economic Growth Corporation conducted a Market feasibility study for the revitalization of the Dexter Ave. commercial corridor with the aid of Streetsense as a consultant. The input from this market study greatly influenced and reinforced an the increase of scope which this thesis saw during the course of the Winter semester.

At the completion of the first semester of this process, the opportunity arose to attend a community design meeting lead by the DEGC (Detroit Economic Growth Corporation) and the consulting firm Streetsense. The meeting was directly related to the city's RFP for the neighborhood and was held within Russell Woods and Nardin Park on a bus which drove throughout the RFP district.

The market analysis which Streetsense had conducted was analyzing the feasibility for the revitalization of the Dexter Ave. commercial corridor. The basis of this market analysis was centered around the financial stability of the neighborhoods surrounding Dexter and Davidson Avenue. The seven Identified neighborhoods were further broken into two distinct districts, the first being the PTA (Primary trade area) or the area which would most effect the success of a proposed redevelopment of the corridor. The second district was the STA (Secondary trade area), or the area which would benefit from, and effect the success of a revitalized commercial corridor. Russell Woods was one of the neighborhoods which fell within the PTA of this market analysis.

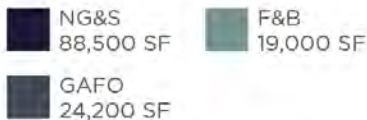
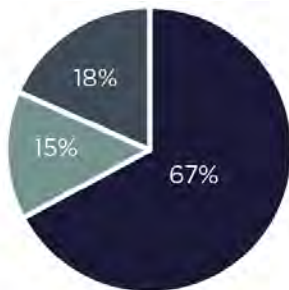


DEMOGRAPHIC ANALYSIS

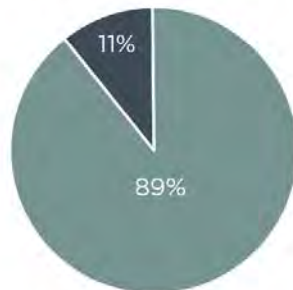
	PTA	-STA	Detroit
Population	27,050 (24% decrease, 2010-2017)	36,808	658,250
Households	11,839	15,047	252,089
Median Age	37	38	35
Median Household Income	\$22,140	\$21,465	\$27,372
Primary Nonwhite Ethnic Group	94% (African-American)	92% (African-American)	80% (African-American)
Bachelor's Degree or Higher (Population 25+ years old)	18%	17%	20%
Single Parent Family Households	34%	33%	31%
Average Number of Vehicles per Household	0.9	0.9	1.2
Households Without Access to Personal Vehicle	34%	36%	25%

Source: US Census Bureau, US Bureau of Labor Statistics, Nielsen Company/Claritas Demographics and Business Facts reports created for Streetsense, April 2017. Figures for each trade area are recorded exclusive of one another (i.e. STA figures do not include PTA).

Retail Type Distribution



Tenant Type Distribution



SUPPORTABLE SPACE BY CATEGORY

CATEGORY	TOTAL CAPTURED EXPENDITURES	DEMAND
 Food At Home	\$27,026,323	102,731
 Alcohol at Home	\$1,191,636	3,407
 Personal/Household Care Goods and Services	\$31,175,883	97,059
 Pet Food & Services	\$785,491	3,719
NG&S SUBTOTAL	\$60,179,333	206,916
 Full-Service	\$3,224,258	9,240
 Fast Food	\$4,909,469	12,114
 Alcohol Away from Home	\$461,293	905
 Snacks & Non-Alcoholic Beverages	\$334,834	911
F&B SUBTOTAL	\$8,929,854	23,170
 Home Furnishings	\$650,374	3,302
 Apparel	\$945,249	4,002
 Electronics	\$445,798	552
 Sports Equipment	\$118,843	600
 Books, Music & Other	\$92,888	574
 Pet Supplies	\$34,376	177
 Automotive Equipment	\$42,060	230
GAFO SUBTOTAL	\$2,329,588	9,439
TOTAL GENERATED RETAIL DEMAND:	\$71,438,775	239,524

Streetsense, US Postal Services, US Department of Housing and Urban Development, Sitewise, Nielsen, US Census Bureau, US Bureau of Labor Statistics (2017), International Council of Shopping Centers (ICSC), STR, Hotels.com, Detroit Convention & Visitors Bureau (2017)

• Neighborhood Goods & Services (NG&S):

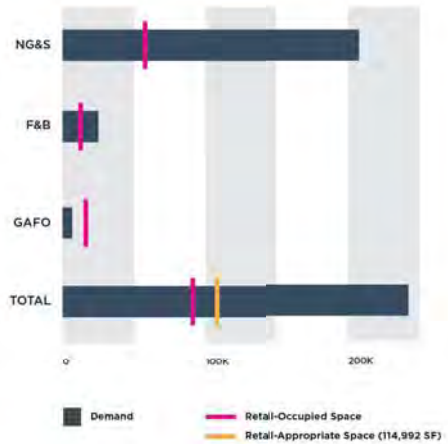
The work underway to bring an Aldi into the neighborhood is supported by the findings of the market analysis. In addition to a grocery store, other neighborhood-serving retail such as a pharmacy and services such as dry cleaning and shoe repair are appropriate retailers for this commercial corridor. Convenience retail do best when clustered together, as customers prefer to accomplish multiple errands in one trip.

• Food & Beverage (F&B):

The take-out restaurants along Davison Avenue are adequately serving most of the demand for F&B in this study area. Over time, some of this demand can be repositioned into sit-down restaurants, such as a diner or other affordable options. In the short term, there is room for one or two sit-down restaurants. Ensuring that any additional restaurants are well advertised to the community and fall within an accessible price range will be critical to long-term success.

• General Merchandise, Apparel, Furnishings, & Other (GAFO):

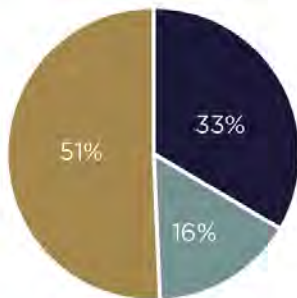
Currently, there is no additional demand for GAFO retail in this study area. The emphasis in retail strategies should be placed primarily on the NG&S retail category.



	DEMAND (SF)	RETAIL-OCCUPIED SPACE (SF)
NG&S	206,916	57,968
F&B	23,170	12,600
GAFO	9,439	15,450
TOTAL	239,524	86,018
	VACANCY RATE	16,7%

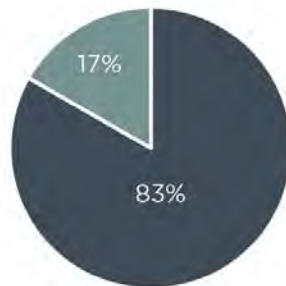
Supply and demand figures are modified to adjust for market conditions specific to Rural Woods. Figures represent a balanced demand which calculates a figure between high and low productivity as presented in the technical appendix.

Class of Space Distribution



Class A	59,200 SF	Class B	28,000 SF
Class C	89,050 SF		

Occupancy Rate



Occupied	147,300 SF
Vacant	29,550 SF

RECOMMENDATIONS AND STRATEGIES

Following the report's release, the DEGC will be coordinating with citywide stakeholders to craft an implementation plan.

RUSSELL WOODS

The retail along Davison Street is very car-centric. Creating a more NG&S-focused cluster would probably be more effective on Dexter Avenue, but issues with safety and the quality of the building stock will need to be simultaneously addressed with tenanting strategies. **Several overarching conclusions and recommendations, applicable to all corridors studies, are located in the last chapter of this report (pages 114-119).**

	RECOMMENDATION	PRIORITY LEVEL (1-3)
MANAGEMENT	Organize retailers into a Micro-BID, a business association or as a main street organization. This will provide the opportunity for retailers to coordinate efforts and resources, as well as give the neighborhood a platform to share their input on issues such as hours of operation, quality of offering, etc.	1
	Consider identifying more than one Retail Priority Block cluster in the commercial corridor. Due to the length of the route, spacing retail clusters around more than one node would permit the surrounding neighborhoods to have more walkable, accessible retail to homes or places of business.	1
PLANNING	Address blighted buildings along Dexter Street, as blight is a prime deterrent for the development of new retail activity.	1
	Pursue an infill development strategy along Dexter Street. Many retailers along Dexter Street have adjacent parking or vacant lots, which detracts from the pedestrian-oriented environment desired by the community.	2
	Permit street (curbside) parking lanes within retail cores along West Davison Street. Parallel parking increases pedestrian safety by providing a buffer between the sidewalk and oncoming traffic, and slowing traffic speeds. Traffic analysis should be undertaken to determine this recommendation.	3

The major take away from this market analysis was the insight it began to give on the city's plans for the commercial development of Russell Woods and the surrounding area, with a proposed redevelopment of the Dexter commercial corridor to extend between Buena Vista St. to Fullerton Ave. It was with this knowledge that the scope of the proposal in this thesis was expanded from the original study area which spanned 300 feet of alleyway between Leslie and Glendale Ave. to a nine block area encompassing 1.5 miles of alleyway between Dexter and Broadstreet East to West, and Glendale to Sturtevant North to South.





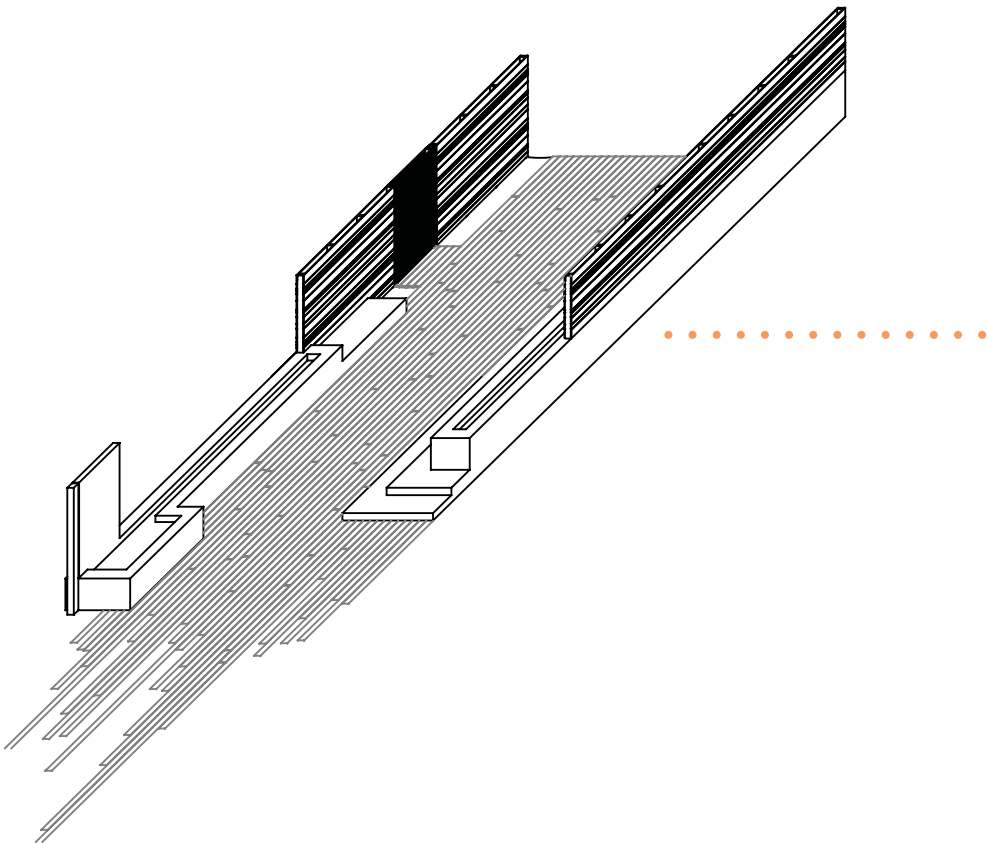
SKETCH PROBLEM TWO

Based upon input given during the mid review relating to the original case study proposal which sought to adapt the alleyway between Leslie and Glendale, and after further research and meetings with community leaders, a new proposal was created which expanded the scope of the proposed site. Due to the scope expanding from the original 300 feet to 1.5 miles, several smaller scale interventions were designed and proposed in a short time frame to experiment with possible improvements to areas such as paving, fencing, crossings, and entries within the alleyway.

These studies were conducted over the course of a week in AutoCAD and were intended to influence the eventual final design for the alleyway improvements.

Based upon the sketches which were done during the first semester, and the subsequent design presented at the semester benchmark, several alleyway interventions were quickly designed to experiment with possible design nodes which could be deployed as specific locations within the expanded site.

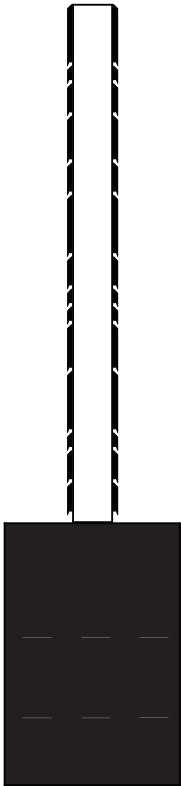
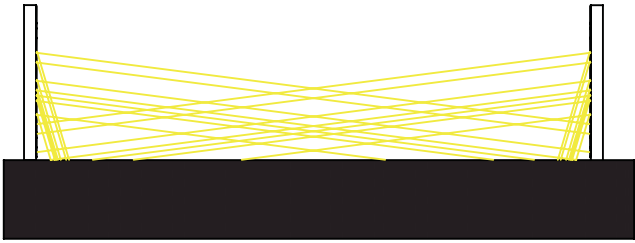
Many of these interventions were based upon the previous semester's designs; however, due to the expansion of the site, several interventions such as entry and destination nodes were added.



[Entry Node]

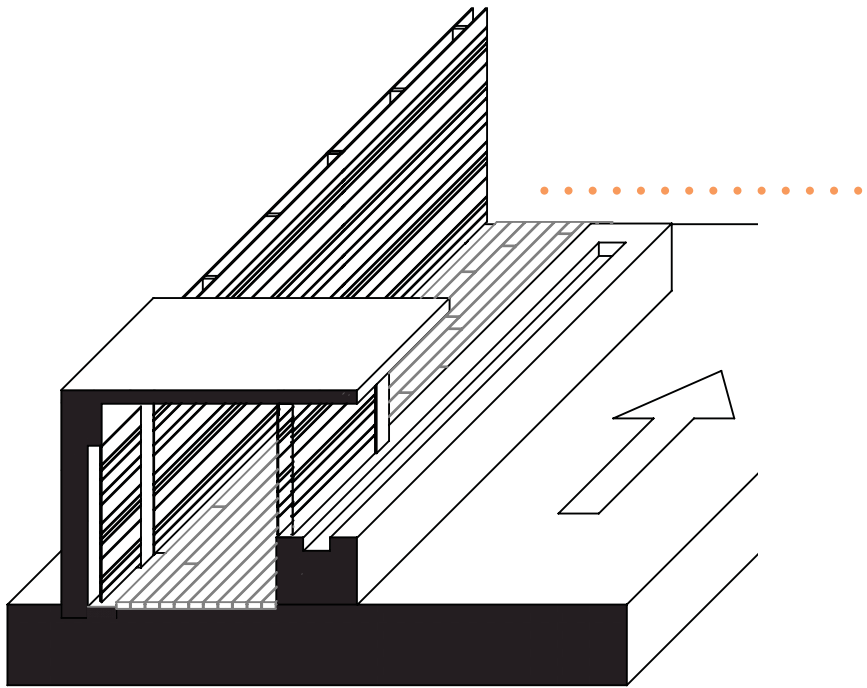
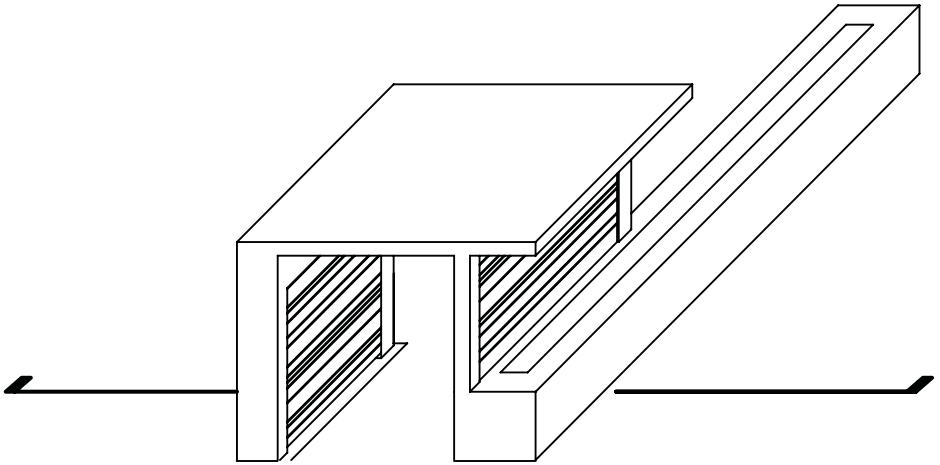


The intention of the entry node was to create a defined access point to the street from the alleyway. This intervention does away with the alley gate which was proposed in the previous iteration of this project. By creating a defined presence on the street-front, the entry node was intended to redefine the connection between the alley and the street.



[Alley Fence]

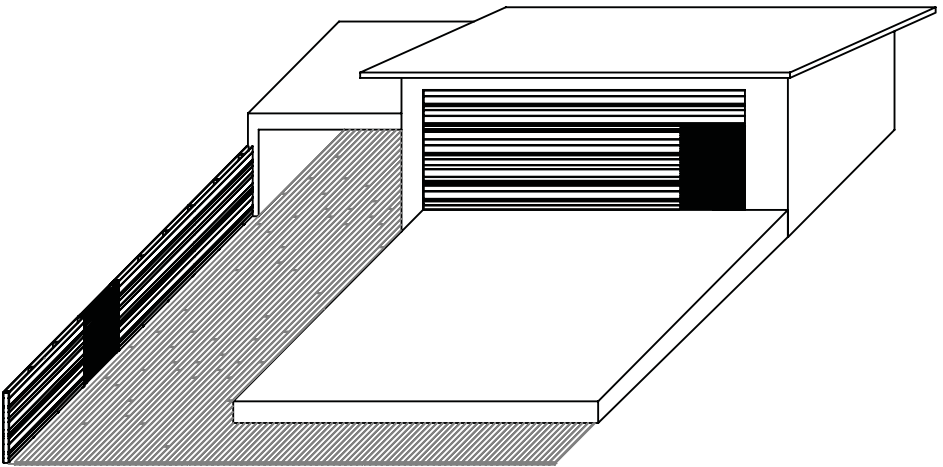
The intention behind the proposed alley fencing was to create a unified, yet private barrier between the public alleyway and the private residences. Spanning between individual garages and rising no more than six feet high, the intervention was designed to be as unimposing as possible, while still providing privacy to the neighboring residents. The fence would further be utilized by providing the lighting for the alleyway. By installing LED lighting strips within the fence, the alleyway would be indirectly lit, creating a safer space to occupy during all times of the day.



[Dexter Entry]



It was apparent early in the design process that the alleyway running parallel to Dexter Ave. would continue to require vehicular access behind the commercial spaces. It was with this consideration in mind that a new entry would be proposed which provided a defined pedestrian and vehicular space within the alleyway, while still attempting to maintain a similar design language to the other design elements.



[Fullerton Jazz Stage]



Due to the expansion of the proposed site, the opportunity arose to begin to include a select number of semi-vacant lots within the proposal. Expanding further on the jazz performance stage which was proposed in the previous semester, a larger one was designed to occupy a vacant lot along Fullerton Avenue, the northernmost street within the site, and near to the proposed Dexter commercial corridor.

FINAL ADAPTATION PROPOSAL

At the culmination of the second sketch problem, and based upon the feedback and research thus far in the thesis process, a final proposal for the adaptation of 1.5 miles of the alleyways chosen in the Russell Woods neighborhood was conducted.

Based on the culmination of research and process work which has led up to this point, a final adaptation proposal was created for the selected alleyways in the Russell Woods neighborhoods. In contrast to the previous design exercises, this proposal focused on individual nodes within the alleyway as opposed to the site in its entirety.

In order to determine the specific nodes, another visit to Russell Woods was arranged and specific locations were selected which would characterize the main design language which would be present in the alleyway. These locations are as follows:

[] **Alley Entry**



[] **Modified Garage One**



[] **Modified Garage Two**



[] **Green-way**

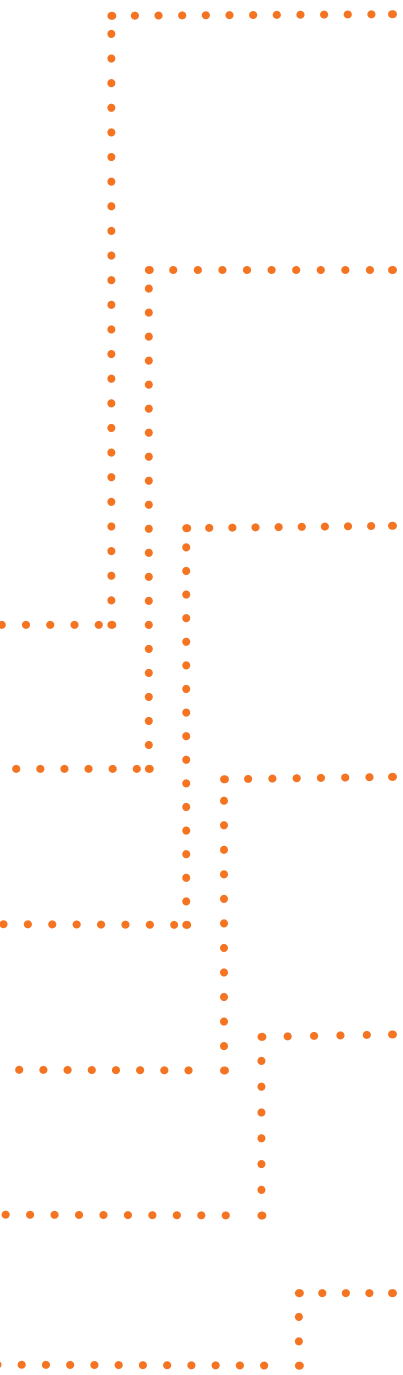


[] **Alley Intersection**



[] **Street Crossing**





The locations which were selected remained within the 1.5 mile design area of the alleyways, stretching from Dexter to Broadstreet east and west, to Glendale and Sturtevant to the north and south. This area encompassing a total of nine blocks consisted of 158,400 square feet of occupiable space which was currently under utilized. With a large portion of this area also consisting of impermeable paving and impassible foliage, it was the intention of this design intervention to create a space which would act as a commodity within the community while also responding to the environment.

The initial concern with modifying this existing space was the effect it would have on the pedestrian street environment. This proposal, however, does not negate the use and utility of the sidewalks which span the entirety of the site and the neighborhood. The return of the alleyways into the pedestrian space which they were in during their official use by the city did not hinder the utility of the sidewalk. In returning the alleyway to the pedestrian, it becomes intertwined within the current pedestrian circulation spaces. If one so desires, they may utilize the alleyway to walk from one point to another; however, they must still inevitably utilize the sidewalk as well. Unlike the High Line in New York City, or the Dequidre Cut in Detroit, the alleyways remain intertwined with the current pedestrian circulation system.

The intention of the proposal is not solely to create a circulation space for the

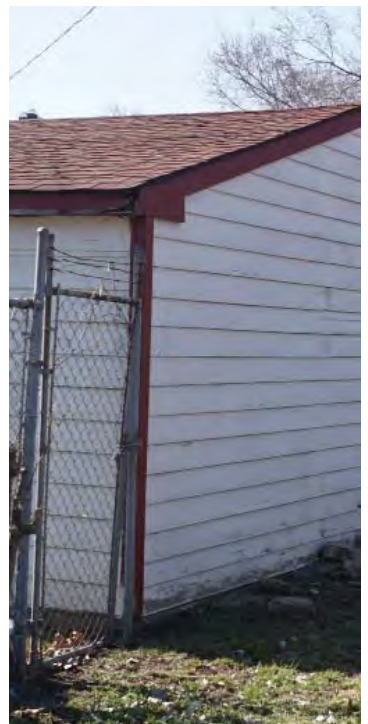
pedestrian, but more so to create a space in which the individual may find a location to occupy in solitude. Due to the scale of the site and its area of influence, there is a possibility for an individual to discover an area with which they may occupy alone for a certain amount of time, and within several minutes another individual may do the same. Rather than creating a new form of pedestrian circulation, the intention of this proposal is to create a space which allows the individual to decide its use.

Another major concern when creating this proposal, which has carried through since the earlier case studies, was storm-water runoff. Due to the construction of the city, and the utilities which service it, the city of Detroit has a history of multiple flash floods within the past several years. It was with this in mind, that a solution which could be implemented within one of the city's existing utility systems became a feasible consideration. Due to the poor paving conditions which existed within the alleyway which occupied the total 158,000 square feet of space, the ability to introduce the principles laid out within the Chicago Green Alley Handbook and the Portland Alley Allies study became more practical. In this proposal, the existing paving was to be removed, with the demolished surface acting as a filler for a new surface of permeable pavers which would span the alley. Interspersed within the new paving would be bioswales which would capture the remaining storm-water runoff and allow it to be treated through natural means and percolated into the soil.

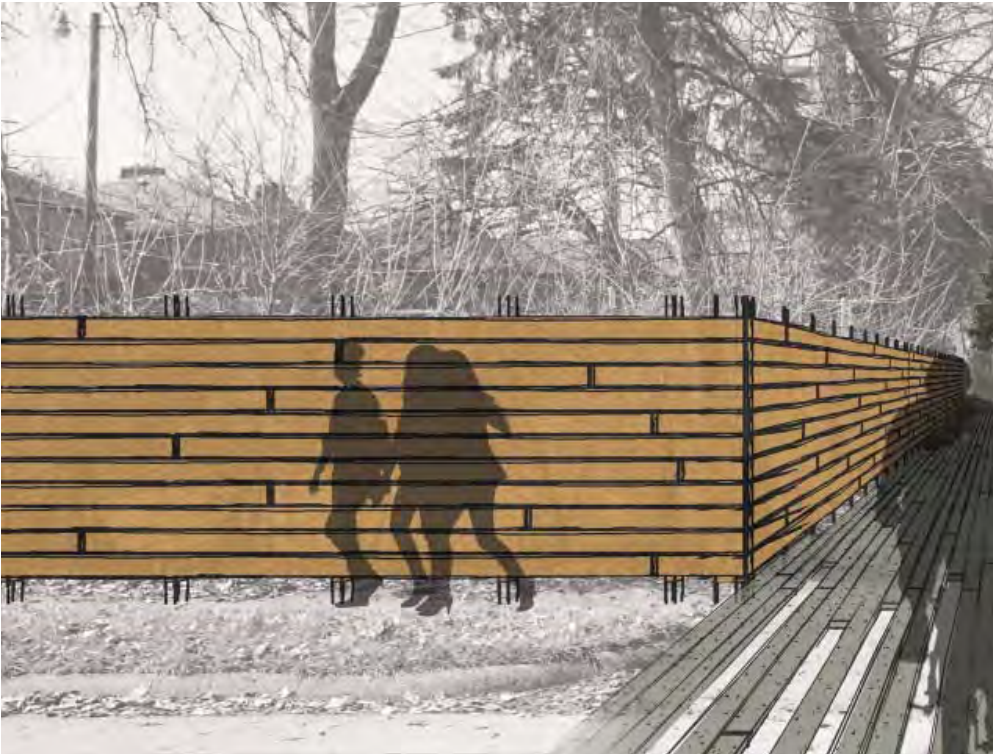


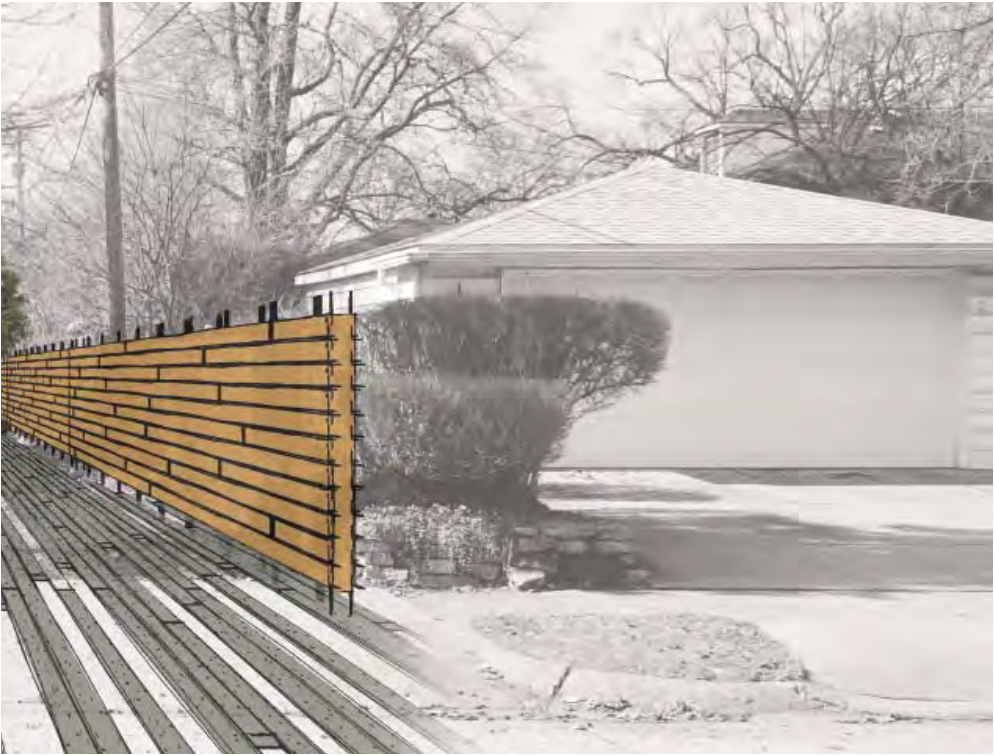
In conjunction to the reactivation of the alleyscape, several of the existing garages which still open to the space would be renovated with the agreement of the owner. This would allow yet another space in which an individual or group may seek solitude from the public realm of the city, while still remaining within a public space.

This further intervention also allowed for permeability in the alley facade. By creating spaces which branch from the original thoroughfare, a more interesting and engaging alley facade is created. Variety in the facade is also accomplished by allowing the existing garages to retain their alley frontage. This is accomplished by only infilling the proposed fencing between the existing structures of the space.

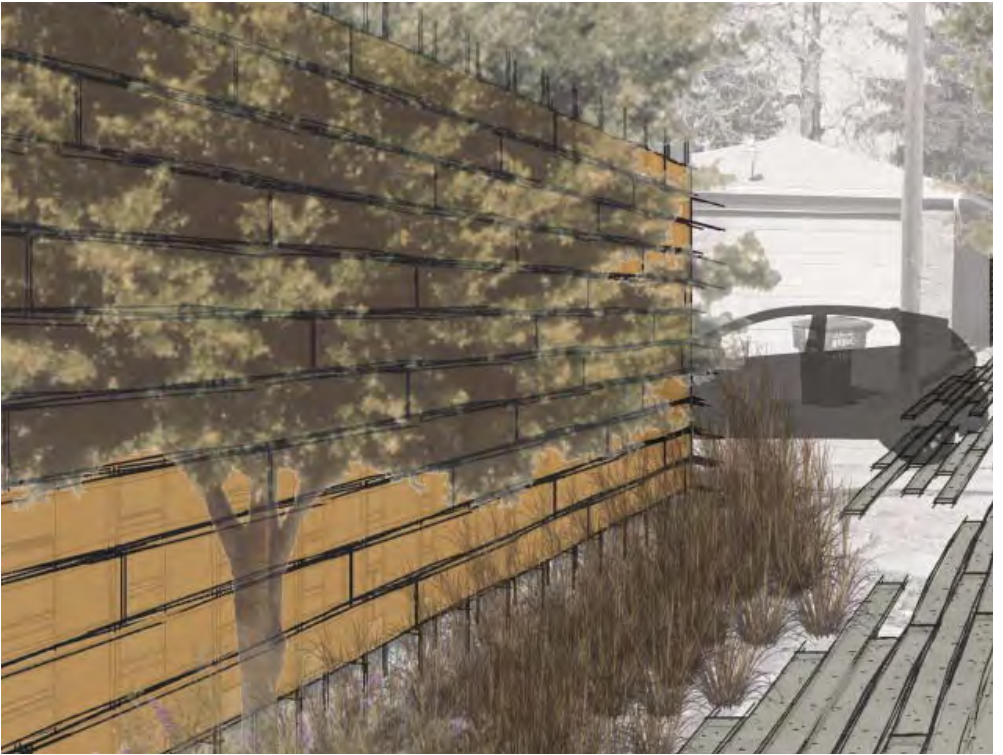








Another consideration which must be made is the area where the street crosses the alleyway. It is in these areas that alleyway fully interacts with both the sidewalk, as-well-as with the street. In order to create a unified paving surface for both the street, and the alleyway, it was decided that where the two intersect, both of their paving surfaces shall meld. By allowing the permeable paving method of the alleyway to dissolve into, and bridge across the street, it creates a defined, yet unique crossing for both the alleyway and the pedestrian sidewalk. This interaction between the street and the alleyway insures both the safety of the pedestrian, and the continuity of the alleyway as the two interact.





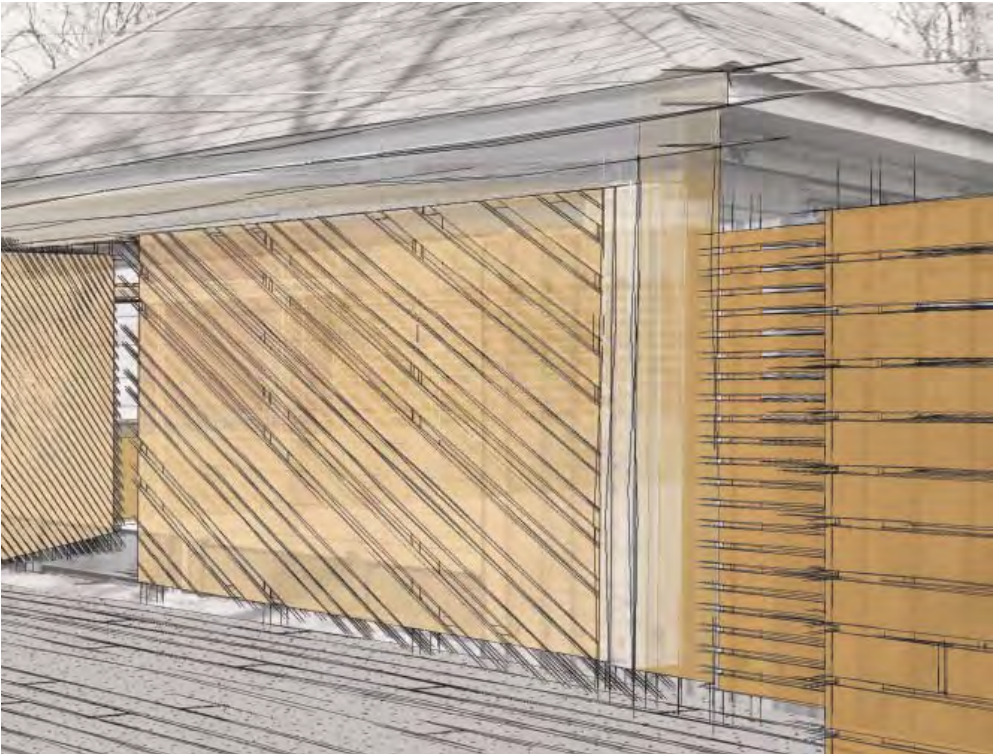
The interaction between the streetscape and the alleyway also expresses the entryway of the space to within the public realm. While every individual resident which abutts the alleyway is provided with a private entry into the space, the public entry to the space must be more defined.

It is with this in mind that the pavers at every crossing point not only respond to the street crossing, but they also separate from the two adjacent boundaries of the space, where infilled native plantings begin to envelop the pathway, creating a soft, yet defined entry point into the alleyway from the street. These plantings also serve to act as a bioswale, treating and percolating the storm-water runoff from the street, alley, and the adjoining residential lots.

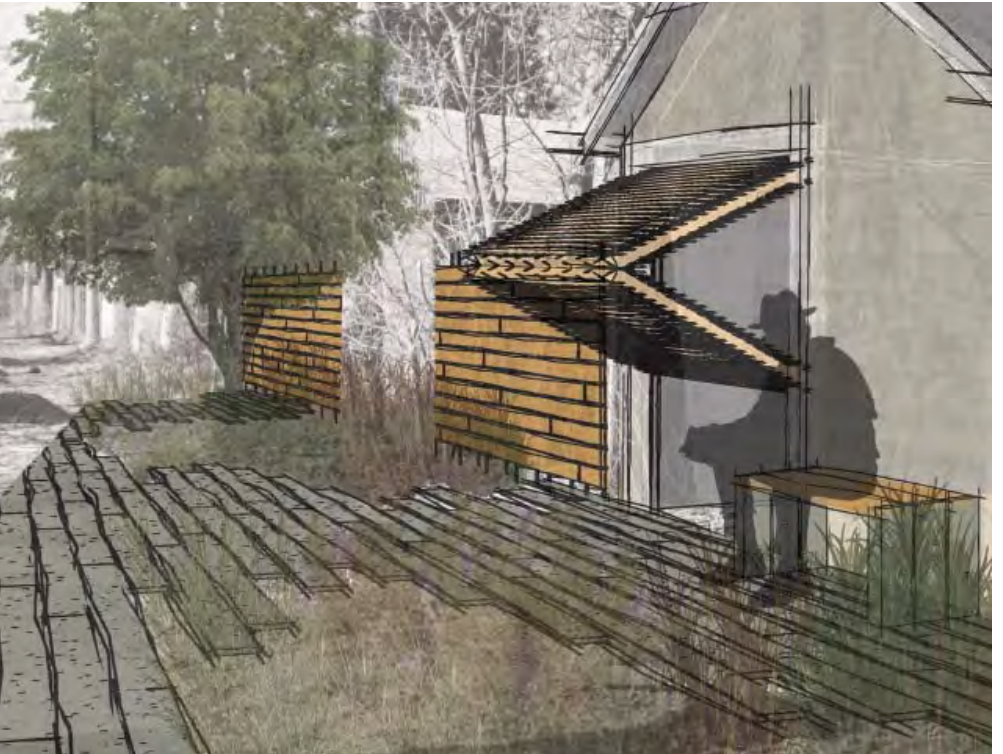


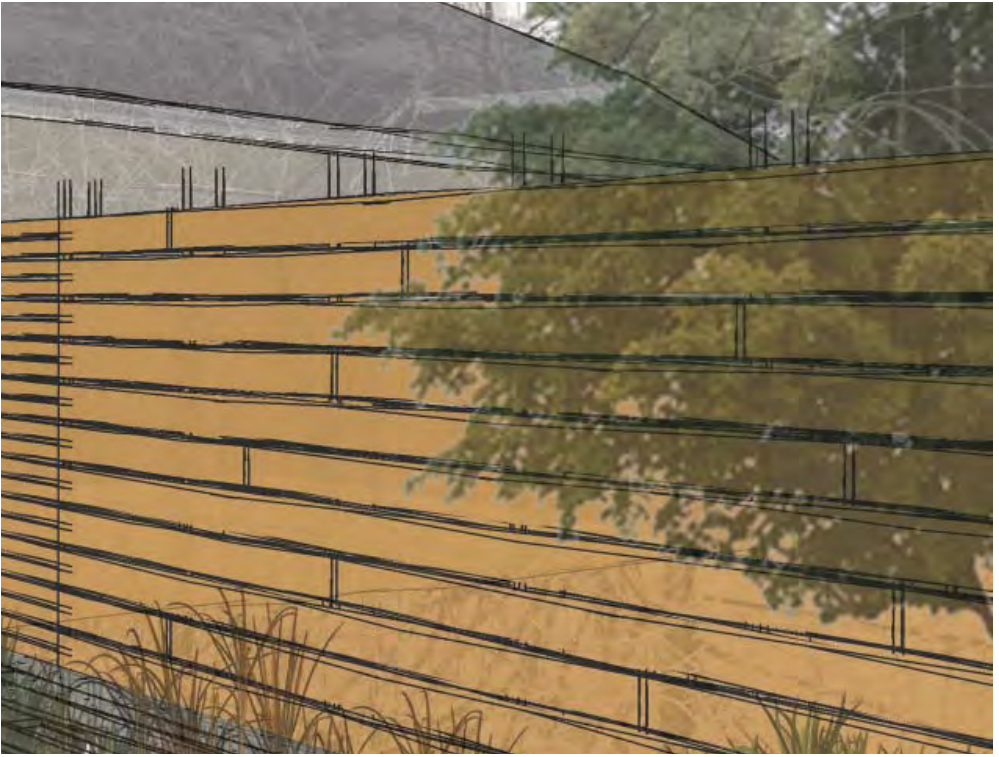




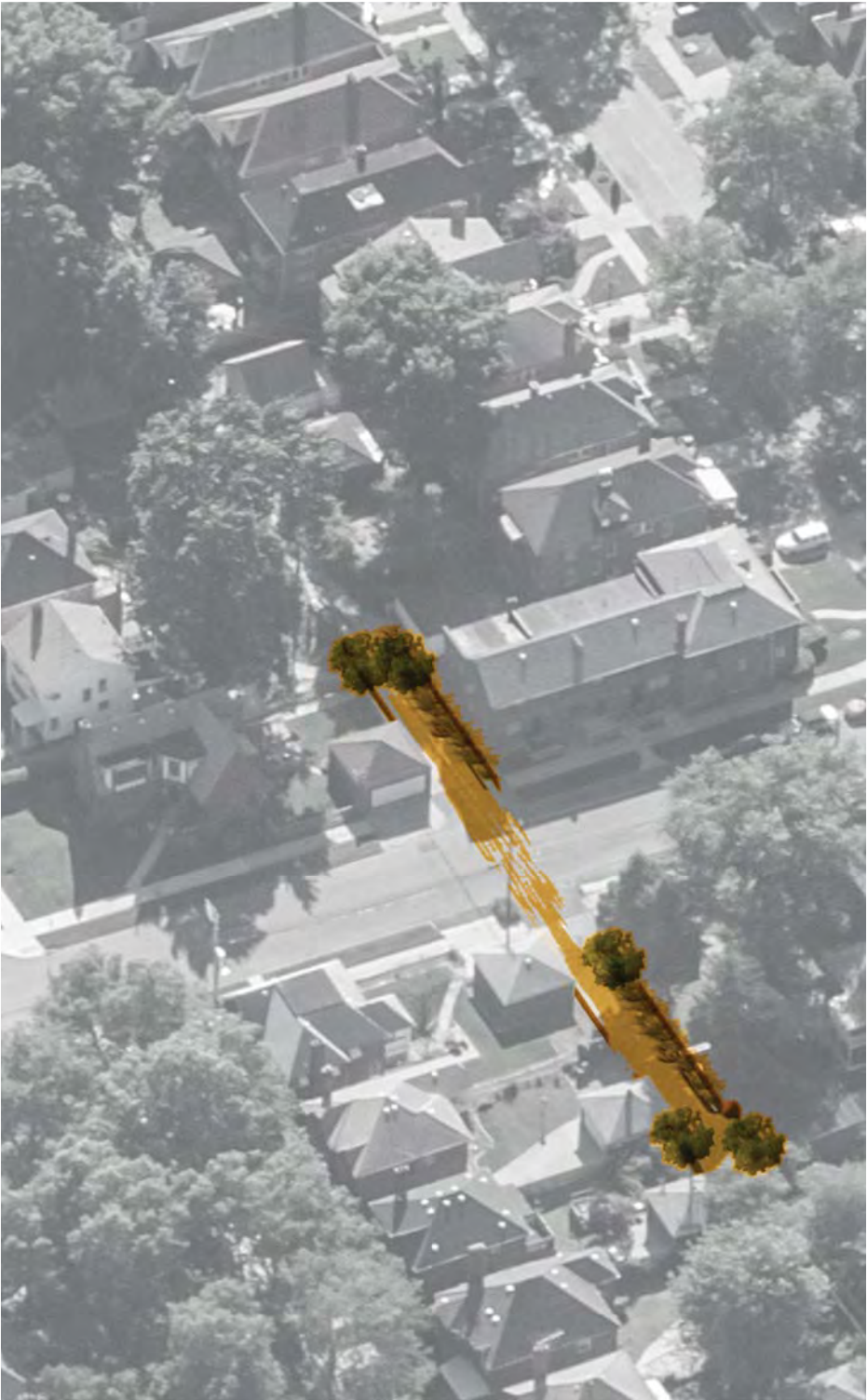


It is the with these major design interventions that the alley is to be adapted from a neglected and underutilized space, to a space which becomes a commodity to the residents of the Russell Woods neighborhood and surrounding areas. It is ultimately the responsibility of the team which is awarded the RFP for the neighborhood to propose a responsible solution to address this, and many other issues which are present within the neighborhoods which fall within the scope of the RFP. This is but only one small segment of within the Russell Woods neighborhood; however, the ubiquity of the alleyway here, as-well-as in other areas within the city of Detroit, allow for a similar design consideration.









CONCLUSION

As cities grow and develop, the infrastructure required to facilitate that growth expands and develops as well. However, eventually the utilities which were designed to service the city begin to degrade, either through changes in technology, logistics, government policy, or other factors. As these key elements of infrastructure degrade and fall into disrepair they become misused, or even unusable. At the termination of their use by the city, often these utilities fall into neglect and disrepair. When this occurs, the utility itself then risks becoming a detriment to the community it once serviced, even if it is out of use. In such a situation, it becomes necessary to adapt and reuse the former utility to benefit the surrounding community, allowing it to be converted from a detriment, to a commodity.

This is the issue which this thesis attempted to address. As America's cities adapt to the ever changing urban fabric, we must ensure that the mechanisms which created and maintained that city do not become forgotten. It is often the hidden elements within the environment which shape its future development. Given the opportunity, the expansive alleyway system within the city should be adapted and reintroduced into the new urban fabric.

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