MILLENNIAL HOUSING

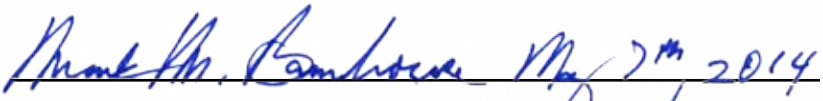
JACKLYN SURAT

MILLENNIAL HOUSING

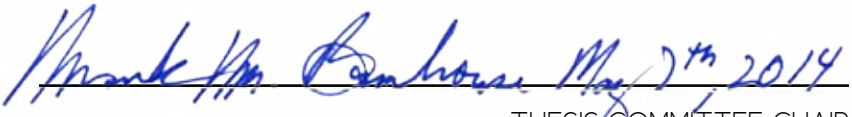
A design thesis submitted to the department of architecture and landscape architecture of North Dakota

By Jacklyn Surat

In partial fulfillment of the requirement for the Degree of Master of Architecture



PRIMARY THESIS ADVISOR



THESIS COMMITTEE CHAIR

MAY 2014

TABLE OF CONTENTS

TABLES & FIGURES

TABLES & FIGURES

CONT.

THESIS ABSTRACT

In this thesis, the current and past ideals of what is considered a home, the desires to create a home, and the features that make up the idea of home will be examined in regards to their being drastically changed due to the particular influence of millennials.

Both the question of what is perceived as a home in a rapidly changing world, and the underlying desire to create a home influenced by generation Y will be explored within Millennial Housing. With the idea of home being an essential part of human growth, it is necessary that the future of millennial housing is understood.

This thesis will delve into the idea in the form of a 181,980 sq ft multi-family housing project located in Minneapolis, Minnesota.

KEYWORDS millennials | home | housing | generation Y

PROBLEM STATEMENT

What does it mean for the millennial generation to establish a home?

STATEMENT OF INTENT

PROJECT TYPOLOGY

MULTI-FAMILY HOUSING

MIXED-USE HOUSING

CO-HOUSING

THEORETICAL PREMISE & UNIFYING IDEA

A very different definition of home could be developed by and for the millennials, therefore shaping the future way of life. **CLAIM**

Millennials **ACTORS**
Establishing a home in today's time and pace **ACTION**
Past conceptions of home **OBJECT ACTED UPON**

Uncertain times can lead to adaptable advances within the everyday surroundings in which generation Y will occupy. **PREMISES**

"Over the next decade, the millennial generation will entirely recast the image of youth from downbeat and alienated to upbeat and engaged--with potentially seismic consequences for America." (Howe 2000) home establishment will follow along with these changing times.

Fast paced lifestyles, innovative design, and emerging technologies can inform the future spaces in which the current generation calls home.

The current and past ideals of what is considered a home, the desires to create a home, and the features that make up the idea of home will be drastically changed due to the particular influence of generation Y. **THEORETICAL PREMISE/ UNIFYING IDEA**

SITE

MINNEAPOLIS, MINNESOTA

UNITED STATES

PROJECT JUSTIFICATION

Today's generation, the millennials, are the largest group of individuals yet. The environmentally conscious, debt ridden, tech-thirsty generation is beginning to alter what was seemingly a stable way of life. This instability lends to adaptability within the present domain. Amongst all stable things is considered the idea of home. What then is perceived as a home in a rapidly changing world? With unforeseen changes via the rising generation, how will the idea of 'home' change? Memories are made, enriching events occur, and ultimately home is where lives are sculpted. With the idea of home being such an integral part of human nature, it is vital that the future of millennial housing is understood.

PROJECT PROPOSAL

PROJECT NARRATIVE

WHY THE ACTOR'S CHARACTER IS OF INTEREST TO YOU?
(millennials)

As a member of the millennial generation, I have been able to come of age during a rather interesting shift of time in history. Millennials have had the opportunity to see the pre-technology boom as well as become absorbed by the ever changing technology market. We grew up learning alongside new advances and therefore have a strange amount of comfort and reliance on it. Often times we see technology as the answer to all problems and insist on continuous efficiency and incessant improvements.

Generation Y has seen a continuous string of wars, conflicts and disasters across the globe with life-changing affects. These have no doubt shaped our generation. Strangely enough, rather than being pessimistic, the millennials seem to be advocates for change. Recent elections, rebellions, revolutions and movements have all been fronted or impacted by generation Y. The members of this particular group see no barriers and have been reaching out globally at young ages and seeing just what can be accomplished.

Debt is something all too common for millennials. This generation has the highest amount of student loans/debt in history. To make matters more difficult, many millennials were coming of age as a major recession impacted the world in 2007. As countries have slowly regained economic strength and have built back up to some pre-recession standards, many people are still feeling the major blow. High-schoolers and college graduates alike struggled to find jobs, and less-experienced employees faced the possibilities of layoffs; all of this leading to lower incomes. In the years since the recession, an interesting shift has occurred in the lifestyles of millennials. More are reliant on public modes of transportation, self-propelled means or they even share vehicles

with others which is shaping the local economies in terms of producers and retailers.

Millennials are the poster children of "reduce, reuse, recycle"; we've heard it all throughout our education, and it seems to be working. We are more aware of our environmental impact and see global warming as a real issue. When possible, it seems that generation Y makes lifestyle changes in a 'green' manner.

WHY IS THE CHARACTER OF THE ACTION OF INTEREST TO YOU? (establishing a home in today's time and pace)

With the dramatic increase in the rate of change in today's world and ever shifting ideals, it's of interest to understand how the home will be shaped by all of it to fit the needs of the millennial generation. Many things that have remained rather consistent in past years, have seen quite a redesign or new direction of thought.

WHY IS THE CHARACTER OF THE OBJECT ACTED UPON OF INTEREST TO YOU? (past conceptions of home)

The idea of home or a resting place comes natural to people. At first it began as simple shelter from the elements, but a home has grown to encompass many ideas. For some, a home has been seen as a storage space, a secure place, or an item of pride. A home is a place that brings people together for meals, a place of relaxation or solitude. Home is where memories, both good and bad, occur. Celebrations, achievements, and discussions all serve as quiet milestones within a home. Whether it's sprawling or compact, shared or singular, stands alone or as one of many, a home shapes its inhabitants lives while simultaneously reacting to them. If home is so important to our lives, should we not understand how it will change in relation to the millennial generation?

USER - CLIENT DESCRIPTION

OWNER

The resulting housing community will be owned by a private investor, developer or contractor.

RENTERS & OWNERS

Renters and owners include those who inhabit individual housing units and also those who operate small, commercial and retail units.

PUBLIC

Includes those of who do not reside within the housing community, but engage with it via its outdoor spaces and public spaces such as commercial and retail establishments and green spaces.

MAJOR PROJECT ELEMENTS

STUDIO APARTMENTS
Consists of a central living/dining/cooking area with adjoined sleeping quarters, a connected bathroom, and laundry facilities.

ONE-BEDROOM APARTMENTS
Consists of a central living/dining/cooking area with one bedroom, one bathroom, and laundry facilities.

TWO-BEDROOM APARTMENTS
Consists of a central living/dining/cooking area with two separate bedrooms, one bathroom, and in-unit laundry facilities.

THREE-BEDROOM APARTMENTS
Consists of a central living/dining/cooking area with three separate bedrooms,two bathrooms, and in-unit laundry facilities.

SHARED COMMUNITY SPACES
Consists of social, lounge spaces with kitchenette and restroom, performance spaces with group seating and light and audio options, and tech spaces with wifi access and work stations.

SHARED COMMUNITY GARDENS
Consists of subdivided, small scale agricultural plots.

INDIVIDUAL GREEN/OUTDOOR SPACES
Consists of either individual unit gardens, patios or balconies.

COMMUNITY GREEN SPACES
Consists of open green areas, both landscaped and 'natural'.

SHARED COMMUNITY RECREATION FACILITIES
Consists of a workout space able to house multiple machines, free weights, stretching areas, yoga areas and restrooms.

GROUND-LEVEL RETAIL & COMMERCIAL SPACES
Consists of a variety of small to medium scale vendors. Preferably grocery, pharmacy, restaurants, and clothing merchandisers.

COVERED PARKING
Consists of a minimum amount of secure, covered parking.

RENTAL OFFICE
Consists of the office facilities necessary to manage the complex.

PEDESTRIAN/CYCLIST ORIENTED CIRCULATION
Consists of access and circulation paths that place pedestrian and cyclist movement first, over car traffic.

MASS TRANSIT BUS STOP
Consists of a heated bus shelter.

WATER COLLECTION AND FILTRATION FACILITIES
Consists of the necessary systems for the collection, filtration and treatment of water on site.

WASTE MANAGEMENT FACILITIES
Consists of the necessary systems for the treatment and movement of waste on site.

BICYCLE STORAGE
Consists of a secure and covered bicycle storage area.

SITE INFORMATION

The particular site chosen, lies between two sections of Minneapolis. To the south and southeast, begins the Warehouse district or North Loop, and to the north and northwest, begins the Near North neighborhood. Each of these sections have particularly different characteristics. The warehouse district is a culturally growing area driven by art and entertainment while the Near North neighborhood has been historically seen as a lower-income, higher crime ridden area. In recent years, the warehouse district has been influencing it's bordering districts, where in, out skirts of the Near North neighborhood have been slowly evolving into a safer, and more vibrant area. The intersection of these two districts seemed to be an opportune area for a new residential community.

This particular site will have to address security issues in relation to area crime while also creating a sense of community. The current operations on the site will have to be relocated; at current there is a metal scrap yard in place which is poorly utilizing the square footage of the site boundaries. The site will also have to reconcile with nearby businesses as well as an abandoned rail line located at the east boundary.

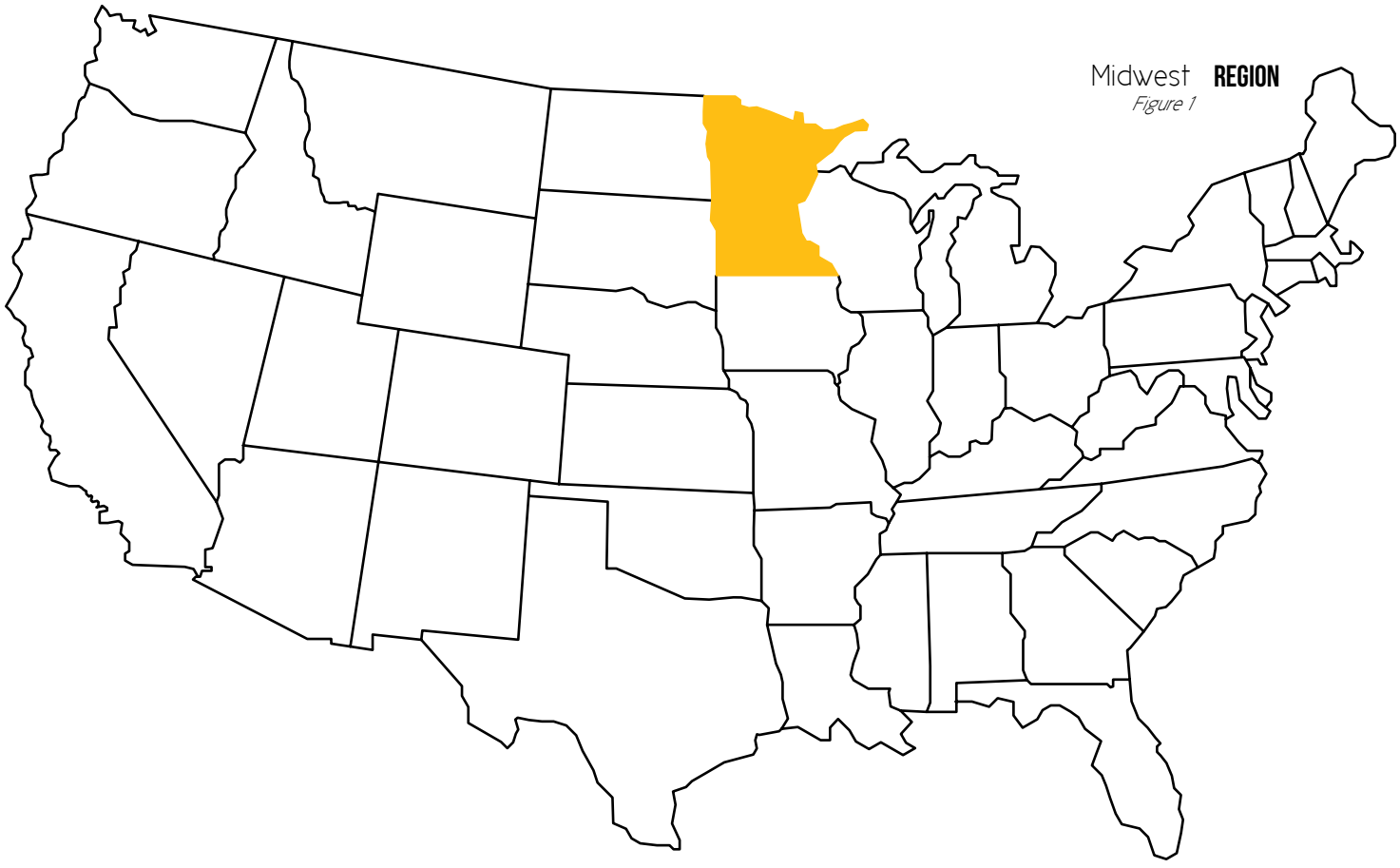
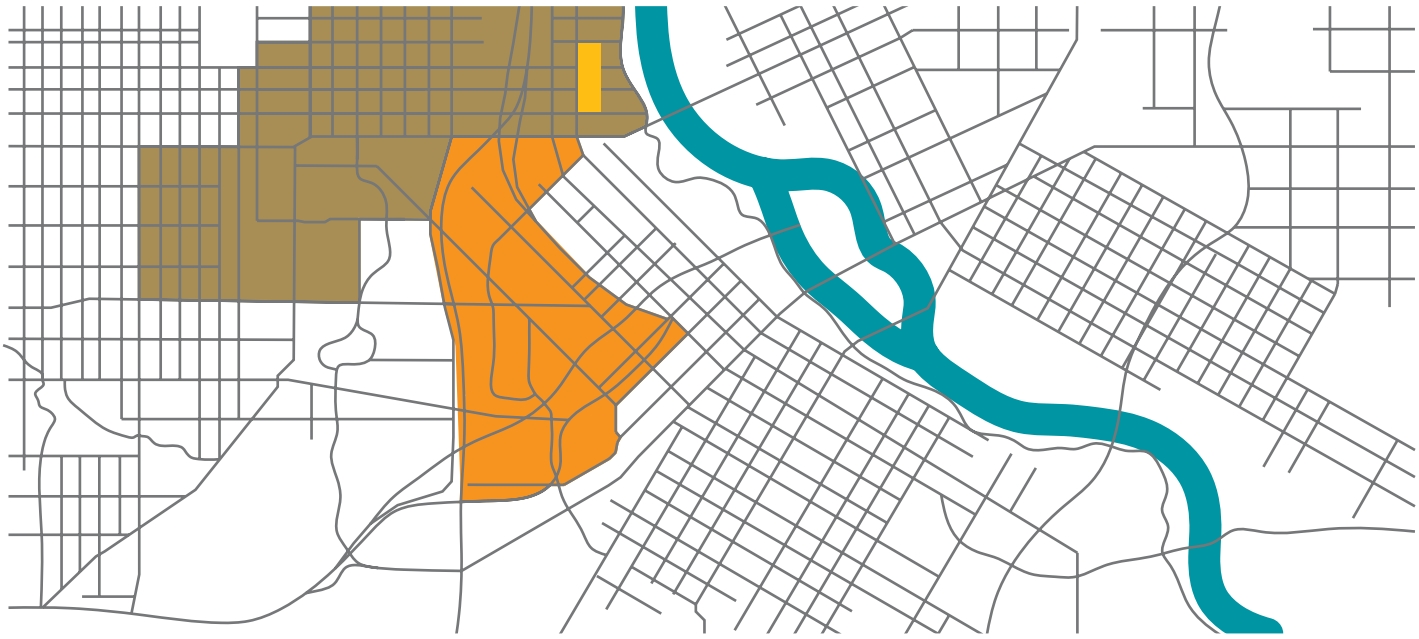


Figure 1

NEIGHBORHOODS North loop | Near north

Figure 2



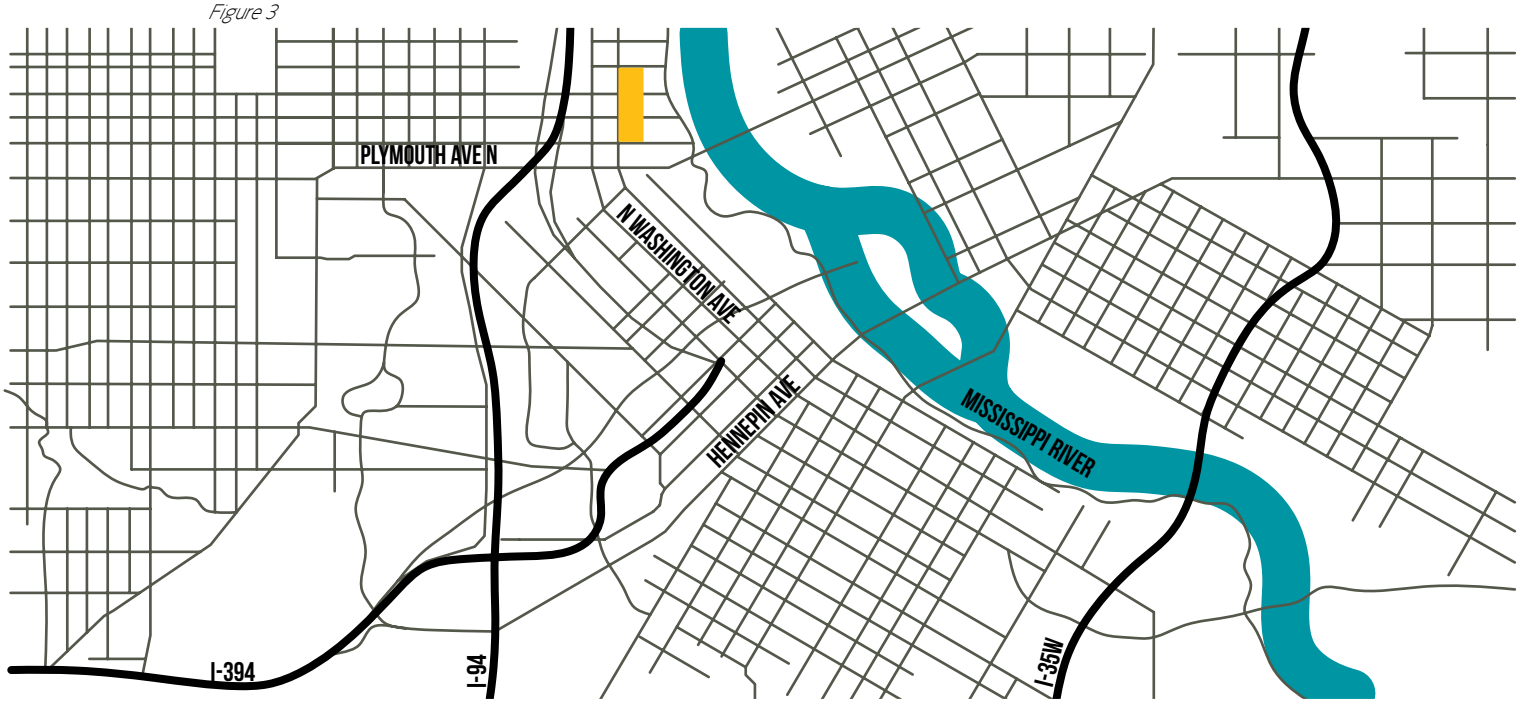
site

north loop neighborhood

near north neighborhood

CITY Minneapolis

Figure 3



SITE INFORMATION

The site is bounded on the north by 17th avenue north, and 14th avenue north on the south. North second street marks the west boundary and an abandoned rail line creates the east boundary. The site measures approximately 480,000 square feet.

Near North neighborhood **SITE**

Figure 4

Figure6, Figure 7, Figure 8 **LANDMARKS**

TRANSPORTATION Alternate Modes

Figure 5

light rail station

bus stop

bike route

PROJECT EMPHASIS

This thesis project will focus on the current and past ideals of what is considered a home, the desires to create a home, and how the features that make up the idea of home will be drastically changed due to the particular influence of generation Y.

Through the examination of sociology, economics and technology this project will be better understood. Materials, methods and technology will also be utilized in order to focus on millennial housing.

PLAN FOR PROCEEDING

RESEARCH DIRECTION

Research will be conducted for the entire duration of this thesis project. The research process will be directed in order to better establish an understanding of the theoretical premise/unifying idea, the site in it's entire context (both time and place), project typologies, and programmatic needs.

DESIGN METHODOLOGY

A mixed-method approach will be utilized as the methodological means for research. This approach will employ quantitative and qualitative research via a concurrent-transformative strategy. This methodology will be implemented throughout the research process and into the design process as well. Analysis and interpretation will be reported and represented in terms of text and graphics. Quantitative data will be collected and analyzed and qualitative data will be taken from personal observation and archival searches.

DOCUMENTATION OF PROCESS

This project will be documented throughout the entirety of the design process. Biweekly notes, summaries, sketches, drawings, models and analyses will be documented and chronologically organized.

PLAN FOR PROCEEDING

SCHEDULE

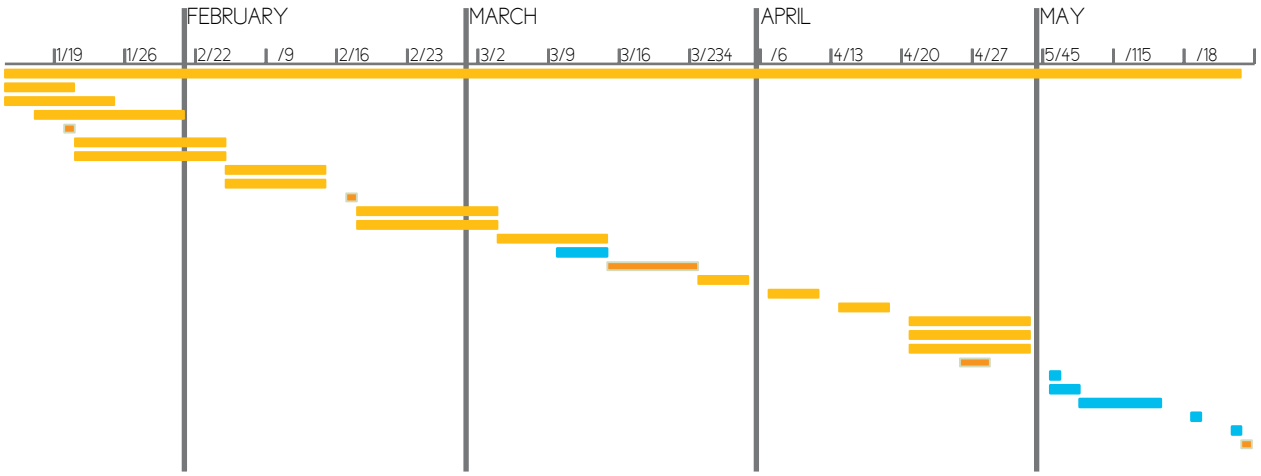


Figure 9

- Project Documentation 89 Days Tue 1/14/14 Fri 5/16/14
- Context Analysis 5 Days Tue 1/14/14 Mon 1/20/14
- Conceptual Analysis 9 Days Tue 1/14/14 Fri 1/24/14
- Spatial Analysis 11 Days Fri 1/17/14 Fri 1/31/14
- MLK Holiday 1 Day Mon 1/20/14 Mon 1/20/14
- Ecs Passive Analysis 11 Days Tue 1/21/14 Tue 2/4/14
- Ecs Active Analysis 11 Days Tue 1/21/14 Tue 2/4/14
- Structural Development 8 Days Wed 2/5/14 Fri 2/14/14
- Materials Development 8 Days Wed 2/5/14 Fri 2/14/14
- President's Day 1 Day Mon 2/17/14 Mon 2/17/14
- Floor Plan Development 10 Days Tue 2/18/14 Mon 3/3/14
- Context Redevelopment 10 Days Tue 2/18/14 Mon 3/3/14
- Section Development 9 Days Tue 3/4/14 Fri 3/14/14
- Midterm Reviews 5 Days Mon 3/10/14 Fri 3/14/14
- Spring Break 7 Days Sat 3/15/14 Sun 3/23/14
- Structural Redevelopment 5 Days Mon 3/24/14 Fri 3/28/14
- Envelope Development 5 Days Mon 3/31/14 Fri 4/4/14
- Project Revisions 5 Days Mon 4/7/14 Fri 4/11/14
- Preparations For Presentation 10 Days Mon 4/14/14 Fri 4/25/14
- Presentation Layout 10 Days Mon 4/14/14 Fri 4/25/14
- Plotting And Model Making 10 Days Mon 4/14/14 Fri 4/25/14
- Spring Recess 2 Days Sat 4/19/14 Mon 4/21/14
- Exhibits Installed On 5th Floor 1 Day Mon 4/28/14 Mon 4/28/14
- Thesis Exhibit 3 Days Mon 4/28/14 Wed 4/30/14
- Final Thesis Reviews 6 Days Thu 5/1/14 Thu 5/8/14
- CD Due To Thesis Advisors 1 Day Mon 5/12/14 Mon 5/12/14
- Final Thesis Document Due 1 Day Fri 5/16/14 Fri 5/16/14
- Commencement 1 Day Sat 5/17/14 Sat 5/17/14

PREVIOUS STUDIO EXPERIENCE

Tea House – Boat House	Joan Vorderbruggen	**FALL SEMESTER 2010**
Montessori School – Sustainable Dwelling	Darryl Booker	**SPRING SEMESTER 2011**
Wildlife Center – Masonic Guild	Steve Martens	**FALL SEMESTER 2011**
North Dakota State University S.T.E.M. Building	Mike Christenson	**SPRING SEMESTER 2012**
San Francisco High Rise	Don Faulkner	**FALL SEMESTER 2012**
Ghana School Compound	Don Faulkner	**SPRING SEMESTER 2013**
Kyoto "Parasitic" Design	Mike Christenson	**FALL SEMESTER 2013**

PROJECT PROGRAM

DEFINITION:

The Millennial Generation: also known as Generation Y, Millennials, Echo Boomers or the Peter Pan Generation. Though dates shift from source to source, this generation can generally be defined by the birth years of 1980 to 2000. This generation ranks as the "largest American generation at 92 million strong, compared with some 76 million baby boomers"(Stern, 2010). The Pew Research Center defines Millennials in simple terms as "confident, connected, and open to change."

EDUCATION:

"When it comes to education, this generation aims high"(Pew Research Center, 2010). Millennials are aspiring and achieving more educational credentials than any other previous generations. (Winograd & Hais, 2011). The vast majority see higher education as a must in obtaining a better life. Two thirds of the age group, when asked in 2008, was either taking part in a two or four year degree program or planned on doing so. The remaining third of the age group planned on obtaining some sort of educational credential which involved trade schools, online-for-profit schools, or community colleges (Winograd & Hais, 2011). "40 percent of Millennials are still in school, and of those who are of college age but not in school, 30 percent say they plan to go back at some point to get their degree. Furthermore, 90 percent of today's high school students say they plan to pursue some sort of education after high school"(Yingling, 2011) .

Overall, Millennials are aiming for higher educational attainment at every level. More millennials are opting for AP exams and

RESEARCH
RESULTS

coursework and advanced coursework. This extra effort can be seen in higher SAT and ACT scores across the board. The highest ACT and SAT average scores are being seen since the past 30 years (Yingling, 2011). Some say that this growth in educational attainment is due to standardized testing, broader education opportunities, and higher amounts of homework and study time.

A large difference between Generation X and Generation Y is the obtainment of education by women. According to Pew Research, "Millennial women are slightly more likely than men to be college graduates" (Pew Research Center, 2010) "57 percent of today's undergraduates are women, and women are now earning 170,000 more bachelor's degrees each year than men" (Yingling, 2011). Because of this rise in female higher education, more and more fields are evening out in terms of male to female ratios. Women are now equal in law and medical professions, which have historically been dominated by men. These are not the only professions however, overall today's women make up "55 percent of the nation's professionals overall" (Yingling, 2011). This leveling is beginning to affect the pay gap and high level positions that have historically occurred between men and women.

ECONOMY:

With all of this knowledge, Millennials are having difficulty utilizing it in a rough economy. 2007 and 2008 produced a terrible economic crisis that echoed across the globe. "Fiscal irresponsibility, over-reliance on financial services and spending beyond means" led to very poor job prospects, and

tightened loans. Student loan debt, credit debt, foreclosures and unemployment have seen record highs over the course of the past 6 years (Burstein, 2013).

In 2006, Pew Research found that 50 percent of recent graduate Millennials were unemployed. That number dropped to 41 percent by 2010, and continues to drop (Pew Research Center, 2010). Although this is good news, many Millennials face great economic difficulties. Recent graduates are moving back in with their parents, finding part time work and downsizing altogether. Generation Y is said to be "doing more with less" (Burstein, 2013, p.96). Millennials are choosing to live with others, live smaller and make their own work.

Due to the economic breakdown, this age group has taken on a more 'do it yourself' or self-sufficient attitude as well as a delayed lifestyle. Similarly seen in past economic crises, this generation is putting off key life events and choices due to unstable financial situations. As of 2010, marriage rates dropped to an all-time low (Burstein, 2013, p.101), child births dropped dramatically, and first-time home ownership has been consistently declining since 2007. Millennials simply cannot afford to make these choices at the historically accepted times and are very cautious about major purchases or investments.

Although Generation Y may not be excelling in economic success at current, it remains a very important goal overall. Alongside economic success, millennials are defining a well-lived life by happiness and fulfillment (Burstein, 2013, p.107) .These concepts are shaping the economic market seeing as the millennial generation is "the largest consumer force in decades"

RESEARCH

RESULTS

CONT.

(Burstein, 2013, p. 103). Millennials' spending choices come with high standards attached; including the support of social and environmental causes.

Millennials are participating more in terms of sharing resources in order to reduce costs (Burstein, 2013, p.106). They want to own less and free themselves of things they do not need or no longer serve purpose. Millennials "have fewer responsibilities related to materials things and have made a principle out of not bringing energy- and resource-consumptive items into their lives (Burstein, 2013, p. 107). Through economics, Generation Y has put a far greater emphasis on community as opposed to the individual.

POLITICS:

Just as Millennials are making an impact on the new economic direction, they have and are currently making an impact in the political realm. The first, most evident political push seen from generation Y came during the 2008 presidential election. Millennials "ushered in a transformational leader whom many of them deeply believed in" (Burstein, 2013, p. 125). In this moment, the emerging generation began to analyze and determine their political choices. Millennials arrived into the political arena and dramatically swayed many outcomes.

Surprisingly, Generation Y is not looking to support a single party, but rather a person. Party line voting is very low throughout the generation which is more concerned with "someone who cares about issues related to community" (Burstein, 2013, p. 135) rather than party voting. Having said this, generation Y has been the

first generation in over 40 years to openly label itself as liberal.

Millennials may not have a strong force in key political administrations at current; however they are beginning to make an impact at local levels through civic engagement (Nussbaum, 2010). Climate change, healthcare and education rank as the top three major topics to be addressed by Millennials. Government assistance programs seem to be supported by many Millennials although they themselves might not benefit from historical government programs such as social security. Due to past and current economic troubles and government instability, millennials seem to have an independent focus on non-electoral actions dealing with the environment, social policy, deficit, and human rights (Burstein, 2013, p.142; Nussbaum, 2010). These issues give a good look ahead as to the ideas and movements that may occur as Millennials enter into higher political roles over the next few decades.

HOUSING:

Currently millennials are showing strong trends in what they look for in a home. These trends and the impacts from them are going to greatly impact the new perception of what is meant by 'home'. Generation Y has been choosing more modest homes, typically with less square footage. In the recent past bigger has always been better and an incessant status symbol. This might "represent a demographic shift against large housing that is often overpriced and unnecessary" (Reilly, 2011). Due to the downsizing of living arrangements millennials save on rent and energy costs. While their living arrangements might be smaller, millennials still want well thought out spaces. They look for well-designed

RESEARCH

RESULTS

CONT.

storage and multi-purpose spaces. Millennials seem to be more likely to get rid of things when they are no longer useful or necessary so the concept of storage must change. Urbanland lists the following features that are appealing to generation Y:

- *Compact, less-expensive rental or condo studio units in the 250-450 sq. ft range.*
- *Two-bedroom, two-bathroom units that can be shared by three to four echo boom renters.*
- *High-amenity one- two bedroom condos for higher-income echo boomers.*
- *High-powered internet connections for all spaces in the building; fast connectivity is a must.*
- *More open, flexible space within the units.*
- *High-quality kitchen and bathroom countertops*
- *Shared amenities, such as communal space for informal get-togethers and parties; gym/sports equipment; bike storage; and dog parks/walks.*

(Gruen, 2013)

The spaces that millennials want in homes are quite a bit different from past generations. They want places to comfortably work from home. Social aspects also greatly affect the new millennial home. Millennials are used to collaboration and socializing, they want open spaces for doing just that. "Gen Y prioritizes functionality over size and lifestyle over the actual property itself" (Destination Home, 2013).

Millennials have learned from the cookie cutter suburbia in which they have grown up in. Millennials are looking for living arrangements that can be made their own and individualized . Surprisingly generation Y is also open to fixer-uppers and making renovations, this may be a characteristic that rubbed off from the baby boomers (Briggs, 2013). Common characteristics between past generations and millennials are a bit difficult to see for the most part. Based on a survey of the past three generations, this table shows dream-home amenities by rank of importance:

RANK	GENERATION Y	RANK	GENERATION X	RANK	BABYBOOMERS
1	WHIRLPOOL BATH	1	HIGH-QUALITY KITCHEN	1	HIGH-QUALITY KITCHEN
2	SWIMMING POOL	2	CLOSETS	2	CLOSETS
3	GAME | BILLARD ROOM	2	FIREPLACE	3	WHIRLPOOL BATH
3	CLOSETS	4	WHIRLPOOL BATH	4	FIREPLACE
5	FIREPLACE	5	SWIMMING POOL	5	SWIMMING POOL
6	HIGH-QUALITY KITCHEN	6	PATIOS | PORCHES | DECKS	6	WORKSHOP | STUDIO
7	SAUNA | STEAM ROOM	7	GAME | BILLARD ROOM	7	PATIOS | PORCHES | DECKS
7	GYM | FITNESS ROOM	8	GARDEN	7	GARDEN
9	HIGH-TECH ENTERTAINMENT	9	GYM | FITNESS ROOM	9	GAME | BILLARD ROOM
10	PATIOS | PORCHES | DECKS	10	WORKSHOP | STUDIO	9	HIGH-TECH ENTERTAINMENT

Figure 10

The overall common theme amongst generation Y is entertainment and social areas as opposed to more private spaces such as gardens and workshops (Solomon, 2013).

RESEARCH

RESULTS

CONT.

The idea that millennials are "looking for a neighborhood not just a home" (Burgum, 2013) is all too true. Millennials are looking to drive less and rely less on their cars. In turn they are looking for more walkability and proximity to daily necessities, as well as easy access to public transportation. This idea would suggest that businesses would have more opportunity near millennial targeted housing. (Reilly, 2011) Employers are starting to become attentive in locating their startup companies near cities and urbanized areas in order to attract not only business, but employees too (Gruen, 2013).

Technology is making a great impact on millennials' perception of home. Based on a BHGRE survey, 64 percent said they would not want to live in a home that was not "tech-friendly" and 44 percent said technological sophistication of the family/living room was most important (Winograd & Hais, 2011). Security technology is also a higher concern of millennials. 48 percent of millennials surveyed said a security system was necessary and particularly a system that can be controlled remotely (Winograd & Hais, 2011). Green technology is also a growing demand; millennials are looking for sustainable technologies that save them money (ERA Real Estate, 2013).

Overall, as the millennial generation moves forward, they will become the largest group affecting the housing market. Their lifestyles will affect and shape the new perception of 'home'.

Millennials have already shown that they are a generation all of their own. The changes that have been seen in education, economics, and politics feed into the changes that will be seen in housing.

In terms of education, millennials aim high and put more effort towards continued education. Higher education is no longer made up of a male majority. With women and men entering into a more equal work force with more equal positions how does this affect the home? This changes the traditional family rearing roles and stereotypical ideals. Gone are the days of a 'woman's domain' home, so what does a gender neutral home look like?

With higher education levels and more specialized degrees comes more money. Where will those extra funds go? Millennials have grown up and come to age in a difficult financial time. For a generation that is used to holding on to their funds and making careful financial decisions what will happen once they are financially stable? If generation Y has been used to downsizing and spending less, selecting to spend carefully and paying debt, how will they react once they have extra funds? If a generation is content in more compact living how will those spaces change?

An unstable economy has led many millennials jobless, however many decided to create their own work. If people are working and creating more from their homes, then what is necessary in the new home in order to support this lifestyle?

The economy, along with other aspects has led millennials to push off marriage and children. How must a new type of housing accommodate with this trend? The definition of family itself has

RESEARCH
SUMMARY

shifted dramatically in the past decades, and more emphasis is being placed on community rather than the individual; and homes will echo this new ideal.

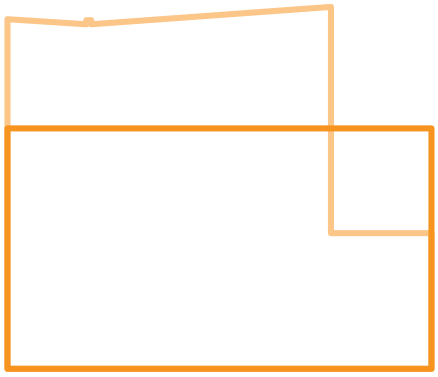
Politics is also a helpful subject in understanding millennial housing. Millennials have made it clear that they are a major Liberal entity within the political field and have voiced their opinions strongly. With a liberal outlook and a greater want for government programs, climate change, healthcare and education are major topics that could be confronted as millennials gain power in politics. With more social programs and local political engagement, housing can shift dramatically.

Overall these broad topics offer a look at how Millennials differ from past generations and what makes it so, but millennials are starting to voice their opinions on what they want in a home. Due to what millennials have become used to they are opting for more compact, but flexible spaces. Social and community spaces rank high as opposed to privacy, and millennials are looking for neighborhoods rather than just a home. Technology cannot be forgotten; millennials are looking for technologically attuned places to call home. Generation Y is leaving the suburbs of their childhood and heading for denser areas that can offer amenities, business and entertainment nearby.

While there are still many developments to come from Generation Y, it is easy to see that their needs vary greatly from the past. Millennials have been shaped by their surroundings and history meanwhile they have begun to shape new ones. By taking into account where Millennials have been and where they could go, a new conception of home can be understood.

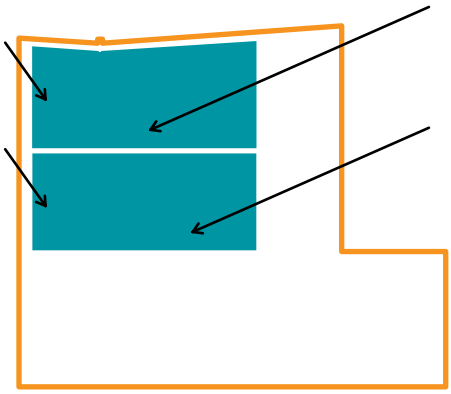
Figure 14

Figure 15



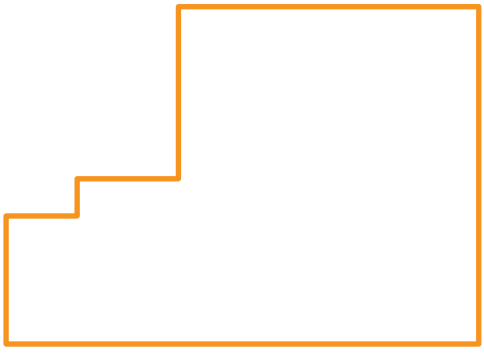
PLAN | SECTION

Figure 11



NATURAL LIGHT

Figure 12



MASSING

Figure 13

CASE STUDIES

LA CANOPÉE 1.

Patrick Arotcharen Architecte **ARCHITECT**

Bayonne, France **LOCATION**

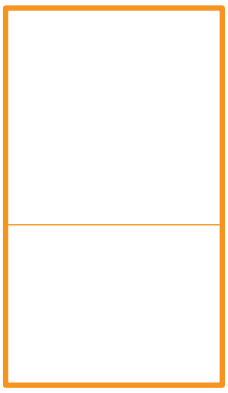
The La Canopée residential complex by Patrick Arotcharen and Carole Magot is located in Bayonne, France. The housing collection occupies 3,800 sq. m of a wooded site which comprises of 50 units. Each living unit was carefully laid out in accordance with topography, existing vegetation, sun path and views (Agence Patrick Arotcharen, 2013). The conceptual idea in the layout was to allow for each home to have unobstructed views and sun access (ArchDaily, 203). To accomplish this, all housing units are raised up on stilts; parking requirements were hidden below the living spaces as well as some circulation paths.

"Hoisted up, as if on stilts, the project mimics the playful nature of the vegetation and trees. The built environment distinguishes itself from the service 'zones' and landscaping at street level offering up a habitat, which brushes up directly against the surrounding foliage."
(ArchDaily, 2013)

Of the 50 housing units, 38 of them are linked by raised walkways, while the remaining 12 stand as individual homes (ArchDaily, 2013). From the walkways are semi-private landings that service two housing units at most. The walkways are said to offer a dreamlike sensory experience as though you are flirting with the trees (DesignRulz, 2012).

Individual housing units optimize sunlight through maximum southern glazing. The main living space is oriented mostly south and is almost entirely glazed. The main living space can also be in some cased doubled in size upon opening doors onto the southern balcony space. These balconies are carefully surrounded with built

Figure 16



GEOMETRY

Figure 18

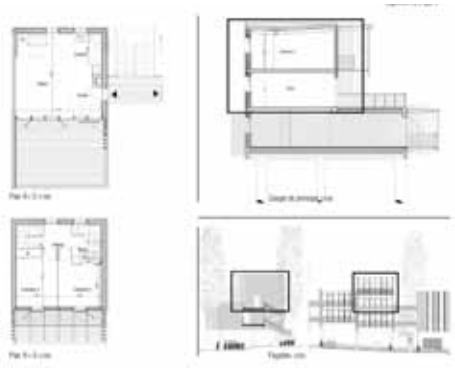
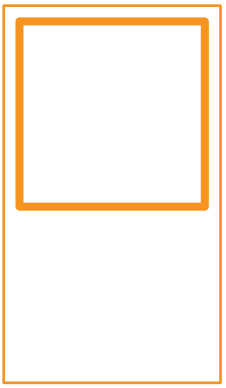
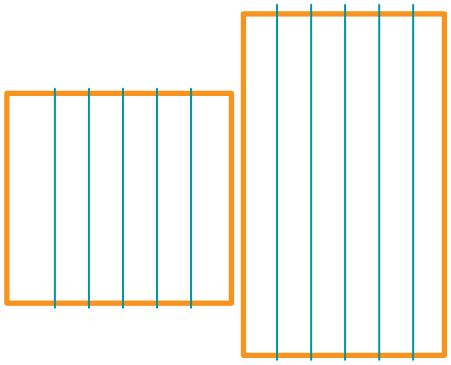


Figure 17



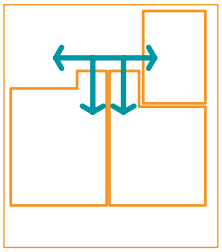
HIERARCHY

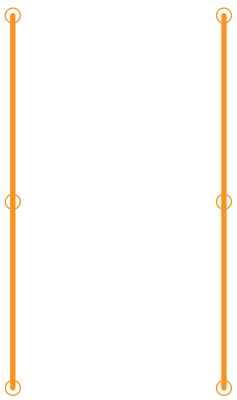
Figure 19



REPETITIVE | UNIT

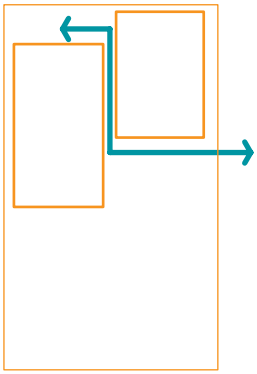
Figure 20





STRUCTURE

Figure 21



CIRCULATION

Figure 22

CASE STUDIES

LA CANOPÉE 1.

CONT.

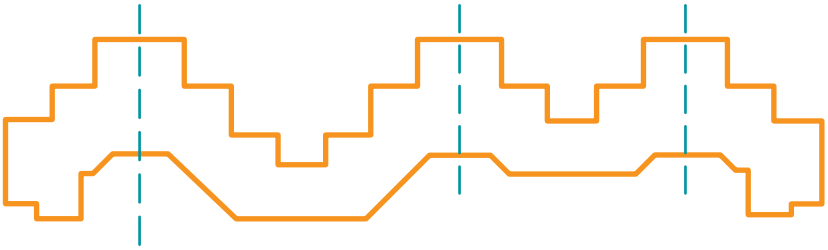
in vegetation opportunities and permanent sun screens to provide passive heating/cooling but also privacy in such close proximity to neighbors. All public spaces are located on the first floor in a very open manner, while private spaces are located on the second floor.

This project utilized many prefabricated elements; this was possible due to a grid and ratio pattern used in each unit. Such prefabricated elements include "structural elements, balustrades, external cladding, glazing units and the protective sun screens" (ArchDaily, 203). Ultimately this regimented design kept cost under budget.

Overall this project is very site specific; it reacts particularly to site constraints and the current condition of the site. The design is aimed to disturb the site as little as possible and react to natural conditions. While it is surprising to see that the project is timber-clad it makes sense in this environment. The cladding fits with the site and will age appropriately with it.

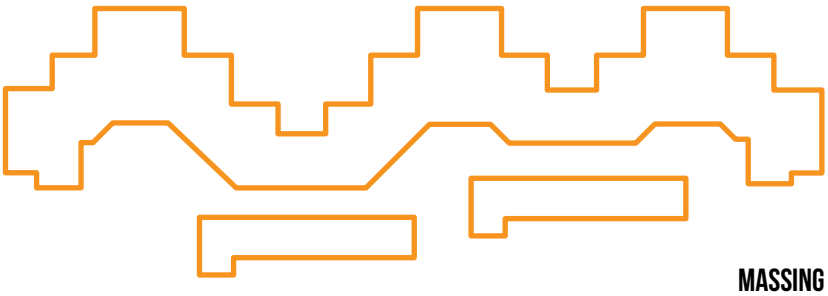
While each housing unit is linked to a common walkway system, overall the project lacks a sense of community. There are no spaces for community use beyond laundry facilities and bike storage, which is interesting in such as densely designed space. Also from the public perspective this project does not offer anything beyond interest.

The housing units themselves have smaller square footages in comparison to American standards. The kitchen and bathrooms spaces tend to be more compact and storage spaces are sparser.



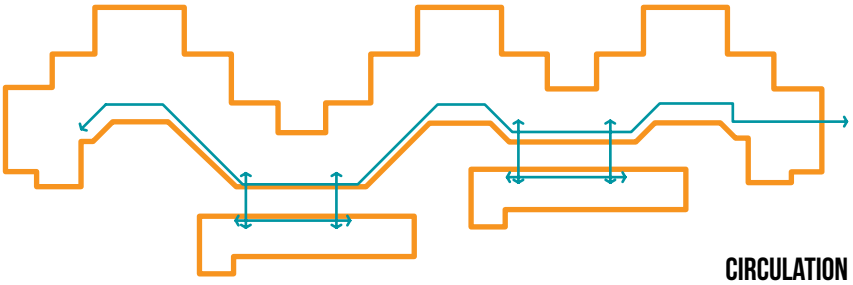
SYMMETRY | BALANCE

Figure 23



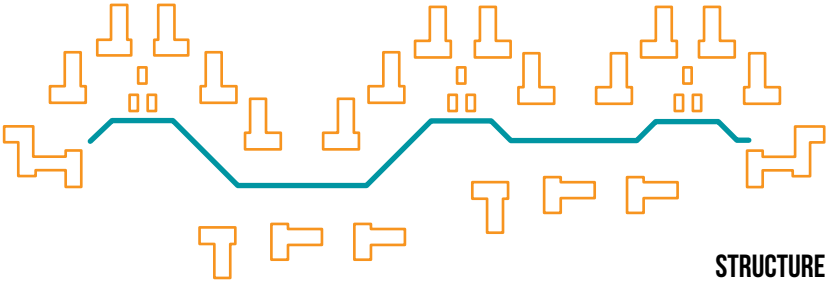
MASSING

Figure 24



CIRCULATION

Figure 25



STRUCTURE

Figure 26

Figure 27

CASE STUDIES

'67 HABITAT 2.

Moshe Safdie **ARCHITECT**

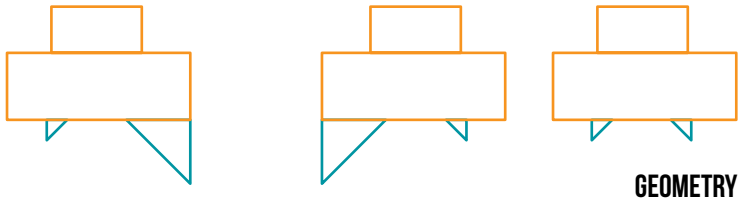
Montreal, Canada, **LOCATION**

Habitat '67, a multi-family housing project by Moshe Safdie is located in Montreal, Canada. The project was designed and constructed for the World Exposition of 1967(Twisted Sifter, 2009). Safdie's goal was to create a small space for a large amount of people to live that still provided the pleasures of a conventional, private home (Stanton, 2004). The design was a reaction to the dissatisfaction of suburban growth. Originally the project was designed for 1,000 housing units, shops and a school; however this was reduced to 158 housing units and no community amenities by the Canadian government (Merin, 2013).

"Safdie's dwelling complex 'Habitat' was designed to give 'privacy, fresh air, sunlight and suburban amenities in an urban location." (Great Buildings Collection, 2011)

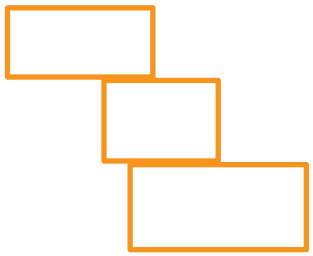
The housing complex is overwhelmingly constructed using prefabricated concrete modules which make up each or half of each unit. These modules were designed in way that allowed for strategic stacking so that privacy and views were properly handled and also so that each unit could utilize a roof garden on top of the unit below it (Great Buildings Collection, 2011). This assembly of stack units resembled a mountain of dwellings (Stanton, 2004). This prefab system was considered a prototype at the time and was being used in order to experiment with construction costs; however after the fact this method proved to be rather expensive.

Each of the housing units range from one bedroom (600 sq. ft.) to four bedrooms (1,700 sq. ft.). The plans remain open in order to filter light back into the unit and also open up to roof gardens.



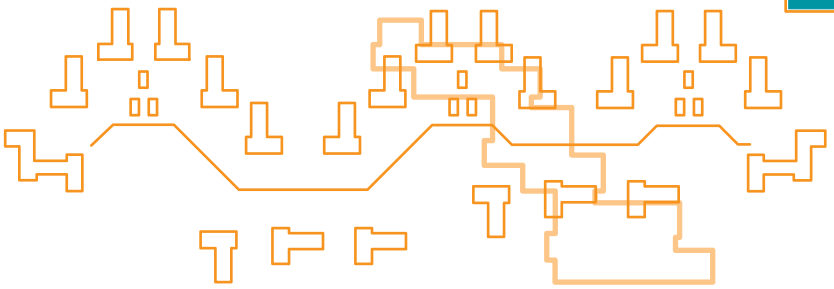
GEOMETRY

Figure 28



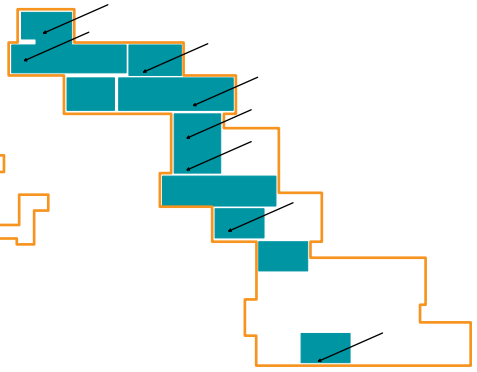
HIERARCHY

Figure 29



PLAN | SECTION

Figure 30



NATURAL LIGHT

Figure 31

Figure 32

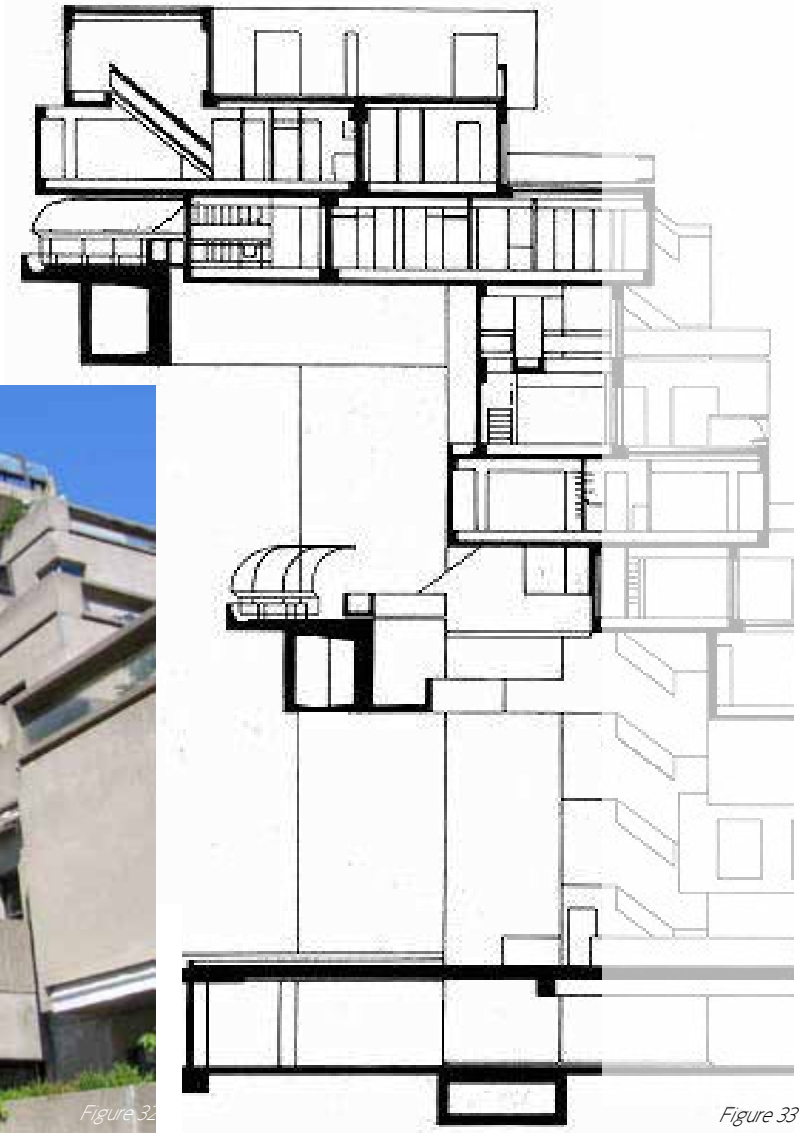


Figure 33

CASE STUDIES

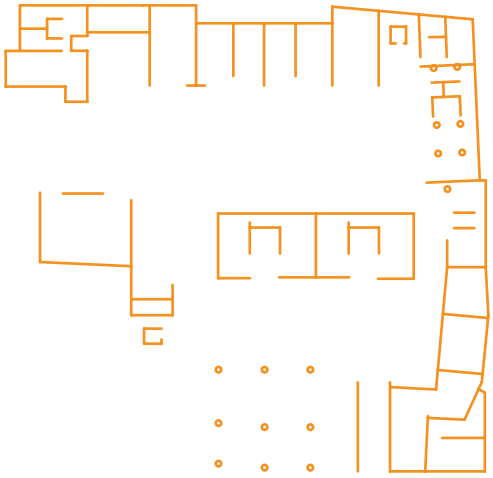
'67 HABITAT 2.

CONT.

Besides the one-bedroom plan configuration, the various housing units tend to be broken up into multiple levels. While the plans are limited to constant module dimensions, they tend to be spacious throughout (Stanton, 2004).

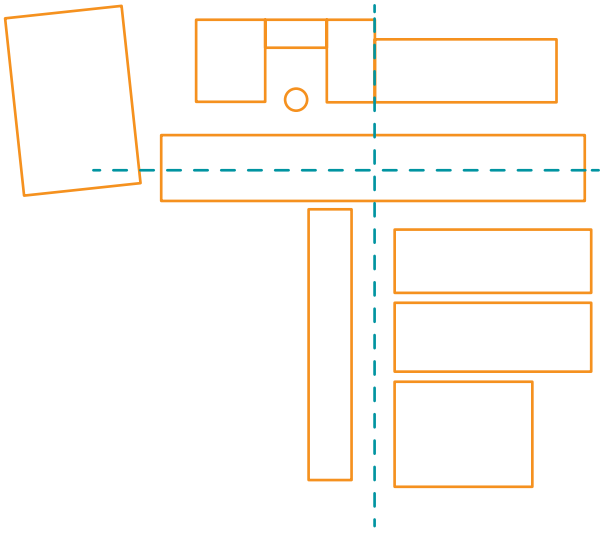
Each of the housing units is connected via a series of semi-covered, pedestrian walkways and bridges interwoven in the center of the complex (Merin, 2013).These walkways meet at three intersections in which the vertical circulation is located. Parking and tenant amenities are located on the ground floor.

Although the concept was progressive, the idea of community seems to have been lost. The connecting spaces between units tend to be dark and lack landscape. The walkways are partially covered in exposed areas; however they do not fully shelter passersby in the cold climate which can limit community interactions. While some aspects of the project did not live up to standards, Habitat '67 lent to a new direction in housing typology that is effective in size and adaptable to site (Merin, 2013).



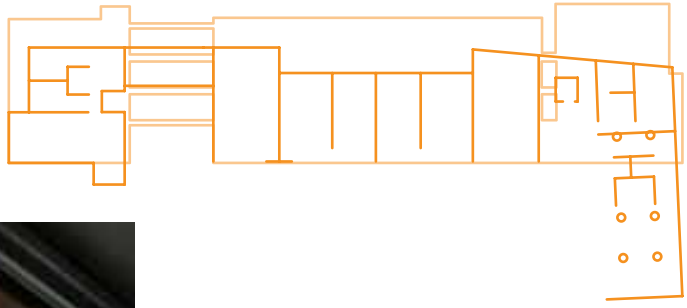
STRUCTURE

Figure 34



SYMMETRY | BALANCE

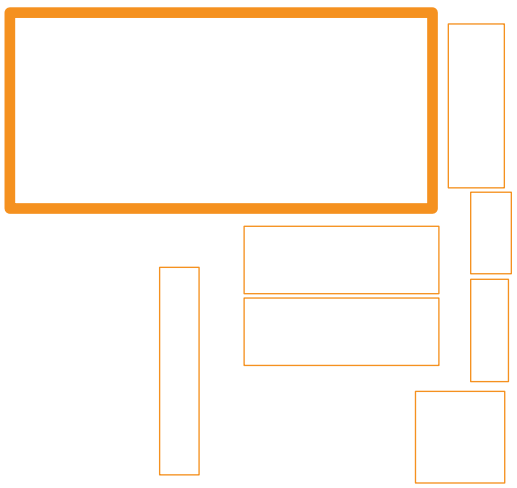
Figure 35



PLAN | SECTION

Figure 36

Figure 37



HIERARCHY

Figure 38

CASE STUDIES

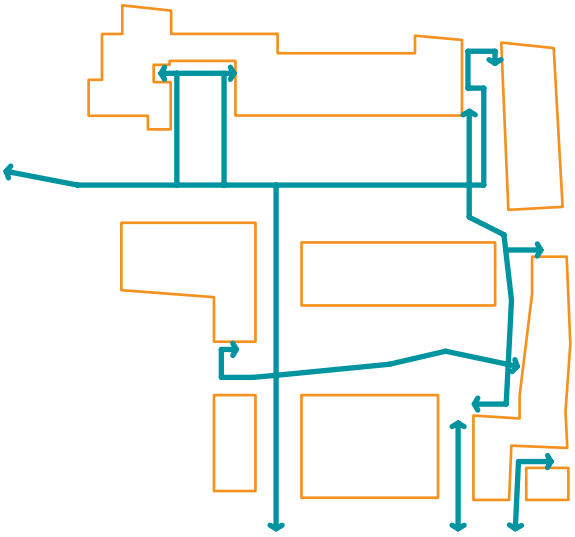
SAVONNERIE HEYMANS 3.

MDW Architecture **ARCHITECT**

Brussels, Belgium **LOCATION**

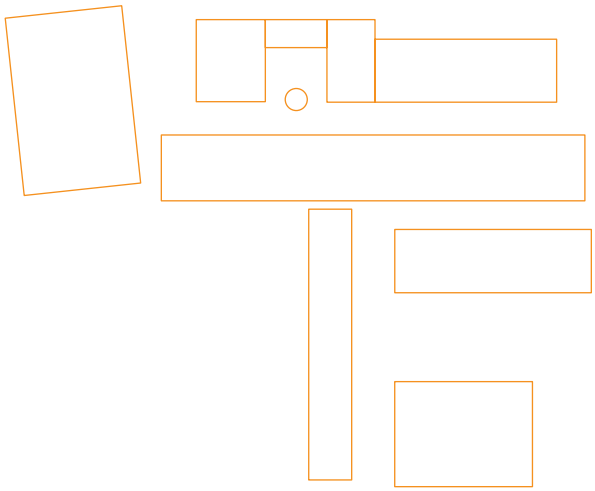
Savonnerie Heymans by MDW Architecture is located in Brussels, Belgium. The housing project occupies a 6,500m² urban site that was once a soap factor, "in a dense but under-served neighborhood on the rebound that is populated by a mix of young people and immigrants." (Metz, 2013) Within the site are 42 living units which range from "studios, 1 to 6-bedroom apartments, lofts, duplexes and Maisonettes" (ArchDaily, 2013) all of which are sustainable. Due to the multitude of living arrangements and overall housing scheme, Savonnerie Heymans brings about a village feel (ArchDaily, 2013). Amongst the living areas there are also other amenities; a social room for events and meetings, a game library, playground, community daycare center, communal laundry, main promenade and large gardens.

"Glass-enclosed bioclimatic loggias" serve as "acoustical and thermal barriers" for the living units while also providing privacy. These spaces considerably lower energy use and with the use of "super-tight insulation" the buildings require "less than 15 Kw per square meter per year to heat". A cogeneration system provides the heat for the entire complex, solar panels heat hot water, rainwater accounts for 45 percent of non-drinking water, semi=intensive green roofs, (Brussels Environment, 2011) and natural materials were used for insulation such as help wool, and cork. Other sustainable strategies include the reuse of the previous buildings on the site whenever possible. 18th and 19th century street houses and the factory chimney were integrated into the design. The chimney in particular serves as a ventilation shaft for the underground parking garage. Also, the formerly contaminated land was cleaned up and replaced with outdoor spaces, both private and public.



CIRCULATION

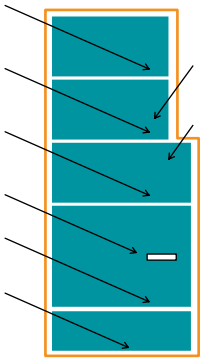
Figure 39



MASSING

Figure 40

Figure 41



NATURAL LIGHT

Figure 42

Figure 43

CASE STUDIES

SAVONNERIE HEYMANS 3.

CONT.

"The scheme was intentionally developed around the concepts of sustainable development and relies on low-serviced buildings. The glass-enclosed bioclimatic loggias provide each housing unit with a buffer acting as a state-of-the-art insulation tool lowering considerably energy consumption and protecting from the city centre noises. They also allow sharing the variety of arrangements of the semi outdoor space of each individual unit" (ArchDaily, 2013).

Each of the living units has a compact, well arranged layout. There are some European/international design tendencies that can be seen throughout the living arrangements. Examples of this include smaller kitchen areas, ample natural light, and public water closets along with private restrooms in each unit. All-around, smaller square footages can be seen throughout the complex in comparison to American standards as well as clear definition between public and private sections of the living units, although public spaces are given division-free space.

Overall the Savonnerie Heymans creates a closely linked, village-like atmosphere around central courtyards; however from the street this is not easily seen. The complex lends a new facade to the historic, urban street and takes note from it; however it does not necessarily welcome the public or offer it something beyond aesthetics.

CASE STUDIES
SUMMARY

Three case studies were chosen for analysis; La Canopée, Habitat '67, and Savonnerie Haymans. It is from these selections that underlying principles can be explored, qualitative ideas can be understood and quantitative design choices can be detailed. Through the category of multi-family housing and co-housing, important principles can be shown in relation to the overall research problem.

The various case studies selected for analysis share many similarities though they were each designed independently from one another. While this is the case, it is also expected that they each hold particular characteristics. It is from these similarities and specific characteristics that insight can be gained.

Overall a key element that can be taken from these case studies is the use of space. All three projects produce compact and efficient living spaces with significance placed on public areas within the home. These public areas comprise of abundant natural light and open floor plans including living, dining and kitchen spaces. The configuration of these uses in one space along with private spaces will be an important design problem to be solved in relation to millennial housing.

Use of space in terms of public or community use is best seen in Savonnerie Haymans. This project best portrays a community environment through the intervention of deliberate landscaping, community facilities, and architectural elements that encourage interaction. While Habitat '67 and La Canopée have some communal aspects, neither shows design elements as strongly as the Savonnerie Haymans project.

On the technological side, Savonnerie Haymans boasts the best example of passive and energy-efficient design. The project

implements the particular sustainable strategies of today in order to deliver a responsible design solution. La Canopée serves in some cases for responsible design via treatment of site and materials use; however it does not exploit current sustainable building technologies as strongly.

In terms of density, Habitat '67 showcases an experimental look at the grouping of housing units. The design configuration lends to a new direction of high-rise design and new insight as to how dense living could look like. The intertwining of modules to create privacy and outdoor space and the framing of views and harvesting of sunlight truly take space planning to a new realm. Utilizing this linking module design might not be entirely cost effective; however the space-planning idea that can be taken away from this project could be useful in an urban environment.

The interaction between project and site, in particular the urban environment, is quite important seeing as the selected thesis site in located in an urban area. Savonnerie Haymans best exhibits this interaction seeing as it is located in the center of Brussels, Belgium. The issues of privacy, noise, and security are important in these situations. By observing the use of materials, systems and design solutions, insight can be gained as to how to design for an established urban area.

Each of the case studies provides the same design solutions, nor should they. They each came with particular design problems and constraints. It is from these issues that new answers can be generated. Therefore through the analysis of these case studies, along with others throughout the design process, their answers can be used in relation to the particular traits and constraints of millennial housing.

The Near North neighborhood has had its fill of history; a history which makes it unique. Through the study of its past and present conditions much can be learned and utilized for future development. North Minneapolis, or the Near North Neighborhood of Minneapolis, began development in the early 1800's. The original neighborhood was developed predominantly by an influx of the Jewish community. These people came from Russia, Poland, Lithuania and Romania over the span of the 19th century and began to set down permanent roots and began a stable, local economy (Inside Northside, 2013). This focused area was the result of Jews not being allowed to live in many areas around Minneapolis (Goldberg, 2007). In the early 1900's, north Minneapolis began to see a larger population of African Americans and the neighborhood continued to be peaceful and economically prosperous.

At the end of World War Two, populations began to shift in the north side. Servicemen moved away to the surrounding suburbs to find new homes. A large majority of the Jewish population moved to neighboring city St. Louis Park due to the fact that they were able to purchase homes there. African Americans on the other hand, were still facing a great deal of racism; they could not obtain the federal loan programs needed to buy property. This unfortunate misdoing meant that the African American population stayed put in the Near North neighborhood (Goldberg, 2007) .

In 1967, the civil rights movement reached Minneapolis and provoked action. A riot broke out and destroyed much of the

HISTORICAL NARRATIVE

economic backbone of the neighborhood. Unfortunately this event only increased the amount of people leaving the north side for the suburbs (Goldberg, 2007). The houses that were left behind became rental properties, and as interstate travel became more prevalent via the nearby I-94, area businesses left the neighborhood for more lucrative locations. The once healthy corridor of "diversity, commerce and civic pride" (Wood, 2010) slowly declined to an area known for crime and violence. For many in the Twin Cities area, north Minneapolis has simply been a problem.

Though North Minneapolis has seen difficult changes and deterioration in the past century, there are positive actions being made. Minneapolis has begun to be more proactive in supporting the neighborhood law enforcement strategies and also by creating a development plan (Wood, 2010). Through non-profit construction and business, local companies are starting to make an impact. New solutions for urban development models are being planned for a neighborhood that is "inclusive, prosperous for all, and diverse on a socioeconomic scale" (Fillman, 2013). Groups such as North Mpls Culture, Catalyst Community Partners, Nexus, Economic Opportunity Network, and the Ackerberg Group are just a few of the companies at current who are working to make a difference in the Near North neighborhood (Wood, 2010; Catalyst Community Partners, 2011; Nexus, 2013). These groups are investing in the communities of North Minneapolis through "city plans, grants, business development, arts organizations, youth programs, housing programs, neighborhood associations, job training, and community economic development" (Catalyst Community Partners, 2011).

What is happening is change. Successful businesses in the neighborhood are attracting a consumer market and welcoming in new residents (Catalyst Community Partners, 2011). Surrounding neighborhoods are starting to have an impact on the Near North neighborhood too. Newly renovated historical buildings in the adjacent Warehouse District are generating new interest and activity. Once abandoned properties are seeing a revival. Even the University of Minnesota planned an outreach center within the Near North neighborhood (Catalyst Community Partners, 2011).

At current, housing and transportation are shifting within North Minneapolis. New housing developments are being constructed and buyer assistance programs are making home-buying easier in the area. Developers are buying up vacant commercial spaces, stagnant city properties and even historical properties and regenerating them into useful spaces (Wood, 2010). Bars, restaurants, day care centers, diverse housing, salons and education centers are all coming back to the neighborhood.

A new Light Rail transit line was proposed in 2012. The line would service the northwest area of the Twin Cities and connect to the existing light rail system. The proposed concept would service North Minneapolis amongst other areas. The concept was adopted into the Regional 2030 Transportation Policy Plan in 2013 and was approved by all cities along the route (Metropolitan Council, n.d.). Planning groups believe the addition of the light rail extension will make area businesses and attractions more accessible (Catalyst Community Partners, 2011) .

HISTORICAL NARRATIVE

CONT.

"Over the past handful of years...a series of mighty, collective pushes... have receded the waters so long devouring... North Minneapolis is still wet, but it is drying. It is still broke, but it is mending. The story of North Minneapolis is really just beginning" (Wood, 2010)

University of Minnesota's CURA program (Center for Urban and Regional Affairs) has become a large factor in the development of North Minneapolis. Through analysis, the program aimed to determine what potential industries would fit best in the area based on demographics, economics and land use. The program found that "Firms within high-tech manufacturing, computer and electronic manufacturing, transportation support and educational services are prime for North Minneapolis" (Carr, 2012). Based off of this information, CURA identified that new land use regulations would need to be implemented. These changes would allow for more flexibility and diversity within the neighborhood and would give North Minneapolis a competitive advantage over adjacent regions.

Overall, major changes have been occurring in North Minneapolis over the past decade. Some attempts have failed due lack of understanding of the area while others have flourished. In the end, it is simple to see that change is finally coming to the Near North neighborhood. By looking at successful development in the area and learning from it, millennial housing has the potential to truly thrive.

ACADEMIC

Academically this thesis project will be utilized in order to obtain a master of architecture degree. This is the final opportunity in which I will be able to showcase the skills I have acquired and fine-tuned over the course of my schooling within the educational realm. Not only do I have the opportunity to display these skills, but also I have the ability to determine the context in which they are used. I wish to explore design through my own venue rather than the predetermined projects of past. My goal is to push my skills to a new level within the academic realm, shaped by my interests and discoveries. The hope is to produce high quality work that is free to question, explore, and generate conversation.

PROFESSIONAL

Professionally, I want to develop a thesis project that I am proud of. It should be a representation of both my interests and skill sets. The project should carefully convey design decisions and communicate effectively with a range of viewers. All in all, I want my thesis to show what I am capable of and what I can offer within the professional field.

My goal is to be able to utilize this thesis project in order to market myself to prospective firms. I want to be able to take the challenges within the thesis and use them to my advantage in being able to communicate my skills in problem solving.

GOALS

PERSONAL

In recent years I have discovered particular interests within the design world; sociology, culture technology and environmental stewardship. I have become fond of sociology, or rather seeing how people interact within spaces. I find it satisfying to think that I am capable of creating spaces that will be the environment in which memories, life-events and interactions will occur, and I aim to do so.

Culture has made a huge impact on me. Continuous reading allows me to get a glimpse of international customs and ways of life. Though my travels are not extensive, they have given me insight beyond belief. As the world becomes more globally connected it is imperative that design mirrors the action. My goal is to create a worldlier thesis project.

Technology and environmental concerns have been of utmost importance throughout my life. These factors have shaped who I am and should therefore be clearly seen in this thesis. I wish to fully implement sustainable strategies and technologies in my thesis project from the very beginning. I believe that this way of designing is necessary and will become the future of architecture.

Most of all I want to create a thesis that embodies the millennial generation. I want it to fulfill my interests while exploring the unknown. The idea of millennial housing is a new concept; it has yet to be answered. I want to bring to light what the future holds.

Figure 44


Figure 45


Figure 46


Figure 47

SITE ANALYSIS
QUALITATIVE

VIEWS AND VISTAS

The most dominant existing, grid the surrounds the site is the block grid of streets. The traditional city structure is framed by the irregular interstate (I-94) to the west and the slight bend of the Mississippi River to the east. Around and within the site is a sampling of many larger buildings consisting of industrial and commercial uses, usually two to four stories in height; which stand out from the small and orderly homes that are not so far away.

There is not much contrast in the area. A monotonous selection of browns and grays seem to be the overall feel. Where green vegetation is present is stands out with high distinction. This dull color palate offers a rough, almost uneasy feeling at first, but then lends an unexpected feeling of quiet.

To the adjacent west side of the site lies the Lundstrum Center for the Performing Arts, an unexpected venue in the area that seems to be thriving. Rochford Textile Supply, Ambassador Press Inc., and Omni Work Space Co also lie to the west of the site. Just south of the site is home to Standard Heating and Air Conditioning. Adjacent to the east is Coloplast, a private healthcare researcher and provider, followed by Minneapolis Washer and Stamping, an industrial equipment provider, followed by another Coloplast property, a laboratory. To the direct north are the city animal care and control center and the K & K Metal Recycling plant.

At current the views that have the most potential within the site are those to the south and east. These views would include the Mississippi River and the Minneapolis skyline. In order to obtain these vistas, the view would need to be elevated.

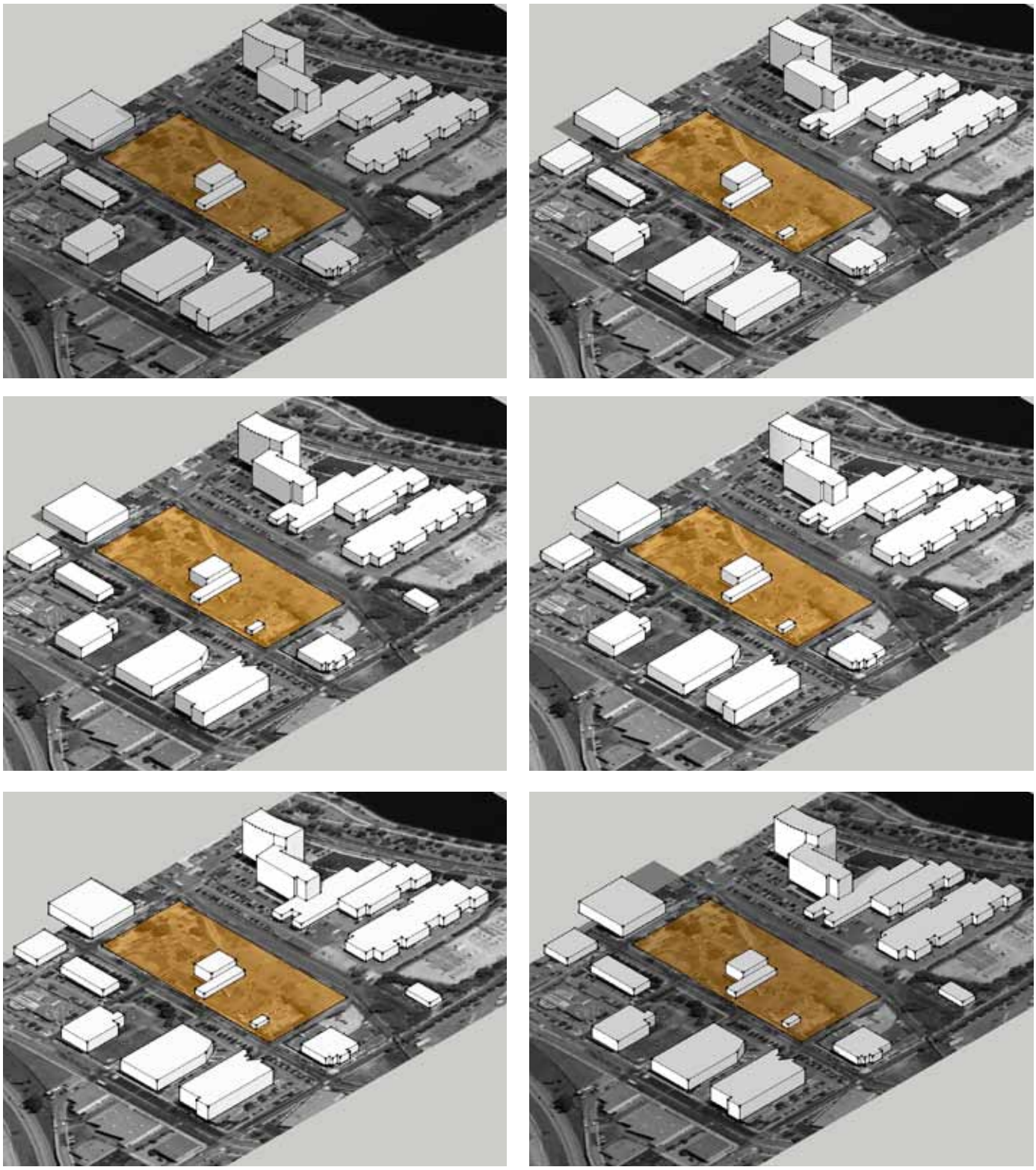


Figure 48

LIGHT QUALITY

Light, when present on a sunny day, is rather direct on the site. While there are large buildings at up to three to four stories in height that surround the site, they are set back far enough that they do not interrupt direct light. In the later months of the year some of the adjacent eastern and western buildings cast long shadows which reach the site, however they do not block any major light.

Since the site has very little vegetation present there is little to no shade.

SITE ANALYSIS
QUALITATIVE

CONT.

WIND

For the most part, the wind flow seems to be channeled up and down N 2nd St. due to the large buildings that surround it; however it is not strong enough to create a tunnel effect. Since the site is significantly higher than the Mississippi River it does not receive the breezes that flow over it.

HUMAN CHARACTERISTICS

There is a great deal of human intervention on the site. It has been manipulated a great deal over time. The present scrap yard and recycle yard have left it littered with sorted piles of mangled metal, old appliance shells, dumpsters and steel drums. The ground is compacted down from heavy machinery and semis which is now dusty from lack of vegetation. Overall the site is very run down in appearance.

DISTRESS

Although the site is run down in appearance it is limited to the site and nearby rail line. The immediate grounds which surround the rail line are quite barren and littered. The surrounding buildings and properties are all well maintained.

Figure 49

Figure 50

SOILS

The main soil makeup of the site consists of Hubbard and Mosford soils consisting mainly of sand, silt and clay (USDA, 2013) .Classifications include D34B, U1A, U2A, and U5A which consist of 0-8 percent slopes. These are typically described as urban land containing commercial and industrial areas covered by impervious surfaces (USDA, 2001). The area was mostly originally wet, mineral or organic soils but was in filled in depressions.

The Hubbard soils are profiled as loamy sand 0-23 inches and sand 23-80 inches; while the Mosford soil is profiled as sandy loam 0-13 inches, coarse sandy loam 13-16 inches, coarse sand 16-35 inches, and sand 35-40 inches. This information is consistent with soil found on hills or stream terraces. These are well drained and aerated soils that are workable for most of the year however they have a tendency to dry out quickly (Moor, 1998).

UTILITIES

There are many overhead power lines on the west boundary of the site, and some on the north boundary which follow N 17th Ave. Electricity is provided by Excel Energy and Centerpoint Energy provides gas. The city of Minneapolis provides and bills for water, sewer and storm water management (City of Minneapolis, 2012).

VEHICULAR TRAFFIC

N 2nd St. has the heaviest amount of traffic immediate to the site. The two lane road has bike lanes and parallel parking on both sides. N 17th Ave is a two lane road with light traffic and N 14th Ave ends

SITE ANALYSIS
QUANTITATIVE RESEARCH

in a cul de sac with only deliveries and parking traffic for adjacent private parking lot to the south.
N 16th Ave and N 15th Ave terminate at N 2nd St. and do not intersect the site.

PEDESTRIAN TRAFFIC

Two biking lanes are on N 2nd St. along with sidewalks on both sides however little to no pedestrian activity is seen.

TOPOLOGICAL SURVEY

For the most part 0-2 percent slope with some areas of 0-8 percent slope.
This is usable and suitable for movement and activity but may not drain well and will need to be carefully finished.

PLANT COVER

The site has limited plant growth. There are a few slightly matured trees near the north boundary of the site. There is overgrown vines and grass along the N 2nd St. boundary and a selection of native grasses growing on the eastern boundary of the site along the rail line

SITE CHARACTER

Industrial, dirty, bare, some vegetation (trees) but very limited. It does not appear that there has been change on the site for a long time.

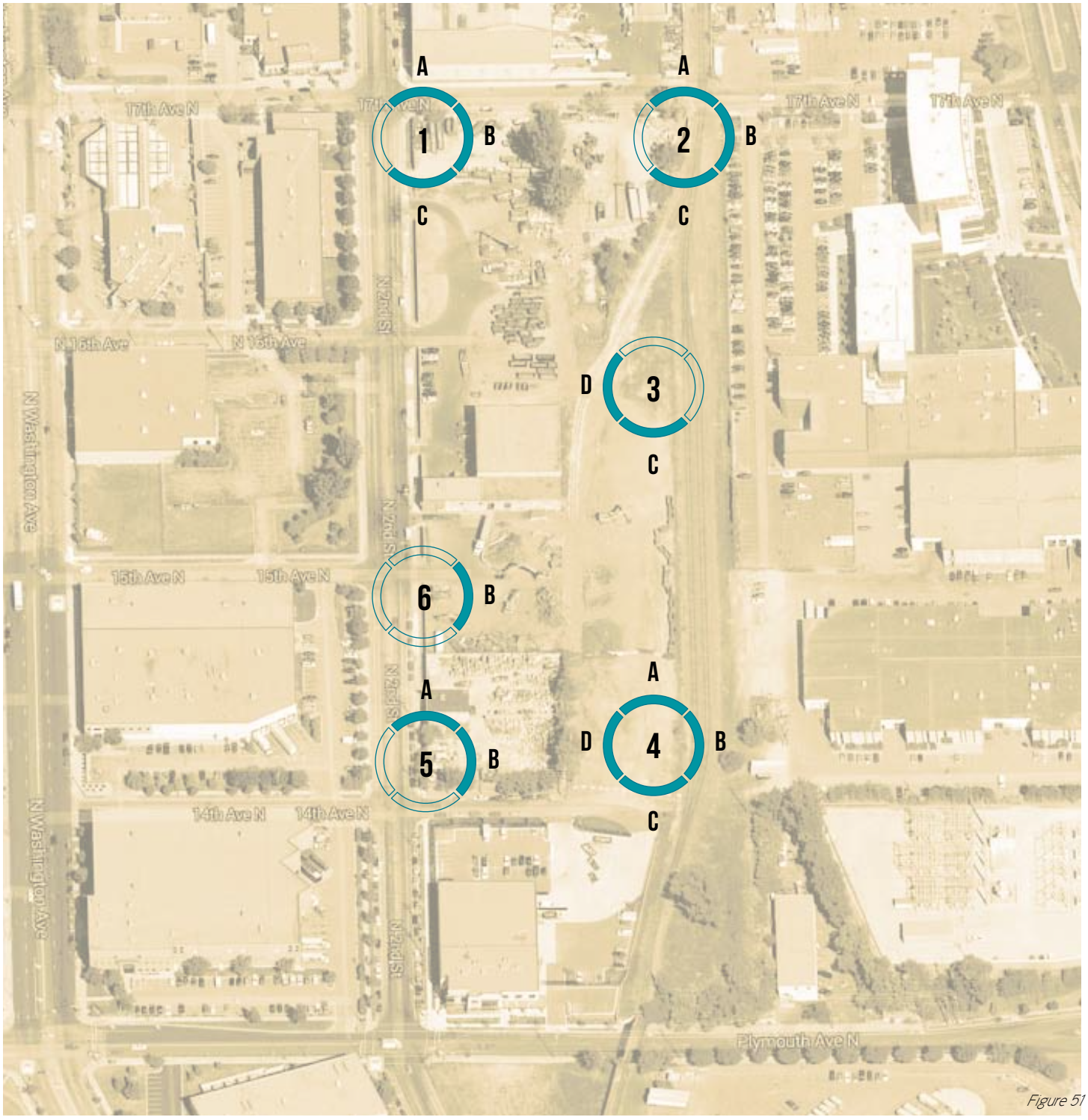

A
1
B
C
A
2
B
C
D
3
C
6
B
A
5
B
A
D
4
B
C
17th Ave N
N 16th Ave
15th Ave N
14th Ave N
N Washington Ave
N 22nd St
Plymouth Ave N

Figure 51

SITE ANALYSIS

SITE RECONNAISSANCE

Figure 52

1

Figure 53

Figure 54

A

Figure 55

B

Figure 56

C

Figure 57

C

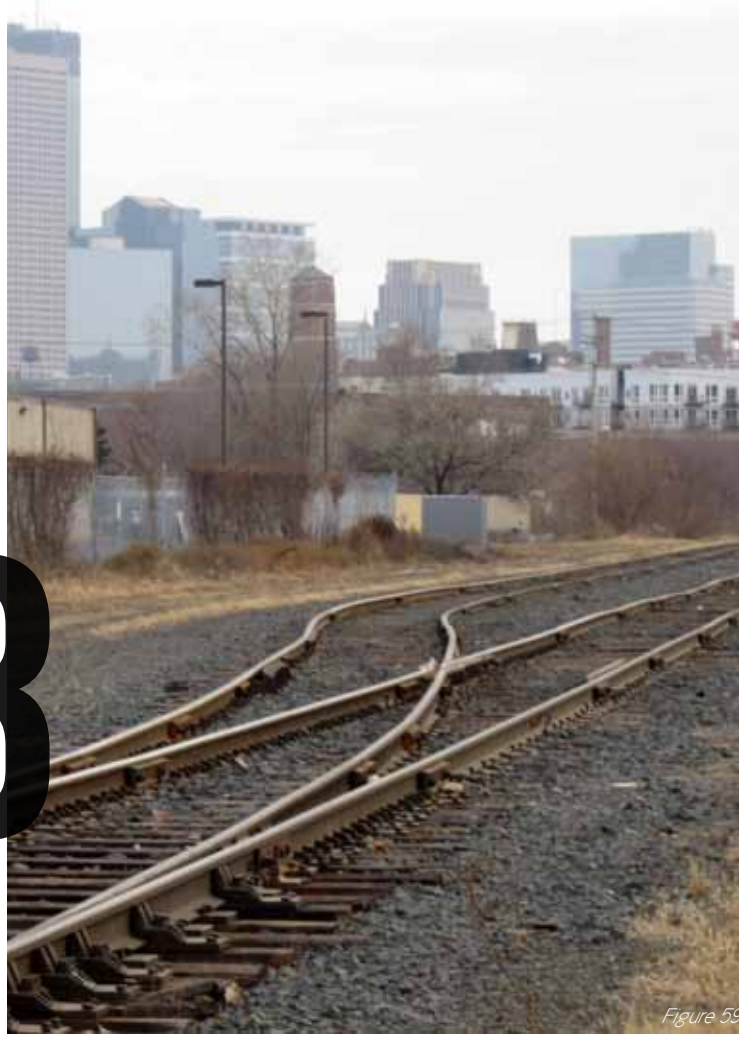


Figure 59

D

Figure 5

2

3

SITE ANALYSIS

SITE RECONNAISSANCE

CONT.

4

A

Figure 63

C

Figure 62

B

Figure 60

D

Figure 61

Figure 64

5

Figure 65

SITE ANALYSIS

SITE RECONNAISSANCE

CONT.

B

Figure 66

6

B

Figure 67

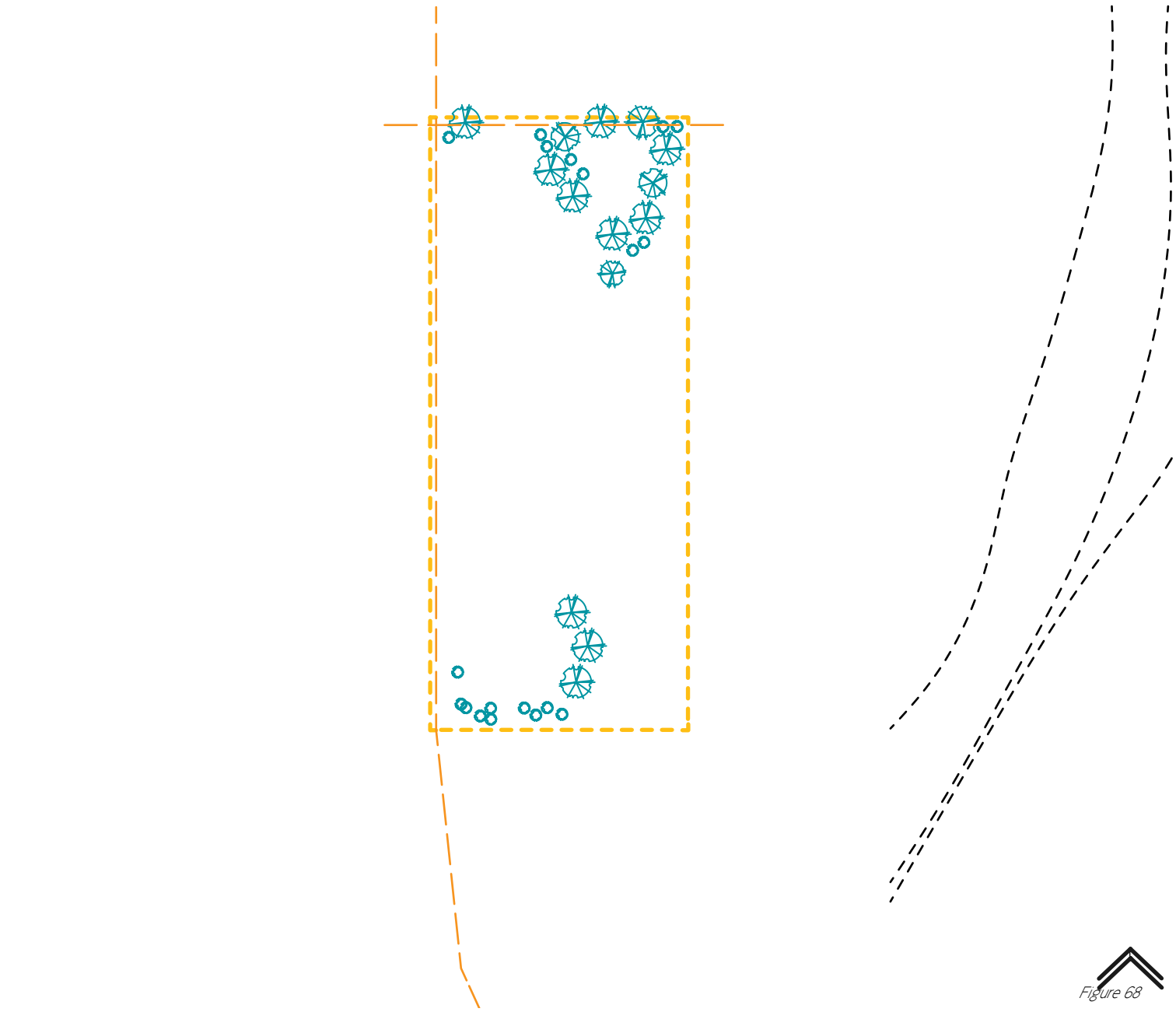


Figure 68

SITE ANALYSIS

BASE MAPS

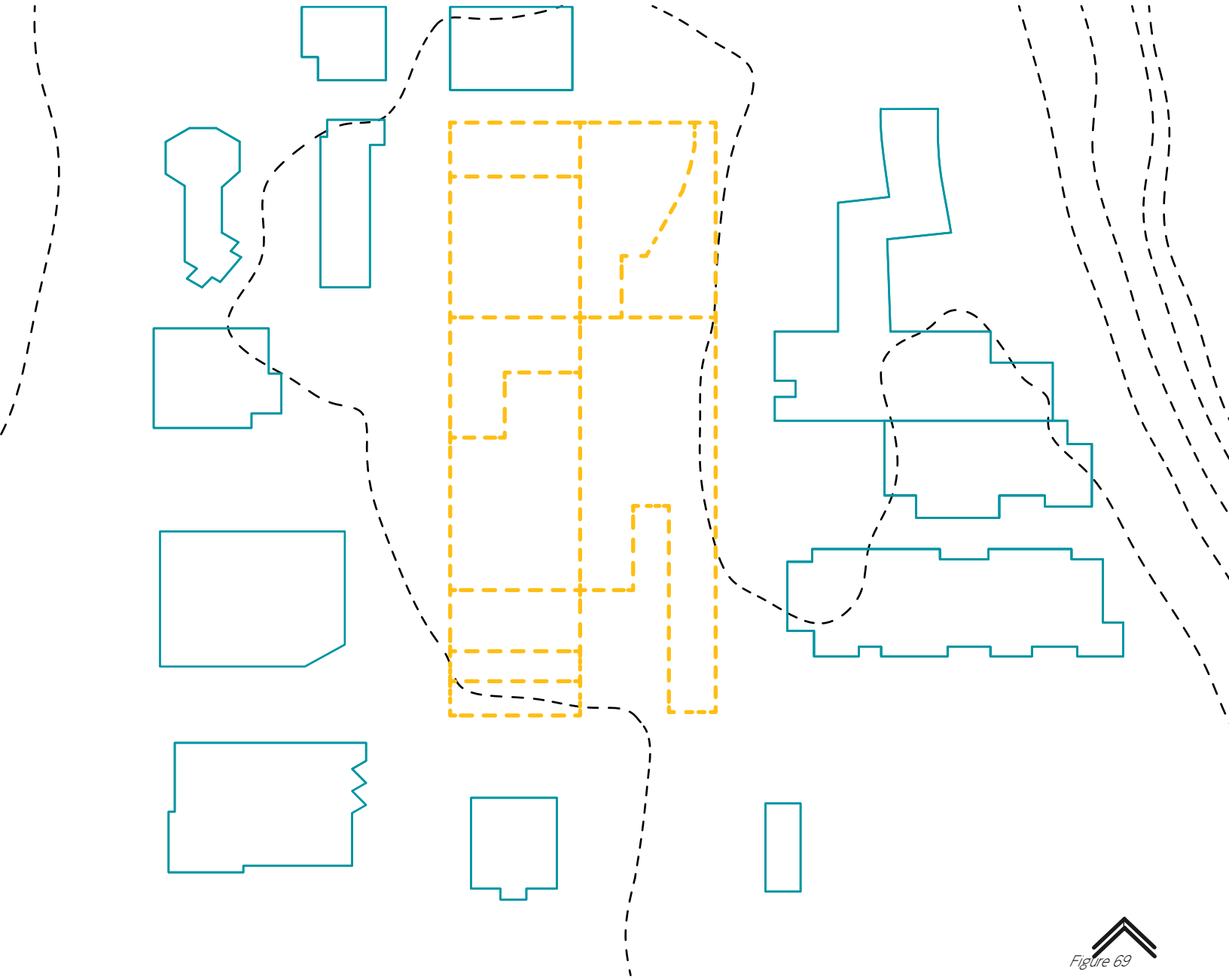
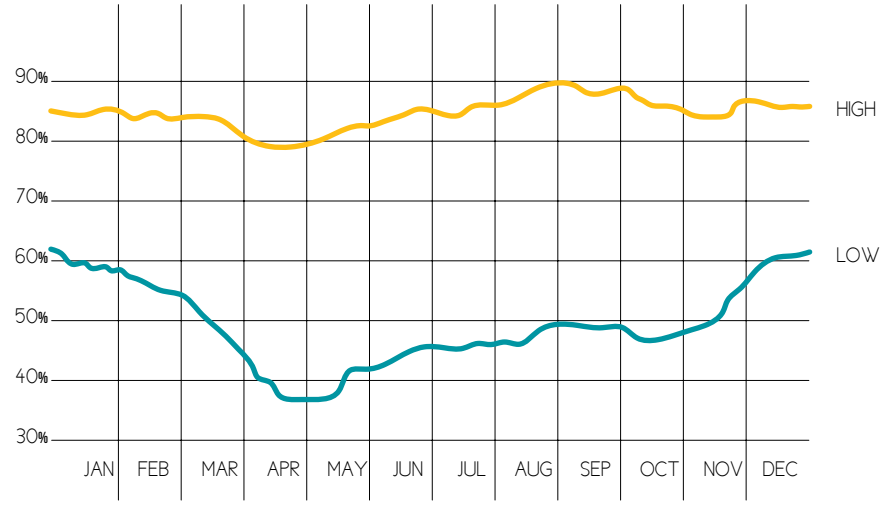


Figure 69

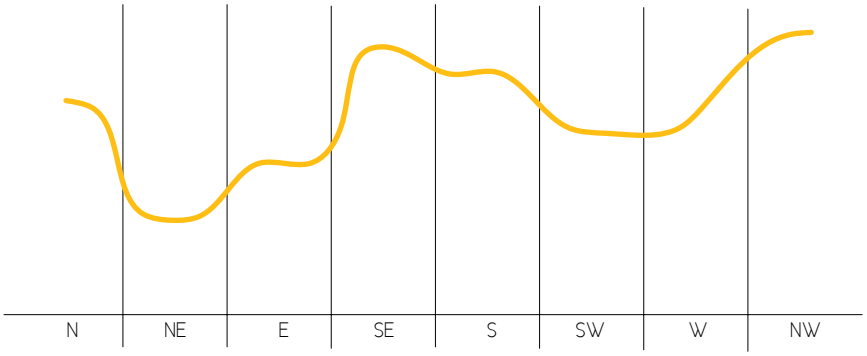
RELATIVE HUMIDITY

Figure 70



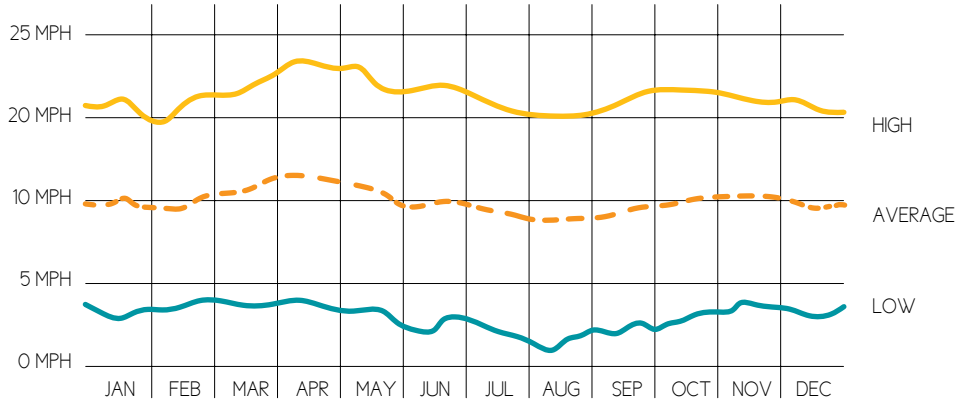
WIND DIRECTION

Figure 71



WIND SPEED

Figure 72

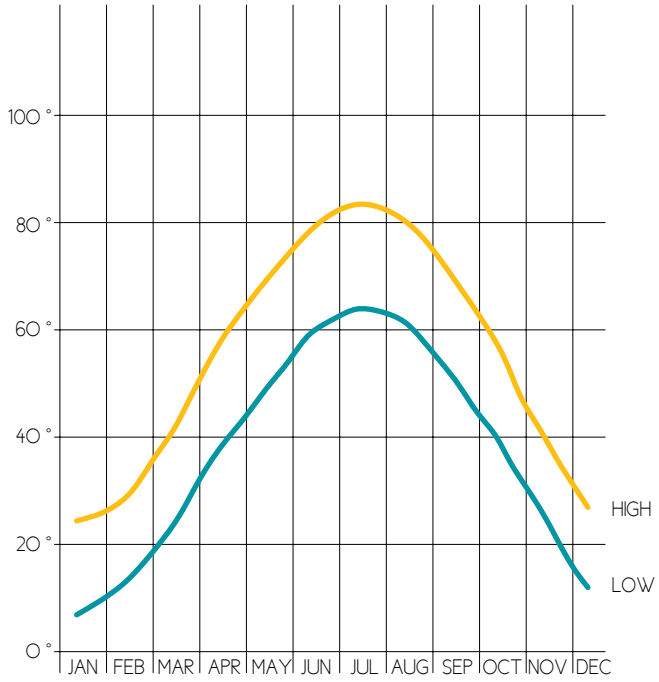


SITE ANALYSIS

CLIMATE DATA

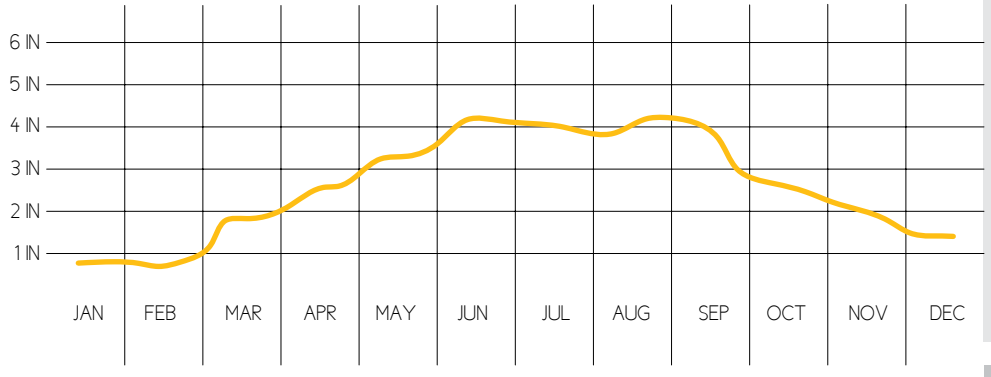
TEMPERATURE

Figure 73



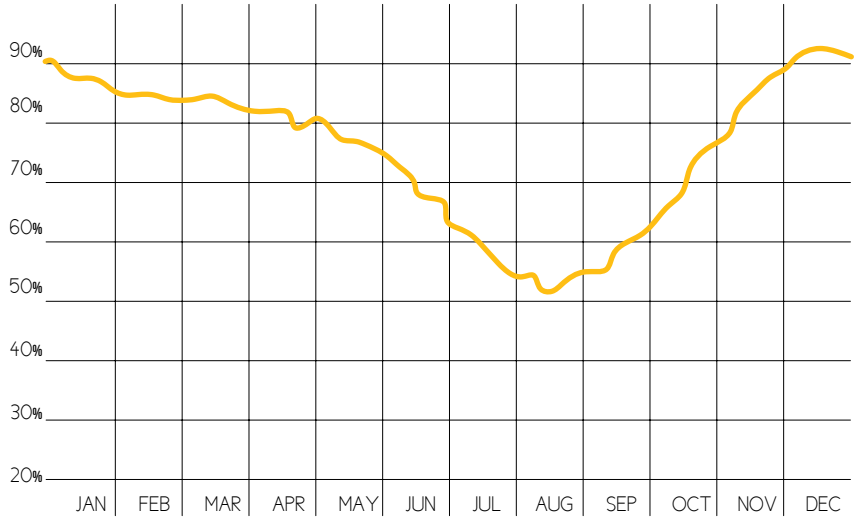
PRECIPITATION

Figure 74



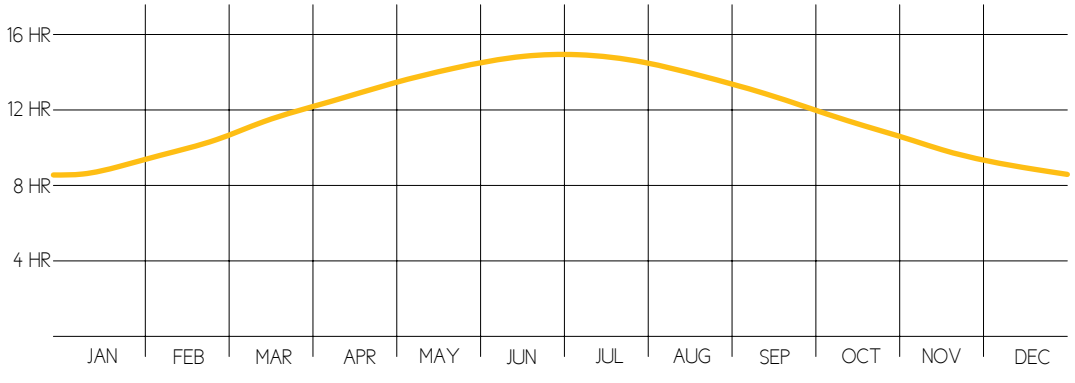
CLOUD COVER

Figure 75



DAYLIGHT

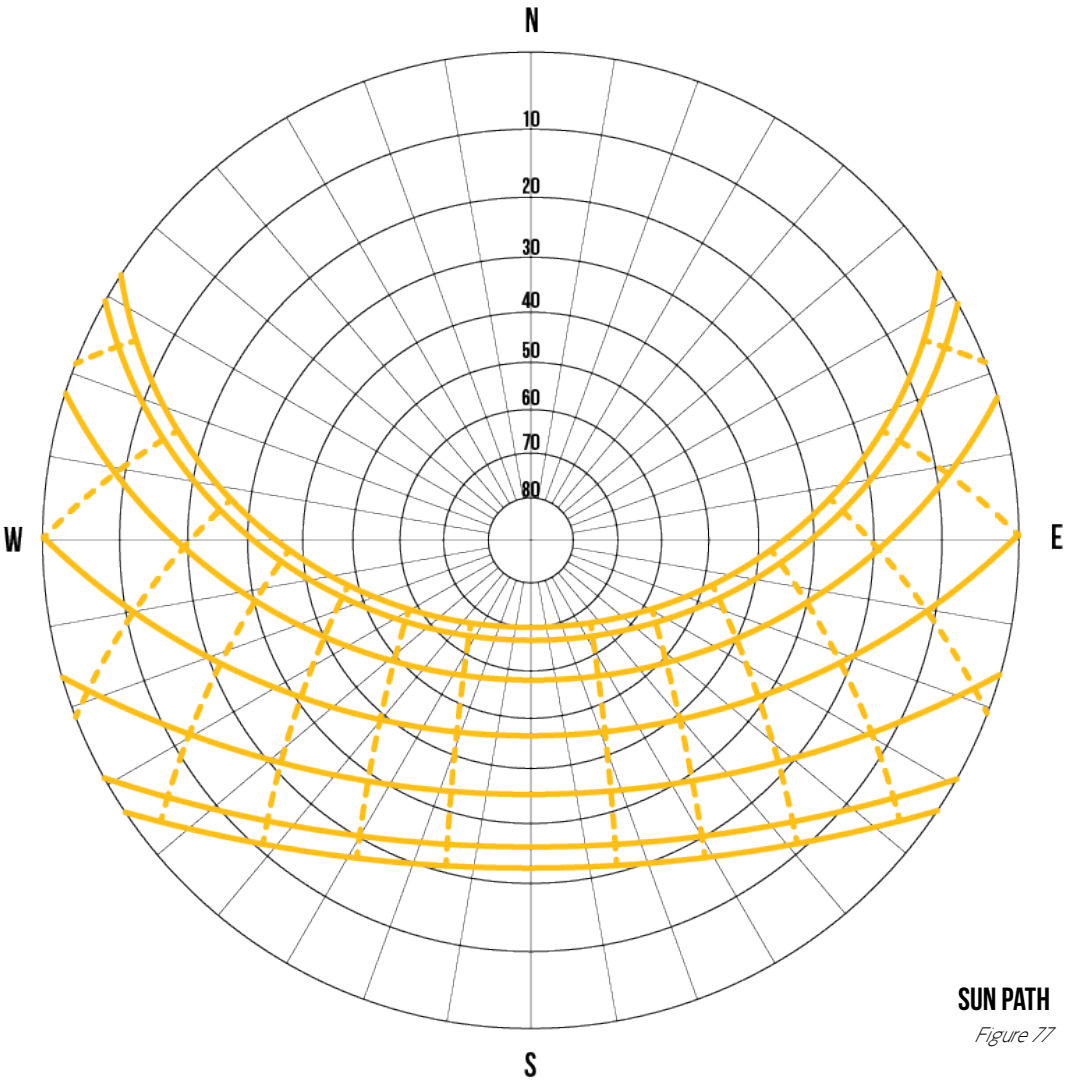
Figure 76



SITE ANALYSIS

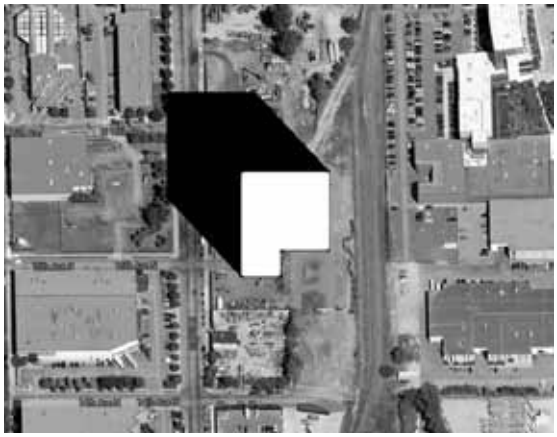
CLIMATE DATA

CONT.

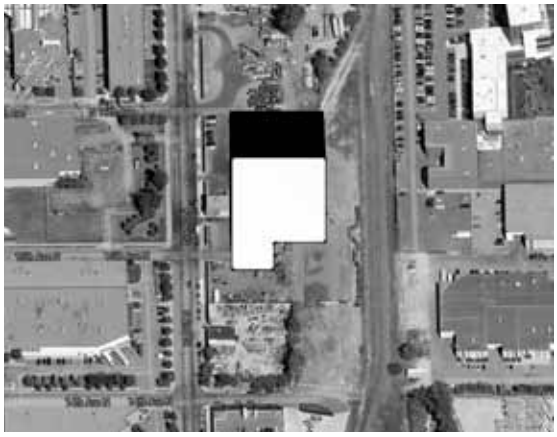


SUN PATH

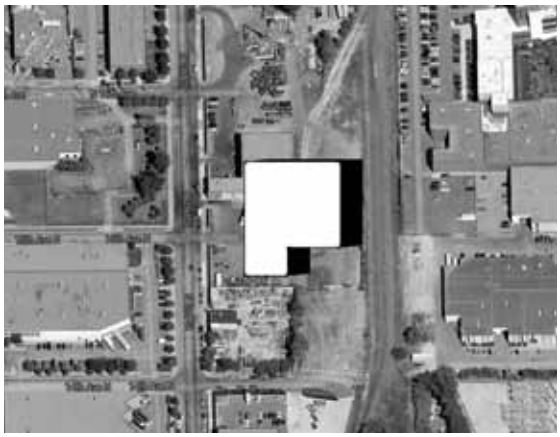
Figure 77

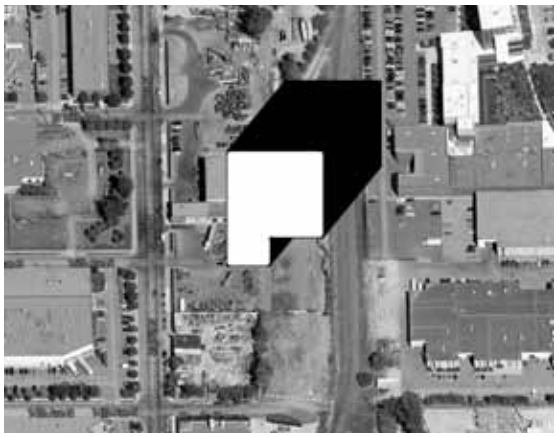


8am

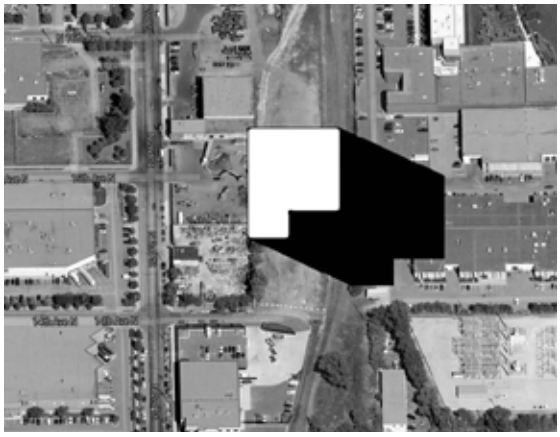


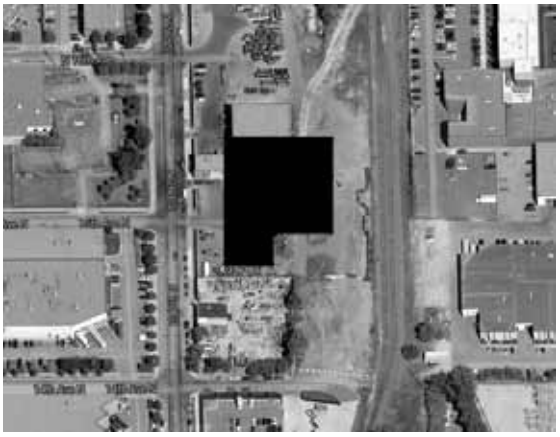
noon





3pm





6pm

JUNE 21ST

DECEMBER 21ST

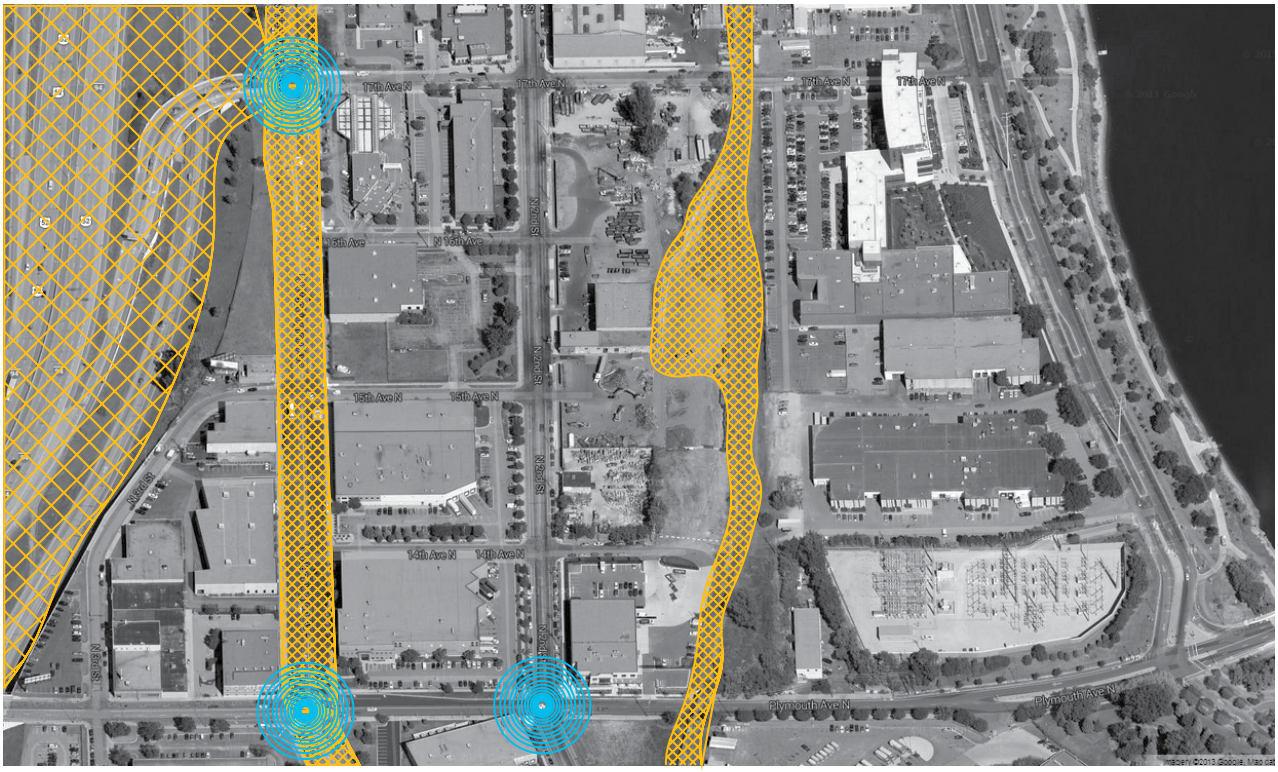
SHADING

Figure 78

SITE ANALYSIS

CLIMATE DATA

CONT.



DISTANT, CONSTANT NOISE

NEARBY, CONSTANT NOISE

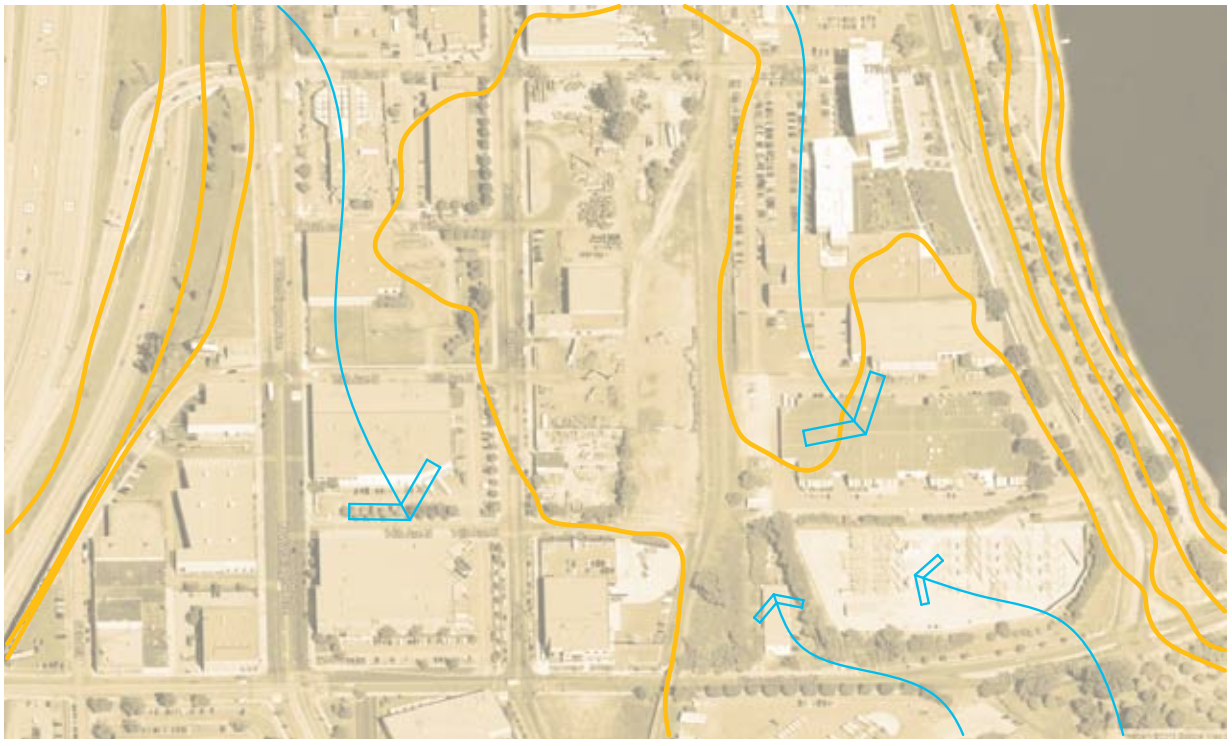
NEARBY, CONDENSED NOISE

NOISE SOURCES

Figure 79

TOPOGRAPHY

Figure 80

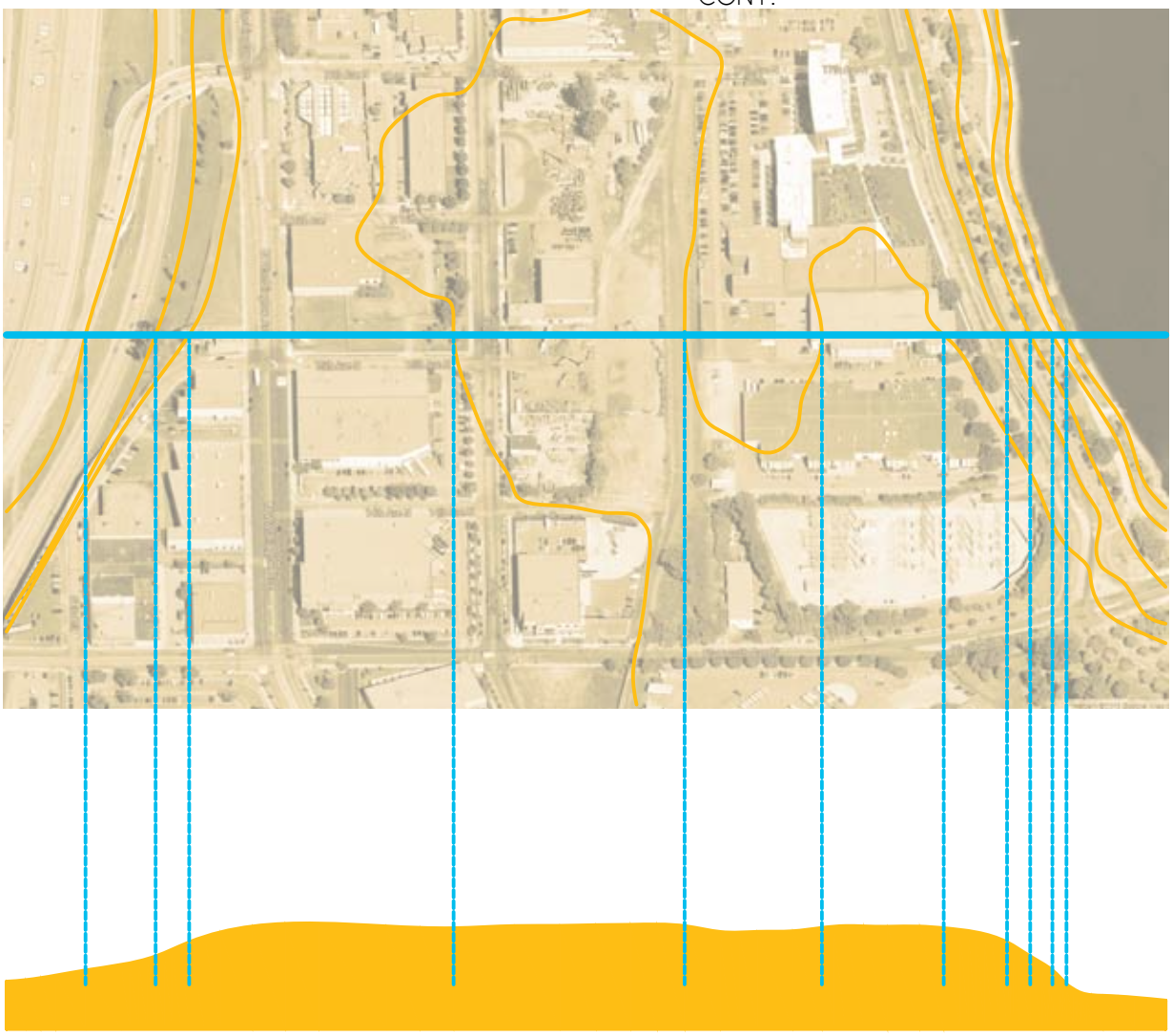


TOPOGRAPHY -AIR MOVEMENT

Figure 81

SITE ANALYSIS
CLIMATE DATA

CONT.



TOPOGRAPHY -SLOPE

Figure 82

STUDIO APARTMENTS
390 sq. ft. each
x 16 = 6,240 sq. ft.

ONE-BEDROOM APARTMENTS
650 sq. ft.
x 44 = 28,600 sq. ft.

TWO-BEDROOM APARTMENTS
680 sq. ft.
x 50 = 34,000 sq. ft.

THREE-BEDROOM APARTMENTS
1,240 sq. ft.
x 27 = 34,290 sq. ft.

SHARED COMMUNITY & RECREATION SPACES
28,000 sq. ft. total

COMMUNITY GARDENS & GREEN SPACES
96,000 sq. ft. total

BICYCLE STORAGE
700 sq. ft. total

GROUND-LEVEL RETAIL & COMMERCIAL SPACES
16,800 sq. ft. total

PROGRAMMATIC REQUIREMENTS

SPACE ALLOCATION

COVERED PARKING
30,000 sq. ft. total

RENTAL OFFICE
350 sq. ft. total

WATER COLLECTION AND FILTRATION FACILITIES
1,500 sq. ft. total

WASTE MANAGEMENT FACILITIES
1,500 sq. ft. total

BUILDING TOTAL
181,980 sq. ft

SITE TOTAL
277,980 sq. ft

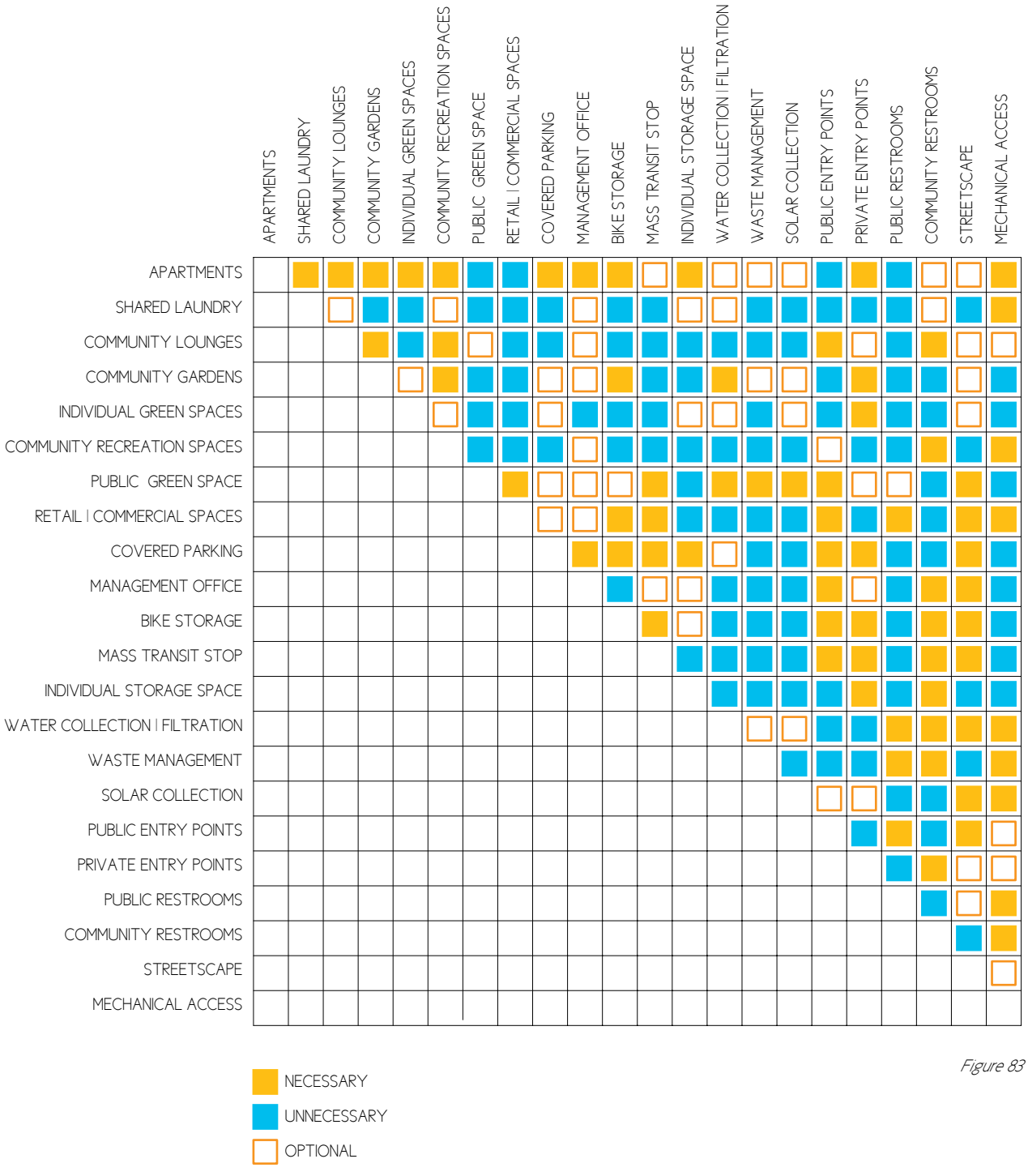

APARTMENTS
SHARED LAUNDRY
COMMUNITY LOUNGES
COMMUNITY GARDENS
INDIVIDUAL GREEN SPACES
COMMUNITY RECREATION SPACES
PUBLIC GREEN SPACE
RETAIL | COMMERCIAL SPACES
COVERED PARKING
MANAGEMENT OFFICE
BIKE STORAGE
MASS TRANSIT STOP
INDIVIDUAL STORAGE SPACE
WATER COLLECTION | FILTRATION
WASTE MANAGEMENT
SOLAR COLLECTION
PUBLIC ENTRY POINTS
PRIVATE ENTRY POINTS
PUBLIC RESTROOMS
COMMUNITY RESTROOMS
STREETSCAPE
MECHANICAL ACCESS
NECESSARY
UNNECESSARY
OPTIONAL

Figure 83

PROGRAMMATIC REQUIREMENTS

INTERACTION NET & MATRIX

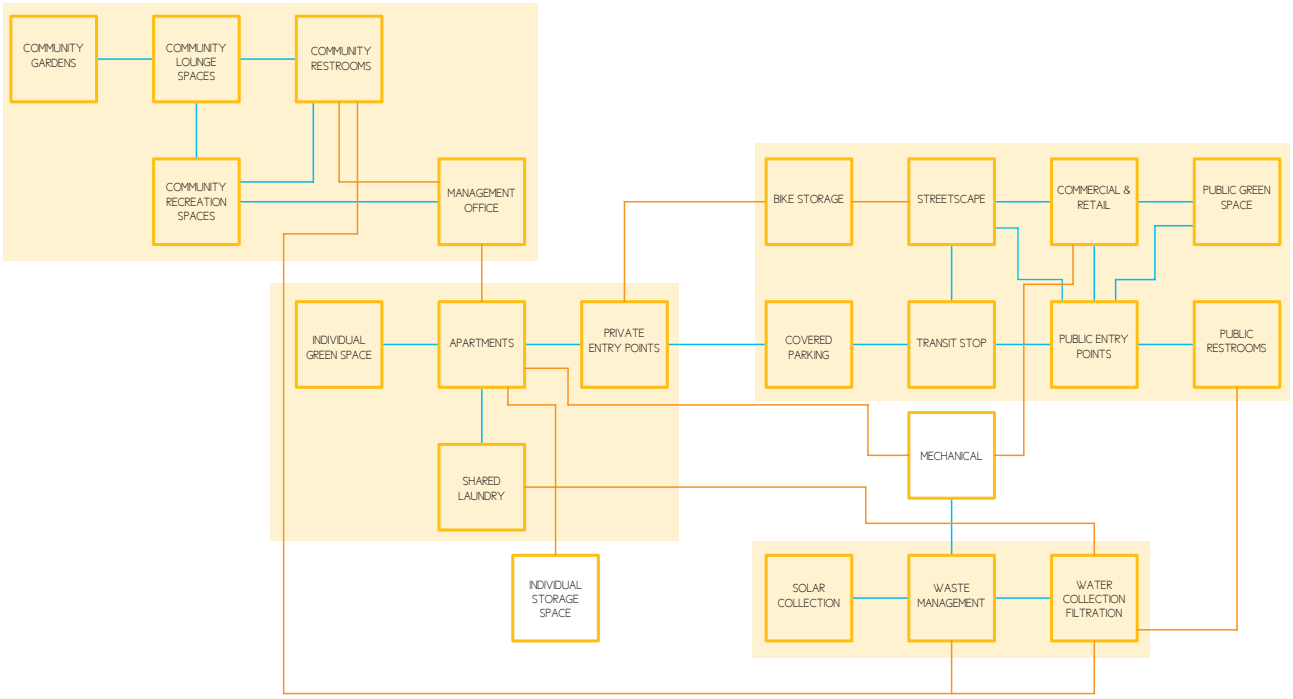


Figure 84

PROCESS

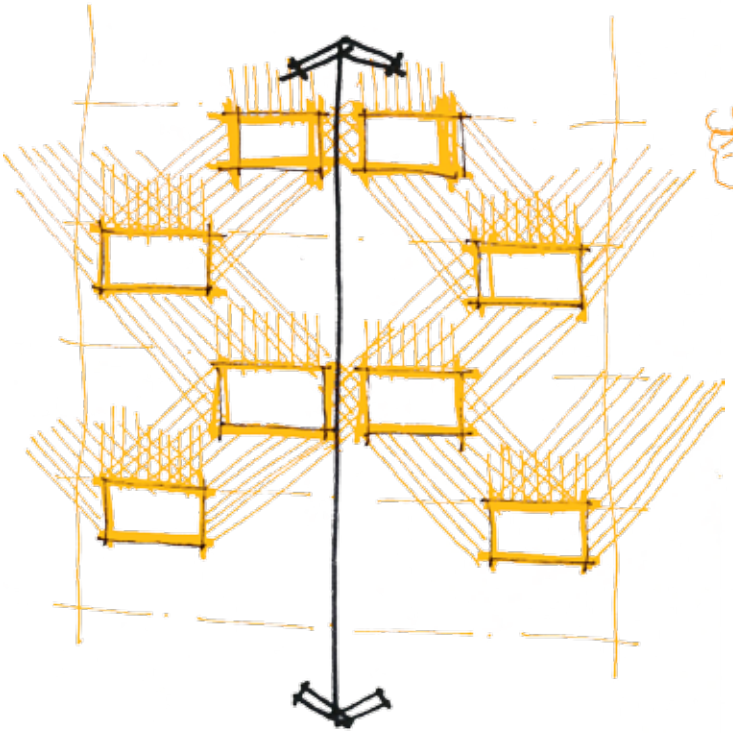


Figure 85

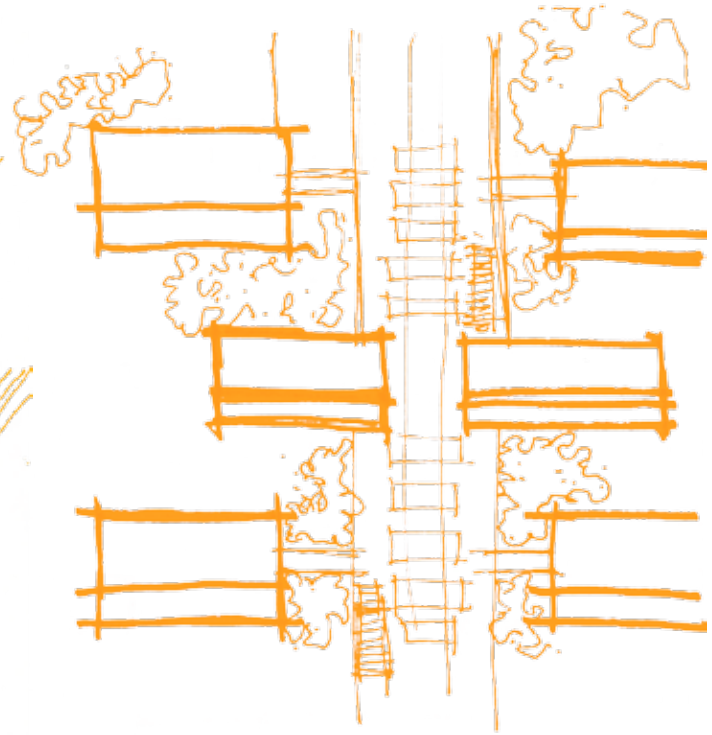


Figure 86

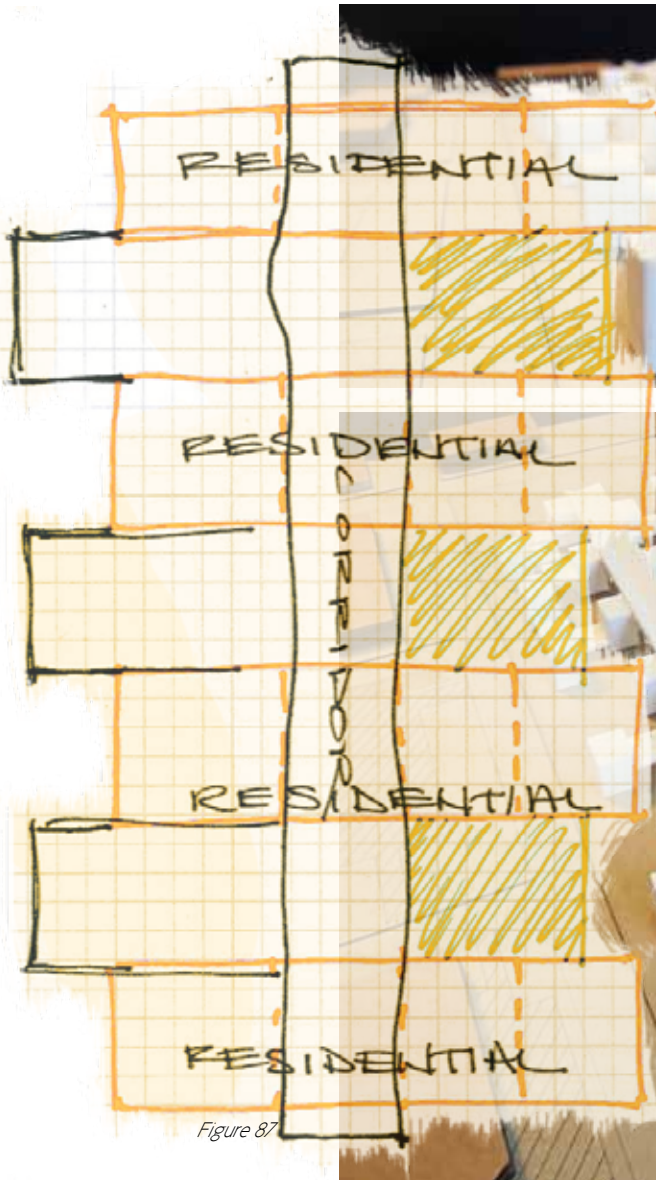


Figure 87

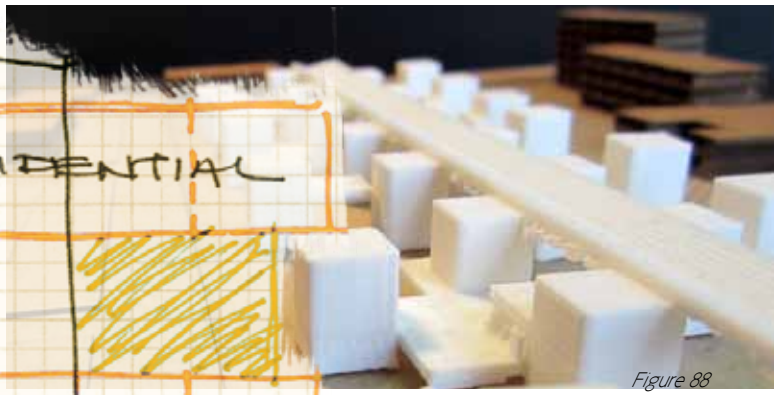


Figure 88

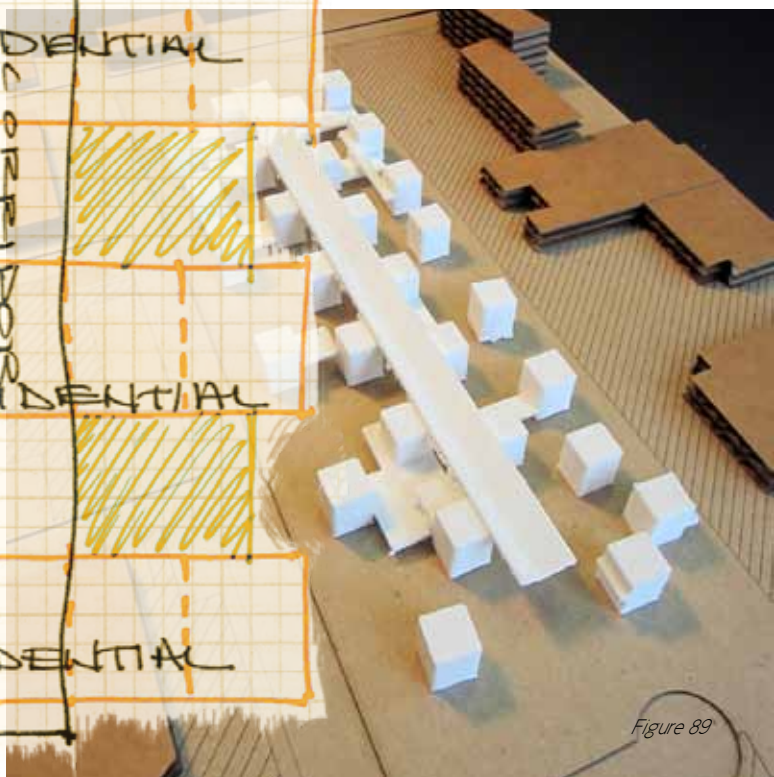


Figure 89

PROCESS WORK

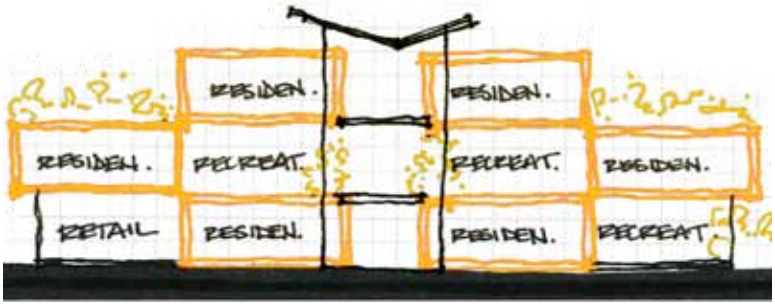


Figure 90

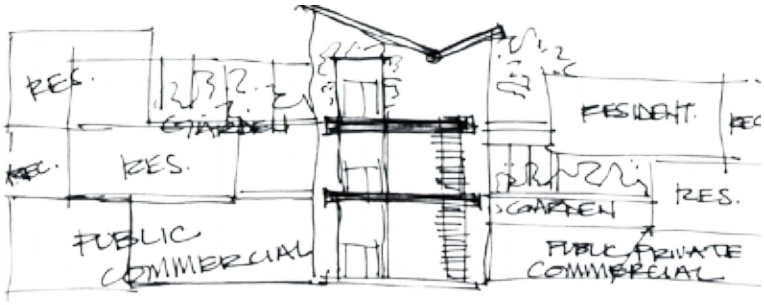


Figure 91

Figure 92

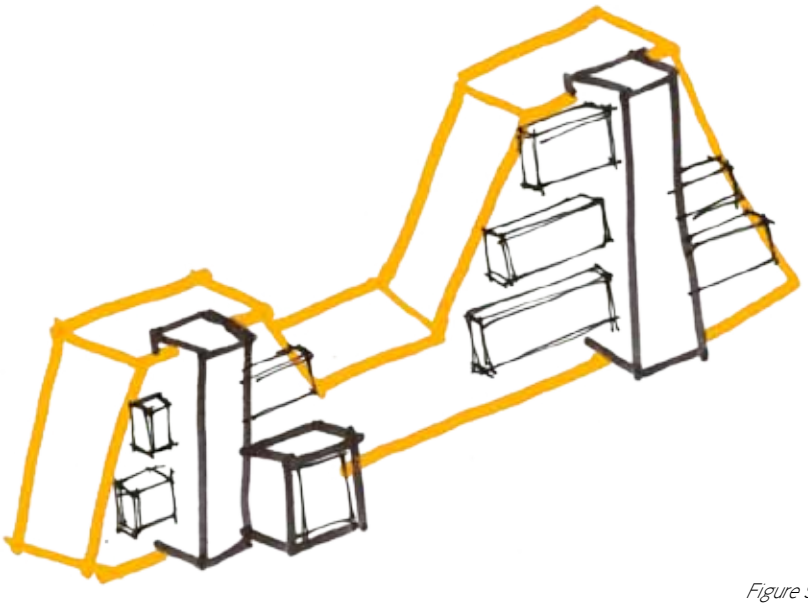


Figure 93

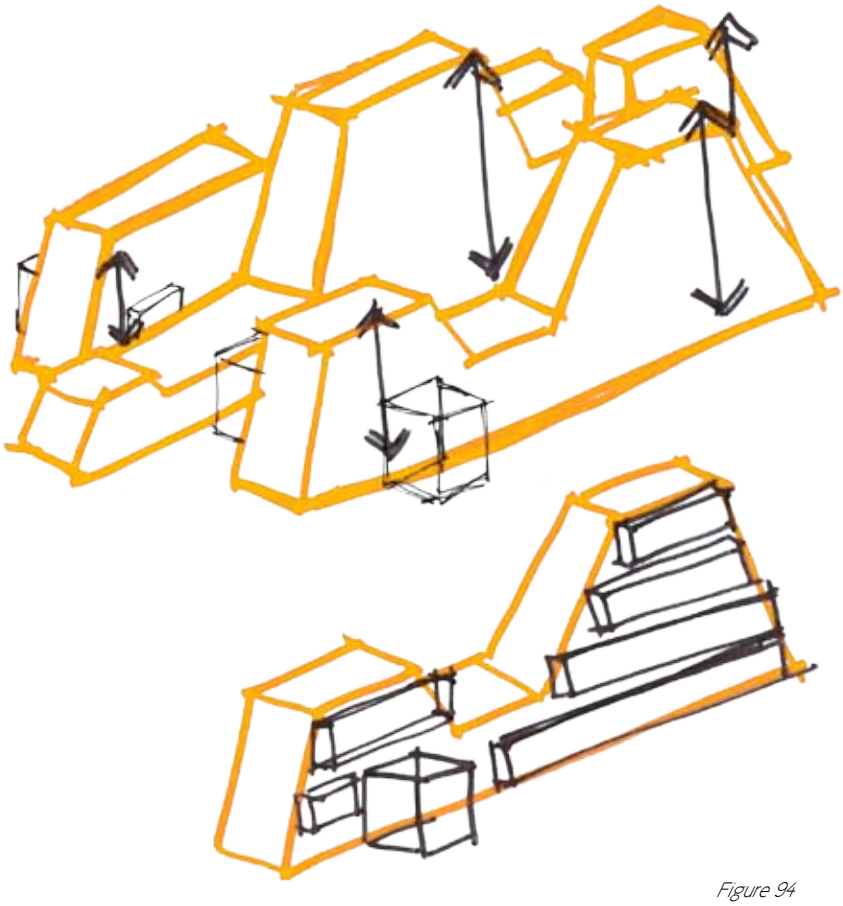


Figure 94

PROCESS WORK

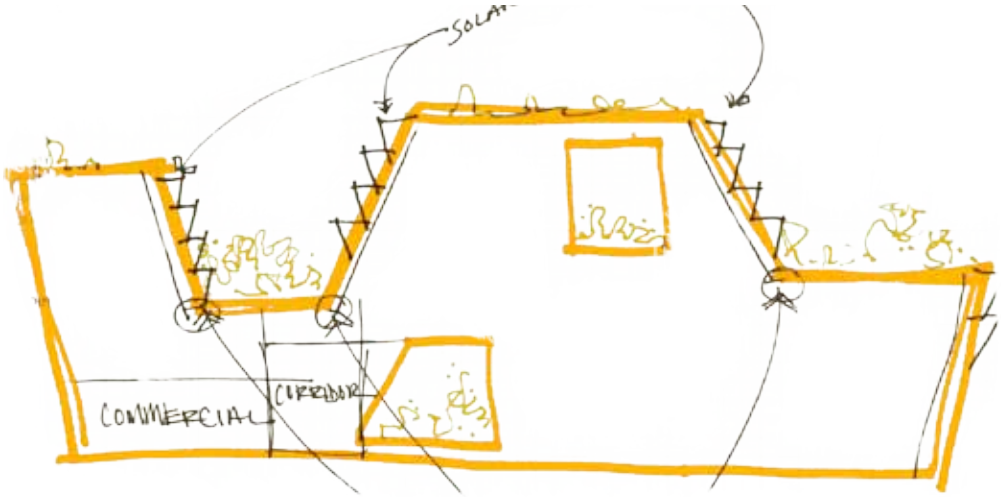


Figure 95

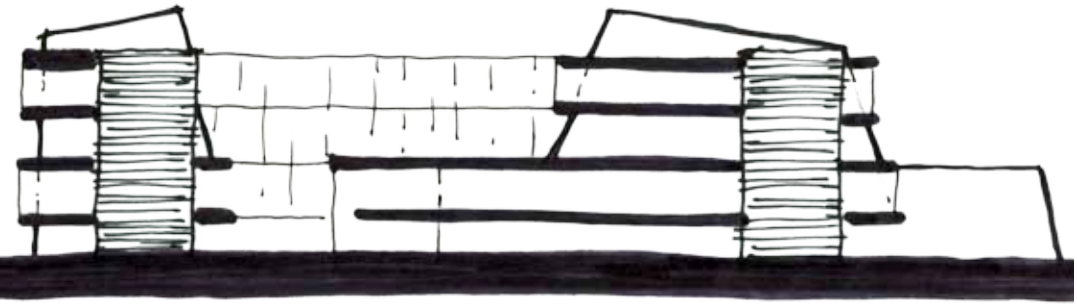


Figure 96

FINAL WORK

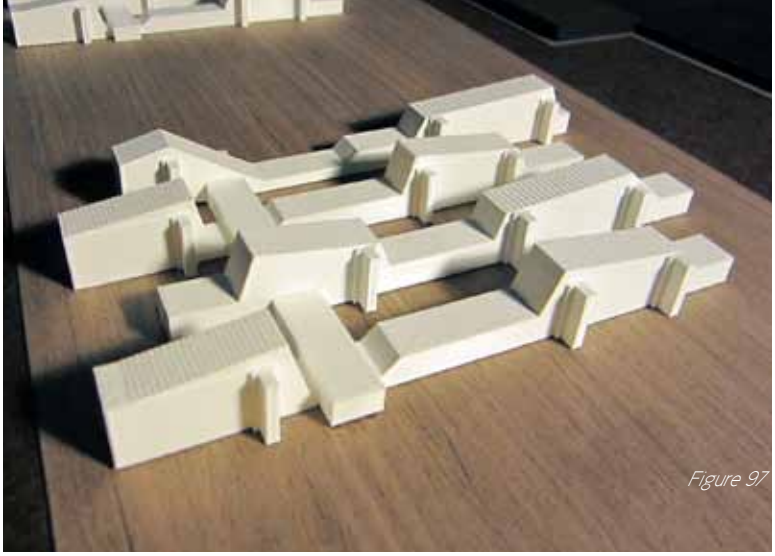


Figure 97

Figure 98

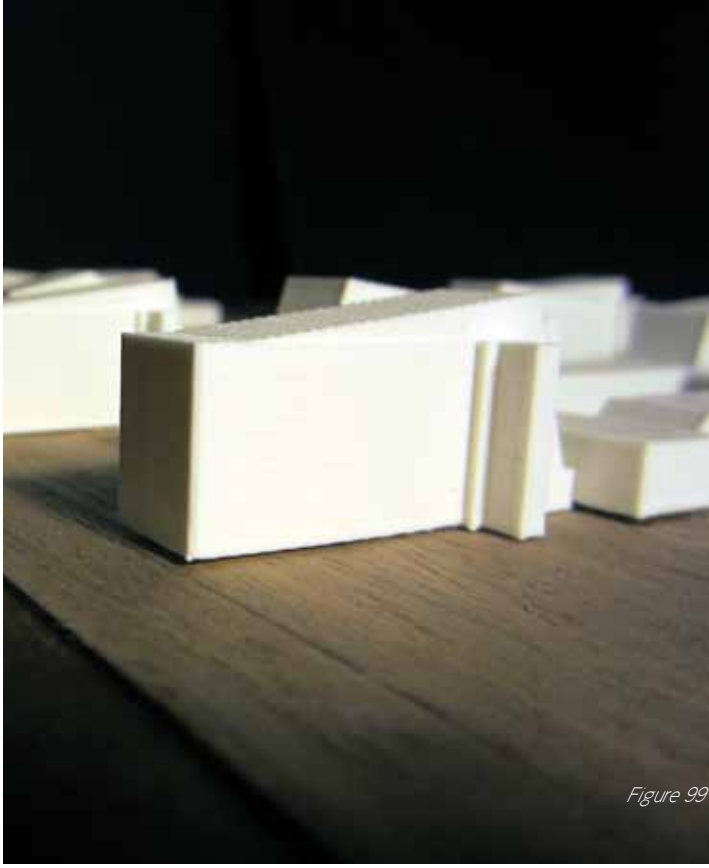


Figure 99

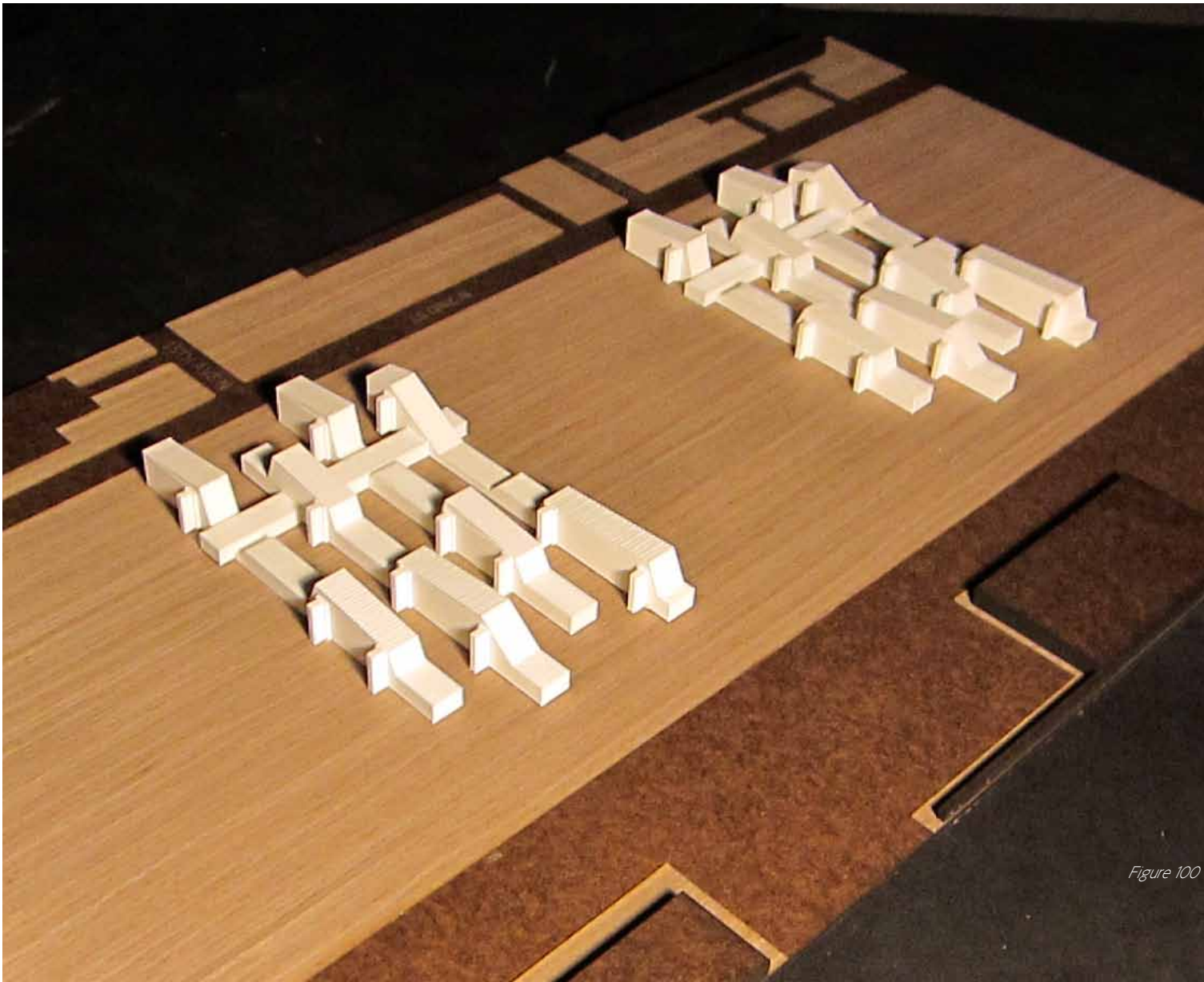


Figure 100

MODELS
CONTEXT

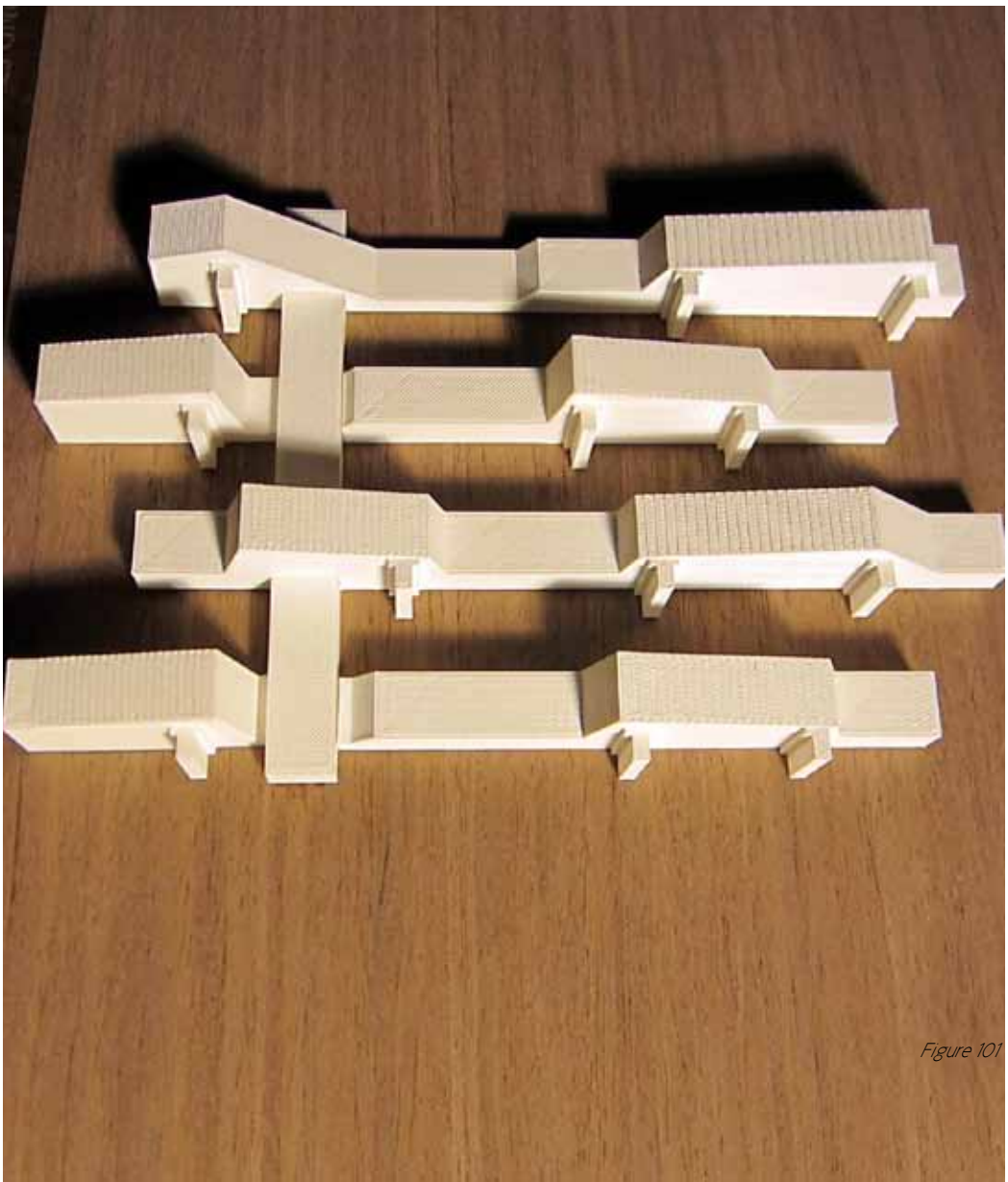


Figure 101

Figure 102

Figure103

Figure 104

Figure 105

Figure 106

Figure 107

MODELS
SECTION

Figure 108

RENDERINGS

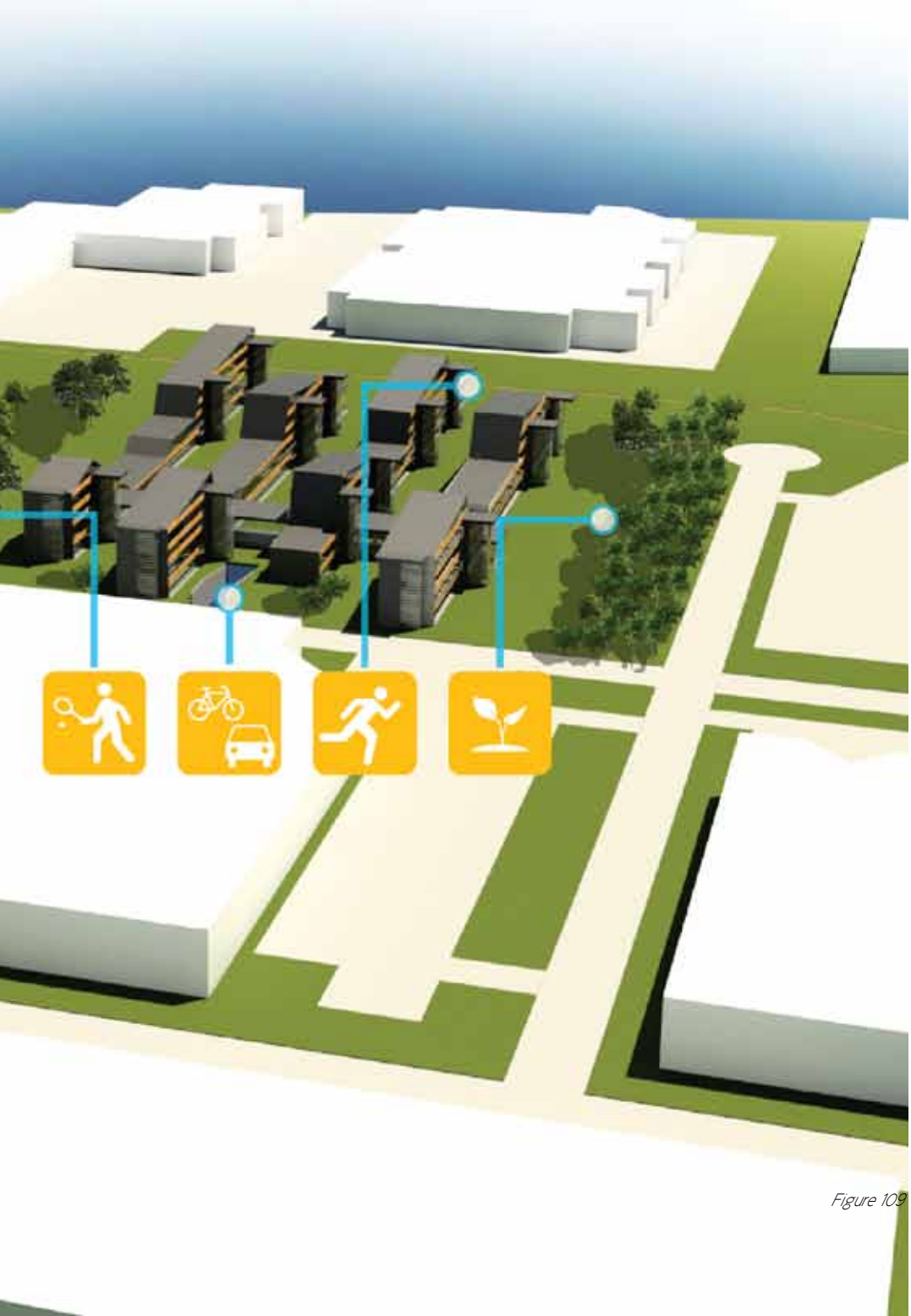


Figure 109

Figure 110

Figure 111

RENDERINGS

Figure 112

Figure 113

Figure 114

Figure 115

RENDERINGS

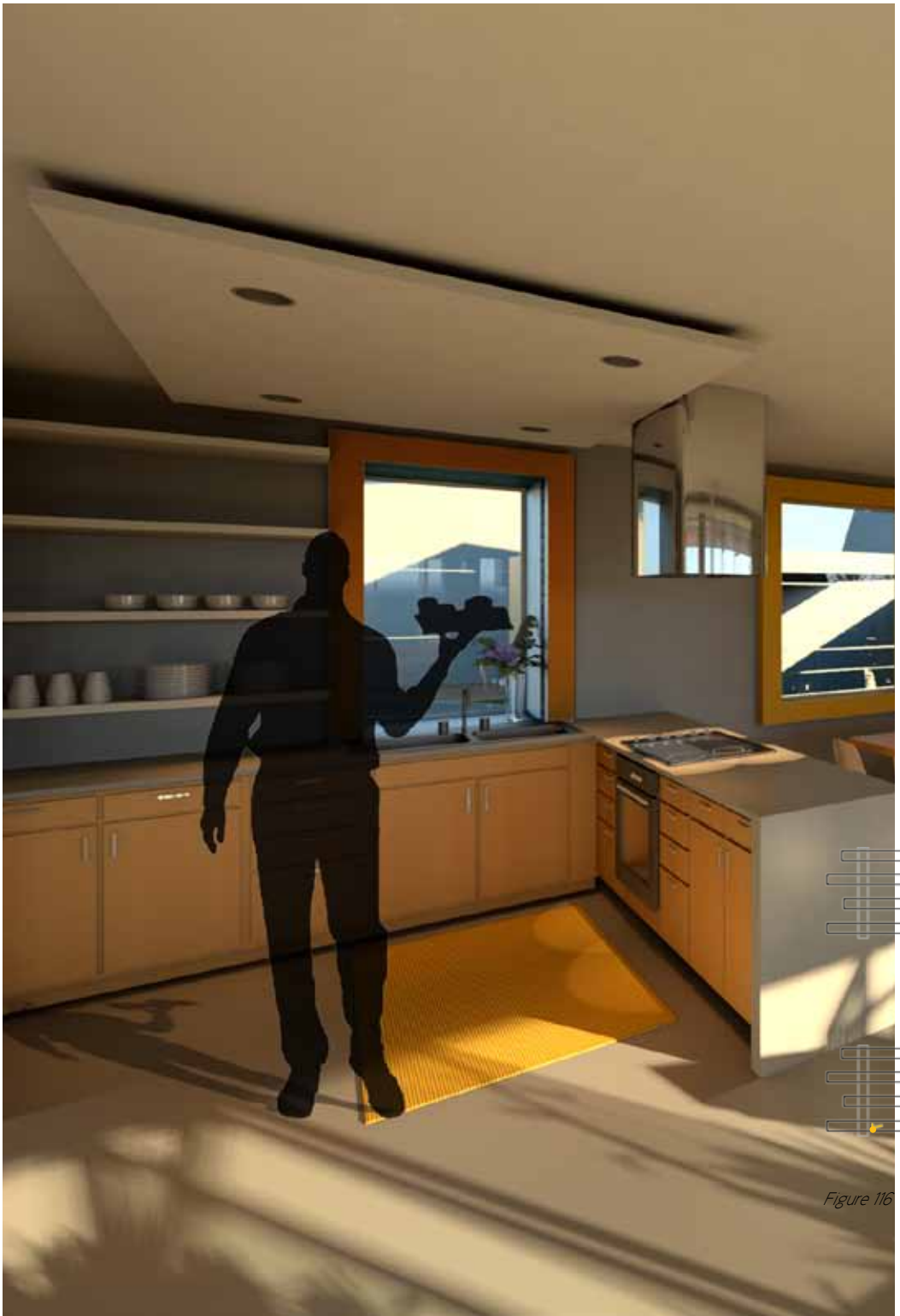


Figure 116

Figure 117

Figure 118

Figure 120

Figure 119

RENDERINGS

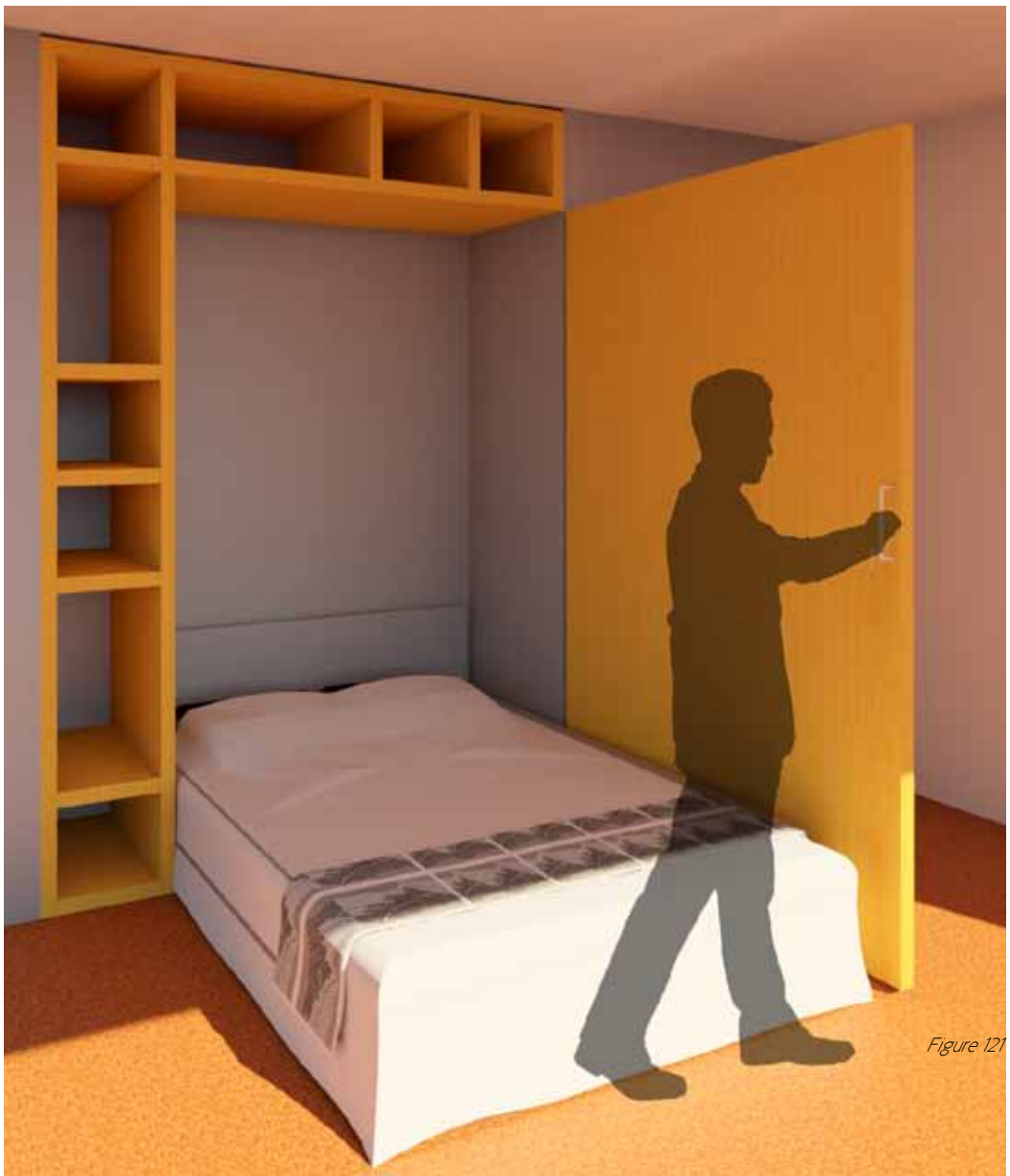
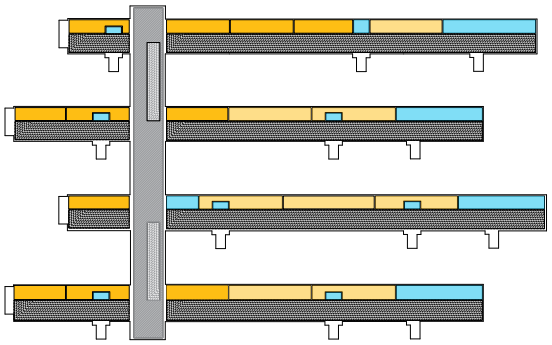
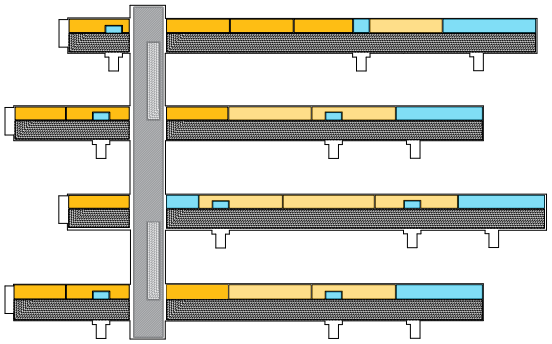


Figure 121



LEVEL 1

Figure 122



STUDIO UNIT

1 BEDROOM UNIT

2 BEDROOM UNIT

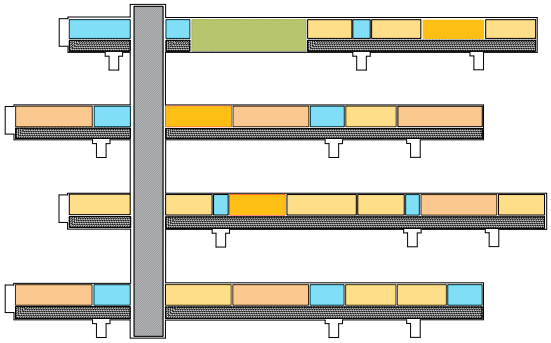
3 BEDROOM UNIT

RECREATION

PUBLIC

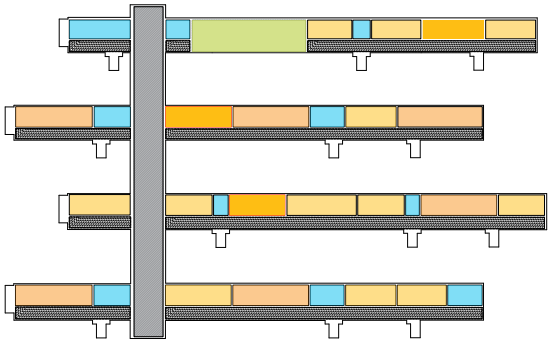
SEMI-PRIVATE

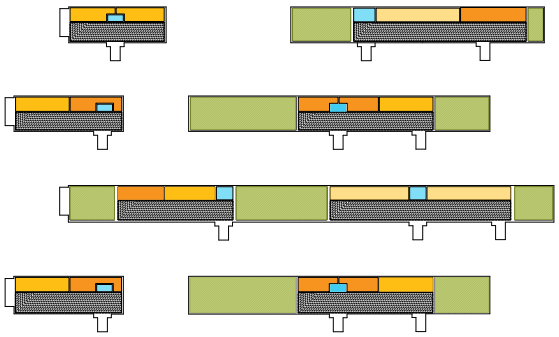
GREENSPACE



LEVEL 2

Figure 123

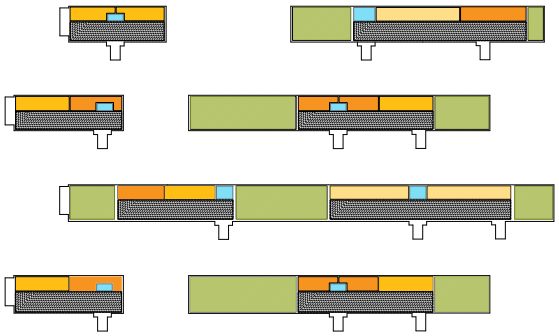


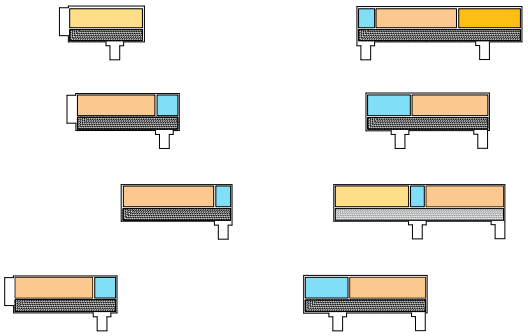


LEVEL 3

Figure 124

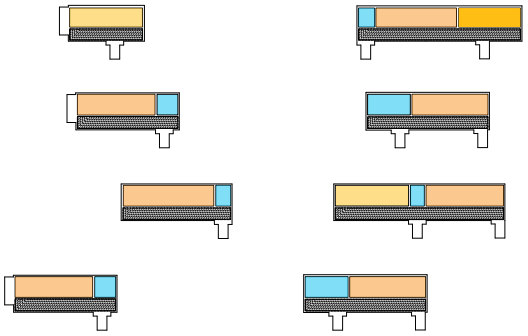
DRAWINGS

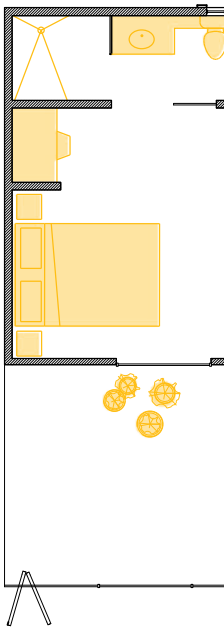




LEVEL 4

Figure 125



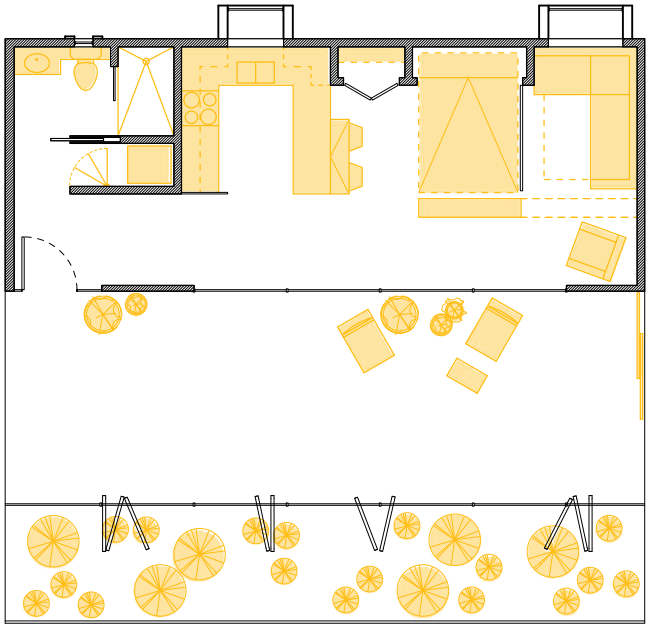


TWO BEDROOM

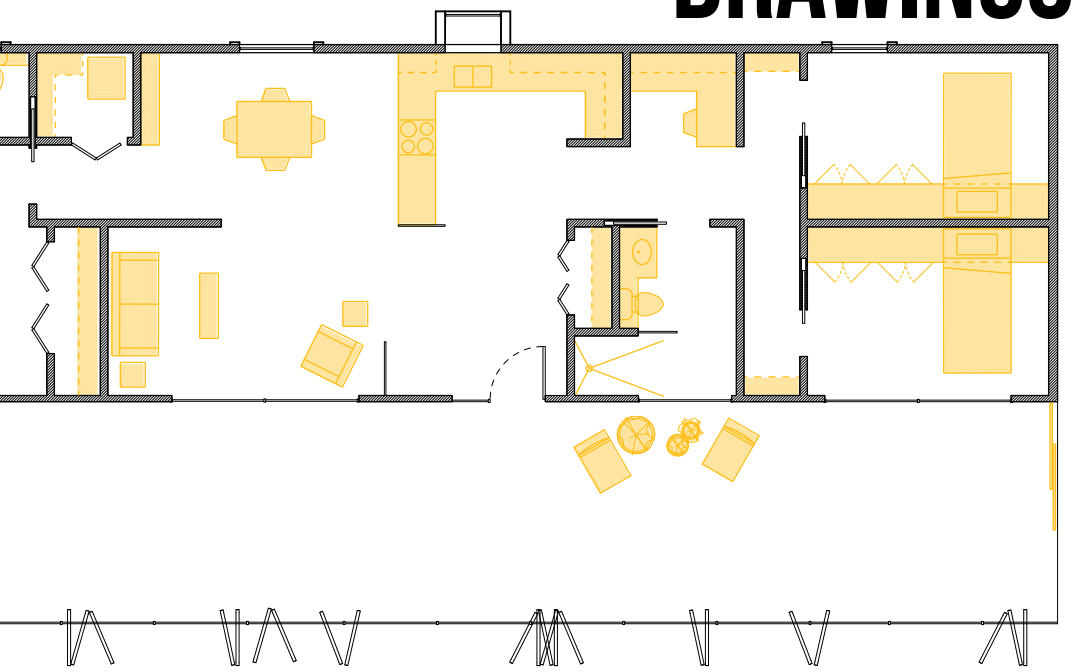
Figure 126

STUDIO

Figure 127



DRAWINGS

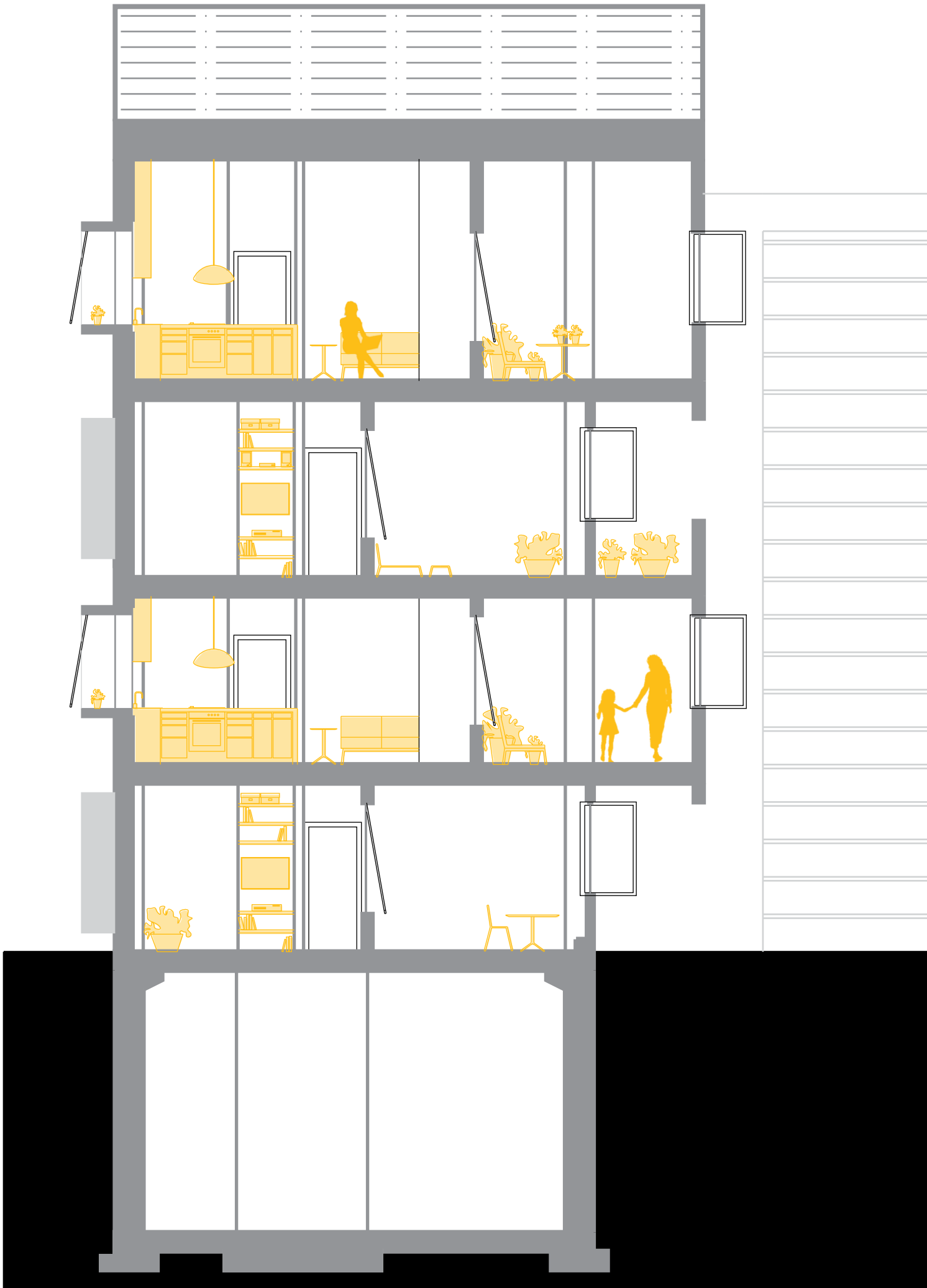


THREE BEDROOM

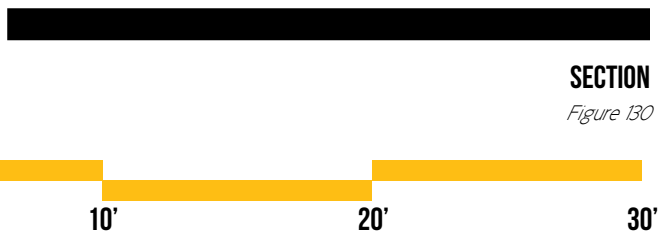
Figure 128

ONE BEDROOM

Figure 129



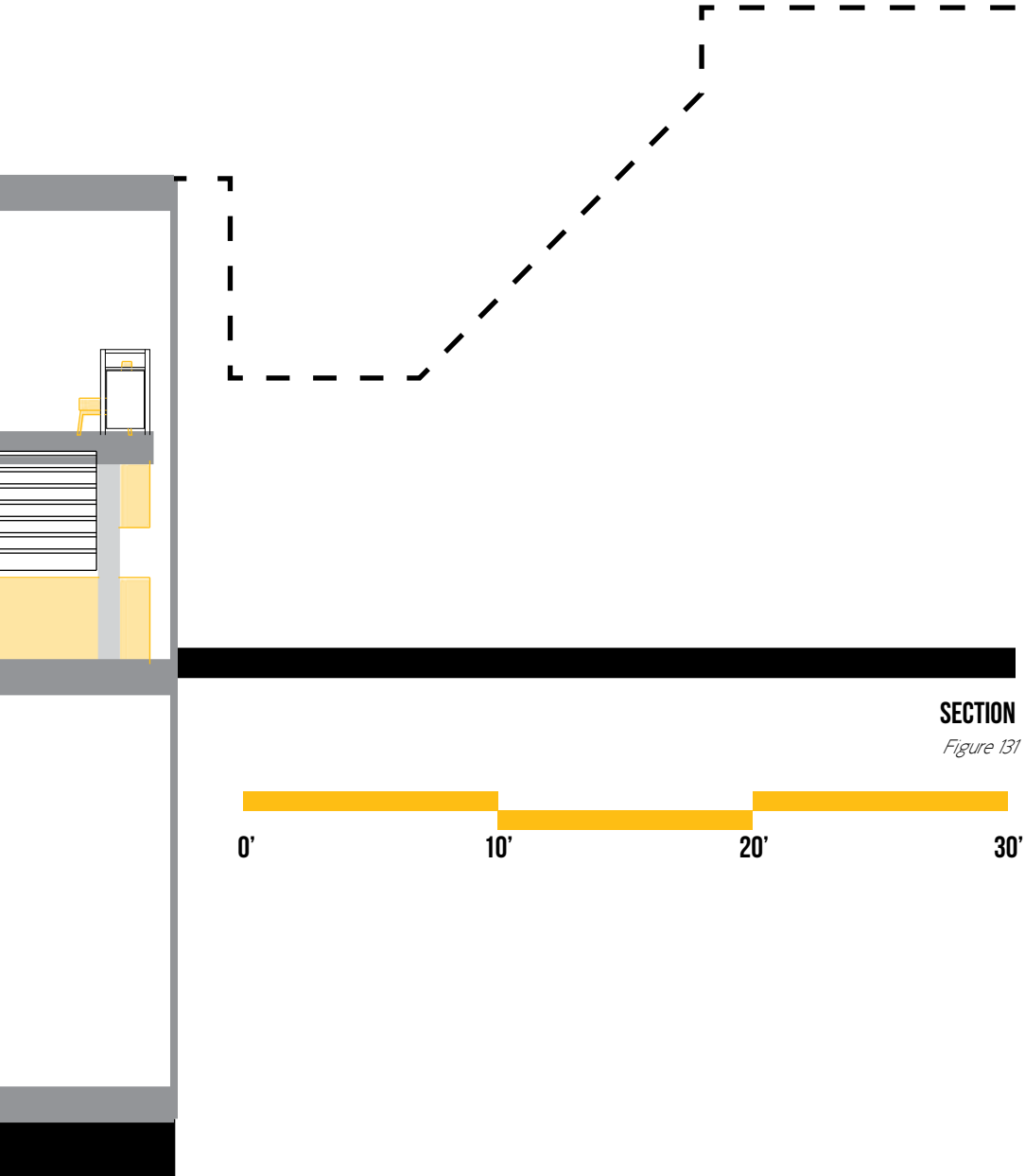
DRAWINGS



SECTION

Figure 130

DRAWINGS



SECTION

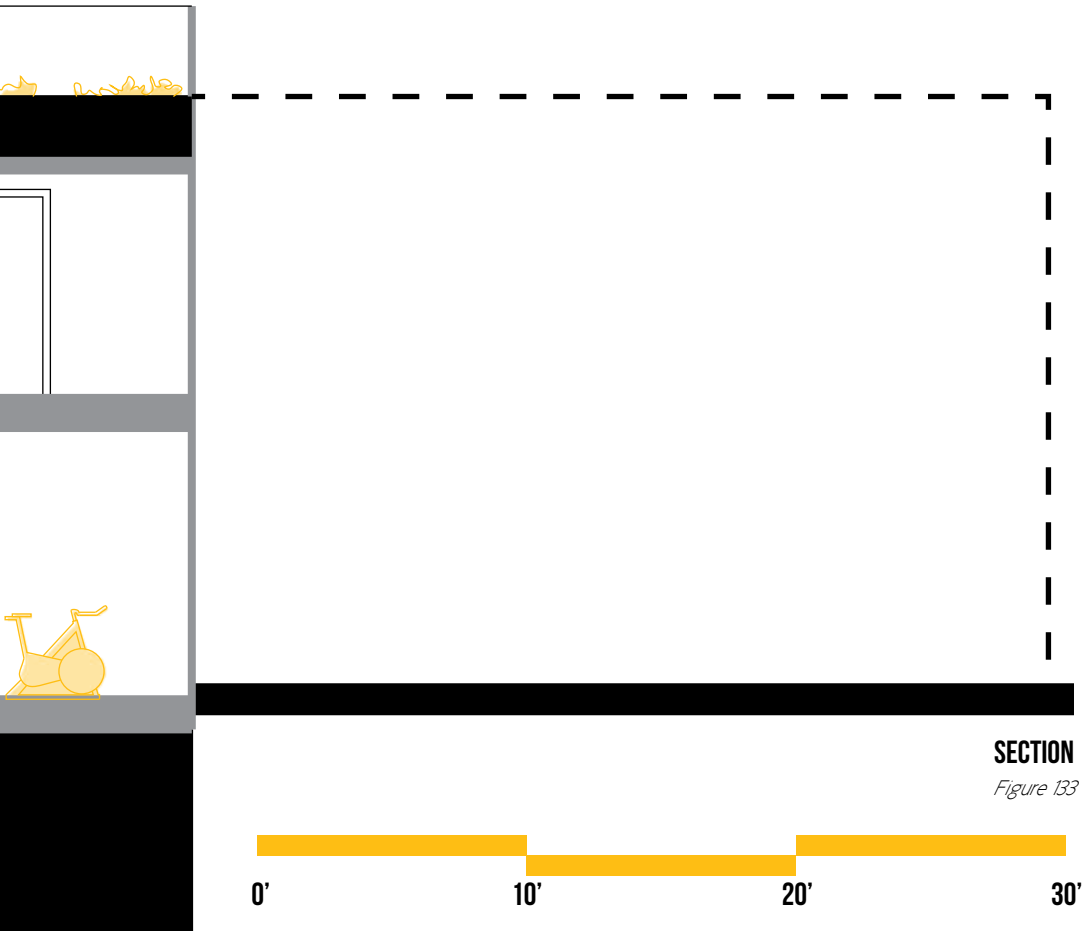
Figure 131

DRAWINGS

SECTION

Figure 132

DRAWINGS



SECTION

Figure 133

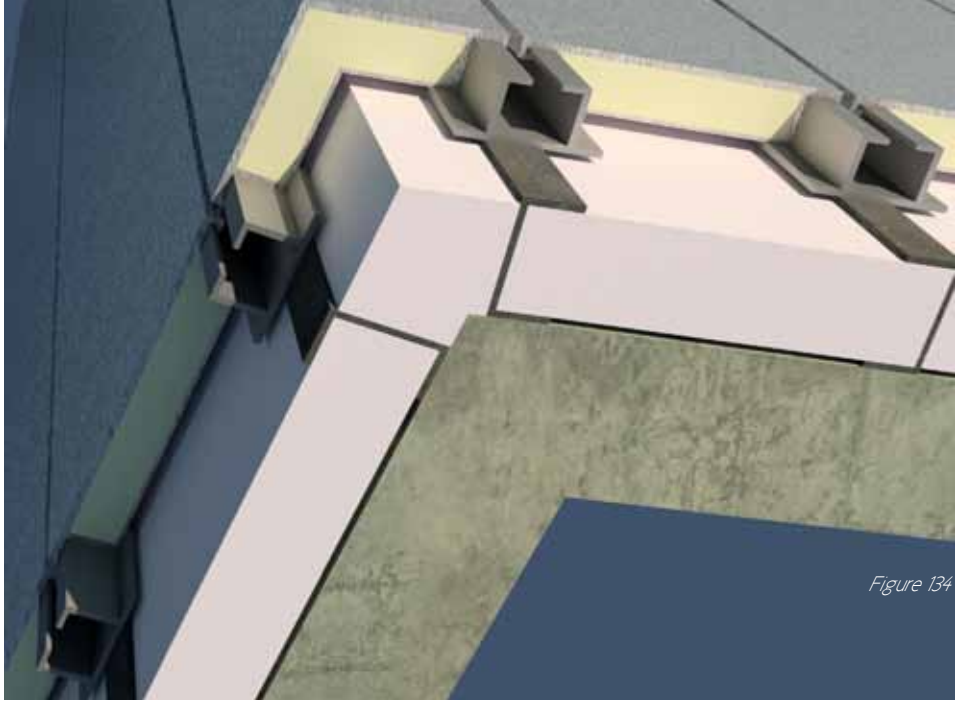


Figure 134

Figure 135

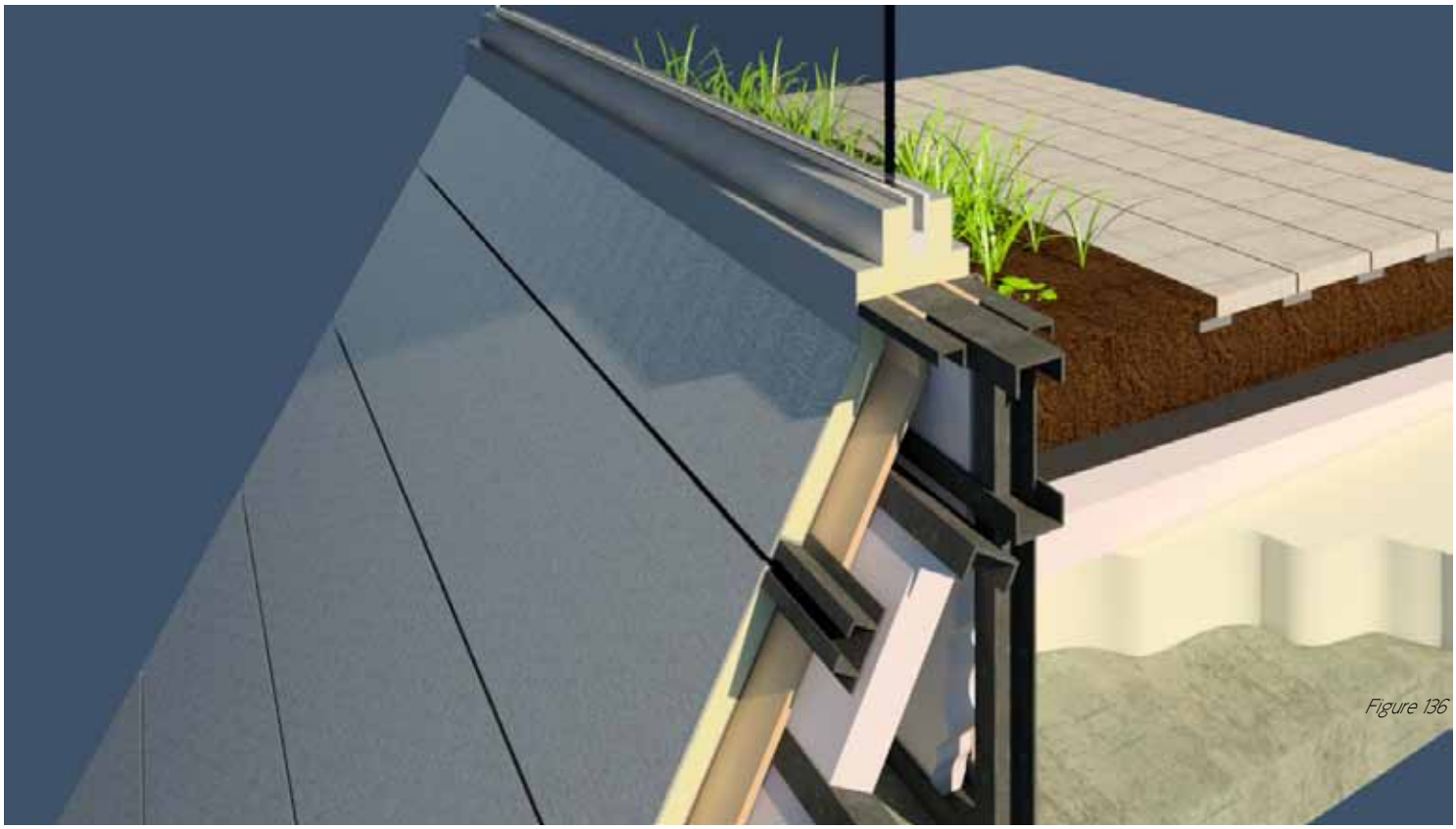


Figure 136

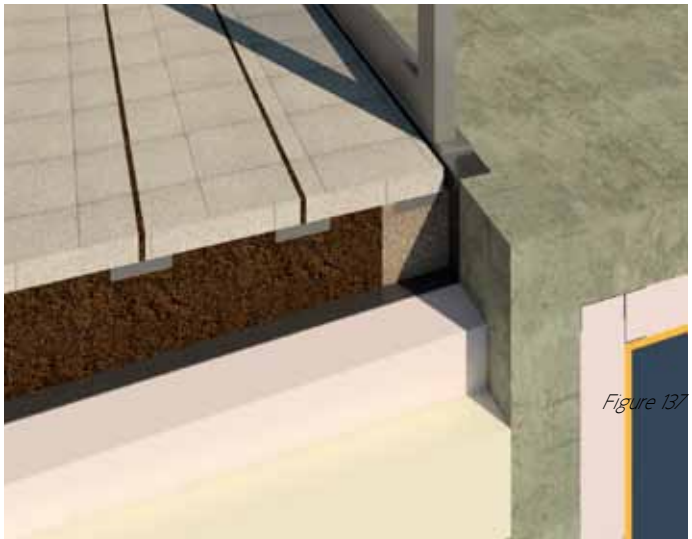


Figure 137

Figure 138

DETAILS

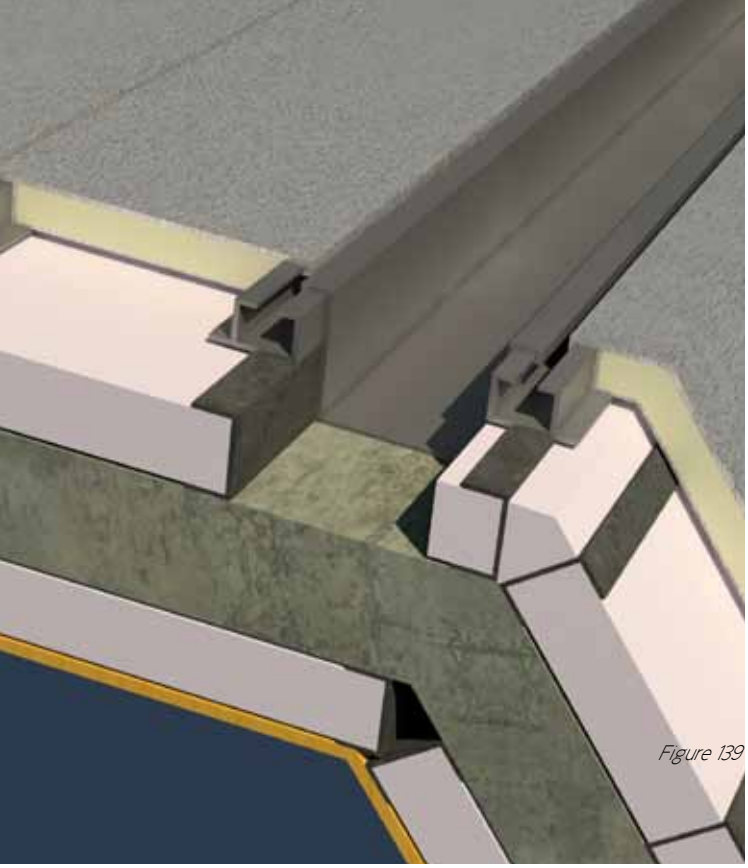


Figure 139

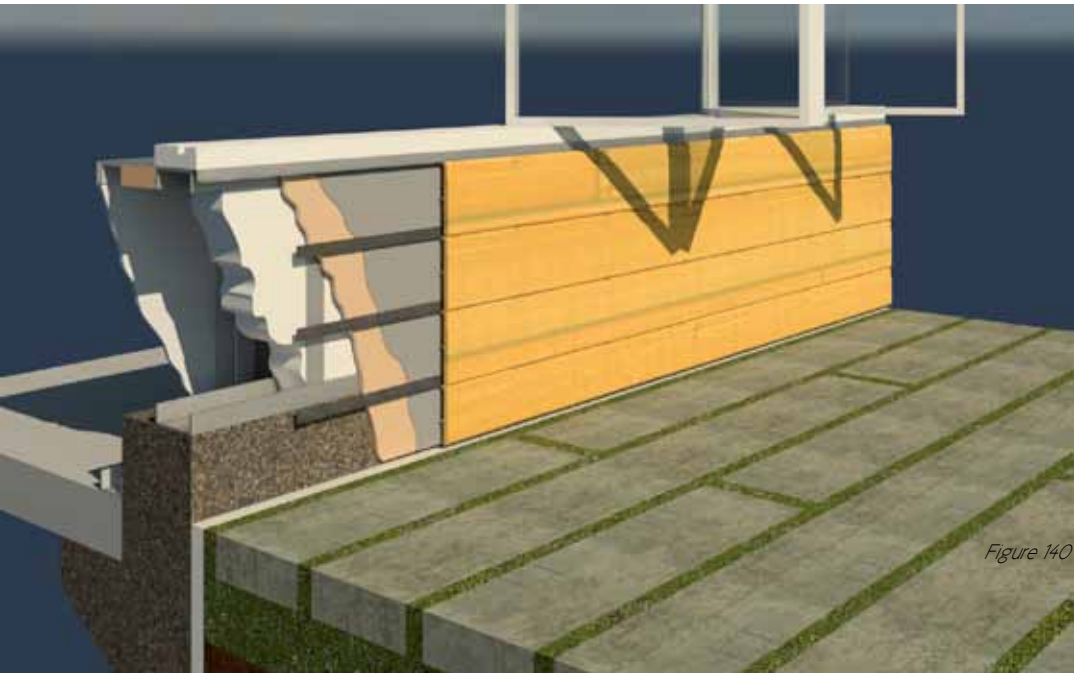


Figure 140

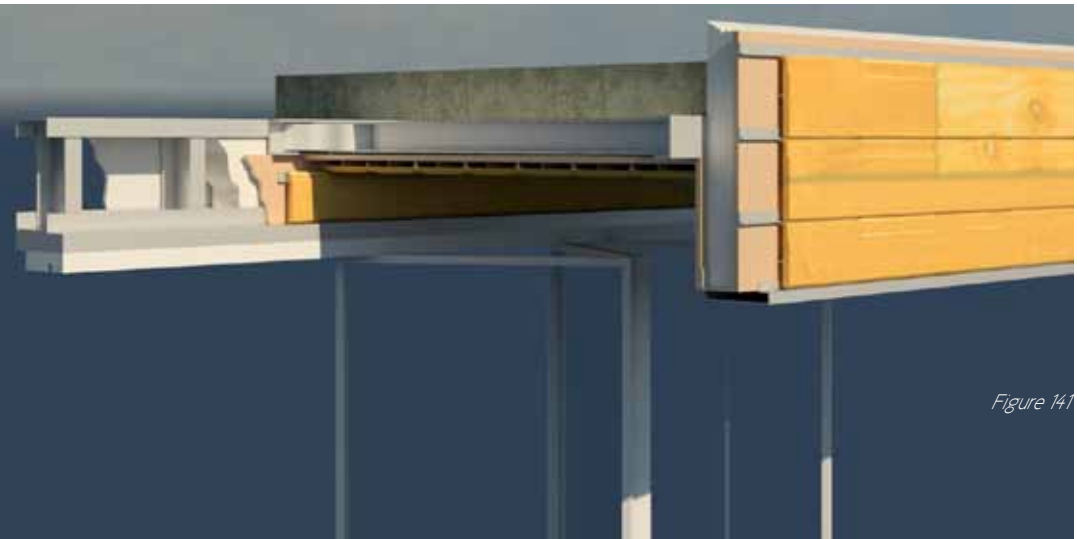


Figure 141

MILLENNIAL HOUSING

WHAT DOES IT MEAN FOR THE MILLENNIAL GENERATION TO ESTABLISH A HOME?

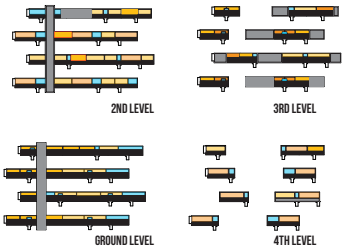
THE CURRENT & PAST IDEALS OF WHAT IS CONSIDERED A HOME, THE DESIRES TO CREATE A HOME, AND THE FEATURES THAT MAKE UP THE IDEA OF HOME WILL BE DRASTICALLY CHANGED DUE TO THE PARTICULAR INFLUENCE OF GENERATION Y.

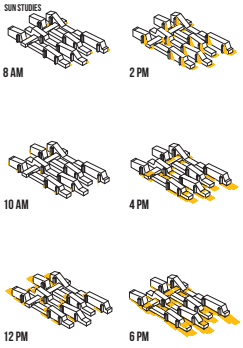
A VERY DIFFERENT DEFINITION OF HOME COULD BE DEVELOPED BY AND FOR THE MILLENNIALS, THEREFORE SHAPING THE FUTURE WAY OF LIFE.

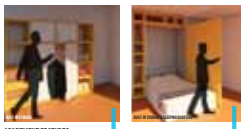
THIS THESIS DELVES INTO THE IDEA IN THE FORM OF MULTI-FAMILY AND MIXED USE HOUSING LOCATED IN MINNEAPOLIS, MINNESOTA.

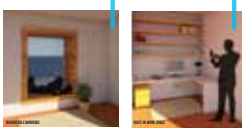
FLOOR PLAN DIAGRAMS

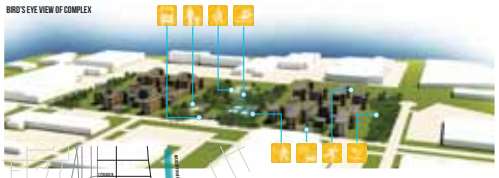
- STUDIO
- 1 BEDROOM
- 2 BEDROOM
- 3 BEDROOM
- RECREATION
- PUBLIC
- SEMI-PRIVATE
- GREEN SPACE

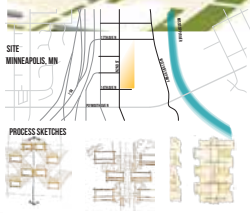






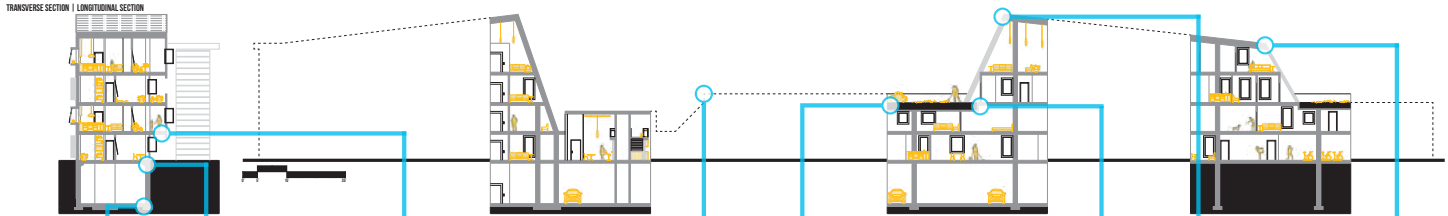






WITH THE IDEA OF HOME BEING SUCH AN INTEGRAL PART OF HUMAN NATURE, IT IS VITAL THAT THE FUTURE OF MILLENNIAL HOUSING IS UNDERSTOOD.

MILLENNIALS | HOME | HOUSING | GENERATION Y



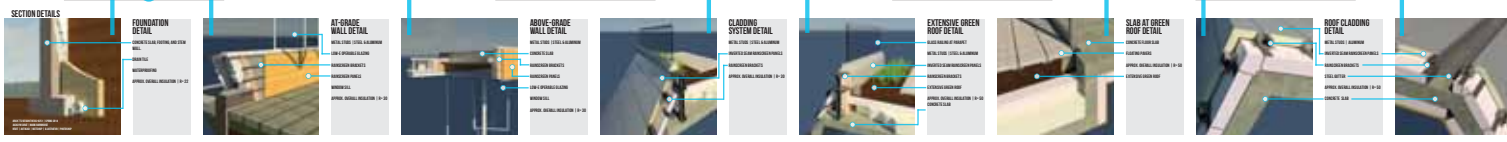


Figure 142

FINAL DISPLAY

Figure 143

Agence Patrick Arotcharen (2013). Agence Patrick Arotcharen. Retrieved November 29, 2013, from http://www.arotcharen-architecte.fr/accueil.html

ArchDaily (203, April 1). *Collective Eco-Housing La Canopée / Patrick Arotcharen Architecte | ArchDaily*. Retrieved November 29, 2013, from http://www.archdaily.com/352232/collective-eco-housing-la-canop-e-patrick-arotcharen-architecte/

ArchDaily (2013, March 27). *ArchDaily*. Retrieved November 27, 2013, from http://www.archdaily.com/220116/savonnerie-heymans-mdw-architecture/

Briggs, J. (2013, June 19). *Letter from a millennial: We're not going to buy your house - Baltimore Business Journal*. Retrieved December 13, 2013, from http://www.bizjournals.com/baltimore/blog/real-estate/2013/06/letter-from-a-millennial-were-not.html?page=all

Brussels Environment (2011). *Savonnerie Heymans | Brussels, sustainable city*. Retrieved November 28, 2013, from http://www.sustainablecity.be/exemplary-buildings/savonnerie-heymans

Burgum, Doug. (*Loretta, She's Had Some Work Done*.) Fargo, North Dakota. 19 Sept. 2013.

Burstein, D. D. (2013). *Fast future: How the millennial generation is shaping our world*. Boston: Beacon Press.

Carr, E. (2012). *Promoting Economic Development in North Minneapolis through Land Use Policy*. | Center for Urban and Regional Affairs. Retrieved December 5, 2013, from http://www.cura.umn.edu/publications/catalog/nsg-017

Catalyst Community Partners (2011). *West Broadway Alive*. Retrieved December 5, 2013, from http://catalystcommunitypartners.org/wp-content/uploads/2012/05/2011-West-Broadway-Avenue-Market-Brochure.pdf

City of Minneapolis (2012, August 8). *Utilities - City of Minneapolis*. Retrieved December 12, 2013, from http://www.minneapolismn.gov/residents/utilities/index.htm

City of Minneapolis (2012, April 18). *Maps - City of Minneapolis*. Retrieved December 12, 2013, from http://www.minneapolismn.gov/maps/

DesignRulz (2012). *Collective Eco-Housing La Canopée by Patrick Arotcharen Architecte | DesignRulz*. Retrieved November 29, 2013, from http://www.designrulz.com/design/2013/04/collective-eco-housing-la-canopee-by-patrick-arotcharen-architecte/

Destination Home (2013, August 30). *The Next Real Estate Boom: Get Ready for Housing, Gen-Y Style - Yahoo Finance*. Retrieved December 13, 2013, from http://finance.yahoo.com/news/the-next-real-estate-boom--get-ready-for-housing--gen-y-style-141521310.html

ERA Real Estate (2013, May 6). *Do Millennial Lifestyle Trends Affect Home Buying? | Owning the Fence*. Retrieved December 13, 2013, from http://www.owningthefence.com/do-millennial-lifestyle-trends-affect-home-buying/#.Uq0EC_RDuSo

Fillman, S. (2013). *North Minneapolis Culture: History*. Retrieved December 5, 2013, from http://northmplsculture.com/history/

Goldberg, S. (2007). *North Minneapolis: Past and Present*. Retrieved December 5, 2013, from http://archive.kare11.com/news/news_article.aspx?storyid=259164

Great Buildings Collection (2011). *Habitat '67 - Moshe Safdie - Great Buildings Architecture*. Retrieved November 29, 2013, from http://www.greatbuildings.com/buildings/Habitat_67.html

Gruen, N. (2013, July 17). *Echo Boomers Will Have Oversized Impact on Retail, Real Estate - Urban Land Magazine*. Retrieved December 13, 2013, from http://urbanland.uli.org/economy-markets-trends/echo-boomers-will-have-oversized-impact-on-retail-real-estate/

Howe, N. (2000) *Millennials Rising: The Next Great Generation*. New York, New York. Vintage.

Inside Northside (2013). *Inside Northside - North Minnepolis History*. Retrieved November 5, 2013, from http://northminneapolis.wikispaces.com/North+Minnepolis+History

REFERENCES

Merin, G. (2013, July 21). *AD Classics: Habitat 67 / Moshe Safdie | ArchDaily*. Retrieved November 29, 2013, from http://www.archdaily.com/404803/

Metropolitan Council (n.d.). *Metropolitan Council - Metro Blue Line extension (Bottineau Transitway)*. Retrieved December 5, 2013, from http://www.metrocouncil.org/Transportation/Projects/Furture-Projects/Bottineau-Transitway.aspx

Metz, T. (2013, March). *Architectural Record*. Retrieved November 25, 2013, from https://archrecord.construction.com/projects/portfolio/2013/03/1303-savonnerie-heymans-mdw-architecture.asp

Moor, F. (1998). *Characteristics of Different Soil Types*. Retrieved December 12, 2013, from http://web.bethere.co.uk/fm/soil/formed/f0108.htm

Nexus (2013). *North Minneapolis - Nexus Community Partners*. Retrieved December 5, 2013, from http://nexuscp.org/our-work/where-we-work/north-minneapolis/

Nussbaum, B. (2010, December 13). *Nussbaum: Our Politics Are at Odds with Gen Y Values | Co. Design | business + design*. Retrieved October 28, 2013, from http://www.fastcodesign.com/1662880/nussbaum-our-politics-are-at-odds-with-gen-y-values

Pew Research Center (2010, February). *Millennials: A Portrait of Generation Next*. Retrieved October 28, 2013, from http://www.pewsocialtrends.org/files/2010/10/millennials-confident-connected-open-to-change.pdf

Reilly, P. (2011, December 12). *Housing the Echo Boomers - Next Big Real Estate Opportunity? - Forbes*. Retrieved December 13, 2013, from http://www.forbes.com/sites/peterjreilly/2011/12/21/housing-the-echo-boomers-next-big-real-estate-opportunity/

Stanton, J. (2004). *Expo 67 - Habitat 67*. Retrieved November 29, 2013, from http://www.westland.net/expo67/map-docs/habitat67.htm

Stern, L. (2010, May 19). *Generation Y: Educated, underemployed and in debt*\ Reuters. Retrieved October 28, 2013, from http://www.reuters.com/article/2010/05/19/us-column-personalfinance-idUSTRE64I4M220100519

Twisted Sifter (2009, May 17). *The Habitat '67 Residences by Moshe Safdie - Montreal, Canada*. Retrieved November 29, 2013, from http://twistedsifter.com/2009/05/the-habitat-67-residences-by-moshe-safdie-montreal-canada/

USDA (2001). *Soil Survey of Hennepin County, Minnesota*. Retrieved December 12, 2013, from http://soildatamart.nrcs.usda.gov/Manuscripts/MN053/0/hennepin.pdf

USDA (2013, February 15). *Web Soil Survey*. Retrieved December 12, 2013, from http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm

Winograd, M., & Hais, M. D. (2011). *Millennial momentum: How a new generation is remaking America*. New Brunswick, N.J: Rutgers University Press.

Wood, D. (2010, March). *The Fierce Urgency of North | Minnesota Business Magazine | Minnesota Business Blogs | Minnesota Business*. Retrieved December 5, 2013, from http://minnesotabusiness.com/fierce-urgency-north

Yingling, L. (2011). *Well Educated: The Millennial Legacy*. Retrieved October 28, 2013, from http://themillenniallegacy.com/?page_id=42

Figure 144

PERSONAL IDENTIFICATION

JACKLYN SURAT

8710 Hillview Drive East
Saint Bonifacius, Minnesota
55375

952-217-0870

Saint Bonifacius, Minnesota

"We need houses as we need clothes. Architecture stimulates fashion. It's like hunger and thirst - you need them both."
- Karl lagerfeld