ABSTRACT

Title of Document: **VERTICAL COMMUNITIES; FUTURE LIVING FOR BALTIMORE'S INNER CORE.**

Paul Costello Bilger, Masters of Architecture, 2011

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How do we continue to densify our cities while providing a habitable environment for citizens to live and grow? With the increase in global population and the trend to move into cities, the urban core will have to be reinvented to accommodate this influx of people. My strategies for the future of the urban core include: first, vertical communities, which focus on equality and the sharing of resources to increase quality of life. Secondly, hybridization, which is the mixing of program designed to increase daily activity and to localize amenities. Thirdly, climate analysis, used to increase the performance and livability of the building. Lastly, context analysis, meant to place the building within the existing urban fabric without disrupting its continuity. This thesis envisions life in the city that provides a healthy living environment for all of its citizens to live and grow.

VERTICAL COMMUNITIES; FUTURE LIVING FOR BALTIMORE'S INNER CORE.

By

Paul Costello Bilger

Thesis submitted to the Faculty of the Graduate School of the
University of Maryland, College Park, in partial fulfillment
of the requirements for the degree of
Masters of Architecture
2011

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Chapter 1: Introduction

The year 2006 marks a significant date in human history where for the first time more than fifty percent of the worlds population was living in cities. With the world population projected by the United Nations to reach seven billion this year (2011), we are going to have to start living more efficiently. This will lead to the restructuring of our daily lives. The compact nature of the city makes it the most logical environment in which contemporary living will thrive. “Compact city designs conserve valuable land resources, reduce transport distances and, thus the energy needed, and the density makes public transport more viable.”(Smith) Restraining sprawl will conserve resources and allow for more collective space available to the community at large. Fertile land will have to be secured for food production and not for home construction. In addition the natural beauty of the landscape needs to be protected in a natural state for recreation and maintained for future generations. Conserving land will force cities to build at densities much higher than their current state.

Life in common will be increasingly important. Working together to conserve resources will provide a catalyst for community building. Sharing resources saves time and money allowing residents to enjoy more important aspects of life. In a campaign to protect rural England, advocates establish four major benefits to dense living, “Living closer together encourages more community interaction, and reduces isolation for vulnerable social groups, such as young families; compact settlements require less transport and

reduce car use, with health and environmental benefits; higher-density development is environmentally beneficial, resulting in lower carbon emissions; in rural areas, more compact villages could help to stem the decline in rural services, such as shops, post offices and bus service." (Willis) Economically services are located where they will have the greatest impact. In order to have such amenities like transportation, schools, and commercial activity accessible there needs to be a greater concentration of users. With the benefits to higher density living there are drawbacks that need to be considered such as security, noise and privacy. These factors will have to be address in this thesis and by future cities.

Life in the city is affected by these drawbacks and it has been detouring residents from enjoying city life. Designing out these imperfections will allow city life to flourish. Benefits of urbanity should be available to everyone without viewing it as a compromise or risk. Out of these shortcomings enters the opportunity to reinvent the way in which we inhabit the urban realm.

Typically buildings are programmed for a specific function namely residential or commercial due the zoning regulations. This single use produces activity only during specific times of the day leading to periods of stagnation. Leaving the place vulnerable to crime and business failure due to lack of activity. Rethinking the programming of the site to provide more activity can regenerate an area bringing people to the site and creating a valuable asset for the whole community.

Hybrid buildings create sustained activity throughout the course of the day by carefully combining programs that generate movement at different times of the day creating a continuous flow of action. The office component will bring people from all over the city during the middle of the day, while the residential component keeps people there in the evening and at night. The sustained hustle and bustle keeps businesses in the neighborhood bringing life to a desolate area. “These new hybrid types can shape public space. Urban porosity is a key intention for large hybrid buildings with the aim of pedestrian oriented urban places. Each new public space formed by hybrid buildings contains living, working, recreation, and cultural facilities. These new pedestrian sectors eliminate the need for automobile transfer across the city. They become localized social condensers.” Holl. Creating life within walking distance encourages a healthily lifestyle and creates opportunities to interact with other on a personal level reducing isolation that some residents feel. Interaction can strengthen the bond of a community.

This building not only embraces the benefits that a hybrid offers it also incorporates contemporary sustainable technology. Recent technological advances can be used to create a more pleasurable living environment for the inhabitants while consuming less resources and reducing waste. Sustainable buildings need to consider all aspects of live from the inhabitants and environment to the economic viability in order to create a balanced and meaningful environment.

Chapter 2: Theory

Home

Architecture has long dealt with the articulation of space that leads to the design of houses and dwellings, but what about the home. Are these words interchangeable? The word home carries with it memories of childhood and emotional feelings. Home is not always attached to a singular place. It can as large a country, and as small as a living room. It is used in expressions of comfort and security, “make yourself at home”, “there is no place like home”, “home is where your heart is”. These are all expressions that don’t necessarily bring to mind a physical space. Juhani Pallasmaa defines home as, “Dwelling, a house, a container, the shell for home. The substance of home is secreted, as it were, upon a framework of the dwelling by the dweller. Home is an expression of personality and family and their very unique patterns of life” (Pallasmaa). The framework is the role of the architect but he cannot fully understand the unique characteristics of the inhabitant’s lives and their individual ideals of home.

The role of the architect must then create the space in which residents can define their personal meaning of home. This will include creating a safe and secure refuge that is flexible enough to allow for personalization, intimacy and privacy. “Architecture can still provide houses that enable us to live with dignity. And, we still need houses that reinforce our sense of human reality and the essential hierarchies of life.” (Pallasmaa)

Slim Tower

What is the best way to increase density? There are many factors at play when determining how to increase the rentable area of a site. Sadly many of these determinants are monetarily driven, which end up diving us the most economical buildings. This includes typical slab buildings with double loaded corridors or towers with oversized floor plates and a central core that has not access to light and air.

What if we designed for the inhabitants instead? By allowing living conditions to drive the design rather than economical rational we arrive at a slightly different scheme. The determinants that make up better high dense living include; access to natural light, natural ventilation, increased views, increased green space and better core experience.

Access to natural daylight is important to the health of the buildings occupants. In my research I found a distance between 25 and 30 feet from an exterior wall provides a significant level of daylight to a given room. By allowing this distance to govern the layout of the occupiable rooms the inhabitants significantly gain quality of life.

Access to natural ventilation improves the health of the building by flushing the stale air and replacing it with fresh air. To improve air movement it is important to have two exposures. By implementing this it will reduce the number of units per floor but will increase the livability for the rest of the inhabitants.

Increased views improve the value of the space. This benefit is partially due to the necessity for natural ventilation, but never the less improves the resident's quality of life. Another result of these parameters is that this decreased floor plat has less of an impact on the ground plane. This can then be used as green space of serve as other communal functions.

Lastly increasing the core experience is critical to improving the circulation route from the ground to the unit. Typically the circulation in dense construction goes to that of function and not part of the experience. The elevator in particular can be a very disorienting place. When you step off you have no idea what floor you are on or which direction you are facing. By moving the core to the outside wall residents can now engage in the outside world.

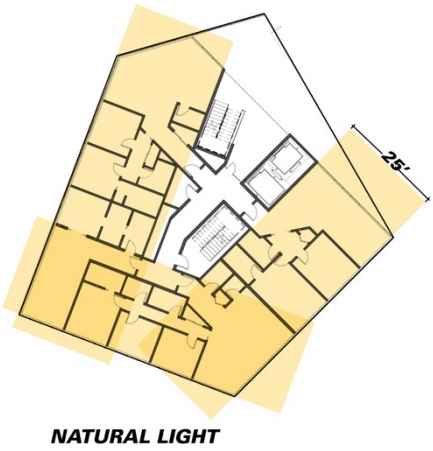


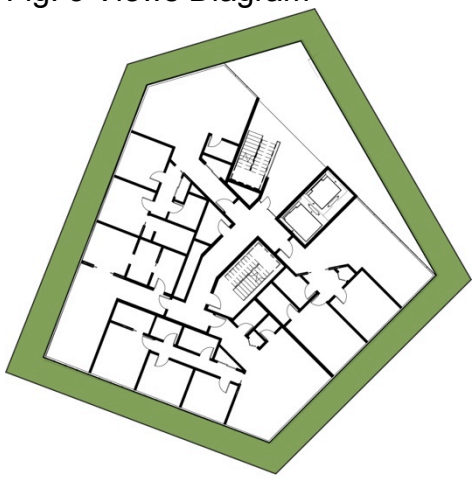
Fig. 1 Natural Light Diagram

NATURAL VENTILATION

Fig. 2 Ventilation Diagram

INCREASE VIEWS

Fig. 3 Views Diagram



DECREASE FOOTPRINT

Fig.4 Footprint Diagram

CORE

Fig. 5 Core Diagram

Vertical Community

Increasing the livability of a dense environment goes beyond access to the natural elements of light and air and asks the question how we interact with all our neighbors. By looking to the diversity that the horizontal environment provides I wanted to bring this vertically into the project.

The horizontal landscape provides spaces for all types of people to live and grow. By providing the inhabitants with a diversity of unit types this is aimed to encourage a diversity of residents from singles, to couples, to families, and seniors. This intergenerational mixing is intended to allow these seeming different market segments to benefit from one another.

To further this interaction the residents are provided with community gardens that can be configured to meet different demands. This is possible if instead of providing each unit with a private balcony you reconfigure the space and provide a communal garden for everyone to enjoy. So by sharing resources the individuals receive a better and more usable space.

The garden spaces would be provided on every third level for maximum benefit. This provides greater height to signify community space is more important then the individual.

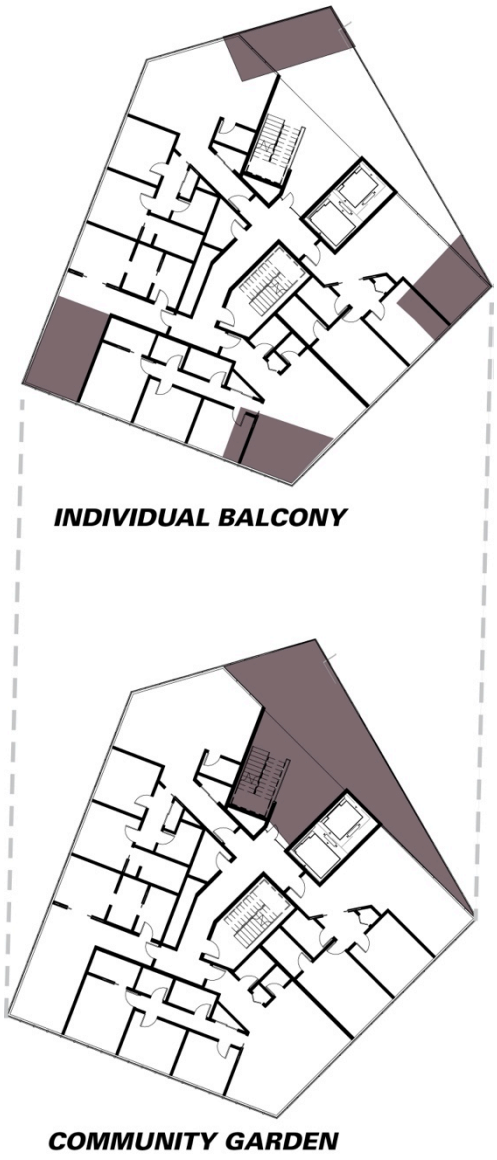


Fig. 6 Community Gardens Diagram

Fig. 7 Unit Diversity Diagram

Fig. 8 Neighborhood Section

Hybridization

Hybridization is the mixing of program to create a more livable community. Community does not stop at the interaction at the unit scale, but if includes all aspects of life. By combining opportunities to live, work, play and learn residents are given the same amenities that are provided in a horizontal composition but vertically. Not only is this beneficial to the residents but the surrounding community as well.

Amenities are provided in areas in which they have the greatest impact. So by having a built in market, venders are more likely to invest in the project. By providing living and working in the same building there how becomes activity all day. Whereas traditionally a purely residential tower will not have a lot of activity during the day and vise versa with an office tower where they create dead zones at night. Meanwhile this increased activity now can support retail and other community activities.

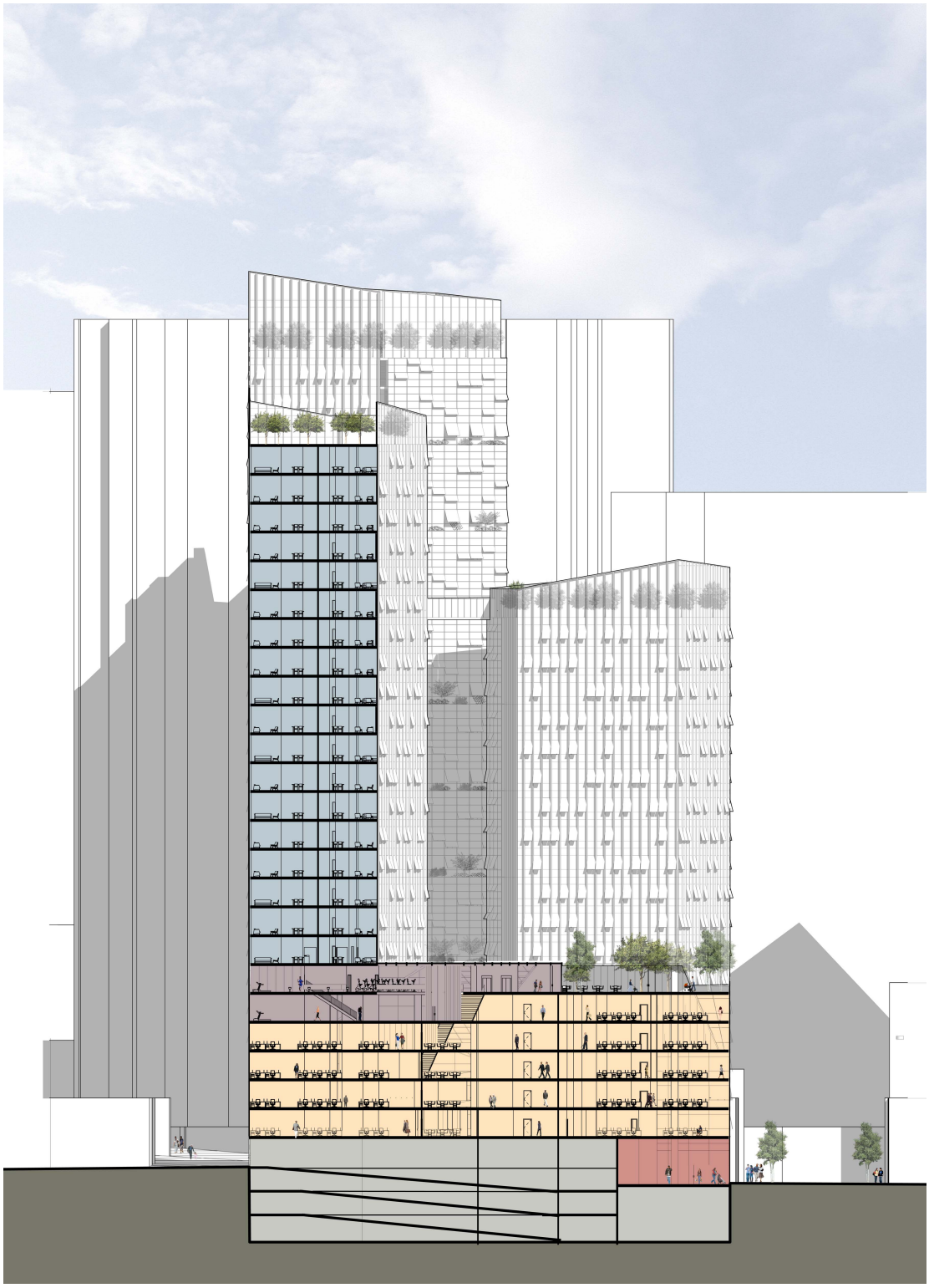


Fig. 9 Elevated Park Section

Chapter 3: Concepts (Life)

Live

In 2006 the city of Baltimore adopted a new comprehensive master plan that detailed the future goals of the city. This plan focuses on four categories that define life in the city. These categories are live, earn, play and learn. With this plan in place the city can now move forward with their implementation and allocate funds accordingly. This thesis aims to use this plan as a benchmark to measure the success of the project.

Flight from the city of Baltimore has been a trend since the fifties but within recent years interest has once again been redirected at urban life. The city plans on stimulating this resurgence by putting in place three clear goals. The first goal is to build human and social capital by strengthening neighborhoods. Second elevate the design and quality of the city's built environment. Thirdly improve transportation access and choice for city residents. Increasing housing options for all citizens will be important to keeping the city diverse and full of life. Strengthening existing neighborhoods is key to maintaining the cultural identity of the place and the attachments that go along with that. Improving the transportation will allow citizens to have greater access to amenities like groceries and neighborhood services. Elevating the design quality and improving maintenance and security will create a new image for the city.

Earn

Job creation and economic vitality are essential to sustaining a healthy city. Baltimore's success is due to its port and this will continue to play a role in the future. The goals set forth by the city are, strengthen identified growth sectors, improve labor force participation rate among city residents, and improve access to jobs and transportation linkages between businesses. The Baltimore Workforce Investment Board has indicated growth sectors as Bioscience, Business Services and Real Estate, Construction, Computer, Internet and Data and Software-Related Service, Health Care and Social Services, and Hospitality and Tourism. Creating a diverse range of jobs will allow the city to maximize its earning potential and create a stable environment for the residents.

Play

Creating places of leisure and recreation are important to the well-being of the citizens. The city had set fourth three main goals. First, enhance the enjoyment, appreciation, and stewardship of Baltimore's Historical and cultural resources. Secondly, improve night life, entertainment, and recreation experiences for residents and visitors. Thirdly, increase the attractiveness of Baltimore's natural resources and open spaces for recreation and to improve water quality. Protecting and restoring natural resources will not only improve the attractiveness of the place it will also clean the environment making it a safer and healthier place to live.

Learn

Education is the essential ingredient to improving the lives of residents. Creating an engaging environment that prepares students to take an active role to society and continuing the education of adults will attract jobs and new residents to the city. Four goals that the city has outlines are, improve public schools and libraries, capitalize on untapped potential of higher education institutions, encourage a culture of learning by enhancing educational and vocational opportunities for all Baltimoreans, and ensure safe and convenient transportation to and from educational facilities. Improving and updating the facilities with 21 century technology will give Baltimore and edge in the education of its residents. Continuing education is important to keep resident civically engaged and aware. Education standards are often sited as a reason for choosing a place to live. Families in particular are drawn to areas with higher standards of education. This improvement will assist in enticing families back to the city.

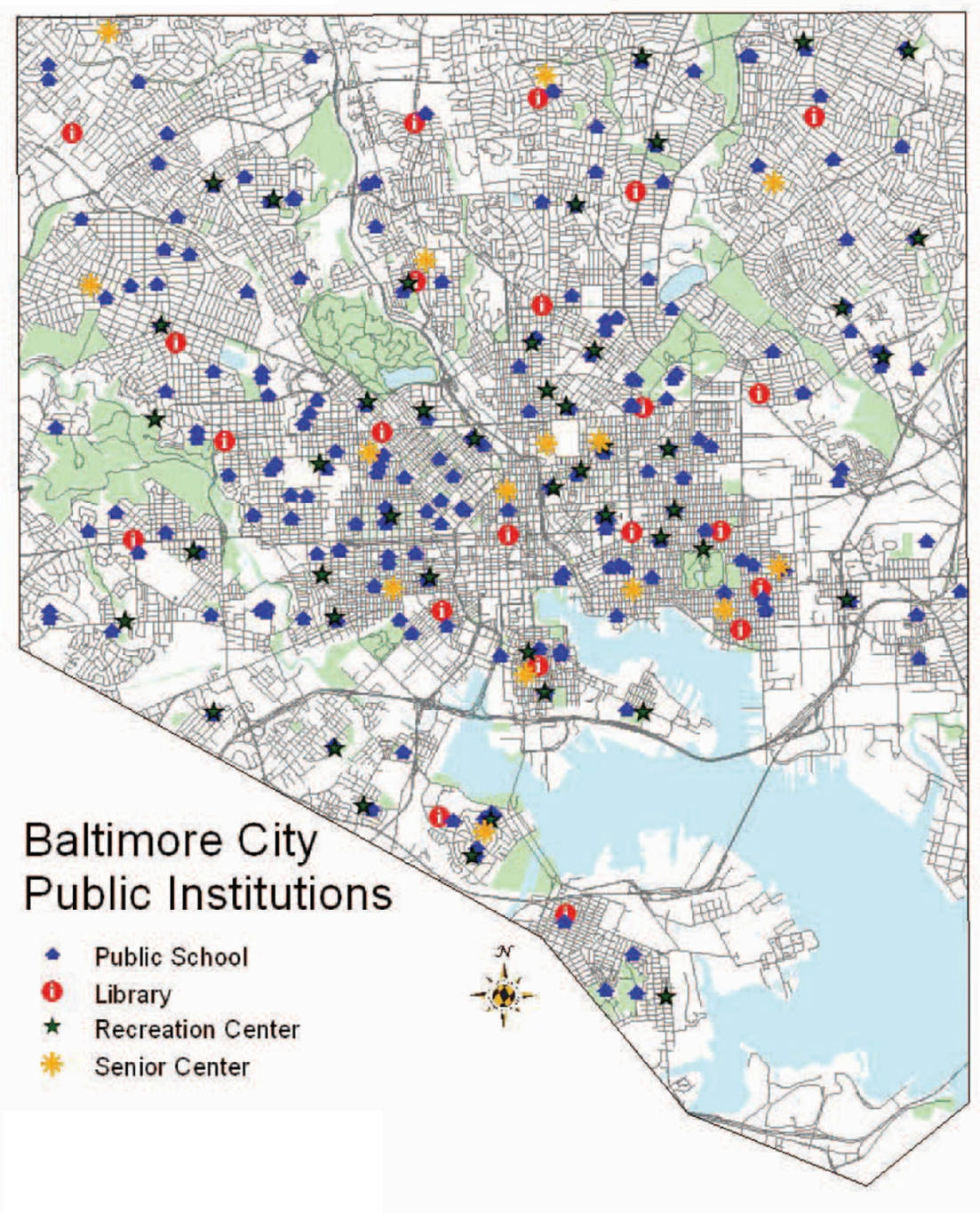


Fig. 10 Baltimore Public Institutions Map

Chapter 4: Concepts (Design)

Connect

Evaluating the interrelationships between the site and the surrounding environment contribute to determining the spatial arrangement of the building. Access to amenities that make up daily life are essential to the success of the project. The amenities can be in close proximity to the site or provided with in the building directly. The threshold between the public and private becomes important in defining the quality of environment.

Improving connections to amenities such as grocery stores and services will increase the overall wellbeing of the neighborhood and its inhabitants. Connecting residents with amenities is also dependent of the density of the population. Businesses are attracted to places where the concentration of people is high yielding them the most profits. Therefore increasing density will improve the attractiveness of the community to the developers.

Interact

Design the informal spaces and provide opportunity for interaction. These are the mediation grounds between public and private life. The spaces are defined by the residents and are flexible enough to change over time.

Rethinking distribution as an event not simply a functional connection. Circulation within the building has the potential to be as invigorating as the streets that lead to their doors. Identifying the elements of street life and

translating them within the building has the potential to enliven these lifeless spaces. Increase the access paths and the connections to informal spaces. Creating options of travel that are equally gratifying adds variety to everyday life and reduces monotony. Natural light and views to the outdoors make the circulation environment more pleasurable

Creating an environment desirable for the human activities and self-expression. Contemporary life is one of personalization and the project should reflect that as a whole and in the individual units. The home is also a place of refuge and a place of safety. This project will look to Newman's writings on defensible space as a guide to creating a safe environment for the residents

Sustain

The careful study of the climatic forces on the site and the use of cutting edge technology will aid in the conservation of natural and physical resources. Looking to nature for time-tested solutions is an approach that will be considered. Biomimicry has the potential to increase efficiency and reinvent our environment for the better. High quality construction will create a better living environment for the users resulting in an extended lifespan of the building.

Introducing biodiversity in the build environment is proven to increase human health and well being. This also provides a place for the natural flora and fauna to flourish in urban areas.

Express

The expression of the building should celebrate the complexity, diversity, and the variety of activities housed with in. The building should be of its time and provide for the needs of the contemporary family. Revealing that this is a new way to live in the contemporary urban environment.

Diversity of functions should be integral within the neighborhood, the building and the individual unit. The building will contain a variety of programs including residential, retail, office, shared spaces, and workshops. The unit should accept new ways of life including working at home, cohabitation, temporariness, and family size. This hybrid building should express its layers to the surrounding community creating a place that the residents can identify and call home.

Chapter 5: Site

Context

The revitalization that the city of Baltimore is undertaking along with its rich and diverse background makes it fitting for this thesis. The cities push for new housing development reaffirms the intent of the thesis and reveals the lack of good housing in the city. Baltimore's distinct cultural and social amenities provide a strong foundation on which the city grew and will continue to grow in the future. "In 1893, Baltimore had more millionaire philanthropists than any other city in America."(City of Baltimore) Distinct institutions rose from these philanthropic endeavors of a few Baltimoreans including the Peabody Institution, Enoch Pratt Free Library, Walters Art Gallery, and Johns Hopkins University and Hospital. These cultural centers along with the redevelopment of the Inner Harbor, Camden Yards, and Urban Universities make Baltimore more than a destination but a great place to live.

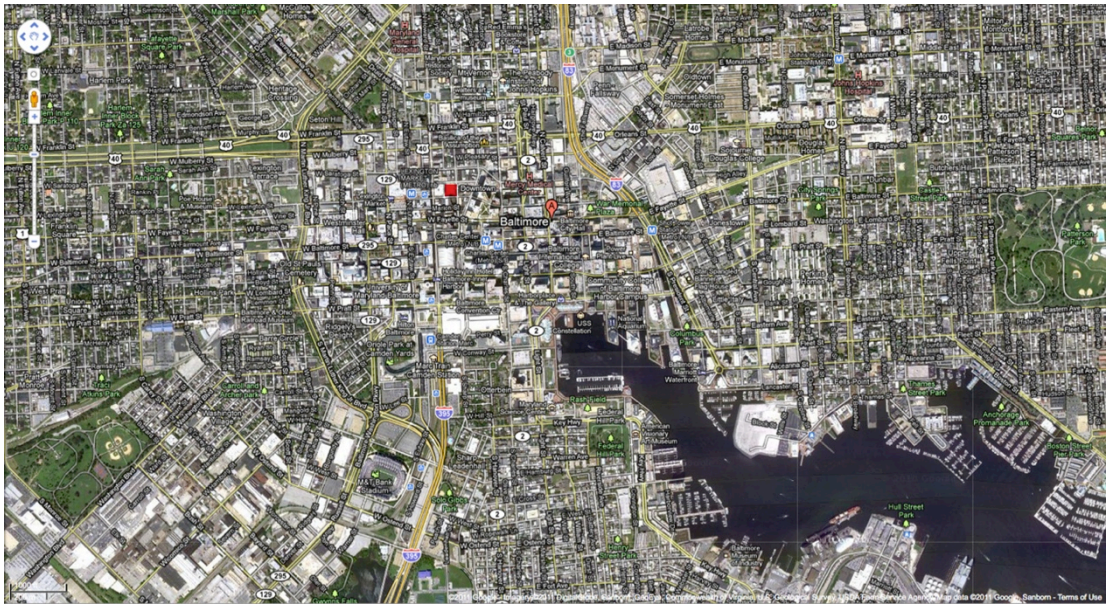


Fig. 11 Site Location

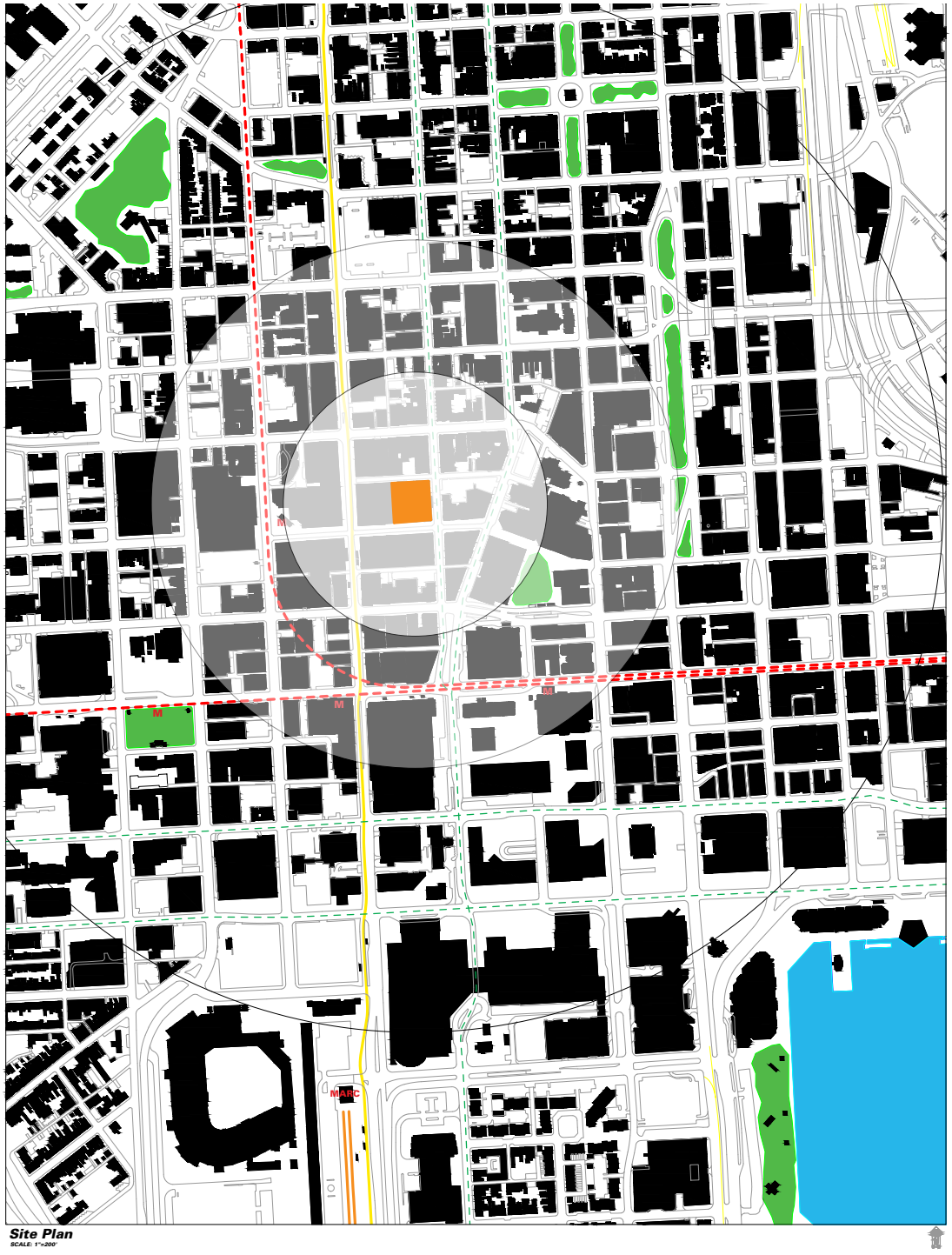


Fig. 12 Baltimore Inner Core Figure Ground

Fig. 13 Baltimore Rail Map

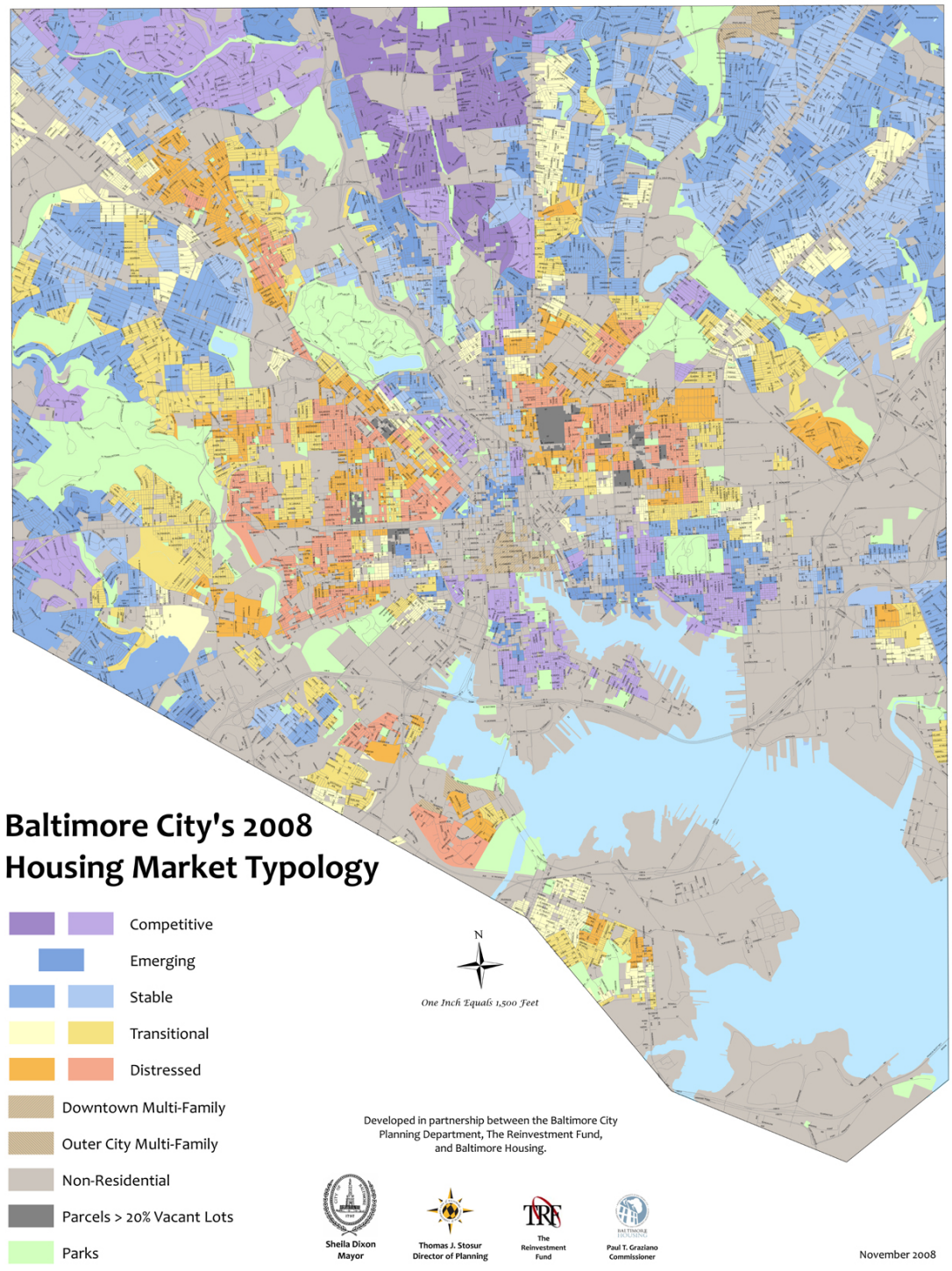


Fig. 14 Baltimore Housing Typology Map

The central location of market center in Baltimore's urban core allows the residents to take advantage of the proximity to many of the cities amenities. World famous Lexington Market is the central focus of this neighborhood. This brings tourists and locals to the area. It is connected by the subway and light rail systems that provide access to major parts of the city. The future expansion of the subway is planned to intersect the existing subway just to the south of the site making this a major transit hub. This would provide even greater access to the city. Proximity to the downtown business district provides opportunities for work and cuts down significantly on commuting. The University of Maryland Baltimore campus is short walk from the site providing job opportunities and higher education opportunities. Entertainment is integrated in the neighborhood through the newly refurbished Hippodrome Theater and Camden Yards. These amenities will continue to improve the neighborhood and will start to sponsor restaurants and shops.

The addition of housing to this will aid in retaining the people that use these amenities and begin to densify downtown bringing work and home together. By having a greater population density the need for more amenities will arise creating an even better place to live with more opportunity. The presence of people 24 hours a day will lead to the viability of restaurants, cafes, and other shops.

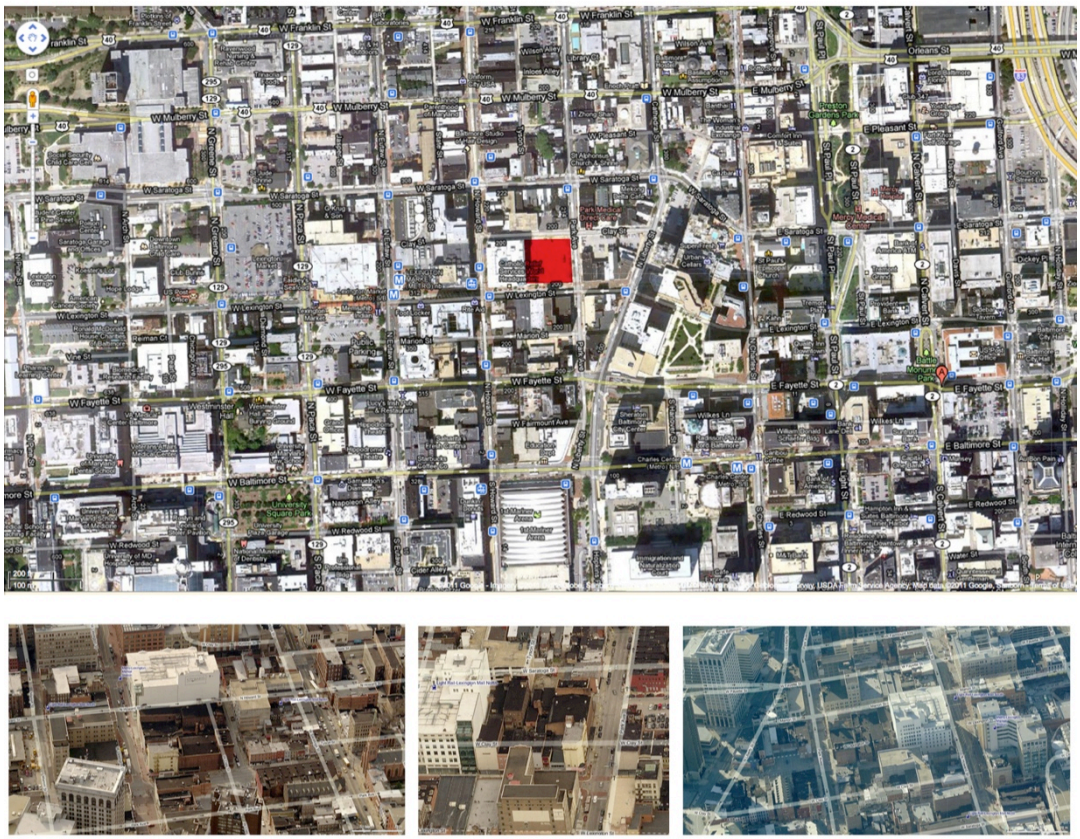


Fig. 15 Site Location, Downtown

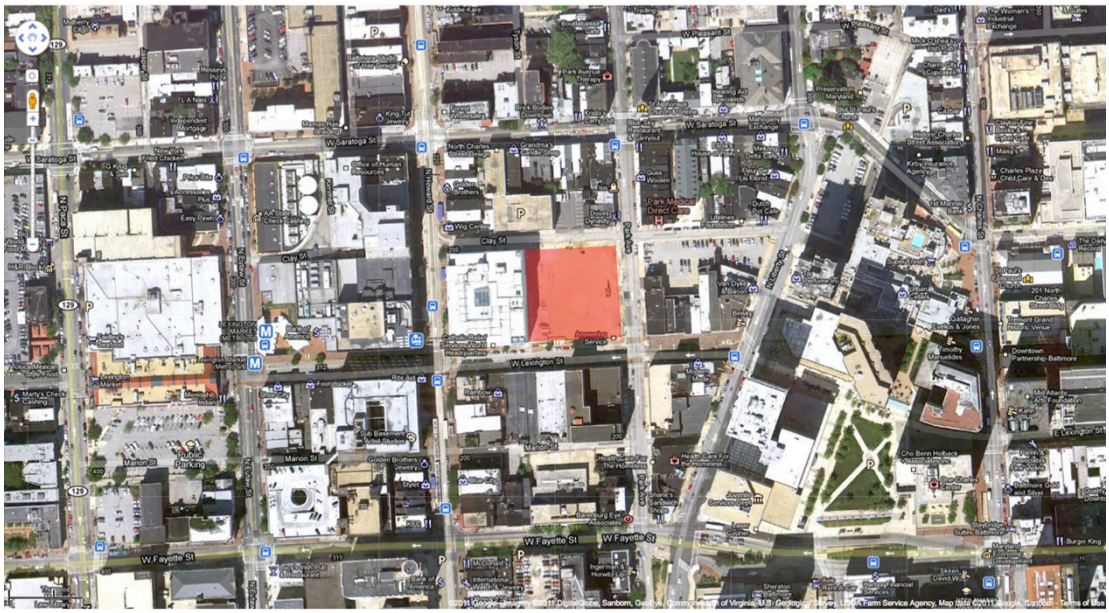


Fig. 16 Site Location, Market Center

View towards Lexington Market looking west

View of adjacent building to the west

View looking north down Park Ave.

View looking east down Clay St.

View towards Downtown looking east

View across site looking south

Fig. 17 Site Photos

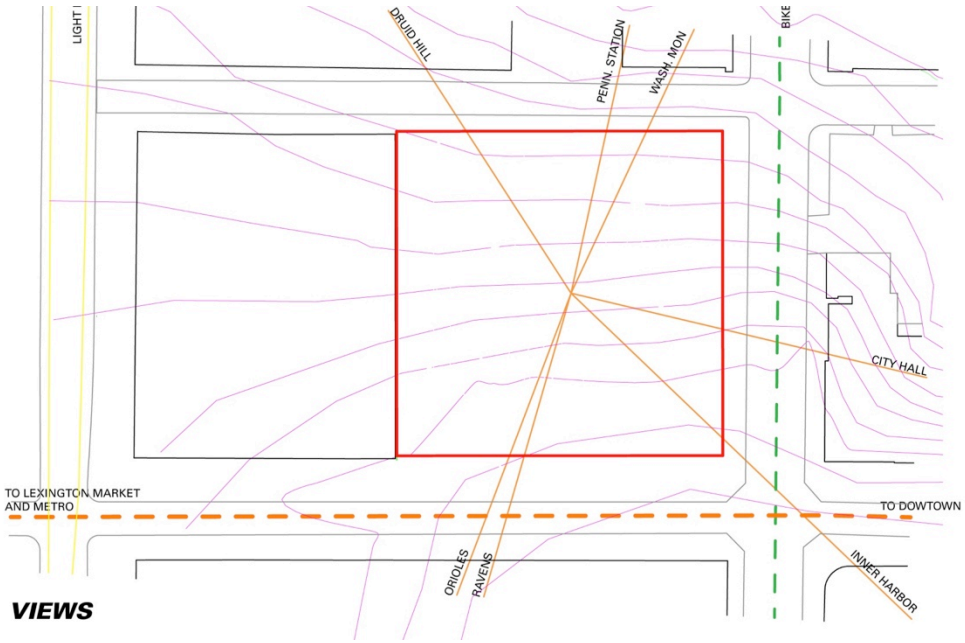


Fig. 18 Views Diagram

Climate

Baltimore sits at on the Chesapeake Bay at the mouth of the Patapsco River. This Mid-Atlantic region stays fairly temperate due to its geographical position between the Appalachian Mountains to the West and the Chesapeake Bay to the east.

The Average temperatures fluctuate from 20 degrees to 100 degrees allowing this region to enjoy four seasons. According the average degree-days the winter is more prominent then the summer meaning that it costs more to heat your home in the winter than to cool it in the summer time. Average rainfall stays fairly consistent from month to month raining between 3” to 4.5” monthly. The most intense sun comes from due south and at high noon appears in the sky between 74 degrees in the summer to 28 degrees in the winter. This difference in sun angles will allow the building to take

advantage of the sun in the winter while blocking the heat from the summer sun. The wind blows fairly consistently from all directions but during the winter it will bring cold winds from the artic. Blocking these winds should be considered in the design.

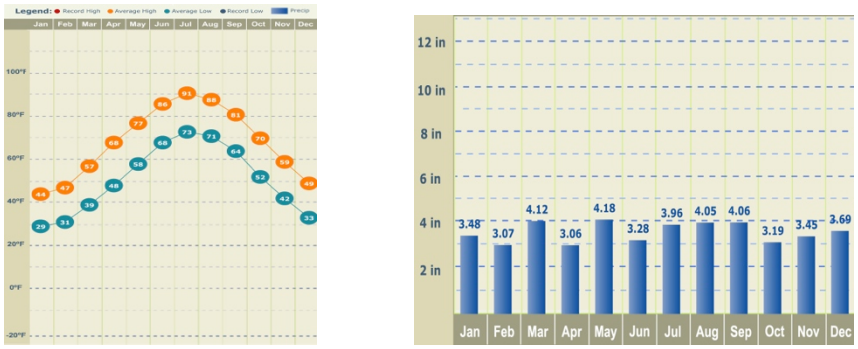


Fig. 19 Average Temperatures / Rainfall

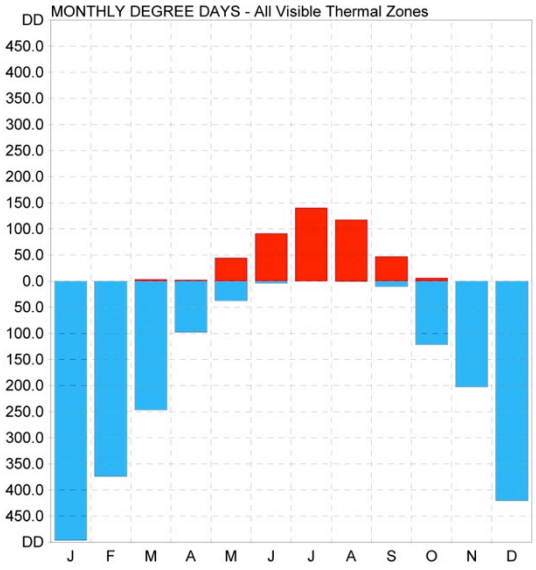


Fig. 20 Average Annual Degree Days

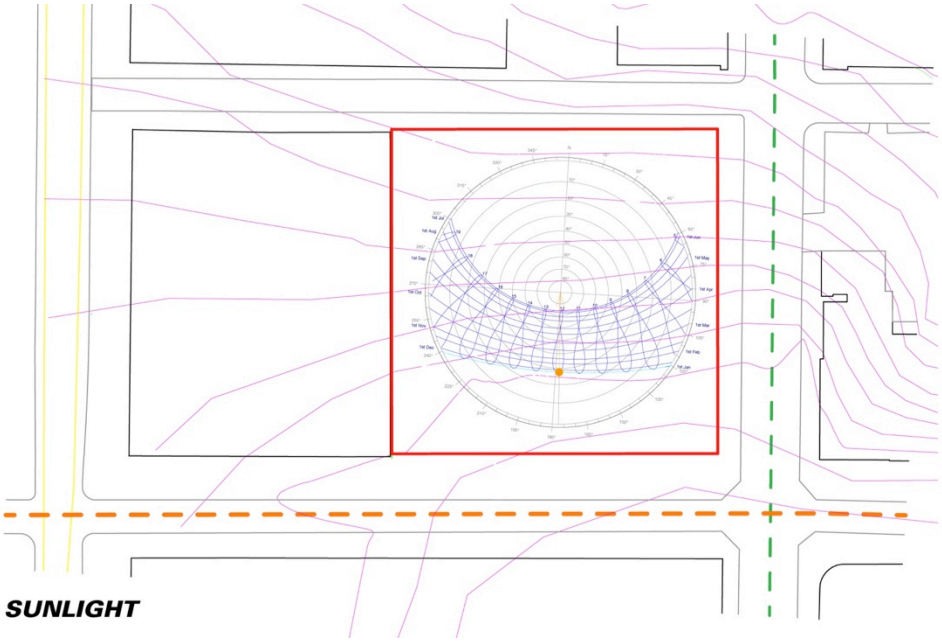


Fig. 21 Sun Path Diagram

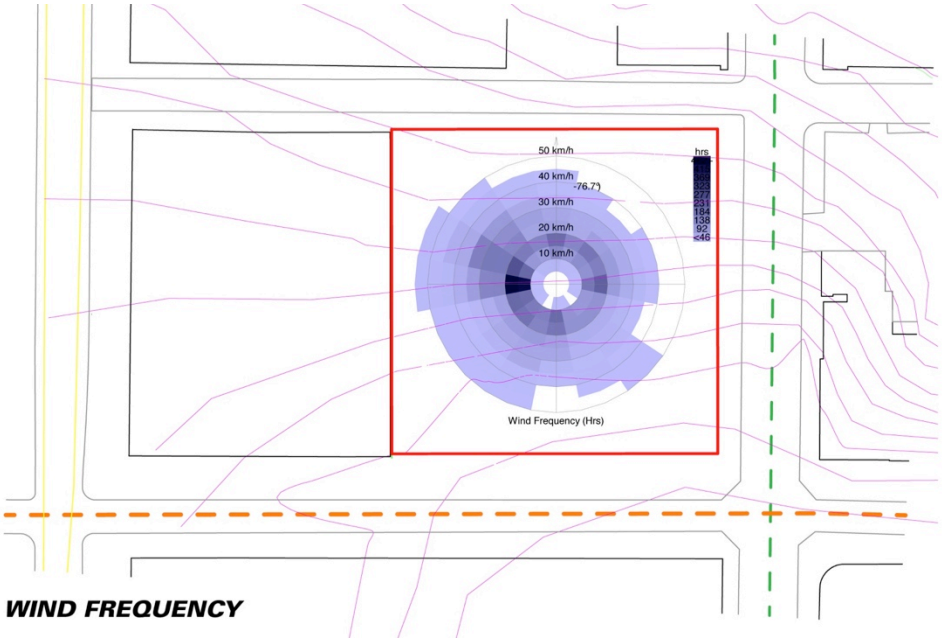


Fig. 22 Average Annual Wind Frequency

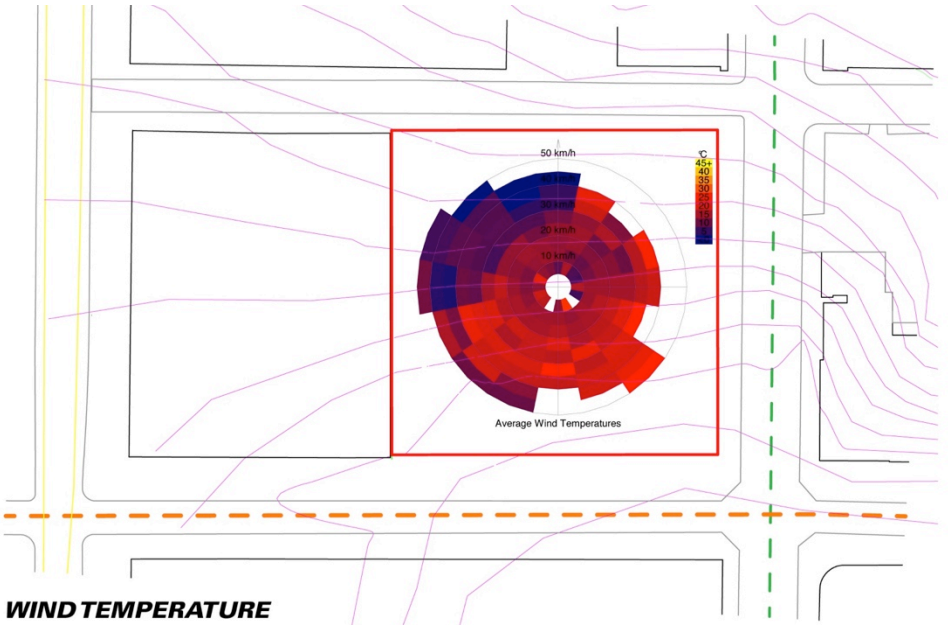


Fig. 23 Average Annual Wind Temperatures

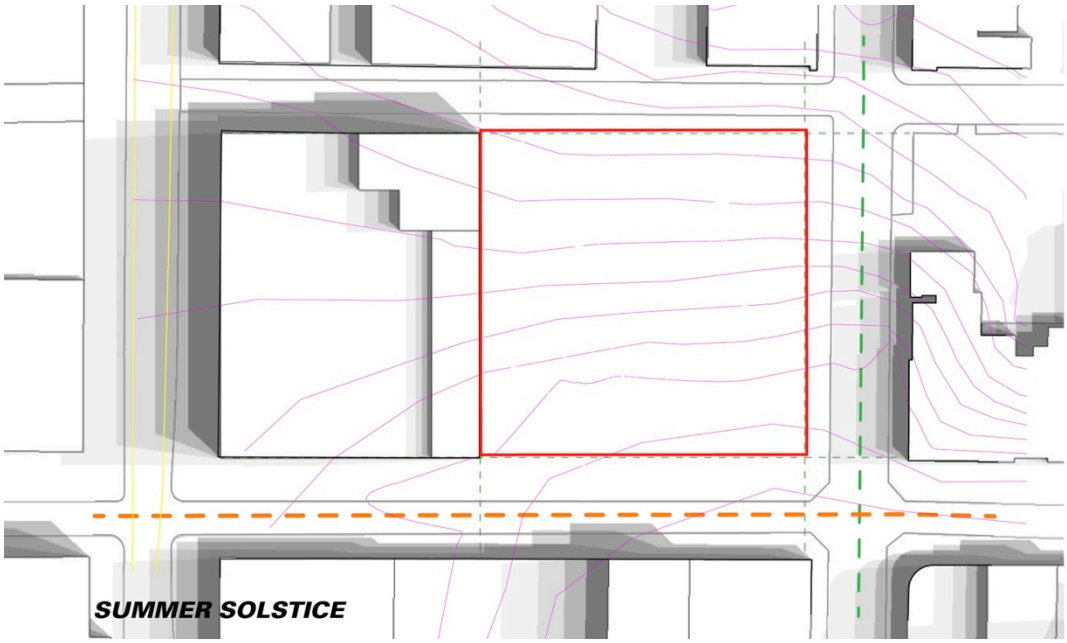


Fig. 24 Summer Solstice Diagram

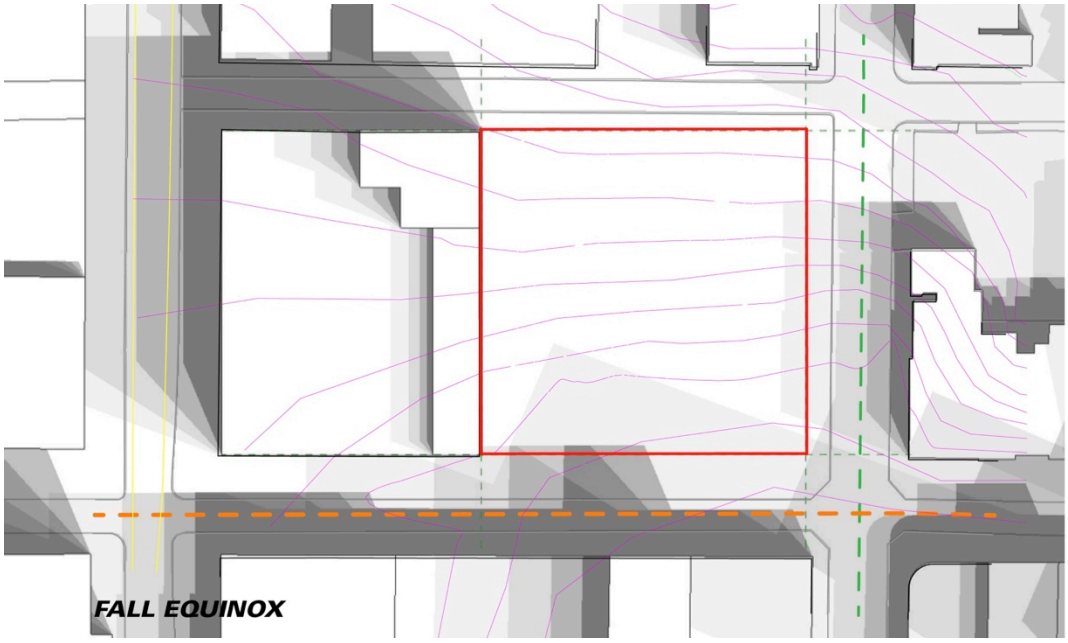


Fig. 25 Fall Equinox Diagram

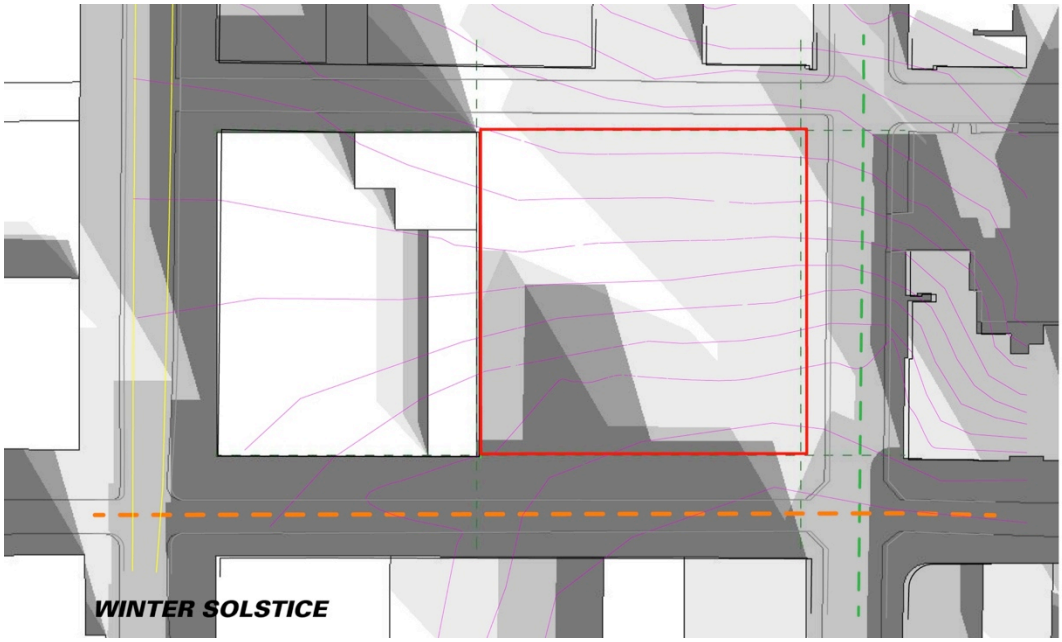


Fig. 26 Winter Solstice Diagram

Chapter 6: Precedent

Rowhouse

The rowhouse has been a part of Baltimore's history ever since the streets were laid out and subdivided. Thomas Poppleton was responsible for this gridiron street pattern that allowed for a hierarchy of rowhouses that catered to the different classes. Main streets consisted of larger rowhouses while alleyways provided room for tiny houses occupied by the immigrants and laborers. This diversity in housing allowed for the rich and poor to live seamlessly in the same neighborhood.

I have studied the rowhouse in three neighborhoods in Baltimore to gather a sense of the aspects that make them a viable type for community building. These neighborhoods include Bolton Hill, Highlandtown, and Poppleton. The attributes of these neighborhoods that make for a viable community are the, clear distinction between public and private, community surveillance, optional movement paths, addition of green space, opportunities for personalization, movement through communal space to increase interaction.

Fig. 27 Rowhouse Study of the Bolton Hill Neighborhood.

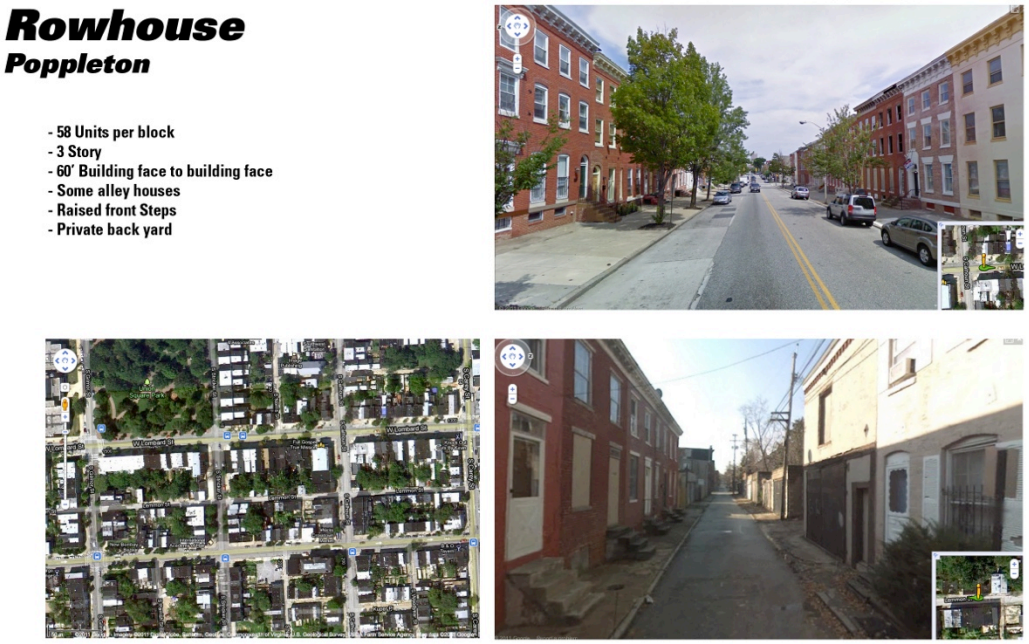


Fig. 28 Rowhouse Study of the Poppleton Neighborhood.

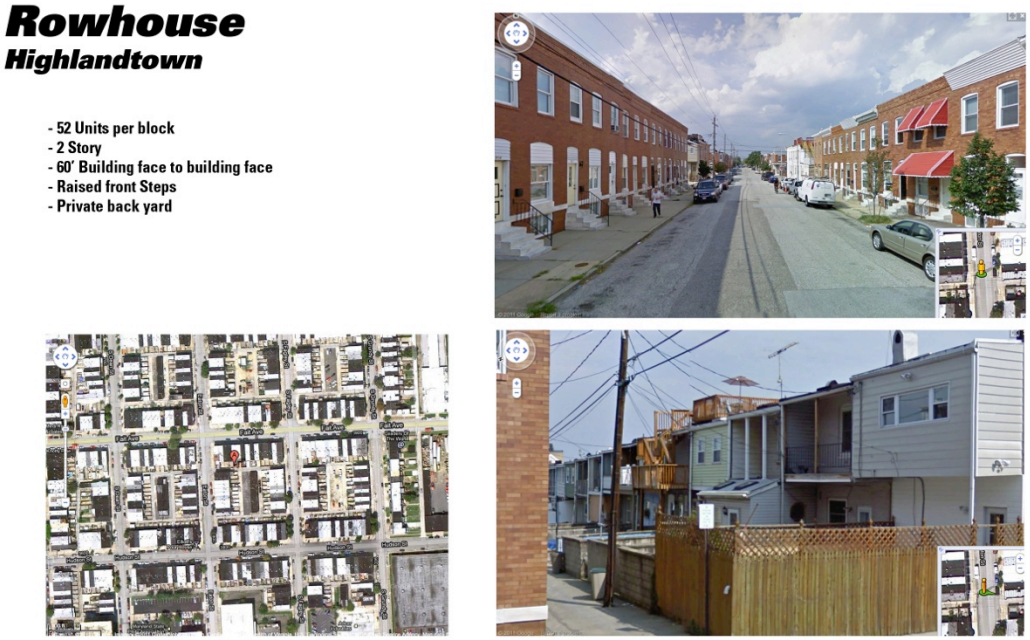


Fig. 29 Rowhouse Study of the Highlandtown Neighborhood.

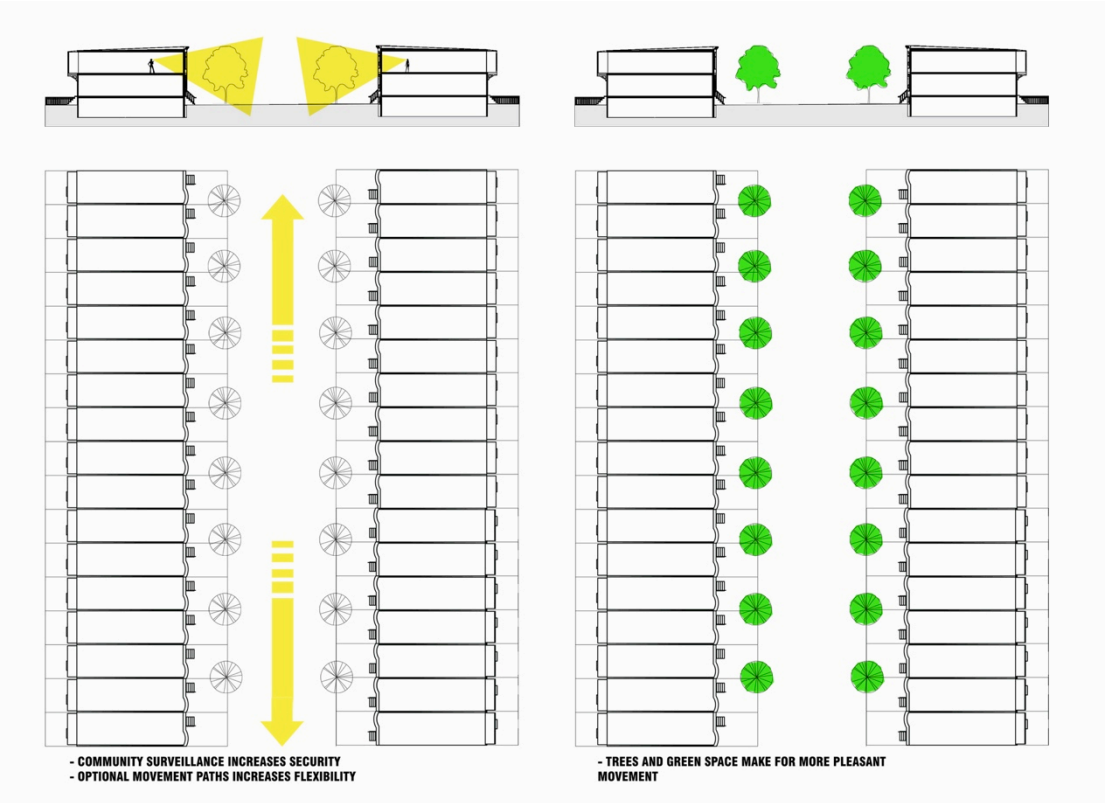


Fig. 30 Rowhouse Diagrams

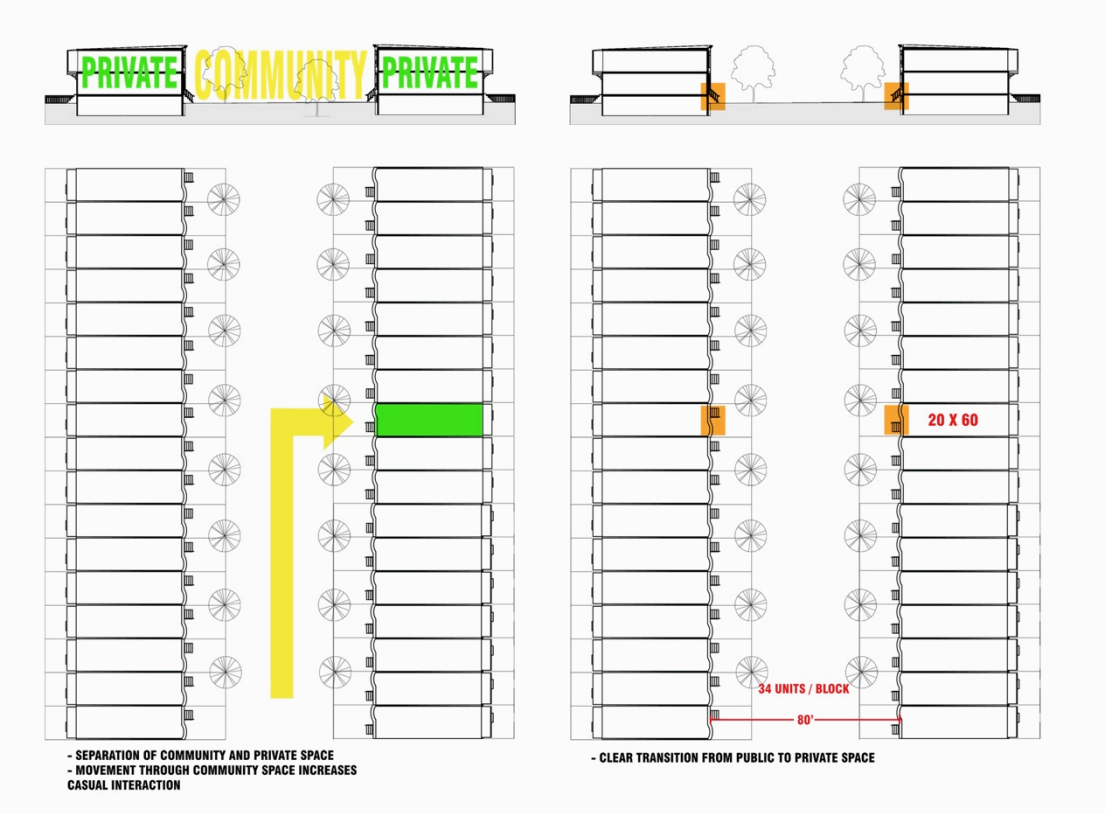


Fig. 31 Rowhouse Diagrams

Courtyard

The contemporary courtyard was studies as a direct relation to the size of site. The 200 ft. x 200 ft. site allows for dwellings of 50 ft. depth to hug the perimeter of the site while allowing for a central courtyard of 100 ft. by 100 ft. The semi private courtyard allows for the residents to collectively share the open space that is otherwise not afforded to their individual unit. This space allows for the casual interaction of residents and invited visitors fostering a sense of shared ownership and therefor helping to build a strong community.

In particular I studies Arango Arquitectos, AART, C.F. Moller, Alexis Lopez and Xavier Diaz, and Domus. I found that circulation is found in cores

that only service a small amount of the units and not all the residents. This arrangement can lead to the isolation of units and weakens the opportunities to casually bump in to your neighbors. The height of the courtyard type is also limited to eight stories to access to light. This limitation only allows for a density of 100 to 200 units depending on the size of the units.

Fig. 32 Courtyard Case Study, Arango Arquitectos

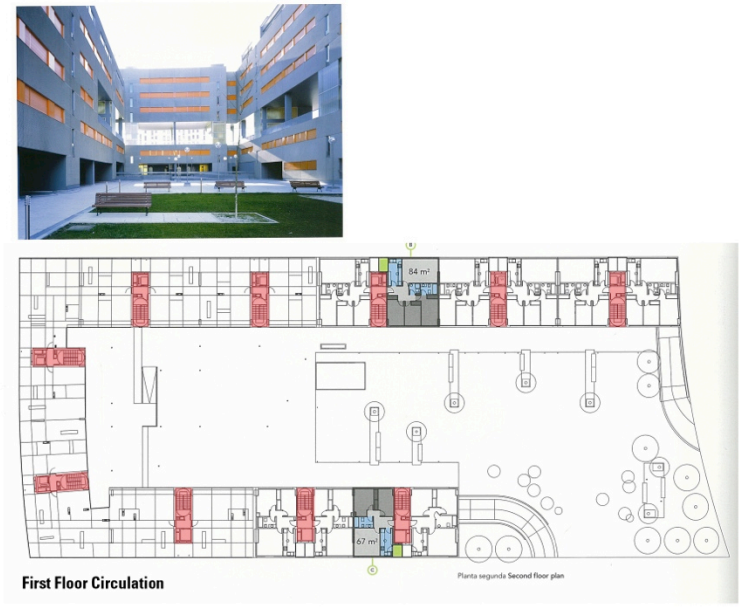


Fig. 33 Courtyard Case Study, Arango Arquitectos

Fig. 34 Courtyard Case Study, AART

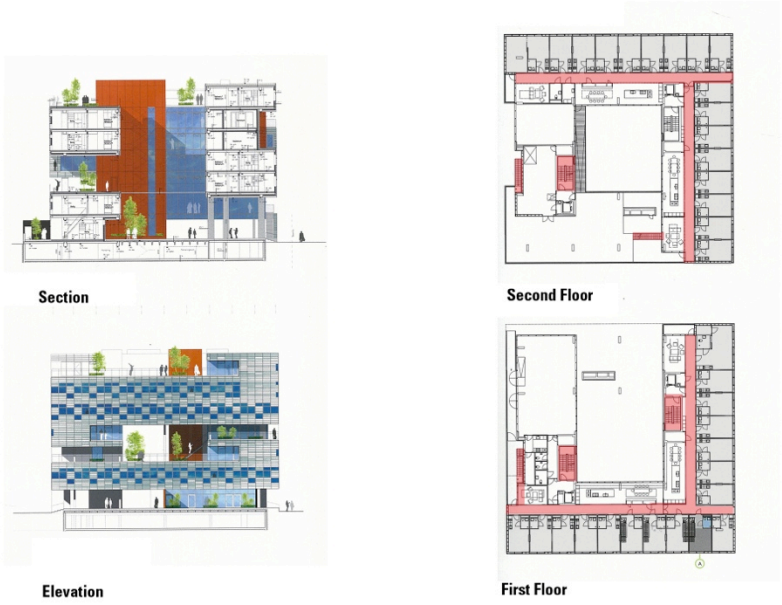


Fig. 35 Courtyard Case Study, AART

Fig. 36 Courtyard Case Study, Alexis Lopez and Xavier Diaz

Fig. 37 Courtyard Case Study, Alexis Lopez and Xavier Diaz

C.F. Moller

Location:
Copenhagan, DK
Completion:
2006
# of Units:
102
Height:
6 Stories
Floor Area:
150,000 sq. ft.


Site Plan


Ground Floor Plan

Fig. 38 Courtyard Case Study, C.F. Moller

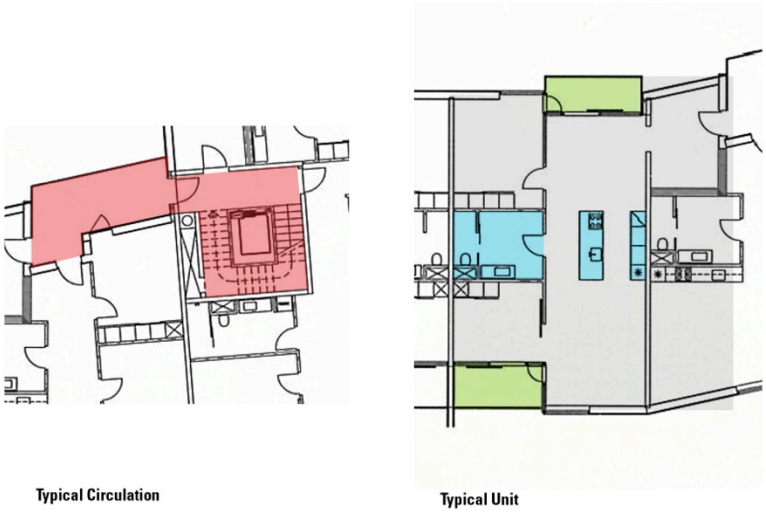


Fig. 39 Courtyard Case Study, C.F. Moller

Fig. 40 Courtyard Case Study, Domus

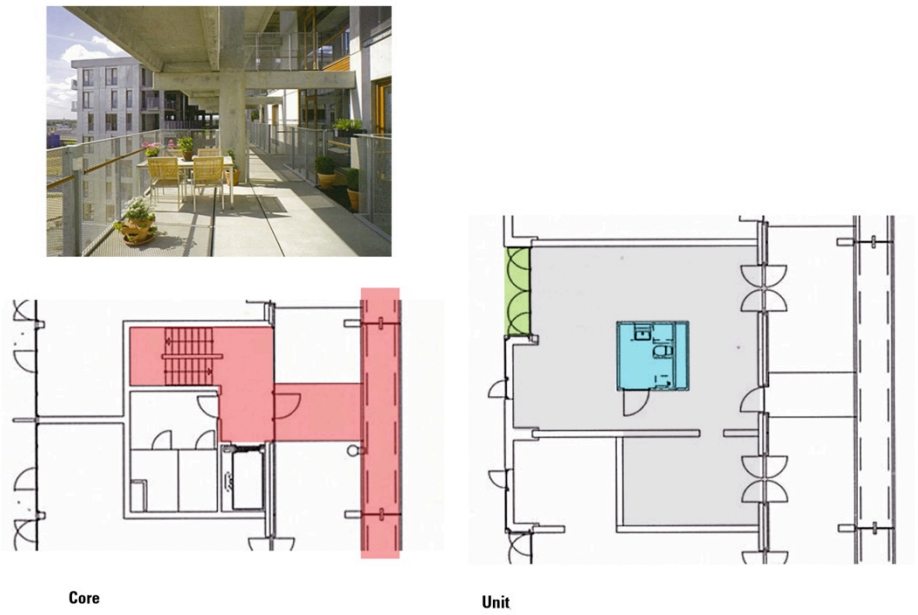


Fig. 41 Courtyard Case Study, Domus

Highrise

To increase densities the high-rise must be considered as viable option. Circulation in the high-rise becomes a dominant feature of the design due to the space needed for elevators and stairs. Not to mention recreation space for children to play. To increase density the building must increase in height but this height increase leads to limitations of human movement. So the question is how to increase density and livability for the contemporary family. This will take more precedent analysis.

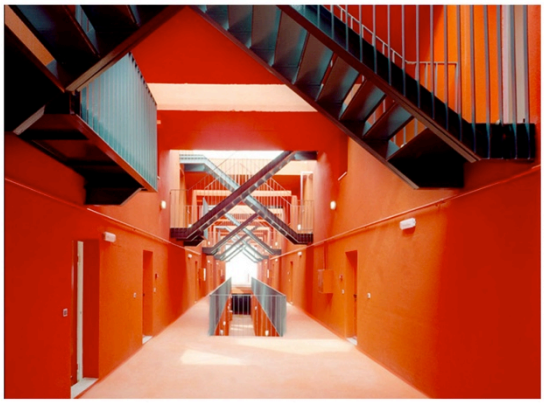


Fig. 42 Highrise Precedent, MVRDV

Fig. 43 Highrise Precedent, NO.MAD

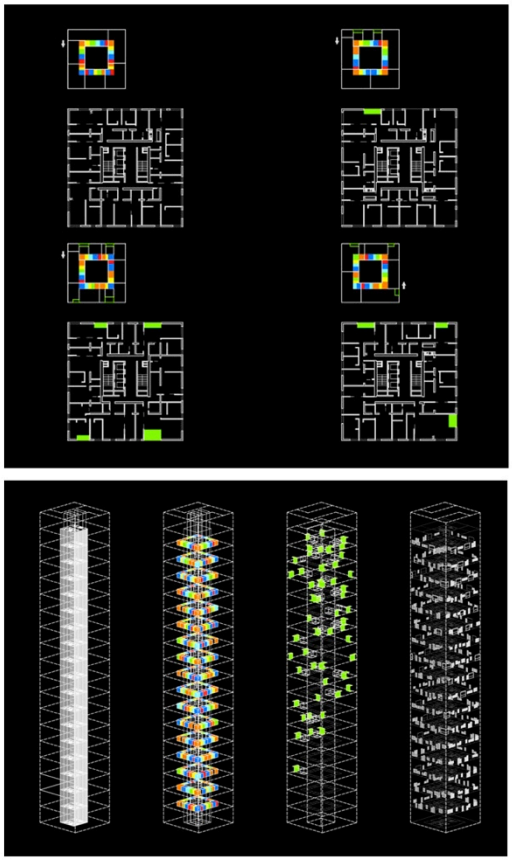


Fig. 44 Highrise Precedent, NO.MAD

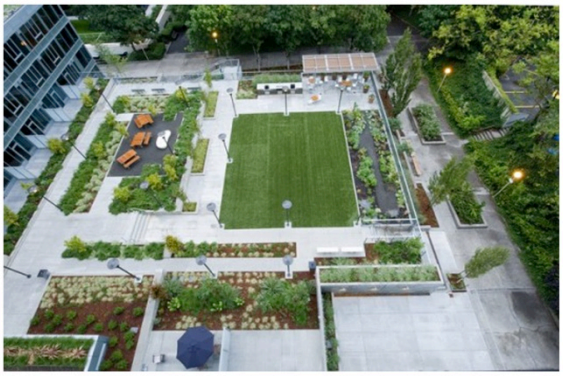


Fig. 45 Highrise Precedent, THA Architects

PROJECT	Location	Completion	Height in Stories	# of Units	Floor Area Sq. ft.	Site Coverage	Density Dwelling per acre	# of units per stair tower	Circulation % of Floor Area	Common Space % of Floor Area
Alexis Lopez, Xavier Diaz	Las Palmas, ES	2005	6	34	58,500	61.30%	246.4	17		
C.F. Moller	Copenhagan,DK	2006	7	102	150,000	51.30%	154.8	25.5		
Arango Arquitectos	Madrid, ES	2005	8	106	134,000	42.70%	92.8	10.6		
AART	Copenhagan,DK	2006	7	107	75,000	45.20%	175.6	26.8		
Domus	Copenhagan,DK	2006	8	115	139,000	17.80%	119.2	28.8		
MVRDV	Madrid, ES	2004	21	157	248,000					

Fig. 46 Precedent Comparison

Chapter 7: Schematic Design

Schematic design has been a process back and fourth between model making at various scales, digital exploration, and theoretical advancement. Beginning with simple form finding massing studies. I then had a basis for exploration and analysis. By ranking these studies on criteria that was generated in my theory or given to me through the climate and contextual analysis I began to narrow in on a design.

By the end this process lead me to the major determinants of the form and allowed me to prioritize the parameters based on their impact. These processes allowed for exploration in several different directions and in the end allowed for the best deign to come forward.

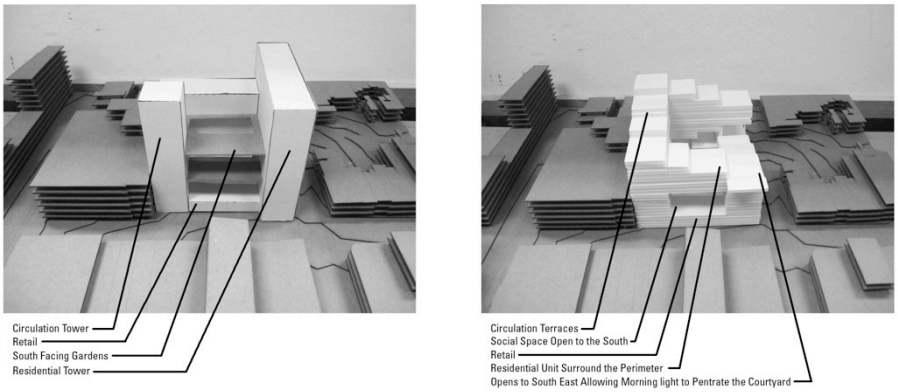


Fig. 47 Massing Studies

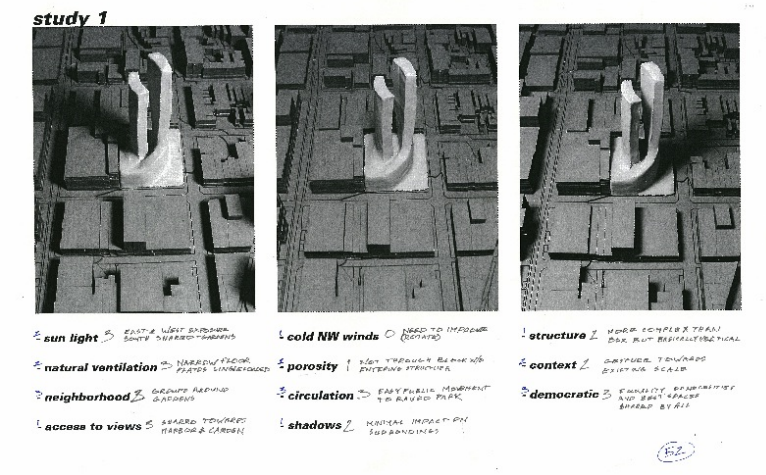


Fig. 48 Massing Study 1

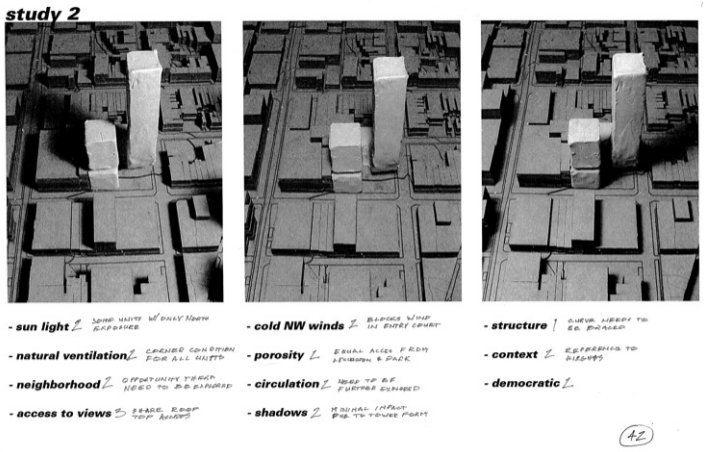


Fig. 49 Massing Study 3

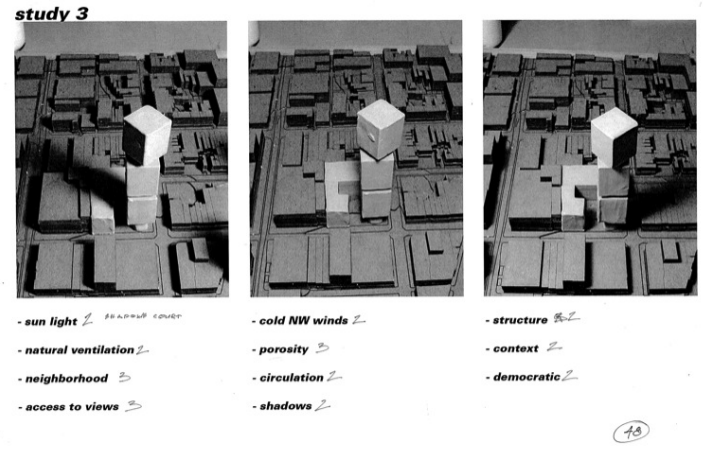


Fig. 50 Massing Study 3

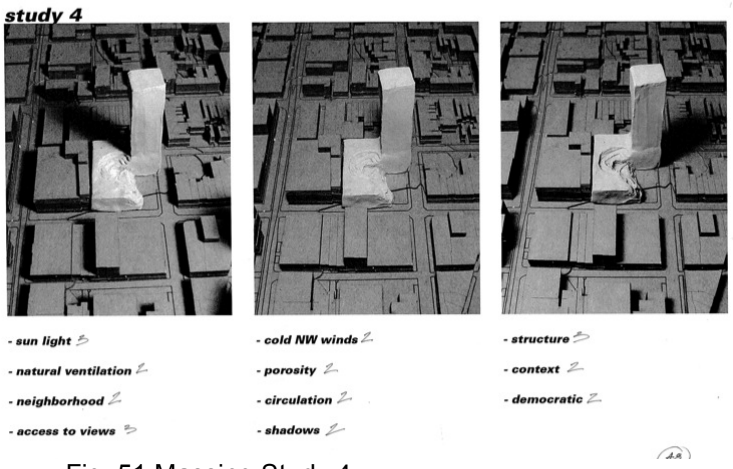


Fig. 51 Massing Study 4

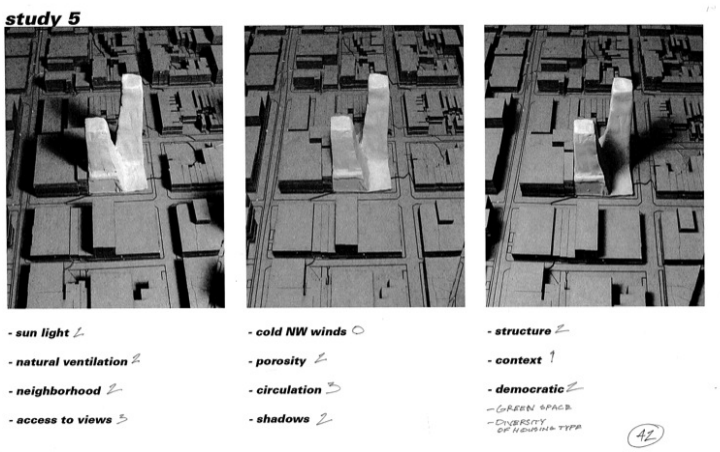


Fig. 52 Massing Study 5

Chapter 8: Program

Future living for urban centers will rely on the program. Its performance will be judged on the usability and satisfaction of the inhabitants. This project first and foremost consists of quality dwelling units and adds program to increase quality of life. For the dwelling unit is only a fraction of our daily lives. The way in which the dwelling interacts with the rest of our lives will determine the future of housing.

This hybrid building focuses on the whole experience of living not simply a quality dwelling unit that is not fully enjoyed until the hall door is closed behind you. The intent is to take an existing structure that we know works, the street, and reinvent those moments in a vertical orientation.

Increasing public access in order to make this a community asset was one of the first parameters. Typically in a high rise building there is limited access for the public, which makes them gated communities. By being more democratic about program location all citizens can benefit from the building assets. With this in place it makes it simpler to arrange the program.

The ground floor (Fig. 55) is dedicated to retail functions drawing the public in. This includes a market with coffee shop and deli facing Lexington St, a café on the corner of Lexington St. and Park Ave., a pub on the northeast corner of Clay St. and Park Ave., and a retailer facing Clay St. These are all tied together by a central atrium that is mean to function as the mixing chamber between programs.

Up on level two (Fig. 56) is where the residents find their mail boxes and management offices. This is also the place where they find their private elevators that take them to their units. The second floor is also the beginning of the office space.

Level three and four is a continuation of the office space as well as the child development center that is an amenity for the residents as well as the general public. This child development center is equip with its own outdoor green space so that the children can have room to play and learn while enjoying the benefits of fresh air and sun shine. All the while being slightly removed from the hustle and bustle of the street life.

Level five contains more office space as well as the beginning of the community workshops. These workshops are intended to be spaces mainly for the residents. The goal is to provide them with spaces that would be comparable to the garage or basement of a single-family home. The space would not be used by any on individual everyday but collectively would be a resource that would benefit all.

Level six and seven (Fig. 57) provide more community workshop space as well as a community gym and public park. This location is ideal for bringing the public vertically into the building. The outdoor park has a nice view along Lexington St., which invites passerby's into the building. Level eight (Fig. 58) begins the residential units. This location removes the residents from the street noise and places them above the context allowing for optimal light and air.

The slim towers are then capped with community programs. The two smaller towers provide community gardens for the residents. This I meant to provide space comparable to the back yard of a single-family home. The east tower is the tallest and provides the best views to the city. This is why this space is reserved for the restaurant and viewing platform that can be used by the whole community. This is the democratic approach were the best views are reserved for everyone.

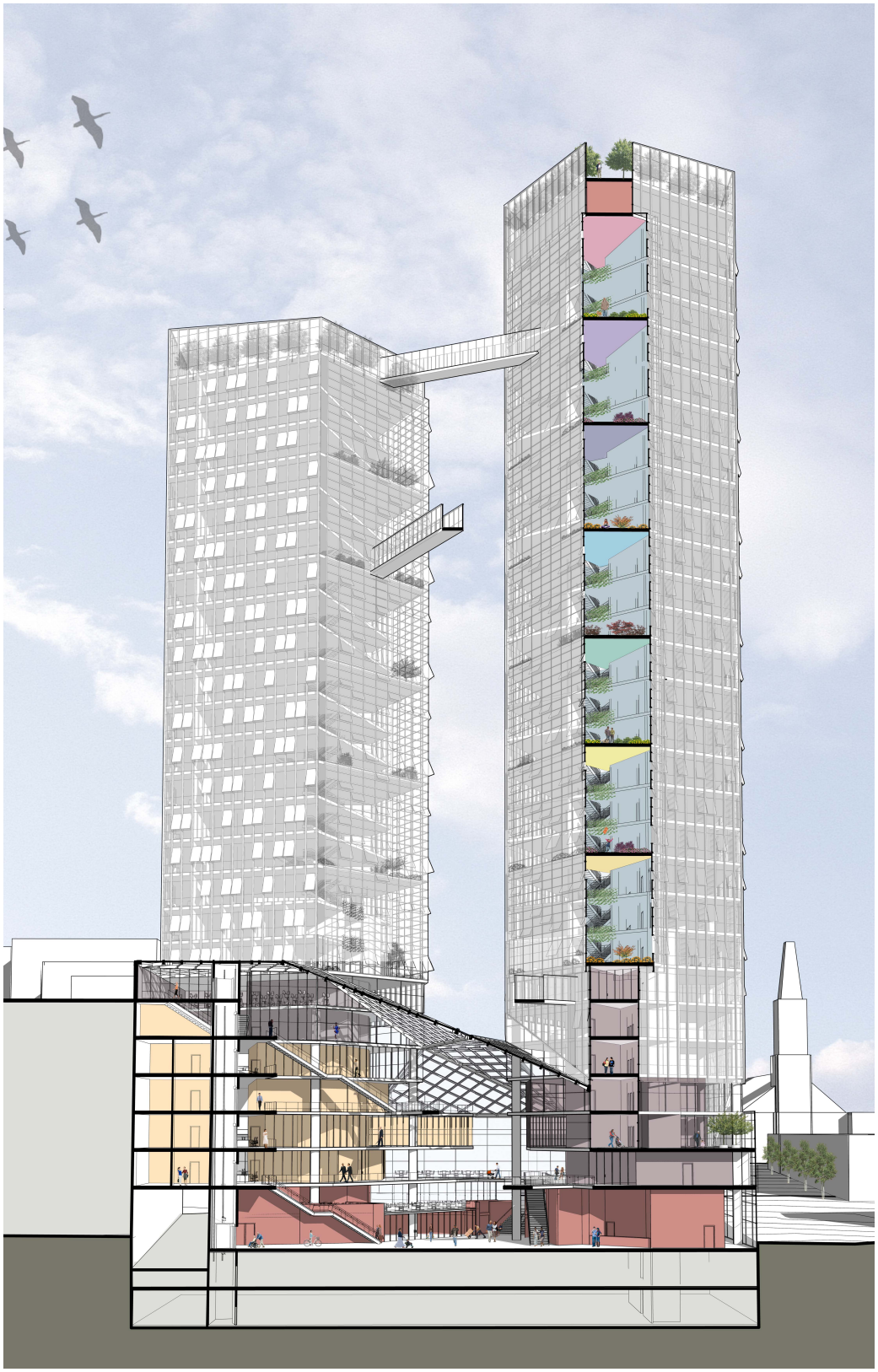


Fig. 53 Section Perspective

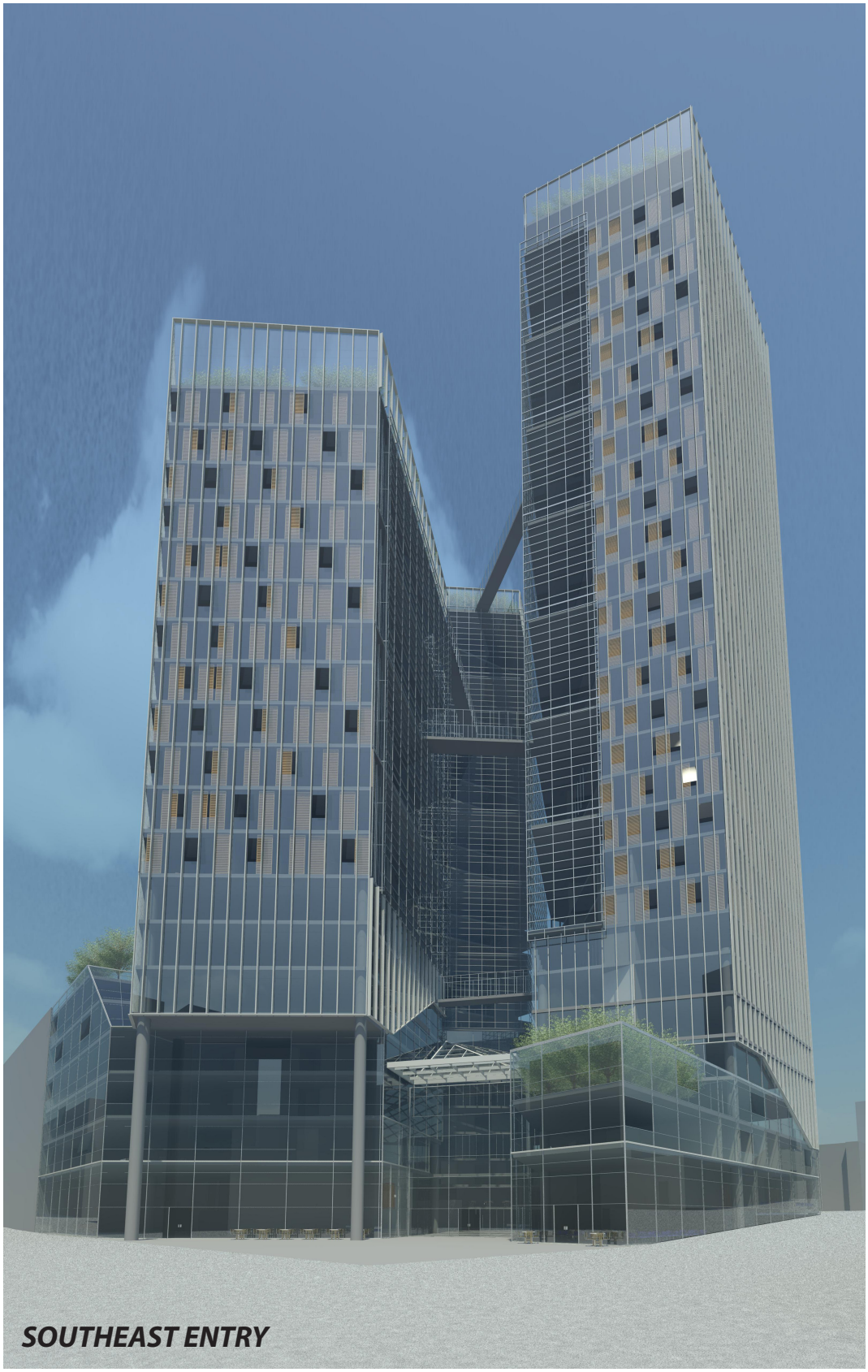


Fig. 54 South East Perspective

Fig. 55 Ground Floor Plan

Fig. 56 Second Floor Plan

Fig. 57 Seventh Floor Plan

Fig. 58 Typical Floor Plan

Fig. 59 South Elevation

Fig. 60 East Elevation

Fig. 61 North Elevation

Fig. 62 Entry Level Perspective

Fig. 63 Second Level Perspective

Fig. 64 Social Garden Perspective

Fig. 65 Social Garden Perspective

Fig. 66 Child Development Center

Fig. 67 One Bedroom Unit

Fig. 68 Two Bedroom Unit

Fig. 69 Three Bedroom Unit

Chapter 9: Conclusion

To density out cities we need to look at vertical opportunities. This configuration does have its challenges but it also has its benefits. While the initial investment may be more monetarily, we need to add the environmental degradation that sprawl has on our land and we need to add human comfort to the equation. The intention of this thesis is to explore the future of cities. By placing more emphasis on the location of resources we can benefit from efficient allocation of resources. Blurring the lines between public and private space will enhance the democracy or our cities lessening the divide between classes.

One thing is clear as we move into the future the population will continue to grow. This growth is mainly happening in cities and we need to plan for this impact. Vertical communities can be the future.

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