ABSTRACT

Title of Document:	[RE]THINKING TALL: Cultivating socio Cultural Trends in a West Chelsea Residential High Rise.
	Lisa Blair Goldsmith, Master of Architecture 2012
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According to the Census Bureau, American society is experiencing a cultural shift in living trends: city living is slowly replacing its suburban counterpart. As a result, there is a growing need for cities to accommodate people of all demographics. Currently, the western-most part of Chelsea located on the lower west side of Manhattan is failing to do this. Since the mid 1990s Chelsea has been a major center of the New York art world; serving as home to hundreds of local art galleries and studios. With the opening of the High Line in 2006 (a successful adaptive re-use project of former rail lines originally built in the 1880s), West Chelsea has experienced an influx of people interested in living in the district. Currently, expensive luxury housing, loft spaces, and converted luxury apartments dominate the West Chelsea housing market. This dearth of housing options has greatly limited people from varying social, cultural and economic backgrounds and circumstances from moving into West Chelsea. This thesis imagines an apartment complex in West Chelsea that offers a variety of compact housing types while fostering a sense of community in order to bring families, singles, and people of all ages, to the vibrant arts community of West Chelsea.

[RE]THINKING TALL: Cultivating Socio-Cultural Trends in a West Chelsea Residential High Rise

By

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The Social and Cultural Shift Towards Cities

According to both Smart Growth analysts and the United States Census Bureau, there is a growing partiality towards city living. This predilection for city living is determined by the preferences of the under 30 Generation Y: the largest age group since the Baby Boomer generation. The reasons behind this shift can be determined by the social implications of the Generation Y childhood experience. According to Nathan Norris, a principal and director of implementation advisory at Placemakers: a planning, coding, marketing and implementation firm, the childhood experience of Generation Y can be placed into four categories; 1) safety to adventure; 2) isolated to connected; 3) inconvenient to convenient; and 4) car dependent to car independent.

The first category: *safety to adventure* addresses the issue of safety in both reality and the media. The majority of Generation Y has grown up in a very safe environment; the suburban cul-de-sac offered a safe place to play with little to no crime. However, despite the lack of crime, the media and growing desire for constant communication, brought news about any and all potential threats to children into everyone's home and gave rise to the 20th century coined term "helicopter mom." Thus, resulting in Generation Y parents heavily monitoring their children. Additionally, the role of the media cannot be emphasized enough. While there was a trend in the 1960s

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towards glorifying suburban lifestyles, the 1990s began to mark the televised interest in urban living by way of shows like *Seinfeld* and *Friends* (Norris). This heavy monitoring coupled with the shifting priority in the media made city living a different and "risky" option and by proxy an alluring juxtaposition to the Generation Y childhood experience.

The second category, *isolated to connected* looks to discuss the social interactions and limitations provided by the suburban-cul-de-sac upbringing. Despite being safe, the suburban cul-de-sac had social limitations. Children had to rely on either liking their next-door neighbor and or people in direct vicinity in order to socialize without being dependent upon a parent or car. Thus, Generation Y has developed a desire to be more connected than previous generations. This can be found in the acceptance of social media and living spaces that are dense, active and urban, i.e. cities.

The third and fourth categories: *inconvenient to convenient* and *car dependent to car independent* both focus on the importance of time and location. In these two categories, it is argued that there is a growing impatience with "wasting time." An example of this can be found when looking at vehicular transportation. The rise in gas prices and dense traffic patterns has increased the cost and amount of time spent in the car making it more difficult to get to a store and or visit a friend. Thus, the inability to get somewhere fast has sparked an interest in local convenience; accessibility via walking or by public transportation (both major features of city living) have become alluring alternatives to the car.

It is important to note that the four aforementioned categories in relation to Generation Y are not the only driving factors that are pushing people towards the city environment. Cities have become far more attractive options for the aging population as well: the reliance on public transportation replaces the individual need for the car and immediate access and or proximity to stores, hospitals, and friends, allows for independence to be prolonged.

One of the most pressing issues facing cities today has to deal with accommodating this growing interest in city dwelling: cities must begin to accommodate people of all demographics. Currently, there are many parts of cities that are failing to do this. The most relevant example for this thesis can be seen in the western most part of Chelsea located between 30th street and 14th street in lower Manhattan.
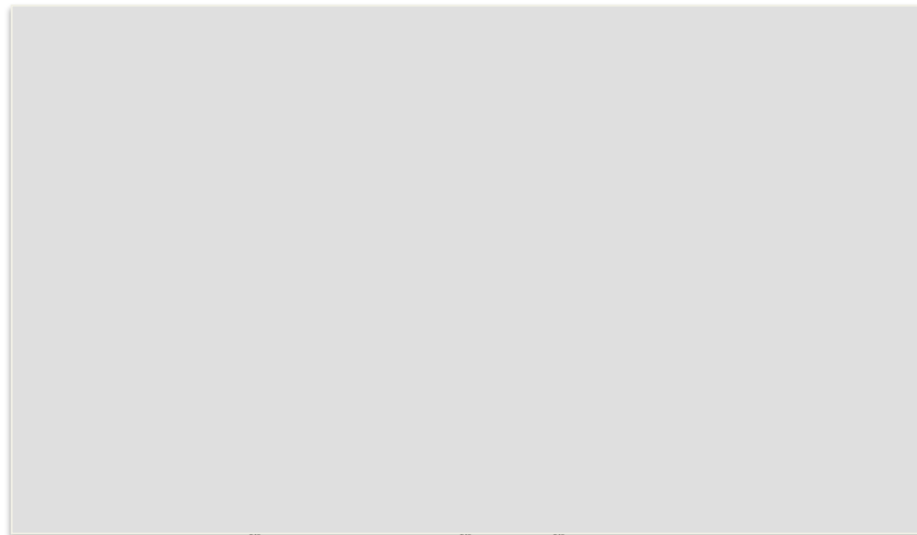
Figure 1: Site map 18th street between 10th and 11th avenue produced by author

Since the mid 1990s Chelsea has been a major center of the New York art world. Serving as home to hundreds of local art galleries and studios, not only has West Chelsea attracted local artists, but it also has a unique cultural identity within the greater urban fabric of Manhattan. Since the groundbreaking of the High Line in 2006 (a successful adaptive re-use project of former rail lines in the form of an elevated park originally built in the 1880s), West Chelsea has experienced an influx of people interested in living in the district. Currently, loft spaces and luxury apartments dominate the West Chelsea housing market. This dearth of housing options has greatly limited people from varying social, cultural and economic circumstances from moving into West Chelsea. The proposed apartment complex is a direct response to this issue. This apartment facility seeks to establish a social environment that fosters a sense of community while offering a variety of housing types in order to bring families, singles, and people of all ages and a variety of incomes, to the vibrant arts community of West Chelsea.

THEORY
On Privacy

> Privacy is the most urgently needed and most critical in the place where people live, be it house, apartment, or any other dwelling. The dwelling is the little environment into which all the stresses and strains of the large world are today intruding, in one-way or another, ever more deeply. To serve the best interests of privacy two of these stresses in particular, traffic and noise must be treated as invaders (Chermayeff).

Issues of noise and traffic are most relevant when designing in a city. Manhattan, often referred to as "the city that never sleeps," falls victim to this problem. How does one create a sense of privacy in a high-rise apartment in a city that innately has more traffic and street noise than any other city in the nation? While there is no one correct answer to this question, certain factors must be identified in order to gain a greater understanding of how noise and traffic impact the urban dwelling. These factors can be divided into four categories: 1) street traffic and noise; 2) noise created by neighbors; 3) noise within the individual dwelling; and 4) the noise of technology.

According to the American Heritage Dictionary, *noise* is defined as a sound that is loud, unpleasant, or unexpected. One could argue that in a city environment, street traffic and noise are synonyms: the more traffic on the streets, the more noise created. Manhattan is one of the most densely populated cities in the nation. As a result, there is a tremendous amount of vehicular and pedestrian traffic that penetrate the city on a daily basis, which adds to the general volume of the streetscape.

Attempting to control this street noise is almost as impossible as identifying a "comfortable" decibel level. For similar to the way in which people like to listen to music at different volumes, people have diverse thresholds of comfort levels when it comes to noise.

While the aforementioned facts seem to doom Manhattan as a city committed to a cacophonous streetscape, those who are either from the city or move to the city can experience an element of noise acclimation. For example, if an individual were to move to Manhattan from Westchester, New York (an environment with notably less traffic and quiet nights), Manhattan may initially appear very noisy: whether it be an ambulance blaring its horn at 4am, or the local ice cream truck's high-pitched and repetitive music at 3pm, the city is always moving and always loud. However, as previously suggested, noise is something one "can get used to." Over time, what was once aurally jarring to the new city dweller will dissipate into the background.

As someone who grew up in Manhattan I experienced this acclimation process every time I left the city for extended periods of time. Between the ages of 10-16 I attended an 8-week summer camp in New Hampshire. Every time I returned to Manhattan it took approximately one week before the everyday "hustle and bustle" of the city didn't impact my sleeping patterns. Thus, while there remain different thresholds of noise tolerance, the ability to adapt to an environment helps tremendously reduce noise as an issue.

In addition to street noise, neighbor proximity can also pose a challenge. Attempting to maintain a sense of autonomy within the home

without disrupting those next to the home presents a very pertinent challenge within an urban context. There is often a direct physical connection between homes, which not only increases the risk of noise invasion between neighbors, but also may potentially impact the way in which the homeowners experience and use their dwelling. To add to this complexity is the individual unit itself: there are functions within the dwelling that either promote a more public or private experience. Thus, identifying different ways of aurally separating a more public room, for example the living room, from a bedchamber, can influence the design layout of the home. To push this notion even further, the type of dwelling also plays a role in thinking about how to separate different spaces. For example, for a dwelling designed for a family with children there may be a desire to separate the bedchambers of the children from the parents in order to provide the parents with a private space dedicated solely to them and separated from the potentially "noisy" attributes of their children.

The final category related to privacy is the role of technology and how its advancements have penetrated the dwelling.

> The form of the human habitat is not designed to accommodate an ever-growing cacophony. Acoustically the habitat is obsolete. The sophisticated organization of the printed TV circuit, for example, is totally unmatched by the organization of the dwelling that contains it (Chermayeff).

The tidal wave of radio and television has socially transformed the way people live. Since the early creation of phonographs and telephones, the outside world has been a growing presence in the innermost realms of the

home. Additionally, the dwelling used to serve as a vantage point from which people used to look out into the world before entering it. Now, the dwelling has become the stage for the world to enter. The dwelling has been transformed by electronics. Instead of being a place of refuge, it has become a stage upon which anything can be watched and enjoyed. Thus, attempting to reclaim a sense of refuge in an environment that seems to be promoting a constant stream of knowledge may serve to suggest that certain design aspects of privacy may be challenged by this internal presence of an external world.
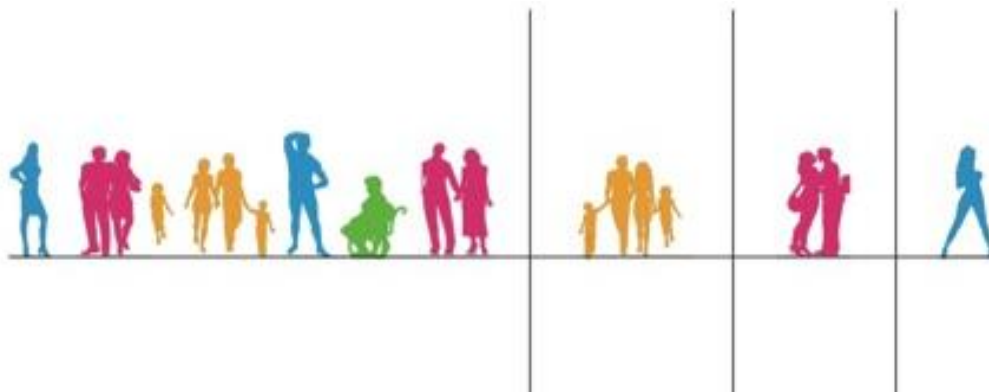
Figure 2: Privacy Diagram produced by author

The Phenomenology of Home

Figure 3: Vincent Van Gogh Room in Arles 1888.

Figure 4: Edward Hopper: Eleven AM 1926.

We have private and social personalities and home is the realm of the former. Home is the place where we hide our secrets and express our private selves. Home is our place of resting and dreaming in safety. More precisely, the role of home as delineator or mediator between the realms of public and private, the transparency of the home as it were, varies greatly. There are ways of life in which home has become a public showcase and the public gaze penetrates the secrecy of home. (Pallasmaa).

The phenomenology behind the meaning of home has been discussed and analyzed by many architects and theoreticians. In Juhani Pallasmaa's "Identity, Intimacy and Domicile: notes on the phenomenology of home," he argues that architects are concerned with designing dwellings as architectural manifestations of space, structure and order, seemingly unable to touch upon the emotional and diffuse aspect of the home. By making this assertion Pallasmaa raises two very important questions: the first being can the *home* be an architectural expression? And the second: what roles do psychology; psychoanalysis and sociology play in the manifestation and the meaning of *home*?

Architecture has long examined the different ways in which one can spatially choreograph housing. However, despite this strong foundation in exploration, there is a clear distinction in semantics. While the words *house* and *dwelling* can be interchangeable, they are the artifacts that create a shelter for the *home*; as the word *home* holds tremendous emotional significance. This significance can be found in modern phrases like "there's no place like home", "home is where the heart is," and "make yourself at home." These commonplace phrases showcase that *home* is not an object or a building but rather a multifaceted condition that merges memories, images, desires, fears, past and present together (thus engaging the psychic territory of the mind). Additionally, the *home* is a set of rituals; personal routines and habits of everyday life that permeate its identity. Pallasmaa defines *home* as, "an expression of personality of family and their very unique patterns of life. Consequently, the essence of home is closer to life itself than to artifact" (Pallasmaa). Thus by accepting this definition of *home*, it becomes clear that the architect cannot design the *home.* Rather, the architect can design a space that allows its inhabitants to express their own individual personalities and patterns of life.

Pallasmaa also argues that the home is comprised of three types of mental and or symbolic elements: the unconscious bio-cultural level (entry, hearth), the inhabitant's personal life and identity (memorabilia, inherited objects of the family) and social symbols intended to give certain images and messages to outsiders (signs of wealth, education, and social identity). This

description becomes particularly important when analyzing the significance of the *home* in an urban high-rise context, as the entry sequence and ability to showcase signs of wealth take on a different identity.

On Community: a personal reflection

> Let us go now to the specimen problem: the attachment of a group of dwellings to the city. By selecting this problem we are involved both with the anatomy of dwellings: the way the houses within the city should stand in relation to one another and to the whole-the way two components of an urban form might hang together (Chermayeff).

The definition of community is a social unit larger than a household that shares common values and has social cohesion. In Manhattan, a city known for being a "cultural melting pot", there is both a horizontal and vertical community. As someone who grew up in Manhattan and had direct experience with both communities, the horizontal community is much richer than its vertical counterpart.

The horizontal community is an establishment of an inner neighborhood within the greater context of Manhattan. This neighborhood usually lies within a quarter mile radius of the apartment building. In reference to my experience, my family had relationships with employees at our local grocery store, the dry cleaners, nearby restaurants, the movie rental store, and the pharmacy. It was an atmosphere where everyone was addressed by his or her first name and there was a sense of loyalty and security.

At the age of 27, I have lived in four different apartments in Manhattan. The first on 108th street and Broadway, the second on 86th street and York Avenue, the third on 98th street and West End Avenue and the fourth on 56th street between 8th and 9th Avenue. In each of the four locations, the vertical

community was a ghost when compared to its horizontal community. Not only was it easier and faster to establish relationships with nearby stores but aside from taking the occasional elevator ride with several other homeowners, my engagement with my neighbors was minimal.

One distinct memory of my childhood centers on Halloween. Every year, most homeowners attended a Halloween party in the lobby of my apartment building. After about an hour of festive celebration, all participating children would make their way to the top of the apartment complex and "trick or treat" their way back down to the lobby. Older residents would either participate in the "trick or treating" with their children or they would decorate their apartments (sometimes in the form of a haunted house) to enhance the "trick or treat" experience. It was one of my favorite experiences growing up as a child in Manhattan. However looking back, this was the only community-based event, it occurred annually, and after its completion, everyone went back to the way things were before: strangers living in the same building. I always found this transition odd and slightly uncomfortable and found myself wishing for more activities like the Halloween celebration.

Vertical Community

What causes this absence of vertical community? Two main contributors are: the circulation systems in high-rise apartment buildings and the lack of common spaces. Pending on the size of the apartment building, the number of elevators will vary. Since the main interaction between residents in a vertical environment currently revolves around circulation systems, more elevators equal less exposure to one's neighbors. Additionally, some elevator systems skip floors in order to expedite travel time. Thus, people who live on odd floor numbers may only associate with their neighbors who also live on odd floors only further limiting residential interaction. Despite the occasional laundry room and gym facility, there are little to no common spaces provided within Manhattan apartment complexes. In order to increase the livability of a dense environment one needs to identify different means of promoting residential interaction. Thus, opportunities to gather and hold community based programs and or meetings is restricted by a lack of space.

The High-Rise

The aforementioned themes of privacy, *home,* and community become even more complex when thinking about their positions in a high-rise apartment complex. By nature, ones privacy will be far more restricted than if one were to live in a stand-alone home in the suburbs simply because people reside above, below, and on either side of one another. The meaning of

home also becomes more complex. Certain ingrained notions about the home and its social significance take on a different identity: everyone living in the apartment complex shares the same entry sequence and experience of approach to the building. Furthermore, the individual entry experience into the unit tends to be homogenized; each person usually shares the exact same door. It is not until one enters the unit that individual expression is present. Thus the social status of individuals, which is traditionally depicted by the size, shape and ornament of the house, is also no longer applicable to the high-rise. Rather, location and the apartment building itself serve as the overarching embodiment of one's social status.

Chermayeff's six domains of urbanity prescribed in his book "Community and Privacy" will help begin the process of evaluating how to establish appropriate common spaces while still maintaining a sense of privacy in a high-rise apartment complex. This is a crucial balance, for the urban realms for community and privacy fall into six domains: 1) *Urban-Public-* places and facilities in public ownership; 2) *Urban-Semi-Public-* the special areas of public use under government and institutional controls (city halls, courts, public schools, post office, hospitals, parking lots, theaters); 3) *Group-Public-* the meeting ground between public services and utilities and private property requiring joint access and responsibility (places requiring mail delivery, garbage collection, utilities control, and emergency rescue devices); 4) *Group-Private-* various secondary areas under control of management acting on behalf of private or public interest for the benefit of tenants or other

legal occupants (reception, circulation, service spaces, community gardens, playgrounds, laundries, and storage); 5) *Family- Private*- the spaces within the private domain controlled by a single family devoted to communal family activities (eating, entertainment, hygiene, and maintenance); and 6) *Individual-Private*- the "room of one's own," the innermost sanctum to which individuals may withdraw from their family.

Of the six domains, *Group-Private*, *Family-Private* and *Individual Private* are of the utmost importance. Of these three, *Group-Private* is the realm in which a balance between both private and more community based domains can be achieved. Instituting programs such as community garden spaces, a gym, community pool, a daycare center, library, gallery space, and re-thinking typical high-rise circulation cores will enhance the opportunities for neighborly interaction. Furthermore, designing a multitude of compact unit types will attract families, singles, couples, and the elderly and as a result, add an element of diversity to the vertical context.

Bioclimatic Responsibility of the High Rise

The significance of bioclimatic high-rise design for Manhattan holds tremendous significance. With the creation of the Urban Green Council, the New York Chapter of the U.S. Green Building Council (USGBC) in 2000, the importance and emphasis on sustainable building in New York City has become a priority. In July 2008, Mayor Bloomberg challenged the Urban Green Council to identify impediments to green building in New York City

codes, and recommend cost-effective code enhancements or new requirements. This challenge was accepted by the Urban Green Council and in 2010, the Urban Green Council produced their first report analyzing and proposing new sustainable solutions. While this was a good first step in initiating changes to high-rise design there is still much to be done identifying environmentally responsible ways to design high-rises.

According to Ken Yeang, "although bioclimatic principles are relatively well advanced for low-and medium-rise buildings, there has yet to be adequate attention and research directed at tall buildings" (Yeang). This lack of principles has made traditional building types insufficient precedents for high-rise buildings, as they cannot compare in both scale and bulk. As a result, determining different ways in which a tall building can take advantage of the meteorological data of its location serves as the starting point for high-rise bioclimatic design. Some of these advantages are: identifying the optimal locations for circulation cores, establishing curtain wall systems at the Northern and Southern faces of the building in order to improve ventilation and energy collection, establishing green systems by incorporating elements such as solar sky courts, environmentally interactive walls, recessed sun spaces, vertical landscaping, insulation walls, water spray wall, and solar collecting walls.

History

Figure 5: Commissioner's Plan: http://gvshp.org
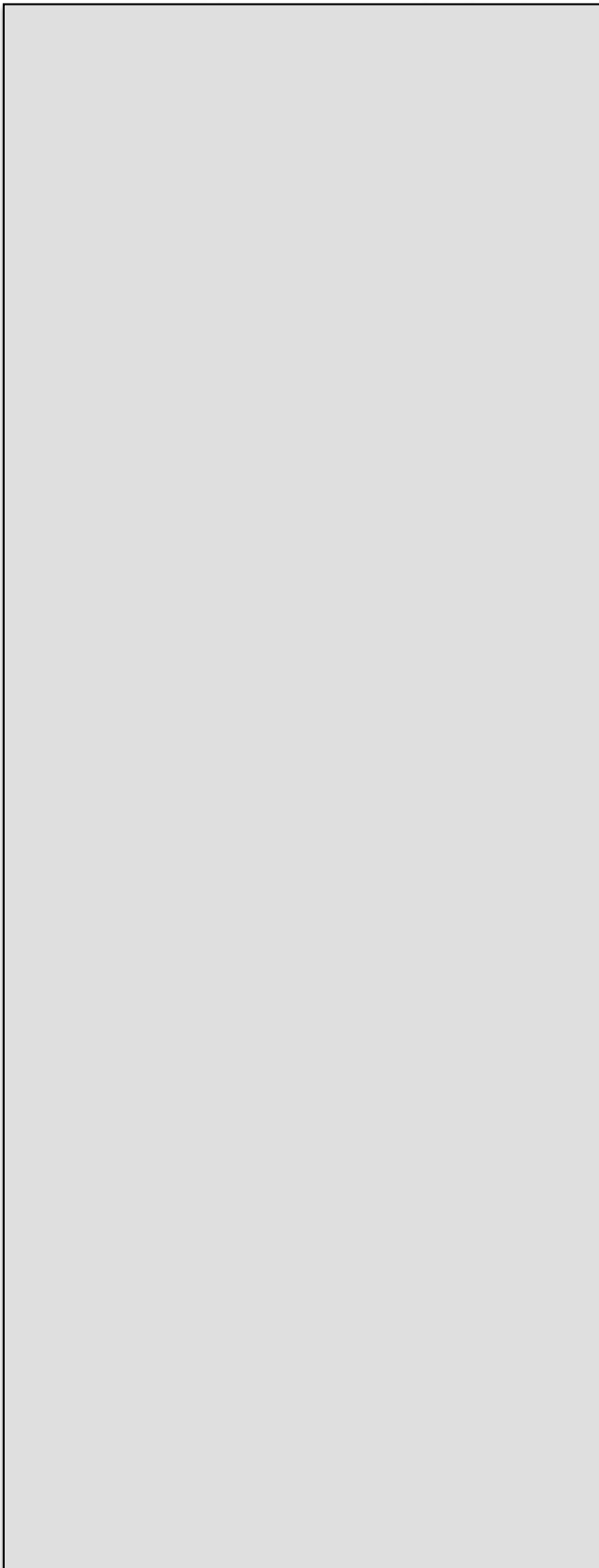
Manhattan is the most densely populated of the five boroughs of New York City. Manhattan is an island located at the mouth of the Hudson River. The borough and county consist of Manhattan Island, Roosevelt Island, Randall's Island, Wards Island, Governors Island, Liberty Island, and part of Ellis Island, Mill Rock, and U Thant Island as well as Marble Hill and a small portion of the Bronx. The original city of New York began at the southern end of Manhattan, which then expanded northward. Between 1874 and 1898 land was added from surrounding counties.

The bulk of Manhattan was originally farmland. In the 18th century Manhattan was developed for residences however there was no governing law that established a street layout. Thus, blocks were divided into individual lots, typically 25 feet wide by 100 feet deep that was then either sold or leased to owners or developers who

18

typically built single-family row houses. However, overtime, developers started to purchase more than one lot at a time and built tenements in order to accommodate the growing population in Manhattan.

In 1811, a plan was introduced to Manhattan. The intent of the Commissioner's Plan was to improve the quality of life in Manhattan by organizing the city layout to achieve optimal access to light and air. Additionally, the New York State Legislature originated the Plan of 1811 in order to provide orderly development and sale of land between 14th street and Washington Heights. The proposed plan identified 12 main north-south avenues with numerous cross streets with Broadway emerging as the only angular avenue penetrating the grid. As previously stated, the intent of the plan was to establish a free and abundant circulation of air in order to get rid of disease in the city. Each avenue was to be one hundred feet wide. Avenues located in the center of the island were to be separated by 922 feet while the avenues along the waterfront were slightly closer. The reason for this stemmed from the understanding that the street frontage near the piers would have more value than the avenues inland because of the water views. The streets running east-west were determined to be 60 feet wide with approximately 200 feet between each pair of streets. While the street dimensions were quite rigid, the block width varied. For example the distance between First and Second Avenue on the east side of Manhattan is roughly 620feet however the blocks between Third and Sixth Avenues range from 800-920feet.

The 1811 grid was originally criticized for its rigidity. Urban planners who favored cities like Rome and Athens believed that the strict grid ruined the elegant ambiance of the free-flowing city. Despite this criticism, the grid proved to be an incredibly useful tool in addressing issues of health by providing all blocks with equal access to light and air that was so desperately needed in Manhattan at the time.
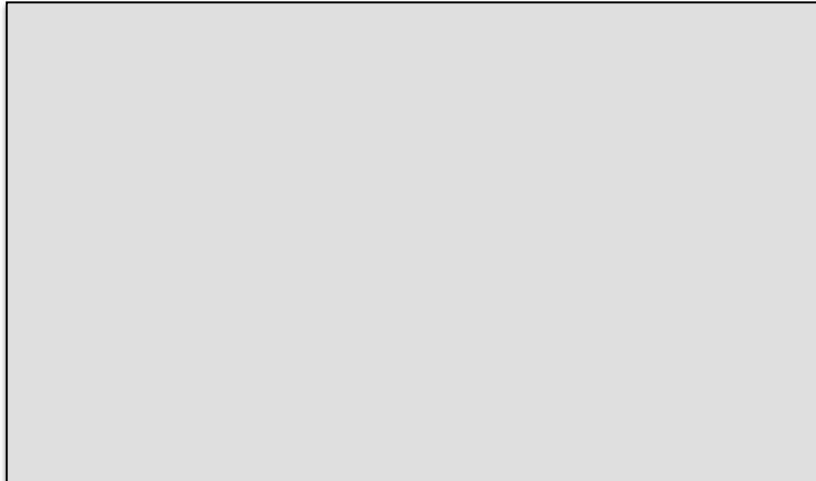
Context

Figure 6: Axon of West Chelsea from: www.nyc.gov.

Chelsea is a neighborhood on the West Side of the borough of Manhattan in New York City. The boundary of the district is 14th street to the south and 30th street to the north. The western boundary lies between the Avenue of Americas (Sixth Avenue) and Seventh Avenue to the east and the Hudson River to the west. Chelsea contains the Chelsea Historic District, which was designated by the New York City Landmarks Preservation Commission in 1970 and 1981, and added to the National Register of Historic

Places in 1977. The landmark was expanded in 1982 to include neighboring blocks that held particularly significant examples of period architecture.

The neighborhood is primarily residential with a mixture of tenements, city housing projects, and townhouses. West Chelsea has become a center of the New York contemporary art world with over 370 art galleries and studio spaces located in both rehabilitated warehouses and new buildings. The retail stores in Chelsea reflect the ethnic and social diversity of the area's population: ethnic restaurants, delis, and local clothing boutiques make up the urban fabric of West Chelsea.
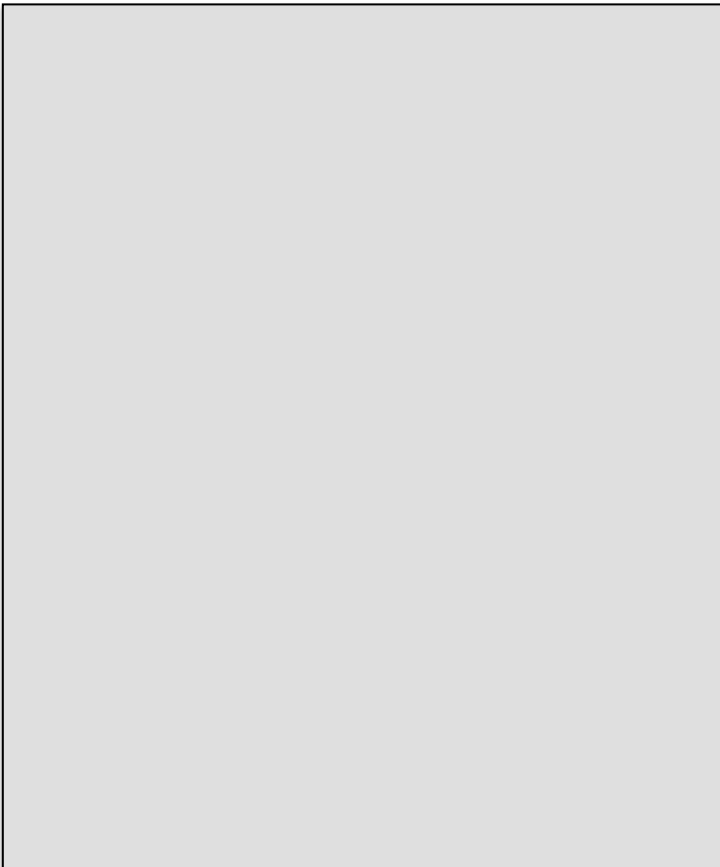

Figure 7: Zoning map of West Chelsea Image from: www.nyc.gov

There are a number of different private and public schools located in West Chelsea as well as arts based post-secondary education schools. The Fashion Institute of Technology: a specialized SUNY unit that serves as a training ground for the city's fashion and design industries is located on west 27th street and 8th avenue as well as the School of Visual Arts, an independent college located on West 21st street and 7th Avenue.

Chelsea is home to a series of notable museums: the Rubin Museum of Art (a focus on Himalayan art), the Chelsea

Figure 8: figure ground diagram produced by author

Figure 9: green space diagram produced by author

Figure 10: Industrial diagram produced by author

Figure 11: Institutional diagram produced by author

Art Museum, the Graffiti Research Lab and New York Live Arts (a producing and presenting organization of dance and other movement-based arts). In addition to these museums West Chelsea is home to many performance venues. Of the most notable are the Joyce Theater, one of the premier modern dance theaters and The Kitchen, a center for cutting-edge theatrical and visual arts.

Other important landmarks of interest are 1) Chelsea Piers: the location of Manhattan's luxury cruise terminal as well as an entertainment and sports complex, 2) Chelsea Market: located in an old restored building this marketplace hosts a variety of bakeries, Italian grocers, fish markets, fruit and wine. 3) The High Line: an elevated rail line that was the successor to the street-level freight line originally build in 1847 which was elevated in the 1930s to only then fall out of use. Originally planned to be torn down the rail lines have been

Figure 12: Mixed Use diagram produced by author

converted to an elevated urban park. With the development of the High Line there has been a change in zoning regulations, which has led to a new boom in construction along the high line.

Climate

New York City weather can vary from day to day. Below is a chart with average temperatures and rainfall by month:

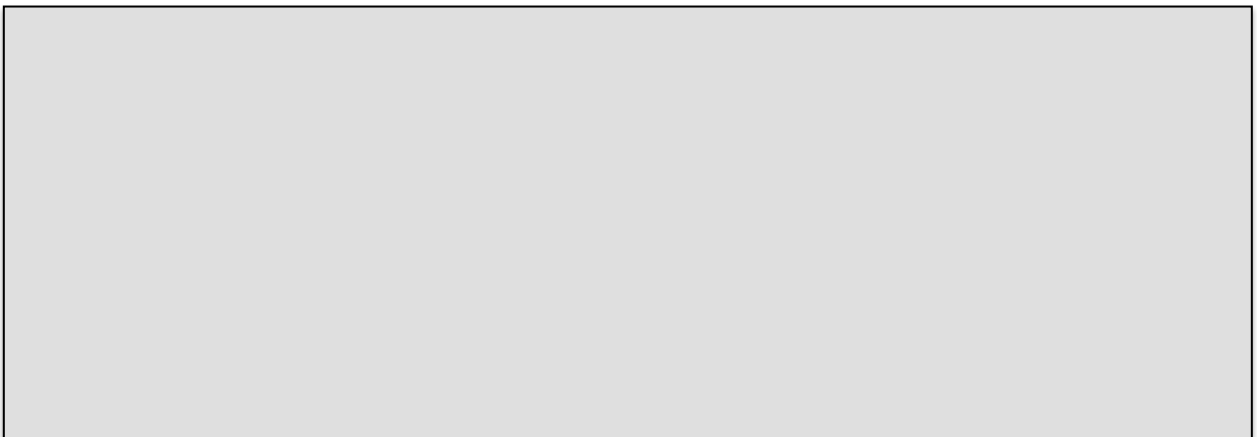Figure 13: Residential diagram produced by author

Figure 14: average NYC temperatures: www.wikipedia.com

Manhattan experiences all four seasons. The summer can be extremely hot while the winters can be extremely cold; the Fall and Spring seasons are far more temperate in nature.

The prevailing winds are mainly received from the West in New York State. During the warmer months the wind emerges from the southwest while in the cooler months the wind has a stronger northwest component.

Figure 15: Manhattan wind Map: www.wikipedia.com

Manhattan is oriented roughly 29° off true North. Thus making the city grid predominately northeast facing.
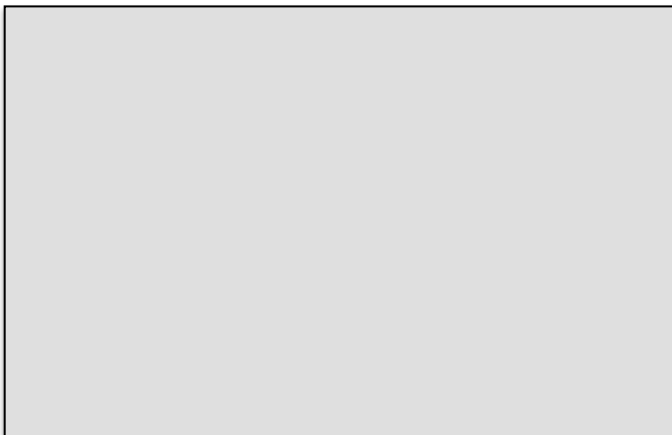
Understanding the Site

The site chosen for this thesis is located on 18th street between 10th and 11th avenue in West Chelsea. Currently, the site is a vacant parking lot. Immediately surrounding the site is a variety of public transportation

Figure 16: Aerial view of site: www.bing.com/maps

Figure 17: Public transportation diagram produced by author

Figure 18: Site image 1 taken by author

Figure 19: Site image 2 taken by author

Figure 20: Site image 3 taken by author

Figure 21: Site image 4 taken by author

stops: bus' 11, 14D and 20D all stop within 1-2 blocks of the site as well as four subway stations located on 23rd street and 8th avenue (access to the A, C and E), 14th street and 8th avenue (access to the A, C, and E) 18th street and 7th avenue (access to the 1) and 12th street and 8th avenue (access to the L). The culture of the site is one centered around art. Whether on the highline for walking along 10th avenue, art pervades the atmosphere.

In order to better understand the limits and constraints of the site an in depth analysis of scale and zoning regulations was performed. As a native New Yorker, the process began by superimposing my former apartment building onto the site. I then examined how this apartment sat within the context of my former apartment building on the site.
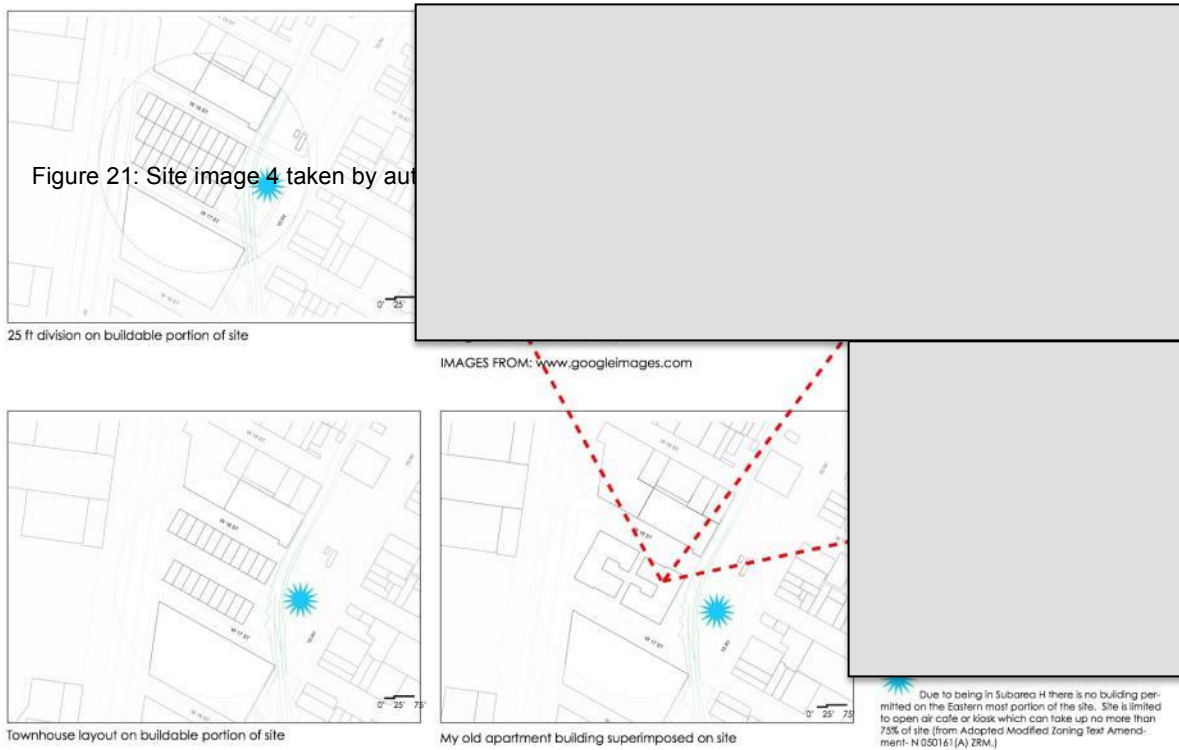
UNDERSTANDING THE SITE: scale

Figure 21: Site image 4 taken by aut

25 ft division on buildable portion of site

IMAGES FROM: www.googleimages.com

Townhouse layout on buildable portion of site

My old apartment building superimposed on site

Due to being in Subarea H there is no building permitted on the Eastern most portion of the site. Site is limited to open air cafe or kiosk which can take up no more than 75% of site (from Adopted Modified Zoning Text Amendment- N 050161(A) ZRM.)

Figure 22: Scale study produced by author with the exception of google images

UNDERSTANDING THE SITE: scale

APARTMENT UNIT IN CONTEXT

W 18 ST

WEST END AVENUE

W 17 ST

10 AV

Figure 23: Scale study 2 produced by author

Once I had a sound understanding of scale, I examined the New York

zoning codes to better understand the building requirements of the site.

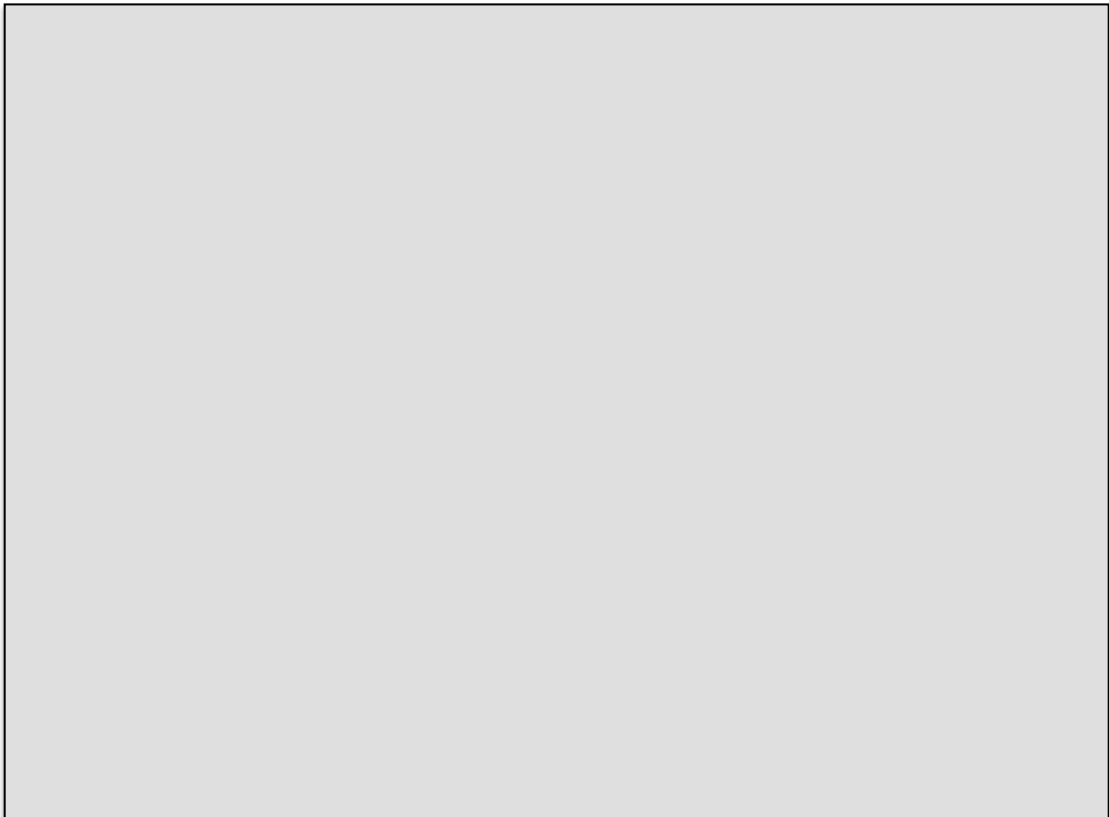Figure 24: Understanding the site: zoning images compiles from: http://www.nyc.gov

Figure 25: Understanding the site 2: zoning images compiles from: http://www.nyc.gov

During my research it quickly became clear that the eastern most part of the site was restricted from having any structure. Additionally, two towers were allowed on the site but they had to remain 25 feet apart from one another. With this information I began to map out the buildable areas on the site.

LOCATION FOR TOWERS

LOCATION FOR TOWERS WITH 25' LOT UNDERLAY

TOWER WEST

TOWER EAST

Figure 26: Interpreting the zoning regulations images produced by author with the exception of FAR table from http://www.nyc.gov

It is important to note that due to the High Line inclusionary program, the Floor Area Ratio of this specific area is 10. This means that with a 60,000sf site I can build up to 600,000sf as long as I stay within the height restrictions established by each tower.

Building Typologies

Prior to beginning the design process a variety of different building types were examined in order to better understand the formation of the high rise. These building types are: the townhouse, the courtyard, the palazzo, the skyscraper –slab/tower, and the high rise. Each building type showcases and identifies a different approach to vertical design.

The Townhouse

The townhouse is a type of row house or semi-detached house that is known for its smaller footprint. In Manhattan, townhouses were initially a type of medium density housing. However most have been converted into luxurious single-family homes. The townhouse pays homage to the 25foot lots that originally defined Manhattan's residential development.
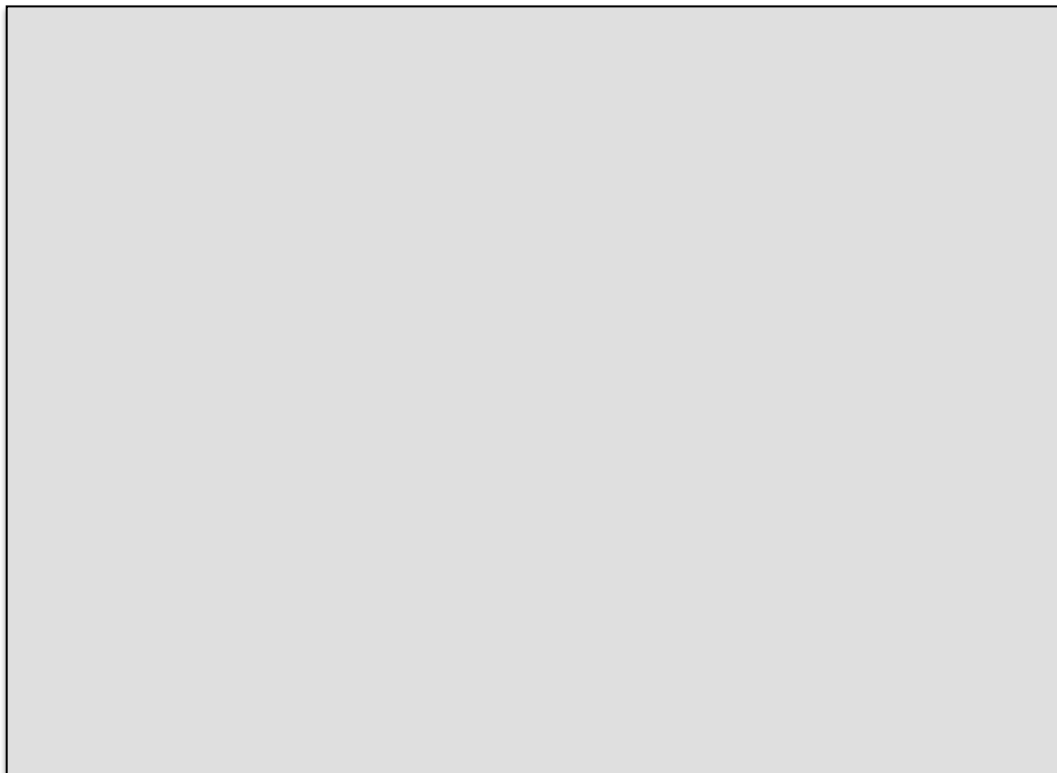
Figure 27: Townhouse precedent images from www.googleimages.com

The Courtyard

The courtyard house emerged in Los Angeles around the 1920s. The design was a response to the region's climate and housing needs. Initially, the courtyards were not meant to be recreational. Rather, they were meant to serve as buffer zones between the city street and the residence. Over time however, the courtyard has started to provide recreational programs. The courtyard building is a distinct medium density housing typology that is centered on a shared outdoor open space or garden. Apartment units usually surround the courtyard and traditionally one must pass through the courtyard in order to access the units.
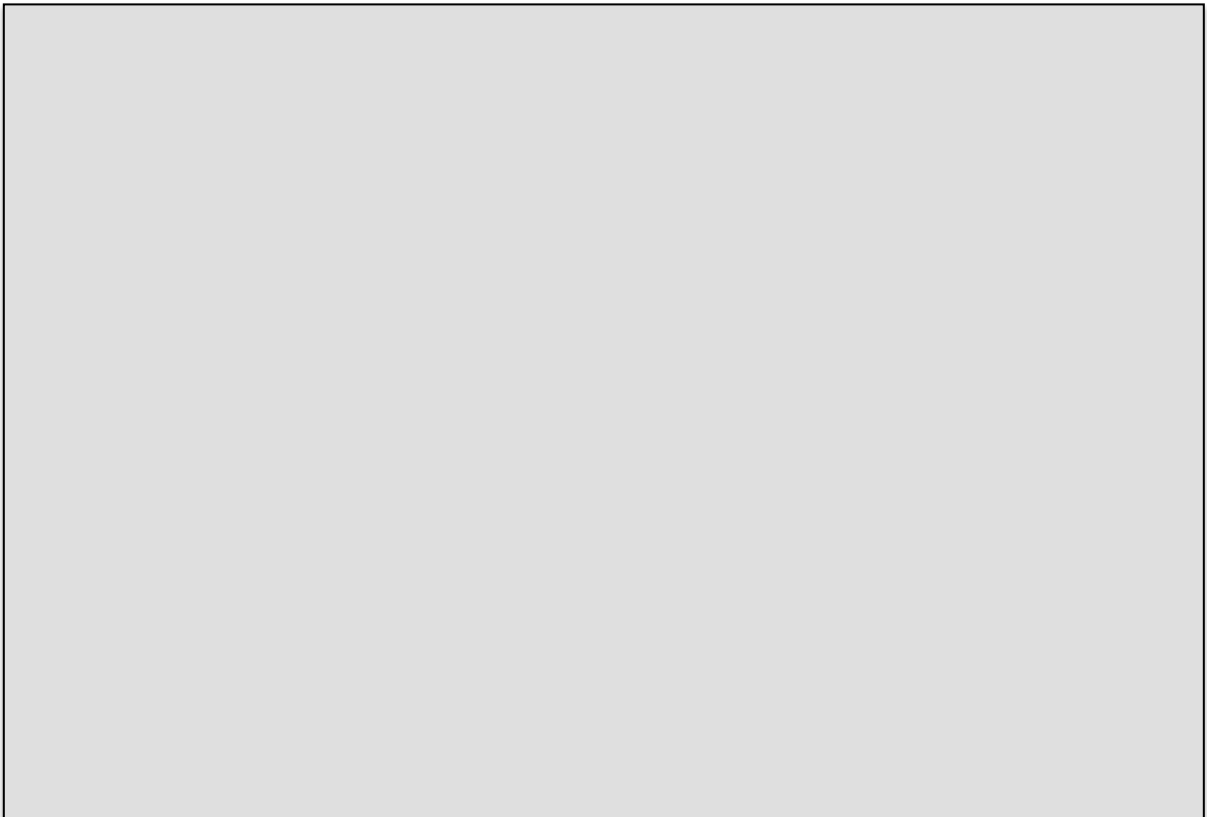
Figure 28: Courtyard precedent images from googleimages.com

The Palazzo

The palazzo is an example of adapting another building type to address the needs of the high rise. The palazzo is the most commonly used model because it had already formed the low building office. Not only did the palazzo establish a clear distinction between the base, middle and top (paying particular attention to the base and the importance of the ground plane), but also it was known for having the proper connotations of power and grandeur.
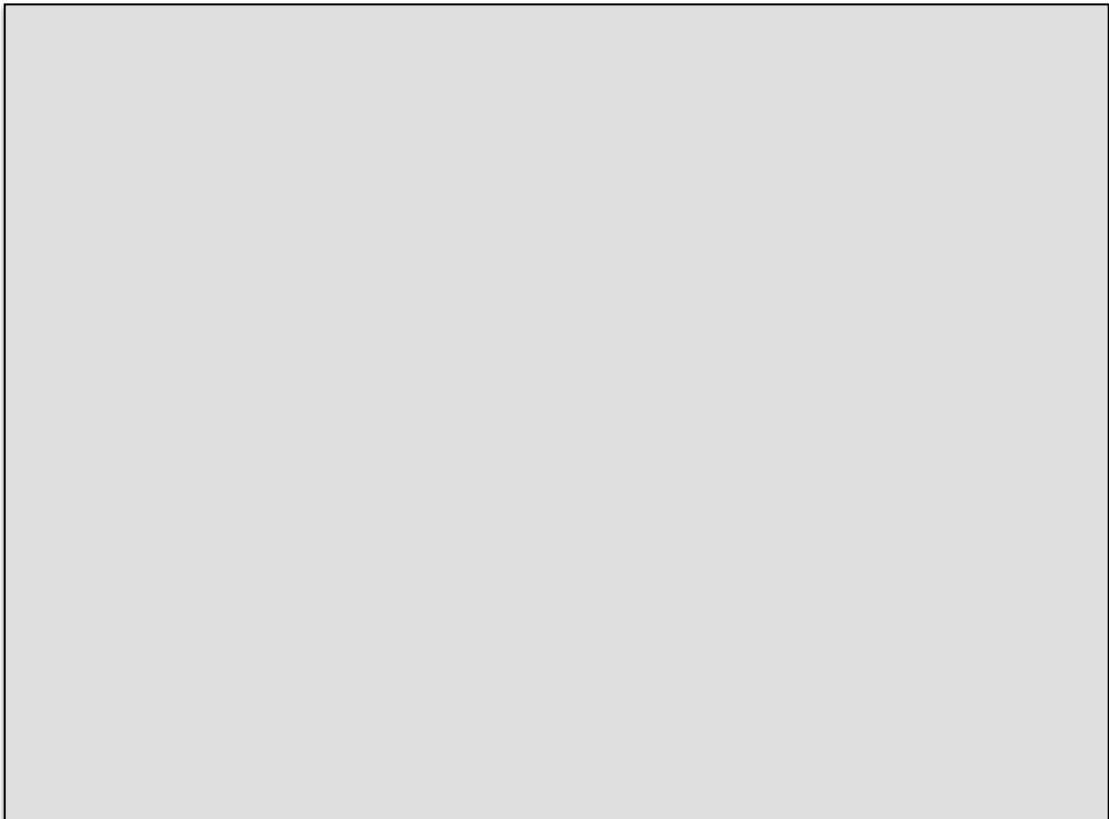
Figure 29: The palazzo precedent images from www.googleimages.com

The Skyscraper-slab/Tower

Unlike the palazzo, the skyscraper/tower no longer emphasized the ground plane. Rather, the emphasis shifted towards the sky and verticality. This shift in identity allowed for the skyscraper to have a more public role i.e. a main contributor to the silhouette in a city skyline.

Figure 30: The skyscraper-slab/tower precedent images from www.googleimages.com

The High Rise

According to Cesar Pelli in his article entitled "Pieces of the City" the high rise is an

ideology rather than a type: goals- "to maintain a healthy street form and life. Therefore, we try to make the bases of our

skyscrapers appropriate to their site, adjusting to different edge conditions. As the skyscraper rises from the ground we design its lower floors so that they respond to and strengthen the form of the streets. We welcome multiple uses as they are part of the variety and richness of urban life. (Pelli)

Figure 31: The High Rise precedent images from www.googleimages.com

Establishing a parti

After an in depth analysis of the site, scale, and zoning regulations was performed, the solar conditions of the site were analyzed.

Figure 32: Shadow study produced by author

In addition to studying sun patterns, the identification of setback requirements, important architectural details, and views were documented as they served as the foundation for the design. The process began by
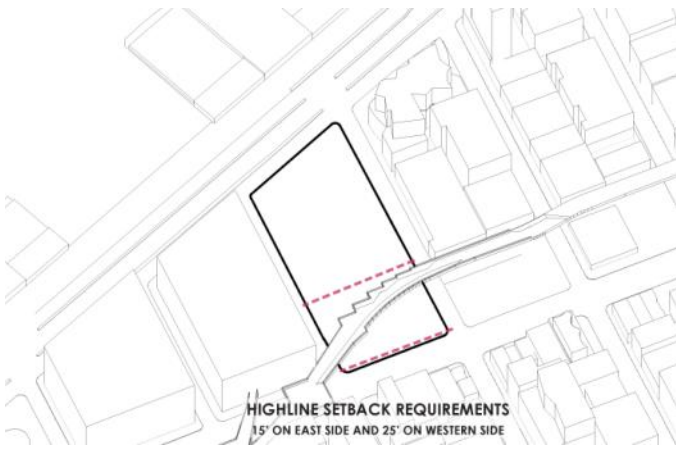
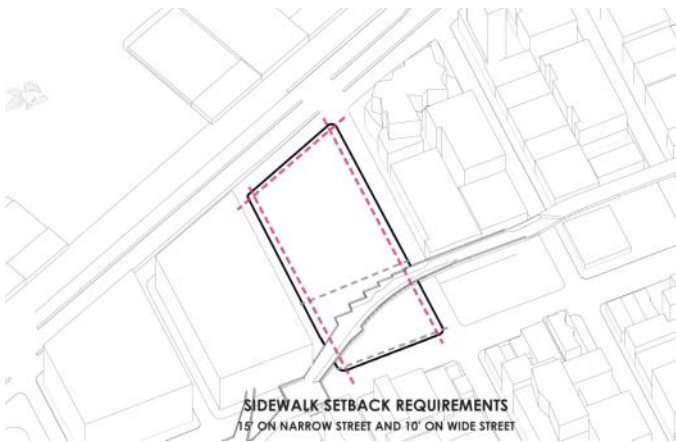Figure 33: Highline setback diagram produced by author

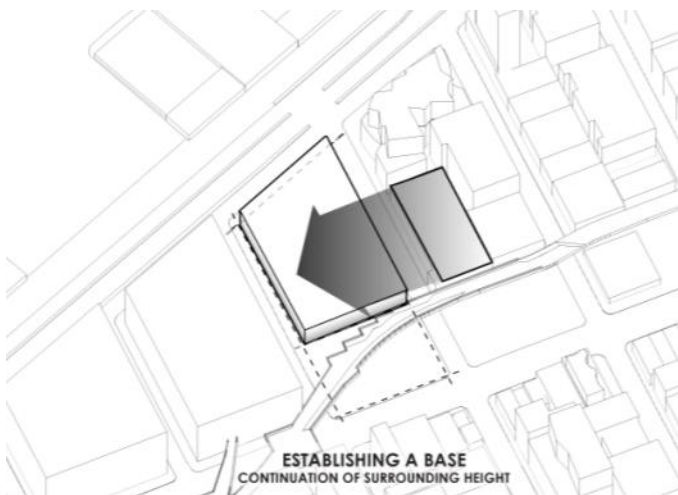Figure 34: Sidewalk setback diagram produced by author

Figure 35: Establishing a base produced by author

identifying the setback requirements of the highline and the sidewalks. This established the outline of the base. In order to determine the height of the base the surrounding context was referenced. This resulted in a base that met the height of the warehouse directly across the street. Once the base was established the architectural and programmatic context was analyzed. Both Frank Gehry's IAC Building and Jean Nouveau's 100 11th Avenue are located near the northwest corner of the site. These two buildings coupled with Chelsea piers (the previously identified sporting complex), identified the northwest corner of the site as a significant corner. Thus, in order to acknowledge the aforementioned features of the site, the northwest corner was recessed.

There is a unique condition that occurs on the site in reference to the
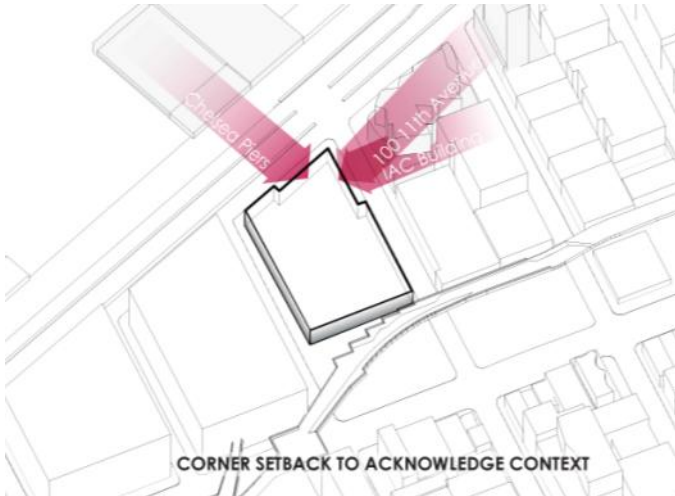
Figure 36: Corner setback to acknowledge context produced by author

Figure 37: Receiving the highline produced by author

Figure 38: Shadow extremes produced by author

highline: it switches direction. As a result, there are a series of shifts that occur in the railway that define the eastern side of the site. It became important to capture this formal gesture into the design of the base of the towers.

As mentioned earlier in this chapter, access to natural light was an important priority. After analyzing the shadow diagram certain conclusions were made about optimal locations for the east and west towers in order to get natural light on the site during all seasons and different times of the day. Looking specifically at December, March, July and October at 6:30pm it becomes clear that the northwest corner and the southeast corner are the ideal locations for the two towers.

After establishing the general areas of each tower, key views were identified in order to help establish the angles of the towers. The north faces
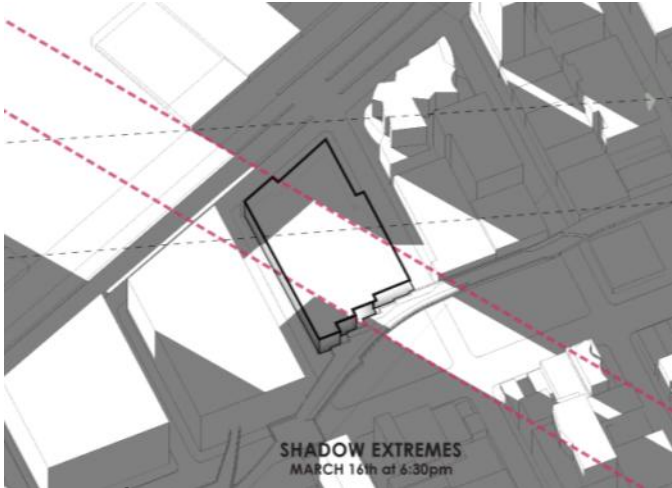
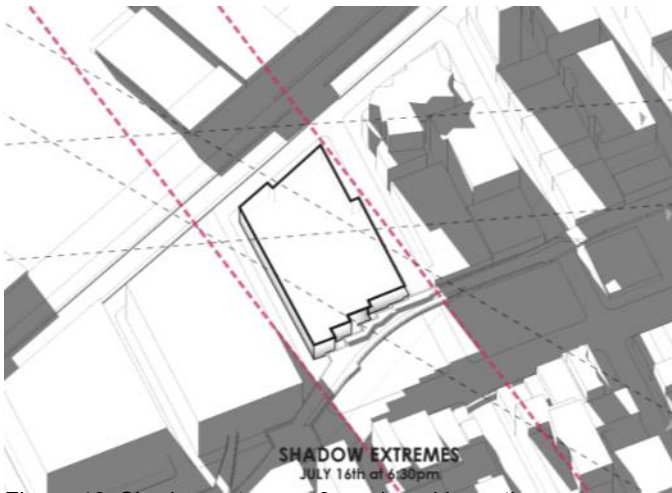Figure 39: Shadow extremes 2 produced by author

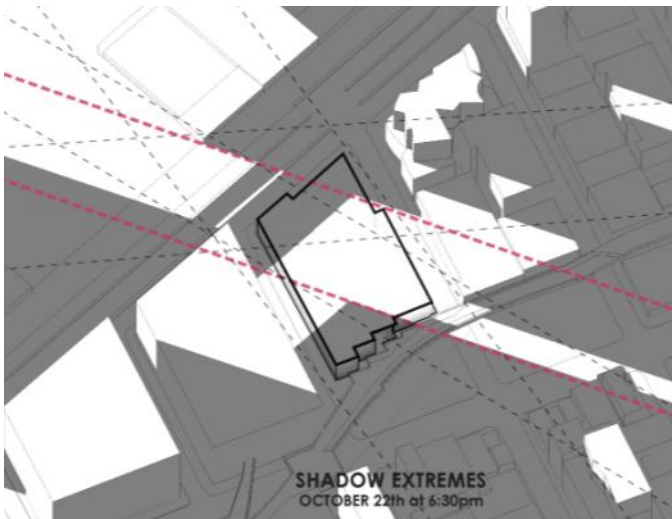Figure 40: Shadow extremes 3 produced by author

Figure 41: Shadow extremes 4 produced by author

had views to the Empire State Building, the east face has views to the highline, the south face had views to downtown Manhattan, and the west face had views to the Hudson River. In order for each face to have the optimum view, the form of each tower became more orthogonal in nature.

The footprint of each tower was then extruded to the height established by the zoning codes. Thus tower East resides at 390 feet while Tower West resides at 290 feet. It is important to that dilapidated warehouses frame the north side of the site. As a result, it was determined that the main entry to the two towers would be on the southern side of the site.
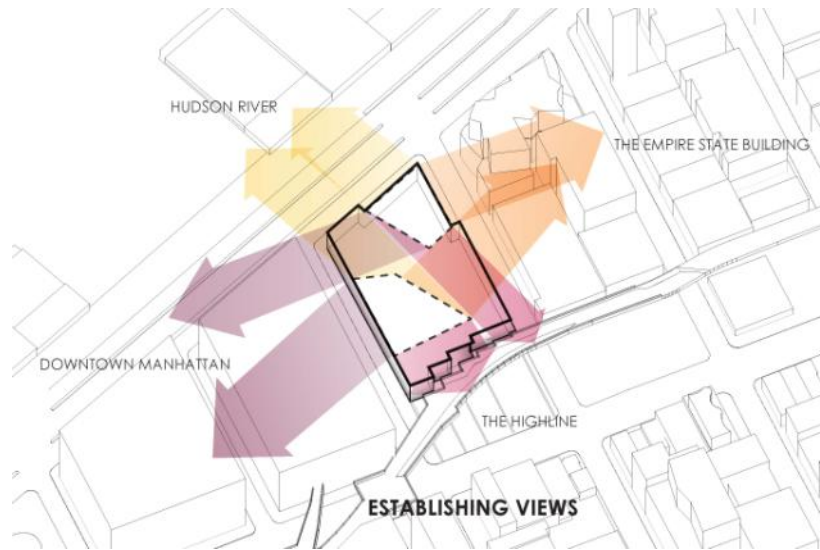
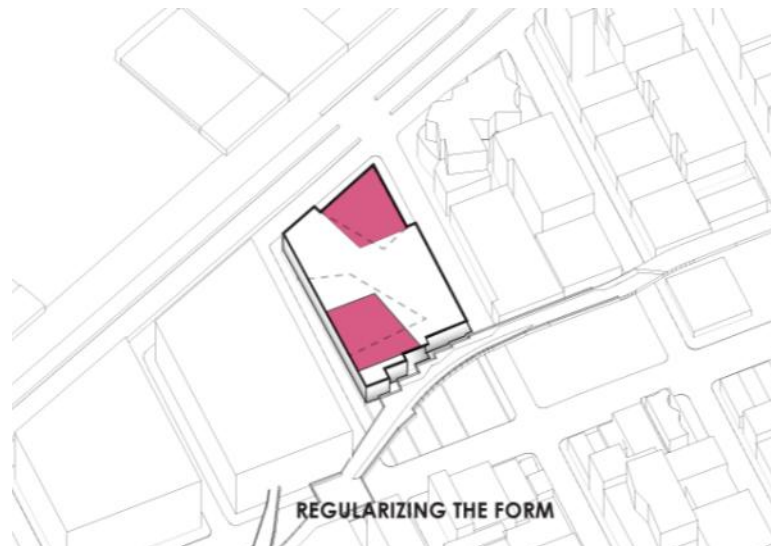Figure 42: Establishing views produced by author

Figure 43: Regularizing the form produced by author
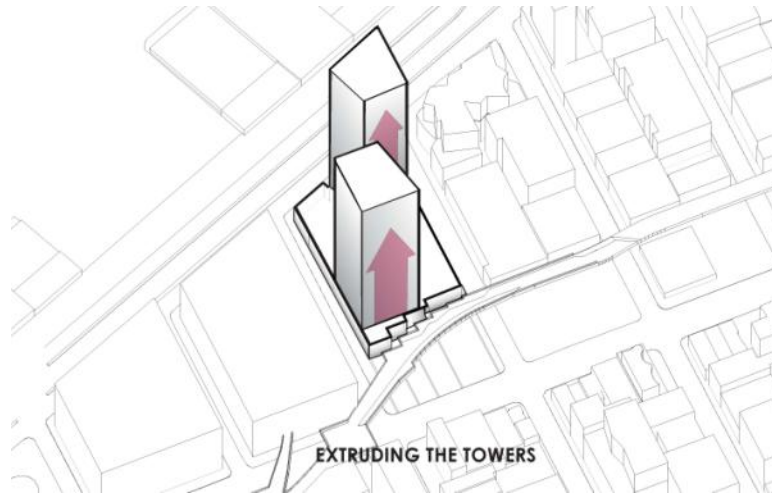
Figure 44: Extruding the towers produced by author
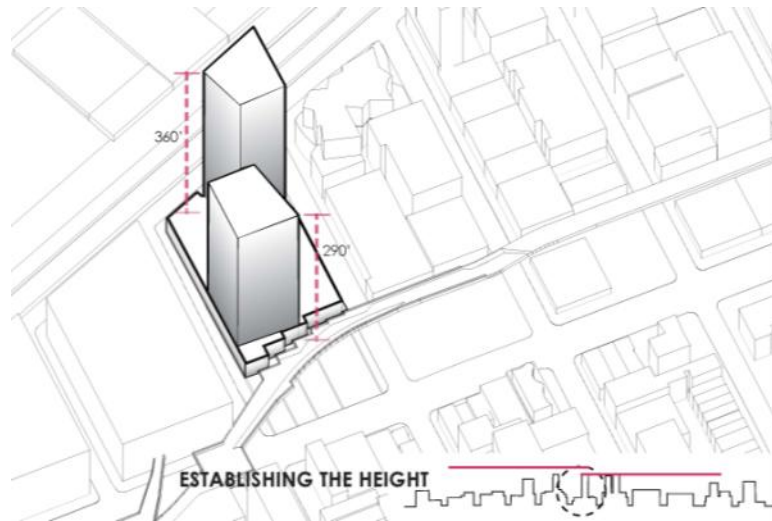
Figure 45: Establishing the height produced by author
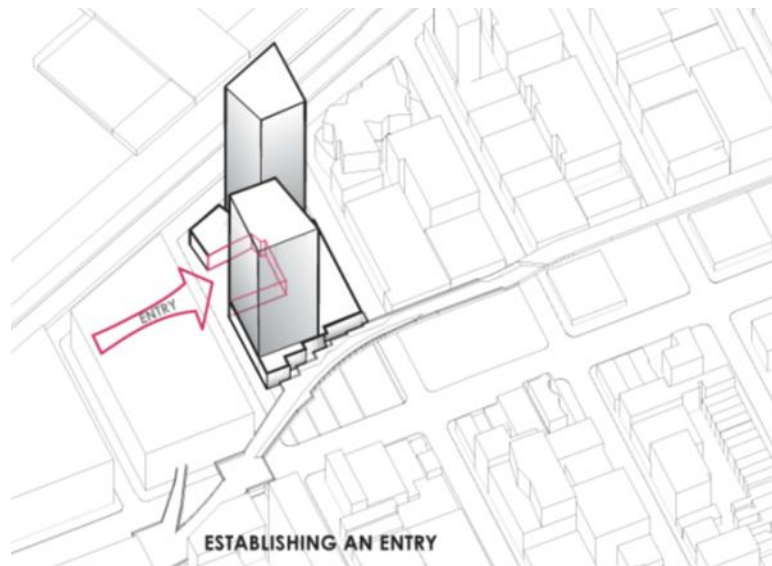
Figure 46: Establishing an entry produced by author

Once the parti was established there was an immediate need to change the monolithic nature of the form. After a series of experimentations, dividing the façade into 3 story components served to not only respect the height of the nearby townhouses that serves as the urban fabric of the city, but it better relates to the human scale.
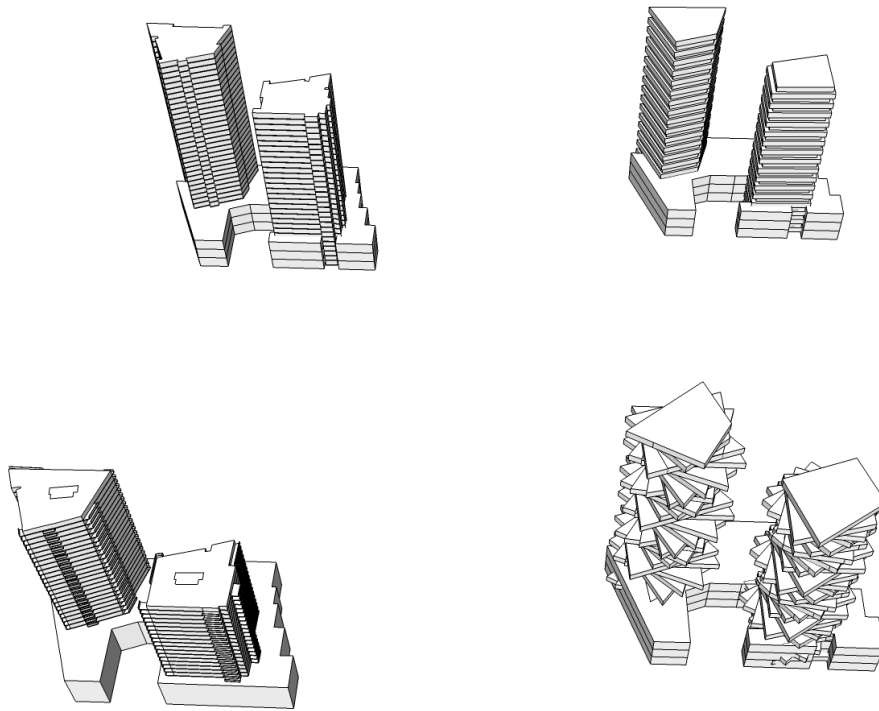
Figure 47: Parti exploration 1 produced by author
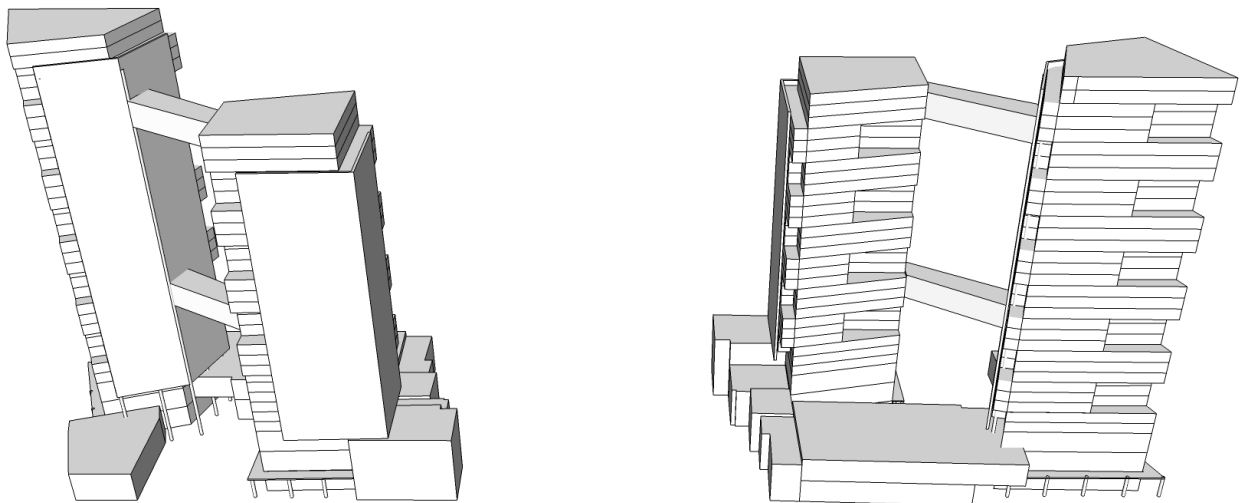
Figure 48: Parti exploration 2 produced by author

By "pushing and pulling" the façade, a series of balconies are established. These balconies provide elevated outdoor spaces and pocket gardens. The large blank panel (located on the massing parti) serves as a terracotta louver system (see figure 49). This system is on the south and east sides of the tower. Not only does this serve as a shading system on the southern face, but it also provides privacy for those on the eastern side. Additionally, the façade is meant to credit the context in which it is built. The shifting paneling system is meant to symbolize an artist's canvas: the louvers are constantly shifting and changing pending on the desires of the residents and as a result creating a new composition on the exterior of the building.

Figure 49: Southwest Elevation produced by author

Figure 50: Northeast elevation produced by author

The shifting and pulling of the façade also allowed for extrusions of double height spaces to be established along the east tower's eastern face. These spaces serve as studio spaces for the local artists living in the facility. Not only are these spaces, places of making, but they are also display cases. While not visible from the highline, high rises in the area will be able to see the type of work being produced. Thus allowing this building to serve as a vehicle in which the horizontal community is engaged vertically. Additionally, the different glass treatments on the façade serves to add yet another

element of diversity to the design: while the interior units may be of the same square footage, the exterior treatment allows for those who are interested in a more open feeling to reside where there is curtain wall, while those who prefer a traditional pre-war apartment can reside where there are casement windows.

Program

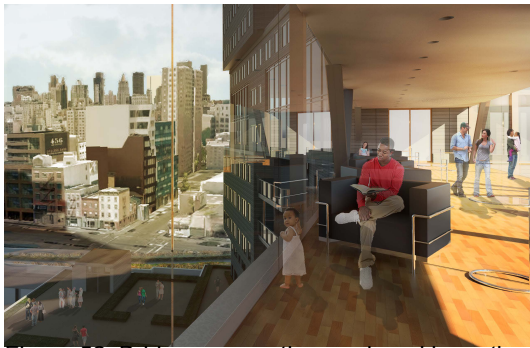Figure 51: Community diagram produced by author

Figure 52: Bridge perspective produced by author

Figure 53: Community space perspective produced by author

This high-rise apartment complex proposes a hybrid program organized into three parts: internalized community based programs, a series of different compact residential units, and a vertical circulation system that promotes neighborly interaction. The community-based programs create an opportunity for residents to interact and engage with their neighbors at a more intimate level. By providing a variety of programs, residents with similar interests will gravitate towards one another. By re-evaluating the vertical circulation system within the complex, the opportunity to establish visual and physical connections will be improved. Finally, the variety of compact housing units will offer residents from different demographics a chance to live in the same community. By hybridizing the program within the high-rise, residents will be able to live, learn, work, and play.

Establishing a Base
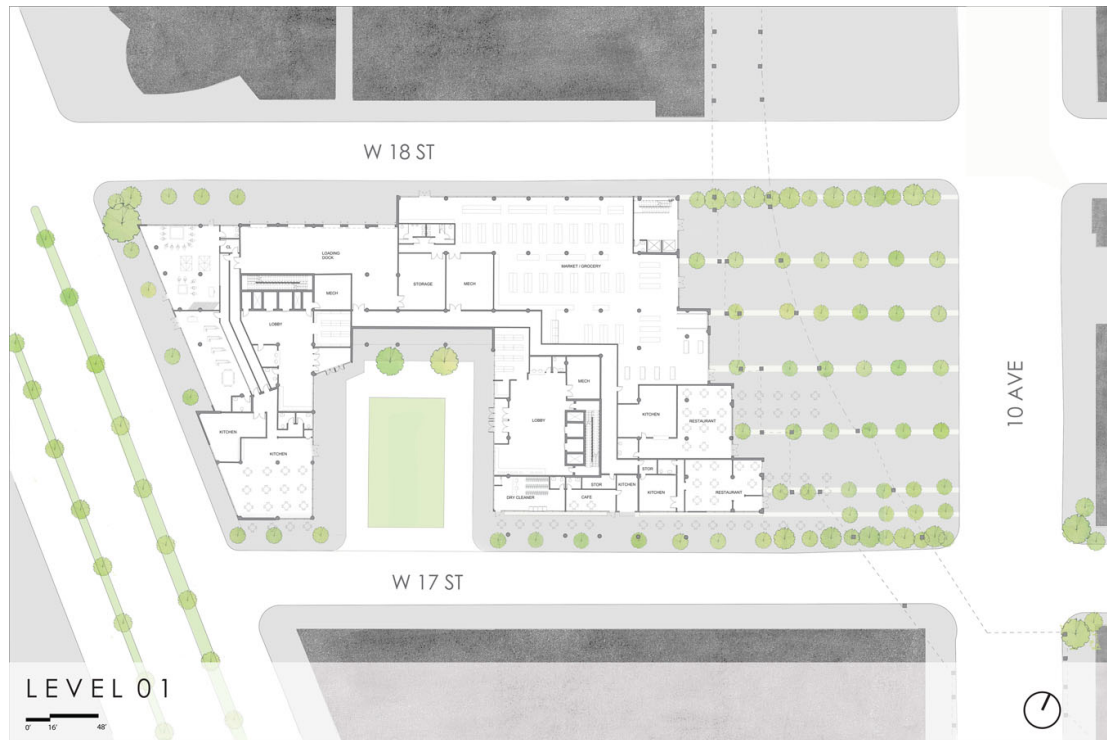
Figure 54: Base 01 produced by author

In reference to the chapter "The High Rise," the transition from the city to the residence is critical in an urban context. The base in this specific context looks to serve as a threshold between the city and the residence. Thus as you can see in the plan above, the lobbies of the two towers are flanked by commercial programs on either side. Additionally, separating the lobbies from the commercial stores is a service corridor. Not only does this allow for deliveries to be made to both the stores and the lobbies, but it also creates a sound barrier between the "hustle and bustle" of a grocery store or café, from a lobby.

The urban plaza implemented on the east side of the site serves to bring people off the highline (as the highline is known to get congested) and

filter them into the facility by framing the plaza with an entry to a gym (New York Sports Club), a local grocery store (Trader Koe's), a café, and a wine bar. By creating a series of different programs fronting the plaza, the plaza will remain active during all hours of the day and night. It is important to note that after initial site analysis, it was determined that there was no grocery store or dry cleaners within a quarter mile of the site. Thus, establishing room on the base level of the complex for both facilities became pertinent.

The south side of the facility will house the main entry to the apartment (as the northern side of the street faces ill-preserved storage facilities). The southern facing street will also have a dry cleaners and a restaurant. On the westernmost side of the site (11th avenue), there will be two fabrication studios that serve to extend the arts district directly to Chelsea Piers. The northern street will serve as the main service road to the facility as the loading dock for both the commercial facilities and the lobbies is located on the north side of the site.

Figure 54: Approach from highline produced by author

Figure 56: Approach from plaza produced by author

Figure 57: Approach from courtyard produced by author
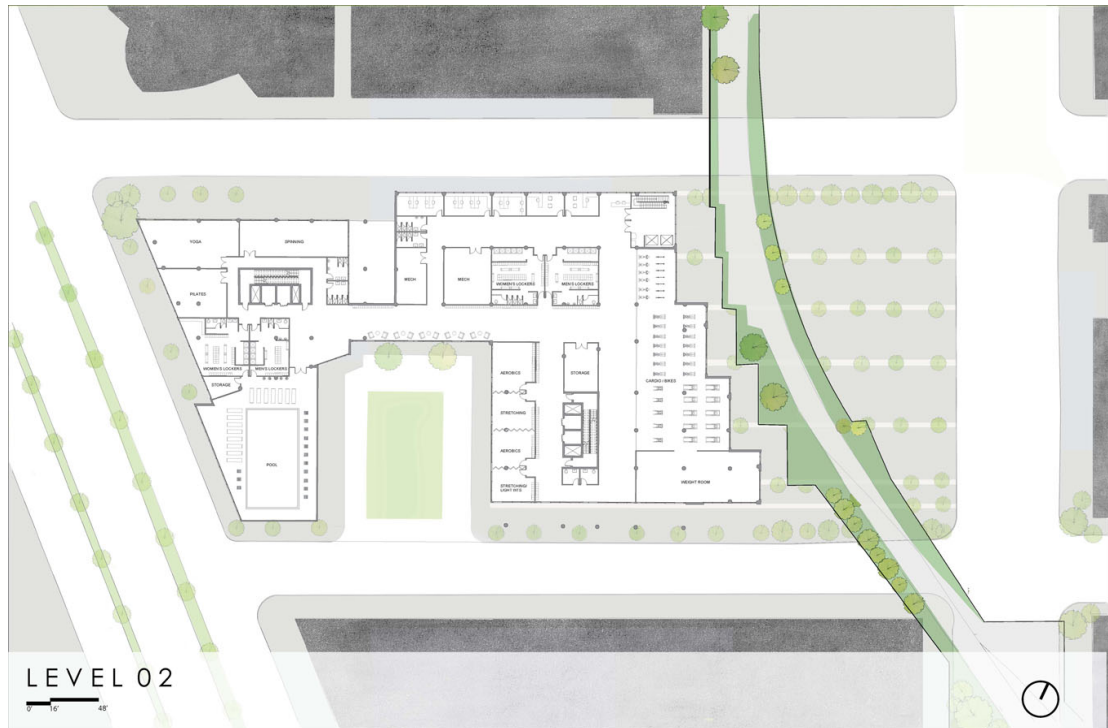
Workout facility

LEVEL 02

Figure 58: Base 02 produced by author

Despite the close proximity to Chelsea Piers there will be a workout facility in the apartment complex. Not only will this promote a healthy means of living but also another means of establishing connections between residents. People often establish a workout schedule, thus those who use the gym facility at the same time will by nature begin to interact with one another. The establishment of workout classes such as Spin, Yoga, Pilates, and Kickboxing promote a sense of community by encouraging people to exercise together. A community pool located in the gym offers families a place to gather with one another in order to promote healthy social interaction for people of all ages. This gym facility is not limited to the residents. The gym is open to the public thus establishing an interstitial zone between the city and

the apartment that allows for a controlled atmosphere in which residents and pedestrians can socialize.

Gardens

LEVEL 03

Figure 59: Base 03 produced by author

Community gardens will be provided and configured in different ways to meet different demands. The community garden can be seen on the third floor of the apartment complex. While linking, the gym and the two towers by way of an elevated courtyard, the residents and gym members can enjoy, maintain, and cultivate the rooftop garden. Similar to the gym, this community outdoor space is meant to provide yet another location for residents to interact with pedestrians. This main community garden also serves to promote learning and the sharing of materials and resources. The growth of

different plants, vegetables and flowers will not only add to the vibrant community, but will contribute to the sustainability of the high-rise.

The gardens also exist vertically, while some units will maintain a private balcony/garden, other units will not. Thus, while residents may not have direct access to another resident's garden, they will have a visual connection to the garden spaces.

Library

A small "in house" library located just off the community garden space not only creates a space for books and other forms of media to be shared and donated, but it also provides an opportunity for residents to learn and share resources with one another. The placement of the library/book swap off the community garden was intentional; during the warmer months residents can enjoy their reading material outside with a great view to the Hudson River. While there will be a distinct room attributed to this library, the infiltration of books and or other forms of media may penetrate other community based facilities within the high-rise i.e. public laundry rooms.

Daycare Center

The daycare facility, like the library is located off of the community garden.   Not only does this provide a controlled outdoor space for the children to play, but it also allows for light and nature to penetrate the walls of the facility. By establishing an "in house" daycare center, residents who have

young children will have a place for their children during the workday.   In addition to simple convenience, providing a day care facility within the high-rise complex will acquaint children with one another, allowing connections and friendships to bloom. Additionally, parents using the facility will have an opportunity to meet other parents within the complex, thus promoting connections and relationships at a variety of age levels.

Additionally, something that is unique to Manhattan is the opportunity to engage different types of communities. Thus while the daycare facility may be in the apartment complex, it will be open to the public allowing elements of the horizontal community to penetrate the vertical community. This will also negate the potential risk of either not enough children living within the high-rise or people who opt to age in place and no longer require the services of the daycare facility.

Community Spaces

UNIT DISTRIBUTION TYPE A
LEVEL 08
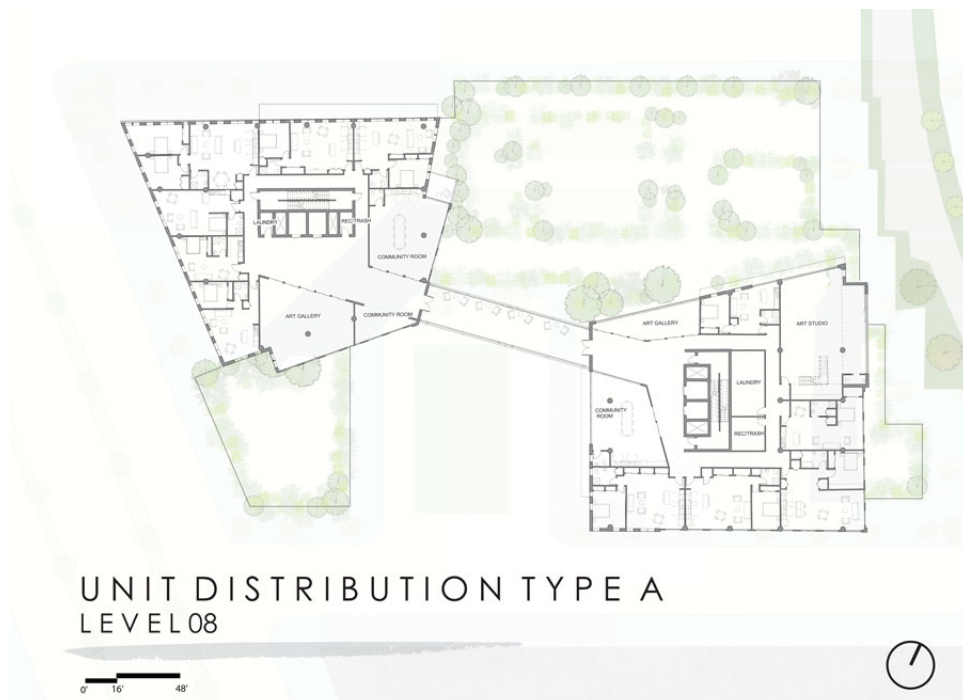
Establishing and identifying the different locations for community spaces in each tower quickly turned into a conversation about bringing the artistic culture of the neighborhood into a vertical context. The floors that connect the two towers via bridge are the community floors. Smaller apartment units were strategically located on these floors because it was determined that those with less space would most likely need and or use large community rooms. Thus, if someone wanted to host a holiday dinner but did not have the space to do so in their own apartment, they could conceivably reserve the community room to host such an event. Additionally, this room can serve as a meeting place for residents to discuss affairs regarding the apartment complex.

Art galleries and art studios were also implemented into the design of this floor, not only does this create a potential live-work environment for artists who choose to live in the facility, but it also allows them to display and or "test" their work before selling and or placing into an exhibit. By establishing several "in house" galleries, residents who are not artists will be allowed to appreciate and react to the work being produced not only in their neighborhood but also in their apartment.
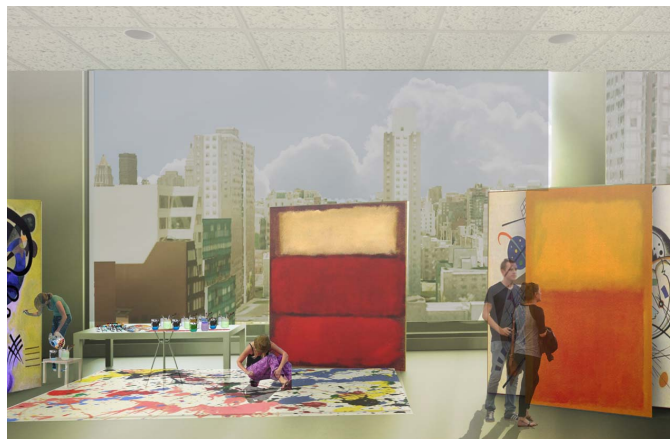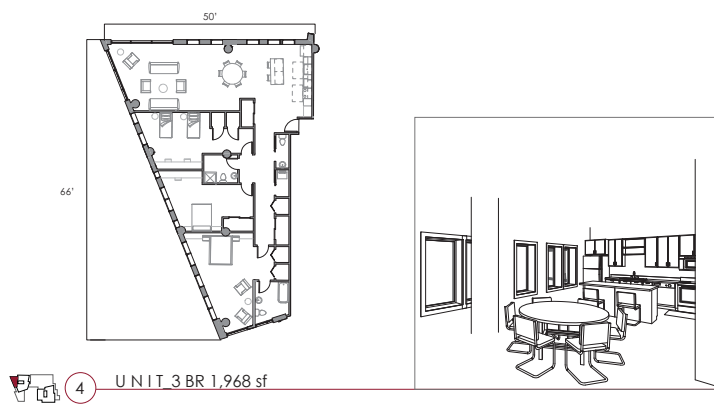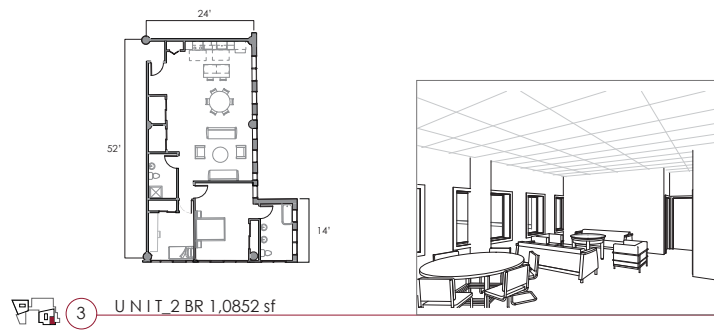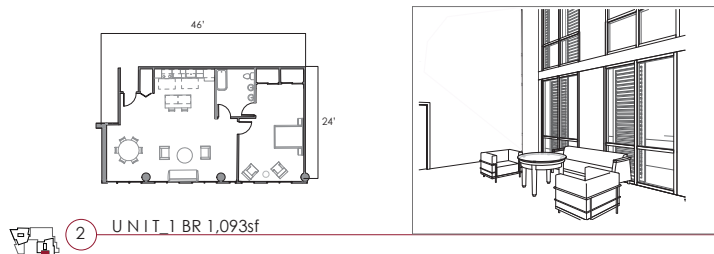
Figure 61: Art studio perspective produced by author

Variety of compact apartment units

24'
25'

UNIT_STUDIO 503 sf
1

46'
24'

UNIT_1 BR 1,093sf
2

24'
52'
14'

UNIT_2 BR 1,0852 sf
3

50'
66'

UNIT_3 BR 1,968 sf
4

UNIT TYPES

0'   16'   40'
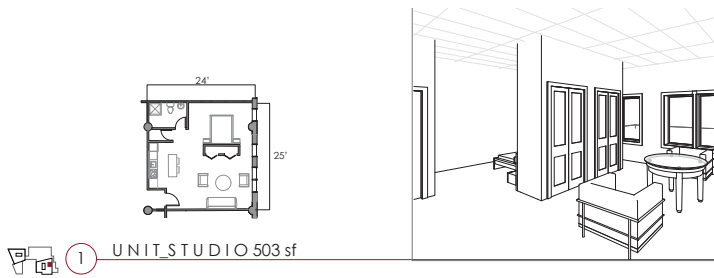
Figure 62: Unit types produced by author

Providing a variety of apartment unit types will not only attract different people from different demographics to the apartment complex, but it offers those who reside in the complex an opportunity either grow or downsize if necessary. By seeking to accommodate singles, families and couples, people of all ages and stages in life can find a suitable dwelling in this facility. Additionally, by providing different unit types, the cultural and economic mix within the high-rise will be just as diverse as its urban fabric.

After consulting with a real-estate broker the smallest "sellable" studio apartment in the West Chelsea area is 500 square feet. This knowledge established the range in square footage for the units. The unit types will range from 500 square feet to 1900 square feet: the smallest unit being a studio
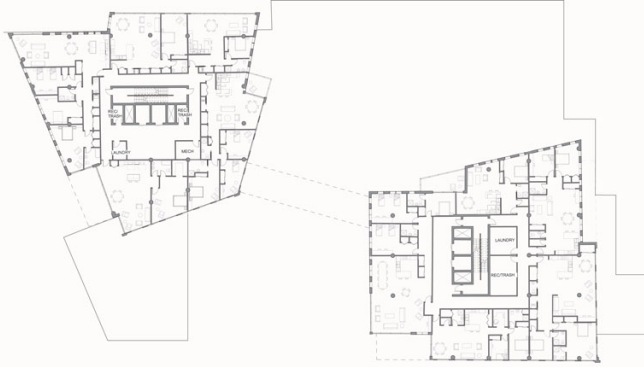
UNIT DISTRIBUTION TYPE B
LEVEL 12

Figure 63: Level 12 produced by author
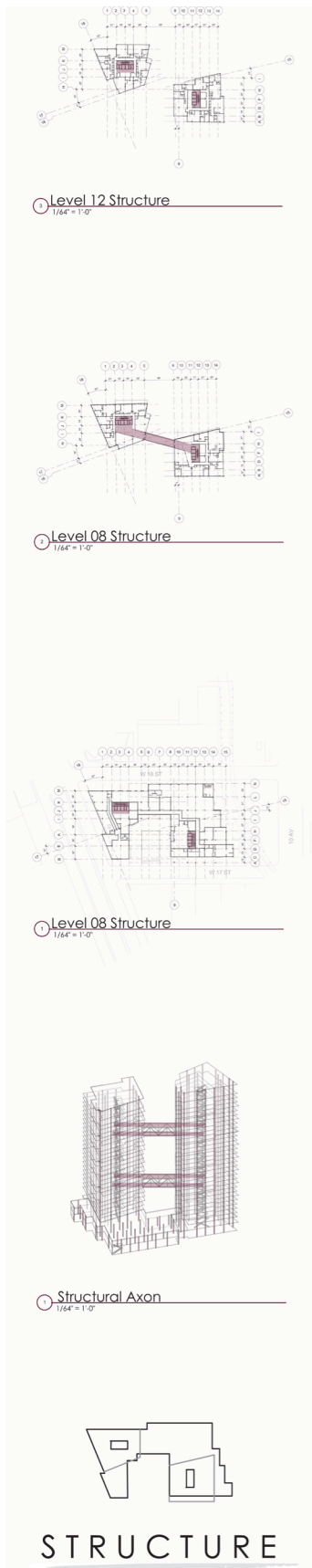
apartment and the largest being a re-interpreted classic six.

Particular attention was paid to the way in which each apartment had its own entry. By creating a small exterior foyer for either one or two units, the opportunity to have a smaller, more intimate space that is solely for the resident establishes a personal touch.

Circulation Cores

Level 12 Structure
1/64" = 1'-0"

Level 08 Structure
1/64" = 1'-0"

Level 08 Structure
1/64" = 1'-0"

Structural Axon
1/64" = 1'-0"

S T R U C T U R E

Figure 64: Structure diagram produced by author

Identifying and determining the optimal location for the high-rise circulation cores directly impacts the experience of the vertical circulation. By placing community spaces near the circulation cores, the way in which people will experience the vertical shift upward will be less isolated and more intimate. After experimenting with a variety of different ways in which the circulation cores could be established, it was determined that a central core would be most appropriate. Not only is a central core efficient for structural purposes, but also it allows for the exterior walls to be freed for residential usage. Thus, the views are given to the residences, and not the general circulation system. Additionally by establishing a central core and maintaining a relatively small footprint, the number of elevators in each tower was limited to two. By centralizing and

reducing the number of elevators, there will also be greater interaction among residents. The bridges in the design serve to not only connect the two towers, but to provide shear support and wind resistance.

CONCLUSION

      The architectural response for this project was heavily rooted in engaging the "artsy" culture of West Chelsea into a vertical context. By incorporating live-work studios and art galleries within the program of the building, the apartment facility is not only promoting and supporting art, it is paying respect to the site in which it was designed. While the internal program acknowledges and promotes art, the exterior of the façade serves as both an ever changing canvas and as an object of display. Furthermore, the variety of different apartments: a studio, one bedrrom, two bedroom, and three bedroom, allow people from varying financial, familial, and demographic backgrounds to live in this facility and adds diversity to a neighborhood that is currently lacking these type of housing opportunities.

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