

ABSTRACT

Title of Document: **Re: America. Architecture, Propaganda, and the Dream**

Degree Candidate: Justin Obringer

Directed By: Assistant Professor Michael Ambrose, School of Architecture, Planning, and Preservation

The American Dream is terribly misleading. The phrase implies a singularity, as if all people share precisely the same dream. "The Dream" implied only success and happiness; it did not dictate the form that housed happiness. The form was inconsequential; it was the symptom not the realization of success. The form was meant to encourage living, not project a status. The resulting suburb may be detrimental to the environment, but the suburban lifestyle was not itself detrimental to the evolution of architecture. It was neither a definitive step backwards nor forwards. Now however, the forms and ubiquitous images associated with the suburbs have caused stagnation and no significant architectural development concerning suburban living has rivaled the 1950s propagandized model. The purpose of this thesis is to reinvent the formal concept of "suburban" living in a manner which does justice to the "American Dream" and the individuality of all the "dreamers."

RE: AMERICA. ARCHITECTURE, PROPAGANDA, AND THE DREAM

By

Justin Obringer

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Advisory Committee:
Michael Ambrose, Assistant Professor, Chair
Luis Diego Quiros, Assistant Professor
Brian Kelly, AIA, Associate Professor

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Preface

This thesis proposal, its culmination, the final drawings, and its proposed form are all tertiary to both its process and intent. The thesis is about the 3am discussions, happenstance ideological debates and office-hour arguments. The beauty of the thesis lies in the fact that everyone is an expert yet no one has any answers. It is about questioning the current American lifestyle and the defaulted pursuit of an out-of-date image. It is about recognizing in the design process a balance between an idealistic zeal and an altruistic objective. It is about seeing the potential within the forgotten American landscape for these ideas to take form--both physically and culturally. It is about never being satisfied with who we are or how we live. In its most primitive form it is about demanding more from our dreams or for many of us, dreaming again.

Dedication

To my uncle; Kevin Dougherty

For his unknowing mentorship over the last six years, selfless personality, and
continuous conversation

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CNN Money September 21, 2011

*"It's official. The first decade of the 21st century will go down in the history books as a step back for the American Middle Class."*¹

CNN Money October 7, 2011

*"The percentage of Americans who owned their homes has seen its biggest decline since the Great Depression, according to the U.S. Census Bureau."*²

Introduction

*"America is as much an idea as it is a place."
-B.D. Wortham-Galvin³*

When the President of the United States of America says every person in America should own their own home and successive administrations provide easy credit, low down payments and low interest rates, it is easy to engrain a way of life into a culture. When coupled by a period of expansion, it then becomes profitable to do so. This was how a vision by James Adams in 1931 that, "life should be better and richer and fuller for everyone, with opportunity for each according to ability or achievement"⁴ evolved into a material right.

The image of the middle class has been shaping itself for decades. This image is now typified by SUV's, TV's, McMansions, and more recently, foreclosures. The impact on the nuclear family, the economy, and the built environment is profound. The only way to shift the paradigm of the current urbanism, or suburbanism, is to shift the perception of what it means to be urban. That is to say, by reference of the introductory quote, to shape the place we must shape the idea. It is the shaping of the idea and the image of the place that this thesis seeks to explore. Attempts by

architects to create populist housing have rendered few results because of the inability to modify the image of the good life that follows mainstream rituals of the middle class.

Paradigm

The profession of architecture is historically an aesthetic endeavor. Designers seek to create buildings that are attractive visually and experientially for both the user and the passer-by. Within the last century however, Americans have emphasized the visual with an ever-growing consumer culture. An *anaesthetization* of architecture has resulted from an obsession with the visual. In an era of facebook, twitter, Google, and the iPhone there is more and more information and thus a constant stream of images processed by the country on a 24/7 basis. This saturation of the image has been substituted for an actual lived experience.⁵ It is now more important to live an image of a life than it is to actually live the life, devaluing the tactile and sensory experiences that architecture can provide.

This has been most widely implemented in the American home. The dream that Adams spoke of in the 1930's was about opportunity. The perversion of this quote resulted in the *domestication* of the way of life. Life is arguably less and less about how you live it but more and more about where you sleep at night. The peak of this realization is the image of the 1950's and 1960's suburban home portrayed in television shows like Mad Men and lived in movies like the Truman Show.

Similar to the overflow of images that we receive on a continual basis, the American dream has shifted into how we receive those images. iPhone, iPad, iPod, Blackberry, and Droid have become necessary symbols even for those who do not need or cannot afford them. Payments for the Civic, Prius, or Jeep supersede the

ability to go on vacation or enjoy a night out. We no longer identify ourselves by the way we live, identity has shifted to the things we have. This *commodification* of the American Dream can be traced to war-time efforts of the growing industrial society that began following World War II and continued through the Cold War and today.

Chapter 1: The Dream

Imageability

The American Dream represents the continuous pursuit of the good life. In the 1930's and through WWII the good life was shaped by the sudden overflow of images and propaganda. The good life was presented in magazines, newspapers, and at department stores. The profession of architecture also began to shift to the domestic and consumer based trend with a series of MOMA exhibitions, the Case Study House Program and collaborations with popular department stores that held lectures and forums on the modern family, modern house, and modern living.⁶

Buildings became images that represented a way of life. They became containers that held the objects of the good life. Cars, washing machines, toys, furniture, and

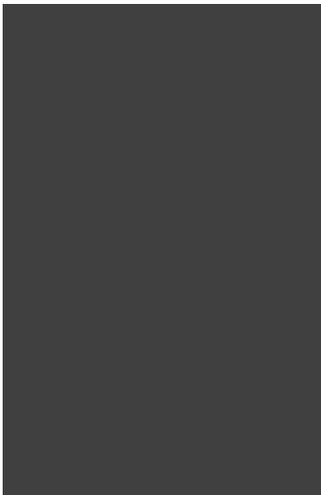


Figure 1.1 War time poster imaging the good life

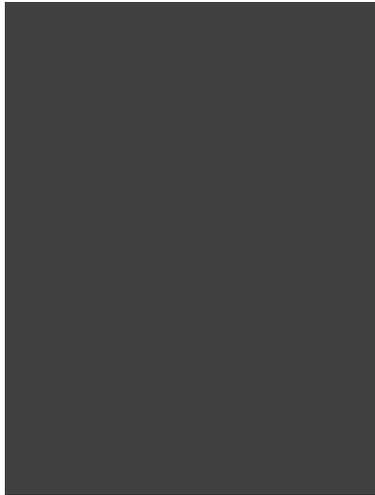


Figure 1.2: War time poster promoting suburban life.

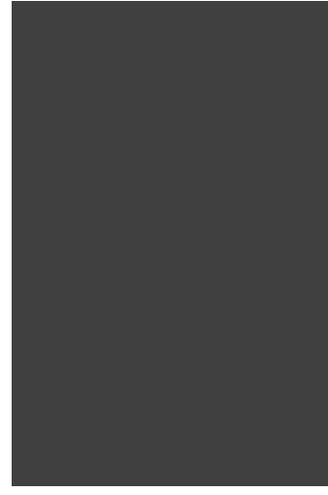


Figure 1.3: War time poster promoting the single family home

the television became important images of the American Dream. At the time of WWII and even afterward with the onset of the Cold War, which posed the threat of nuclear annihilation, these images grew in significance. The things we bought and the image we portrayed allowed the nation to appear confident during times of anxiety.⁷ War time posters shown in figures 1.1-1.3 demonstrate the image that was being portrayed. Emphasis on the 'sacred' nuclear family at the dinner table, images of suburban developments and home building drove the lifestyle that was emerging. These efforts laid the foundation for current middle class values today. Images, however, are purely graphic and cannot account for the actual lived experience. For a change in the American Dream to occur architects cannot solely rely on their idealistic desires. Efforts by modernist architects have been critiqued as abstract, utopian, and cold. The irony is the fact that modernism is also characterized by socially aware principles; however, they failed to prescribe to the images that were driving the culture of the time and in doing so they weren't able to garner main stream approval. This isn't to say that idealistically driven approaches aren't worth consideration, but designs need to have a dialogue between idealism and accepted images and rituals of the time.

Shifting Framework: Utopia to Heterotopia and the Inner Ring Suburb

"It is not the strongest of the species nor the most intelligent, but the most responsive to change that survives." - Charles Darwin

Professionals in the field of architecture have always pursued the creation of utopia. Deemed visionaries, those like Le Corbusier and his ideal visions of Paris along with the multitude of other designers over the course of history have speculated the model city size, community organization, and building form. This pursuit has often separated the architect from the everyday in which they operate. If in the 21st century changing cultures have demanded a flexible interpretation of the ideal, a heterotopia may be the proper pursuit for avant-garde designers to reintroduce the everyday or reality into design. This essay explores the shift from a utopian pursuit to a heterotopian compromise and proposes the inner-ring suburb as a heterotopia.

The dictionary definition of utopia found below provides three different ways for studying the theory of utopia.

1. An imaginary island described in Sir Thomas More's Utopia (1516) as enjoying perfection in law, politics, etc.
2. An ideal place or state.
3. Any visionary system of political or social perfection ⁸

Though there are three interpretations of the definition provided, the similarities across them include the descriptive words: imaginary, perfection and ideal. The problem of which is that none of the definitions allude to a real place, and for obvious reasons. Utopias are place-less. The concept of utopia could be and should be framed to justify a pursuit for something better (as is the American Dream) than any physically found ideal and perfect place. The reason for this is, as the definition suggests, that society itself is inherently imperfect and the notion of

perfection is unattainable because it is a congruence of individuals with individual thoughts and beliefs.

Architect and critic Kenneth Frampton talks about the role of architects, in his work "Towards a Critical Regionalism: Six Points for an Architecture of Resistance,"⁹ and he suggests that an architect's goal is to in fact create place. If we accept Frampton's notion of place-making as an architectural truth, we are left with an extremely contradictory relationship. First, architects are visionaries that throughout history have been taught that they are to change the way people live and create utopias. Second, architects are place-makers for clients who are real peoples that reside in real, tangible places. It is impossible to accomplish both of these intents simultaneously, yet designers continue to seek the notion of utopia. Therefore, Frampton suggests for the profession to continue in the future it must take on an *arriere-garde* position; one that separates itself from a, "myth of progress" and an "unrealistic impulse to return to the architectonic forms of the pre-industrial past."¹⁰ If the architect cannot continue to define utopia in this way then we must re-evaluate its purpose and propose another framework.

Utopia could be used as an *image* to provoke a reaction or an emotion from someone or a group of people. The concept of Utopia has become imageable so that each individual has their own utopia, unique and as equally unattainable as the next person's. If architects aren't creating utopias, not because of any lack of effort but because of its impossibility, within what construct should architects operate?

Is *place* in its singularity enough of a framework to guide design decisions in the present context? Social critic and philosopher Michel Foucault suggest that heterotopias may represent a more accurate construct for the pursuits of society.¹¹ Heterotopias are places that incorporate the mythic element of utopia and the real element of place. Foucault suggests, in *Of Other Spaces* (1967)¹², that we are in a

world of connected points and in an epoch of simultaneity. He even suggests that site is now defined by relations of proximity between points or elements. If this is true then the singular “place” ceases to suffice as meeting the needs of today’s culture. To emphasize this paradox of place and utopia, Foucault uses the boat as an example of a heterotopia:

“The boat is a floating piece of space, a place without a place that exists by itself, that is closed in on itself and at the same time is given over to the infinity of the sea...” [He continues by describing the boat as] “The greatest reserve of the imagination...in civilizations without boats, dreams dry up.”¹³

Foucault is suggesting that the greatness of the boat is its ability to be nowhere and somewhere simultaneously. The boat travels by floating throughout an undefined space, the sea, to anywhere and it exists in theory within no specific space. That is unless you are an individual on the boat. As a passenger on the boat you are defined within the space of the boat. Even though the boat itself may exist nowhere, or in no defined space, you however exist somewhere, on the boat. This is important because once again it is tied to real space, and real space can be designed. We can exist on a well-designed cruise ship with many amenities or in a canoe. These create two very different places and thus experiences.

The relevance of Foucault’s theory to current trends in living and culture is significant. With the development of both the automobile and the Internet we now seek more connections and closer relations than ever. We can exist on the Internet anywhere, yet we are simultaneously inherently somewhere. The automobile gave us the individual opportunity travel from place to place (or defined space to space) with ease and speed. This necessity for the instantaneous ability to move from space to space has come to dominate our culture. However present living conditions haven’t adequately adapted to this change. Current suburbs don’t provide this access and ability to be “anywhere” and cities themselves are limited in what they

can provide. Suburban commutes and increased traffic have stalled their flexibility because of their location on the fringe of development. This results in a one-way travel to amenities. If, as Foucault suggests, our epoch is about relations among sites and heterotopias provide the ability to be anywhere (placeless) and somewhere simultaneously, then living structure should reflect those ideals.

This means first, that we need to live somewhere that could be anywhere with relations amongst other sites. Relations, means the ability to travel quickly and easily to other places through various and multiple means of transportation. The inner-ring suburb could provide this anywhere frame of mind. The inner-ring suburb of the American city is wedged between the city proper and both the outer suburbs and what remains of the rural landscape. These sites often have access to multiple means of transportation because of their historic usage.

Industrial inner-ring suburbs were initially provided with significant amounts of infrastructure, both rail and barge, to move the products out of the area quickly by land and sea. The advent of suburbia and the mass commercialization of the personal automobile, along with the post-industrial shift in the United States economy, allowed highways to cut through the inner-ring suburb as a means of access between the city center and the suburbs.

This is historically thought to be at the detriment to the inner-ring suburb as it is often categorized as by-passes. Those in power are by-passing a place that doesn't warrant investment and ceases to exist within the structure of the suburb—city transfer of people. The inner-ring suburb as a place disappears; however, latent opportunities of the new binary relationship exist for the now place-less inner-ring suburb. Access to both rail and barge still exist even though they are currently underutilized. By by-passing the inner-ring suburb with the highway the access to suburban and rural areas along with access to the city proper is instantaneous for

the inner-ring suburb. There is no secondary connection from the inner-ring suburb to the highway that allows for better access and increased mobility. The current binary relationship or monocentric city model of the American city is no longer valid. A more accurate reflection of metropolitan city structure is polycentric. This means that the inner-ring suburb now exists not just between suburb and city but often times in the middle of an increasingly diverse network of places that serve specific functions. Systems of places from entertainment and cultural destinations to job centers are now inherently closer to the inner-ring suburb than anywhere else because the inner-ring suburb is not seen as a destination itself but as a by-pass that now lies at the center of the relations web.

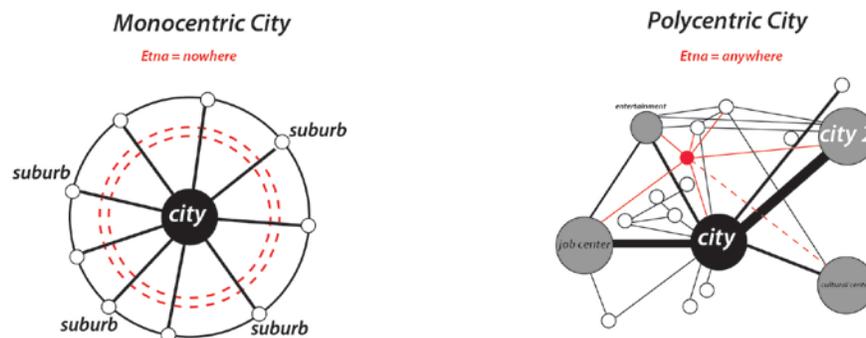


Figure 1.4: Monocentric vs. Polycentric Concept Diagram

city structure

What makes the inner-ring suburb a heterotopia is that even though it is perceived and thought of as a placeless bypass it is fundamentally somewhere. Just as the boat which exists in a sea of anywhere is itself a place, the inner-ring suburb is itself a well-defined place too. The American inner-ring suburb is often times a well-structured area with a main shopping street, multiple civic buildings and parks,

combined with a consistent and relatively dense housing stock. Since individuals have to exist somewhere the inner-ring suburb must be suitable for people to want to live there. Most post-industrial inner-ring suburbs are not currently suitable in themselves to provide “place” with the contemporary amenities that people desire when they aren’t “anywhere”. This is due to a lack of investment for the last 60-70 years and because of the suburban cultural image that has been propagated for the same amount of time. This suburban cultural image is slowly shifting however. The walkable and well-defined communal structure that exists in inner-ring suburbs (sometimes manifested in Transit-Oriented Development centers) is growing in popularity and provides an opportunity for the inner-ring suburb to recapture value and investment that hasn’t been seen in recent memory.

An example of this condition is the town of Etna, Pa. An inner-ring suburb of the city of Pittsburgh that once thrived before it was bypassed for the exurbs further away from the city. Etna now sits within a strong network of local and regional amenities that were previously considered undesirable but could be an example heterotopian framework discussed above.

Paralleled Histories: Etna | Pittsburgh | America

“All people, things, institutions and environments that are innovative and avant-garde at one historical moment will become backward and obsolescent in the next. Even in the most highly developed parts of the world, all individuals, groups, and communities are under constant relentless pressure to reconstruct themselves; if they rest, to be what they are, they will be swept away.”

-Marshall Berman¹⁴

By the start of the 20th century the term progressive was embedded into both Etna and the city of Pittsburgh. In 1910, Pittsburgh, Pennsylvania ranked as the 8th largest city in the United States and it was due to its steel producing towns such as Etna.¹⁵ Etna’s steel mill named “Isabella” was born in 1871 and thrived through the middle of the 20th century building bombs for America in WWII and prompting rail investment through the inner-ring suburb¹⁶. The city of Pittsburgh was defined by its smoke filled skies, Heinz Ketchup and a countless list of firsts that symbolized its role in the rise of America as an international superpower. Both Etna and Pittsburgh could be described as micro-Americas in their paralleled developments but they could also be described as irrelevant today. Like Pittsburgh, Etna became complacent. Pittsburgh now doesn’t even rank in the top 50 largest cities in America¹⁷. Etna was bypassed in 1950 and has rarely been mentioned since. Etna rose with the local production of steel and fell when the production of steel was moved elsewhere. Etna’s mill closure in 1961 could have foreshadowed the mass decline of Pittsburgh in the mid 1980’s and the sudden instability in the American economy today.

Like Etna and Pittsburgh, the United States became content with investment in the automobile. As manufacturing jobs moved overseas and a series of unpredictable

fluctuations in energy costs create volatility in the economy, America refuses to redefine itself. We are now seeing the negative effects of such ignorance.

Studying Etna is the same as studying a section of Pittsburgh and a segment of America. The city of Pittsburgh is now in its third “Renaissance”. It is now a healthcare powerhouse built around low costs of living an aging populace and its large collegiate presence. The United States is beginning to understand the value in blue-collar jobs and the Occupy Wall Street movements underscore the growing inequality in the national economy. It’s much more difficult to be middle class than it once was. Rising costs of education and fewer jobs leave many Americans in a state of unemployed foreclosure. Etna has been losing population, revenue, and quality for decades, stuck on nostalgic times of the past it has thus far been unable to redefine itself.

Exterior Technologies, Inc. (EXTECH) may be the exception to this statement. EXTECH is a sustainable building skin manufacturing company whose revenues rose 289% during America’s “Great Recession.”¹⁸ Stationed in Etna, this company may represent a new and increasingly relevant identity for the inner-ring suburb.

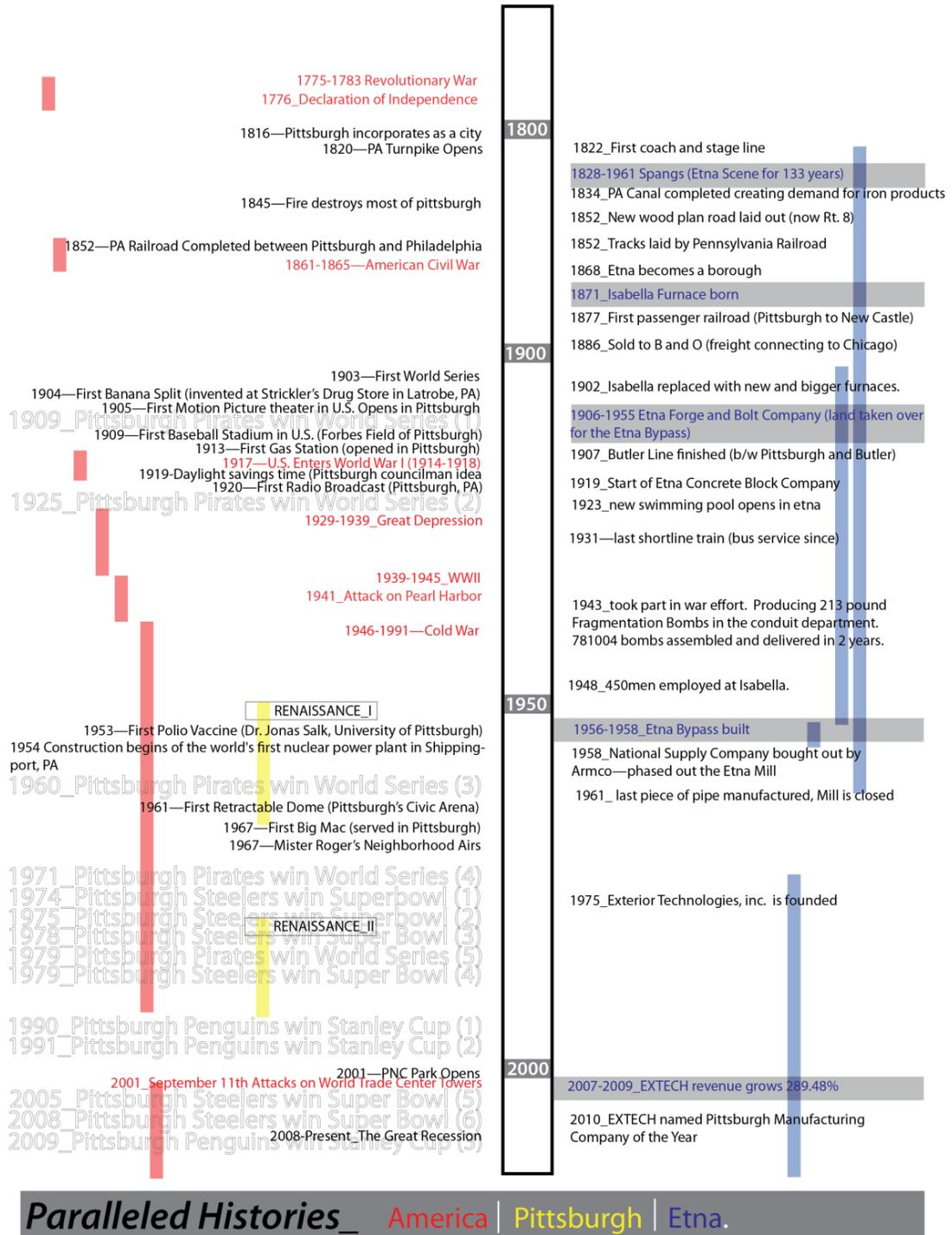


Figure 1.5 Timeline of Etna, Pittsburgh, and America (source: Author)

Dream Translation: Redefine

To shift the stagnating American lifestyle there needs to be a change in the image of the good life. If people desire a new image then new typologies can take form and spawn a shift in the culture to reflect contemporary demands and ideals. Sculpting a new image based on contemporary needs and desires will blend both city and suburb and the past and present. Figures 1.6-1.8 display these concepts. There needs to be a new typology that extracts the benefits of both suburban houses and city housing. Rejecting the suburbs in their entirety would be a great mistake. Elements such as privacy, ownership, and large amounts of space, along with safety and education are all positive attributes of the suburbs that need to be taken into consideration when redefining the American Dream. Traditional city characteristics of density, access, and sustainability should be accounted for as well. This hybrid compromise could appeal to those seeking the American dream with little sacrifice of amenity and access.

The fruition of these concepts can be seen in figures 1.9-1.12. These perspectives show the proposed development condition in both the public and private realms. Programmatic attention focused not on eating, sleeping, and bathing which can be done in any living situation, but the rituals inherent in suburban family life.

The American Dream has been translated over time into a search for personal ownership. This concept can be derived to account for customization and identification in the places we live and work. This thesis attempts to instill these desires at multiple scales for a full realization of the American Dream as it is understood today.

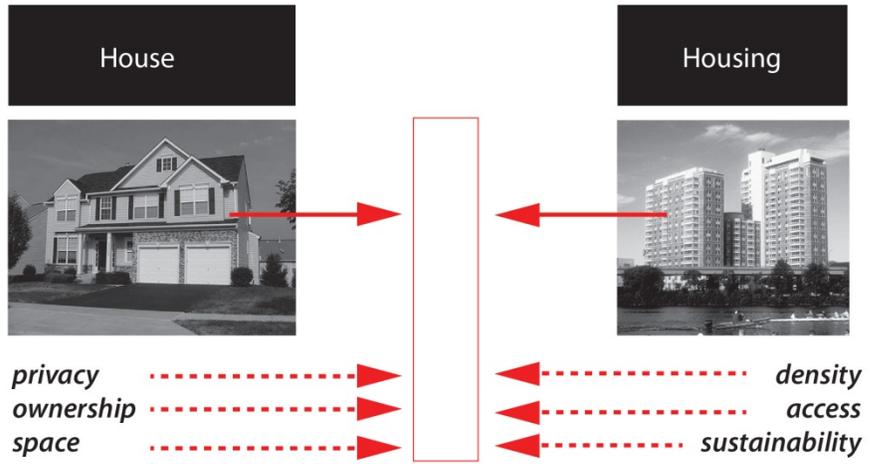


Figure 1.6: Typology concept diagram (source: Author)



form follows *image*

Figure 1.7 Creating culture diagram (source: Author)



Programming Rituals

Figure 1.8 Programming home diagram (source: Author)



Figure 1.9 Proposed street image (source: Author)



Figure 1.10 Proposed porch image (source: Author)



Figure 1.11 Proposed back porch entry image (source: Author)

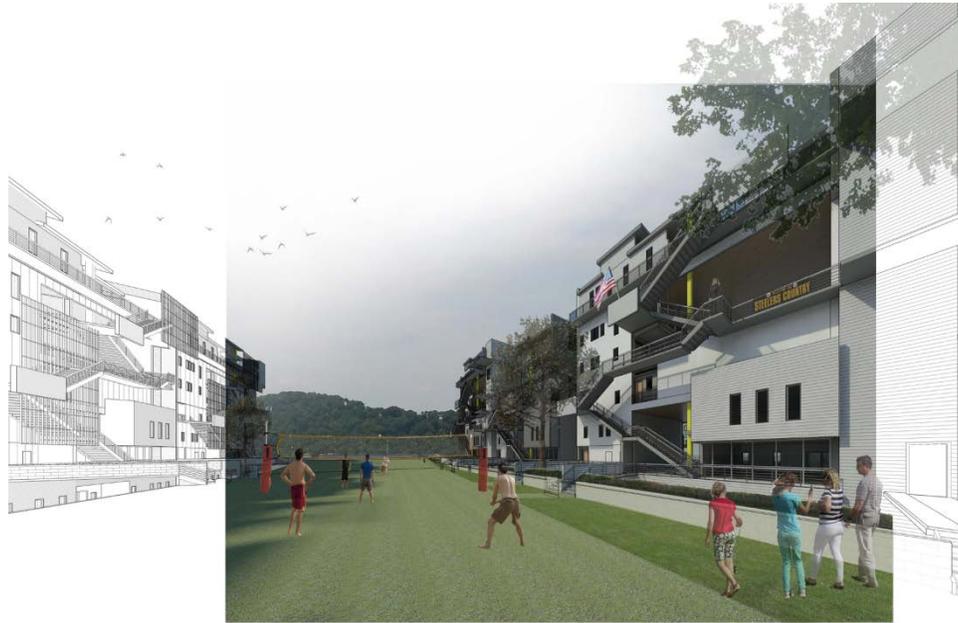


Figure 1.12 Proposed backyard image (source: Author)

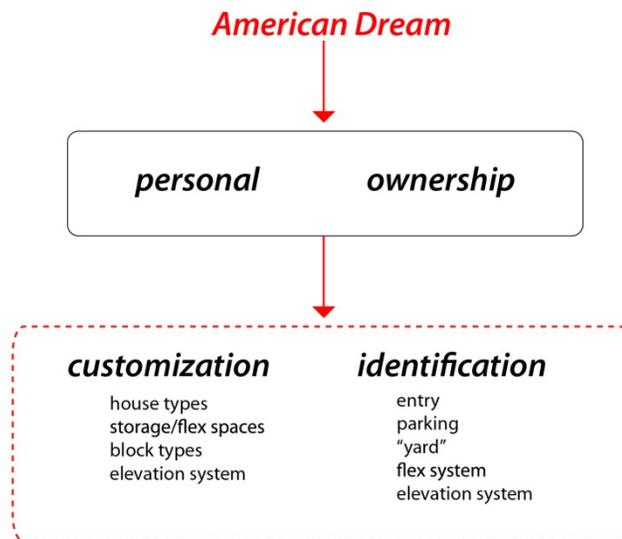


Figure 1.13 Redefining the American Dream concept diagram (source: Author)

Chapter 2: The House

The American middle class house has been shaped by a wide variety of influences since WWI. The government backed suburban developments grew in popularity and have become the staple for the American Dream. Three distinct evolutions in the suburban home have taken place beginning with the 1950's Levittown home. Since then, the 1980's saw an enlargement of the Levittown idea with greater emphasis on privacy and the automobile and in the 2000's the McMansion developed into estates for the material and consumer class.



Figure 2.1 Levittown Development Aerial (source: www.statemuseumpa.org/levittown/one/d.html)

Evolution of Home

William Levitt once said, “No man who owns his own house and lot can be a communist. He has too much to do.”¹⁹ Today this quote may not have an effect on those who read it but at the close of WWII and with the onset of the Cold War this statement meant something. The Levittown home represented the start of a shift in the paradigm of American housing culture. What began as a war-time need for military housing followed with a need for housing the returning veterans and their

families. The Levitt's perfected the mass-production of houses by creating large suburban developments. The success of the program heavily relied on government backed loans, which provided the opportunity to purchase a home with little to no money down (a trend continued into the 2000's).

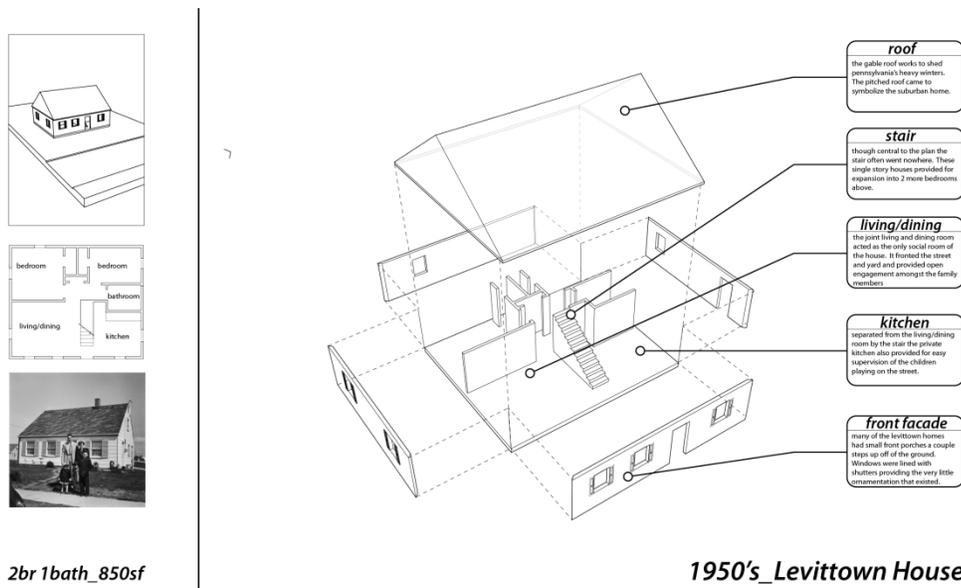


Figure 2.2: The Levittown House (source: Author)

The Cape Cod Levittown House shown in Figure 2.3 began the evolution of the middle class family in suburbia. These were often starter homes for returning veterans and the stair provided the ability to expand the house to a second story when the family grew even though they were stairs to nowhere at the time. The living and dining area were one room placed on the front of the house. Along with the kitchen, separated by the stair, they fronted the street. By placing the public functions of the house on the street parents could watch their kids play and the street almost always was being supervised. The gable roof had the ability to shed rain and snow, provided an area for expansion beneath, and began to symbolize the middle class home.

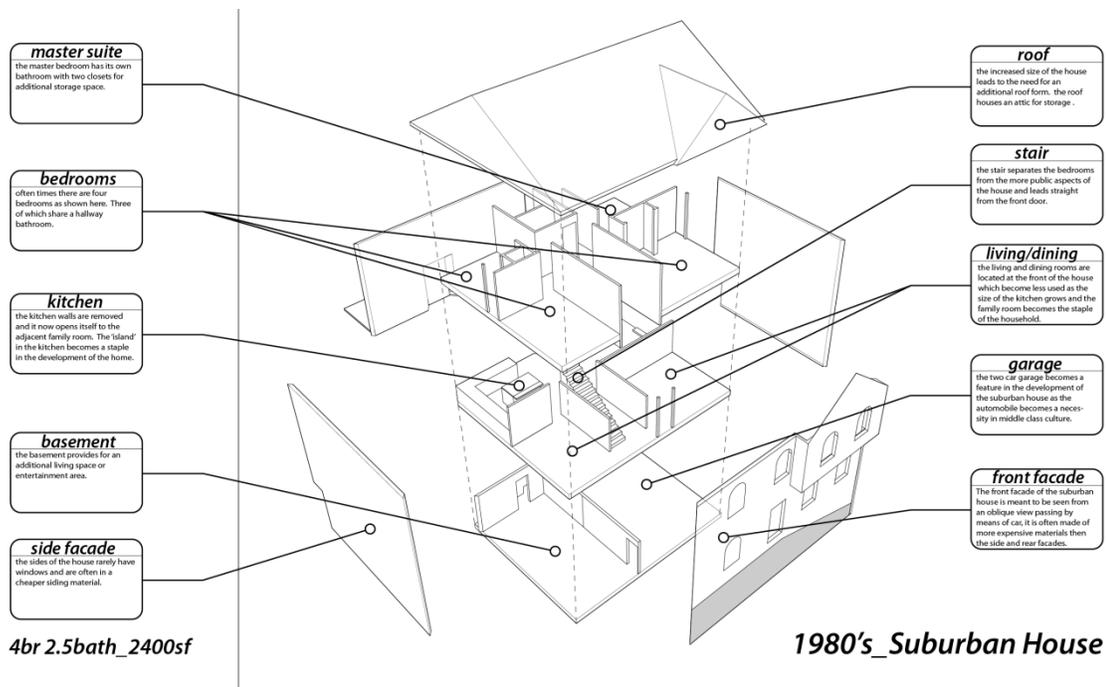


Figure 2.3: The 1980's suburban house (source: Author)

Changes in the suburban house over the ensuing decades seem minimal but have a profound effect on the lifestyle of the middle class in suburbia. The heavily occupied functions of the house (family room and kitchen) that faced the street in the Levittown homes have shifted to the rear of the house with an emphasis of the backyard. The mentality that the children were playing on the street has similarly moved to the more private and often fenced in rear of the house. The house now supports a two-car garage, structurally entrenching the automobile into middle class culture. The most obvious change is the size of the home. The single-story two bedroom Levittown model has expanded to contain three to four bedrooms and multiple baths. The master bedroom has become more privatized and has its own full bathroom. The living/dining room has also been completely altered. The isolated kitchen found in the Levittown model has become an open space and is regarded as the center of the suburban home. The living area has been subdivided into the family room, living room, and the dining room. The formal living room and dining room are the most

unused spaces and front the street while the lively kitchen and family room face the backyard.

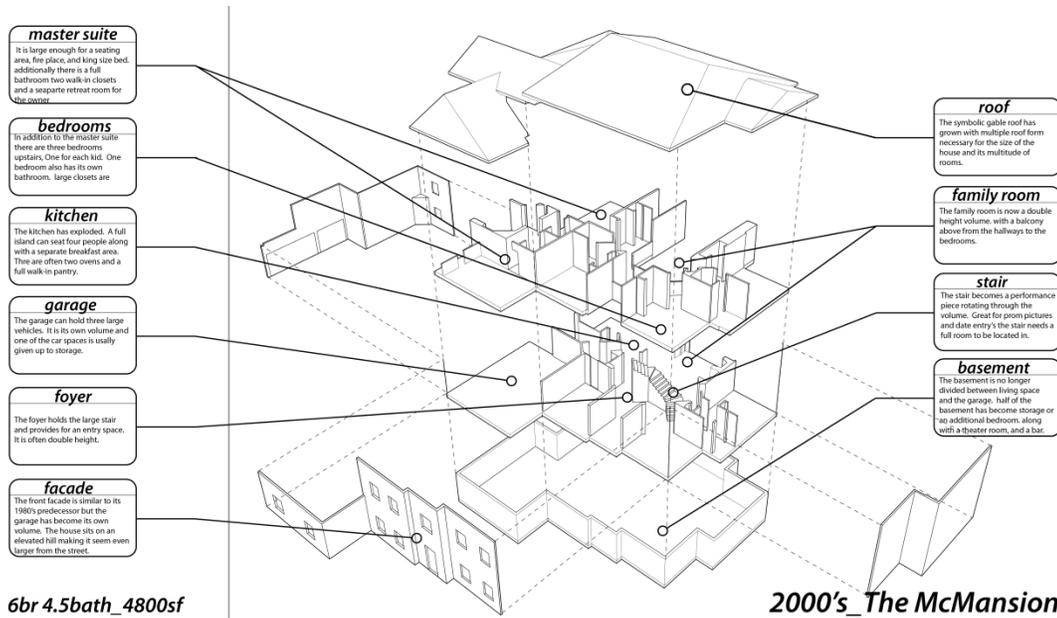


Figure 2.4: The McMansion (source: Author)

Through the 2000's the country grew. Likewise so did the suburban house. So large it has been deemed the McMansion, these Villa like suburban castles grew to an unsustainable point. Specified computer rooms, sun-rooms, theater rooms, offices, and breakfast areas, combined with three car garages almost doubled the 1980's suburban home. The Master's bedroom became a Master's Suite with its own Jacuzzi tub, multiple walk in closets and often times separate private rooms for seating. These versions of the suburban home grew with the size of the automobile as gas guzzling SUVs and Hummers became popular with middle class wealth. Through the construction boom of 2000's home prices were inflated and beginning with the economic crash in 2008 the foreclosure of the suburban McMansion has been on the rise, mortgages became more expensive than the worth of the house.

Recent surveys of the housing industry have provided statistics to the current program trends in the typical American home, see Figure 2.1. Most houses have both heating and air conditioning. 64% of houses have three or more bedrooms and half have a separate dining room.²⁰ These statistics demonstrate what the average middle class family is aspiring to with regard to space and program that will have implications on the thesis proposition.

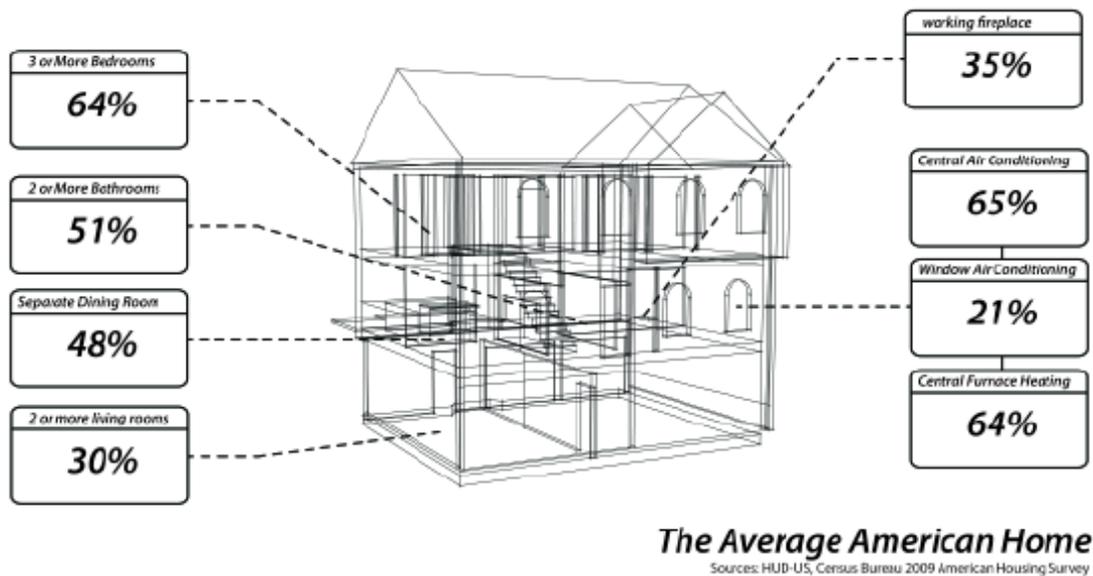


Figure 2.5 Average American Home Today (source: Author)

Prototype Visions of Home

Beyond traditional American housing developments, architects have always envisioned the home. The most notable may be Le Corbusier's Villa Savoy, 1928, which illustrated his five points of architecture combining the automobile, privacy, and outdoor space into the ideal.

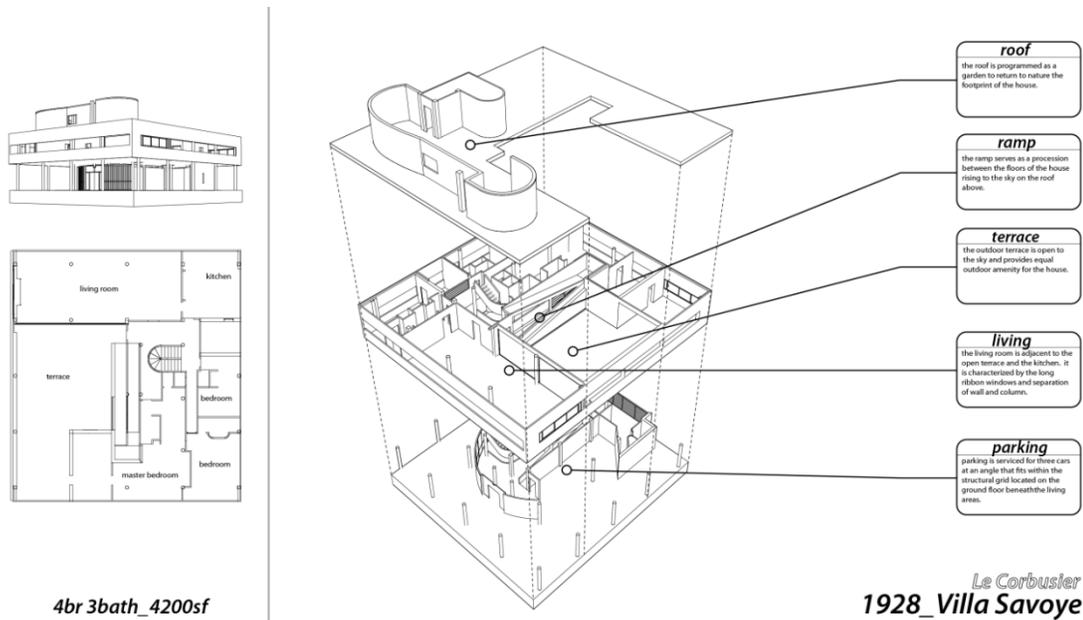


Figure 2.6: Le Corbusier's Villa Savoy (source: Author)

Additionally, Marcel Breuer's Exhibition House at the 1949 MOMA exhibit illustrated a vision for how the middle class family would function within the house and William Wurster's Grover House, 1935, incorporated private outdoor space into a city setting. Breuer's Exhibition house separated the adult and children's functions. The parent's room was lofted half a story on the opposite side of the house from the kid's room (figure 2.3). In this scheme, the kitchen became a command center that oversaw the living room and the children's play room. The house provided for a single car garage and interpreted the gable roof into a butterfly roof that created spaces of varying height. Attention was paid to the connection of the house to the outdoors with a porch attached to the parent's room and a seamless transition from the living area.

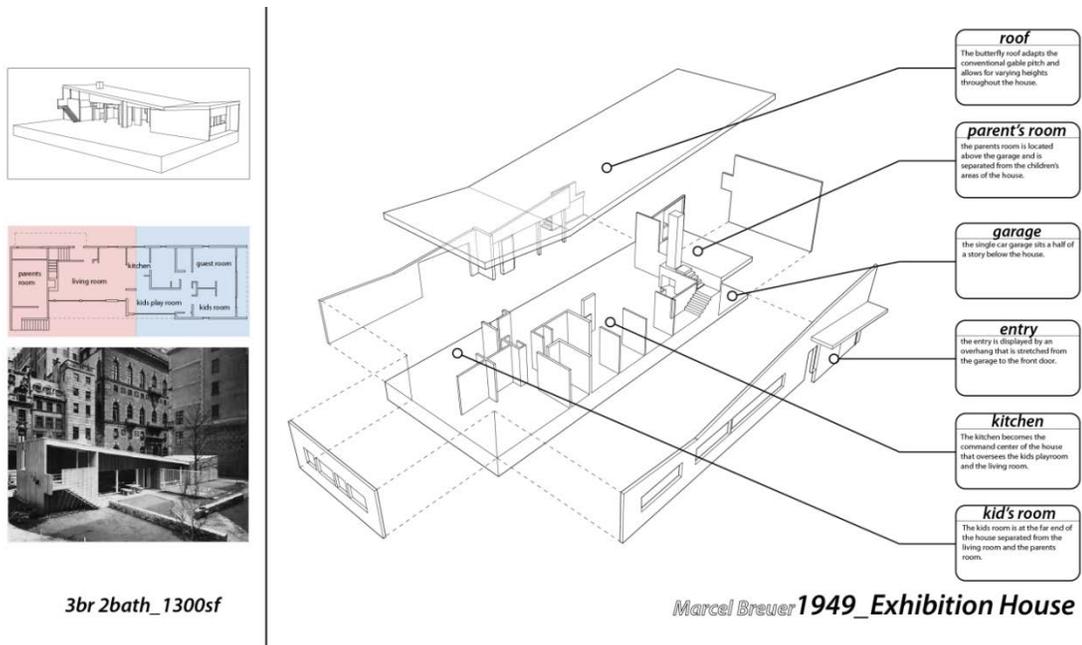


Figure 2.7: Marcel Breuer's Exhibition House (source: Author)

The Grover House, fig 2.4, by William Wurster was done during the Great Depression and created amenity within a small limited site. By reconfiguring the program in a traditional row house typology Wurster was able to connect both the dining room and living room to separate outdoor spaces and take advantage more open views as well as a more intimate garden space. The promenade from garage to house could also be reference the suburban driveway and sidewalk methodology creating ritual from the public face of the street to the private areas of the house. The bedrooms exist in the middle of the house because they do not need to be directly adjacent to an outdoor space.

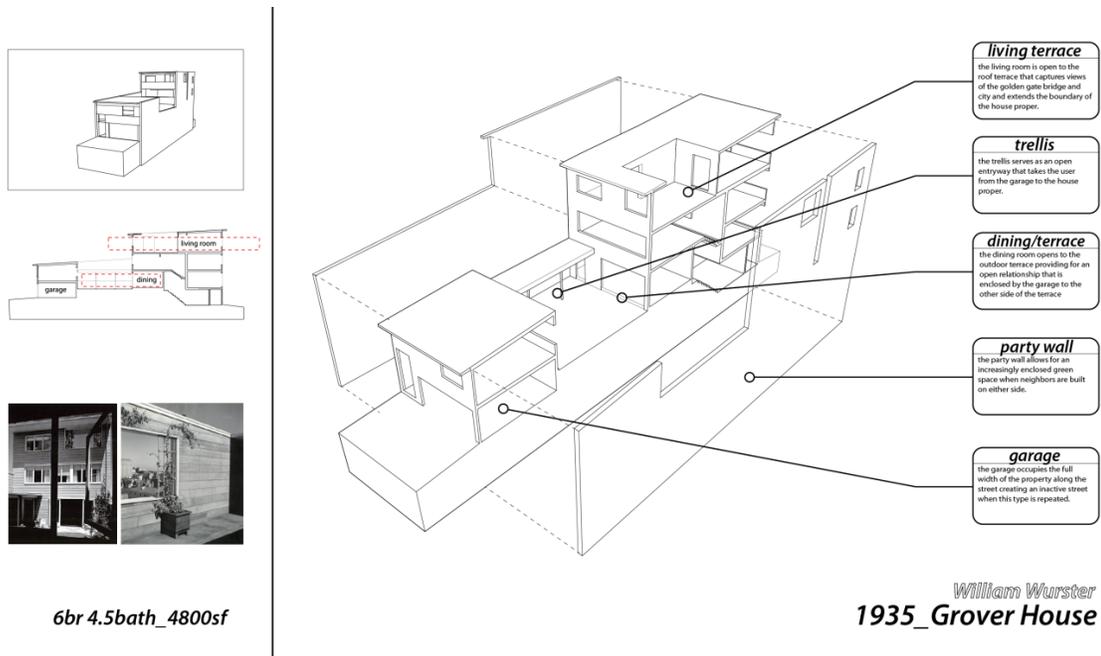


Figure 2.8: William Wurster's San Francisco Grover House (source: Author)

Populized Images of Home

Similar to the influence of war-time propaganda, Hollywood has a profound impact on the image of home. Shows like the Sopranos and Desperate Housewives portray contemporary McMansion lifestyles. Mad Men is a 1960's version of middle class nuclear family life. Even shows like Sex in the City, Friends, and Seinfeld depict specific types of people and how they live. The Seinfeld apartment is set up as a single man's New York City bachelor pad with an open floor plan that allows constant interaction with anyone in the apartment and unfolds to the viewer. The open kitchen, dining table, and seating area provide for constant dialogue when hosting and the bathroom is visible but within the appropriate 'buffer' distance. Rituals created by the apartment range from the door buzzer, that allows friends to identify themselves before coming up, to the window that provides an interaction with the street or the unexpected views of neighbors in another building. Beyond the noticeable functional aspects of an apartment is the image of how a single person

lives in the city that is represented for nine seasons. The constant reinforcement of a lifestyle undoubtedly plays a role in the viewer's identification with their own way of life.

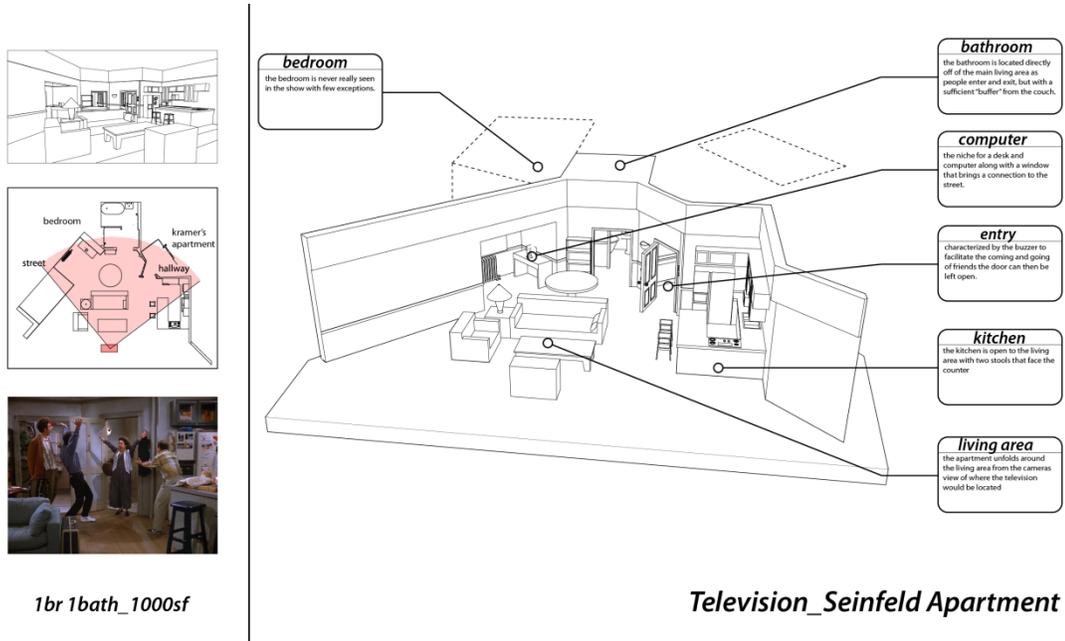


Figure 2.9: Jerry Seinfeld Apartment (source: Author)

Cartoons like Southpark, Family Guy, and the Simpsons (Figure 2.10) create fantasy places but still adhere to the real nuclear middle class image. The Simpson's house, figure 2.10, has two separate living rooms, a two-car garage, and most notably the strict articulation of the yard. The house is set back from the street, enclosed by a fence, and accompanied by a backyard with both a tree house and dog house. Over the twenty some years of the show those amenities become inextricably linked to the suburb. Even Nickelodeon based children's programs popular in the 1990's provided this imageable stereotype. Rugrats, Blue's Clues, and Doug all allowed children to watch middle class families in suburban settings from their living rooms. Even children who didn't live in traditional detached single family dwellings may come to identify the typical middle class family with suburban settings by watching it in a

variety of ways while growing up. What are the implications? Hollywood suggests how certain people live and over years and years of images showing these lifestyles culture can conform to them. Image is thus inherently linked to form: *form follows image*. If form follows image then culture consequently follows form. A culture of isolation, consumerism, and commuting has ensued from the suburban forms generated by decades of images.

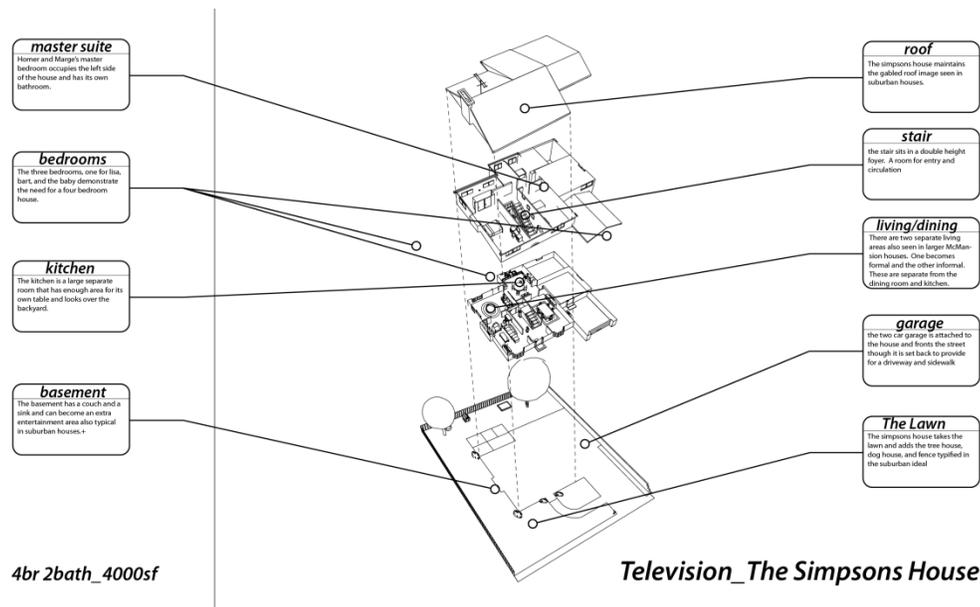


Figure 2.10: The Simpson's House has been broadcast to audiences for over twenty years. Representing an image of the middle class lifestyle and home (source: Author)

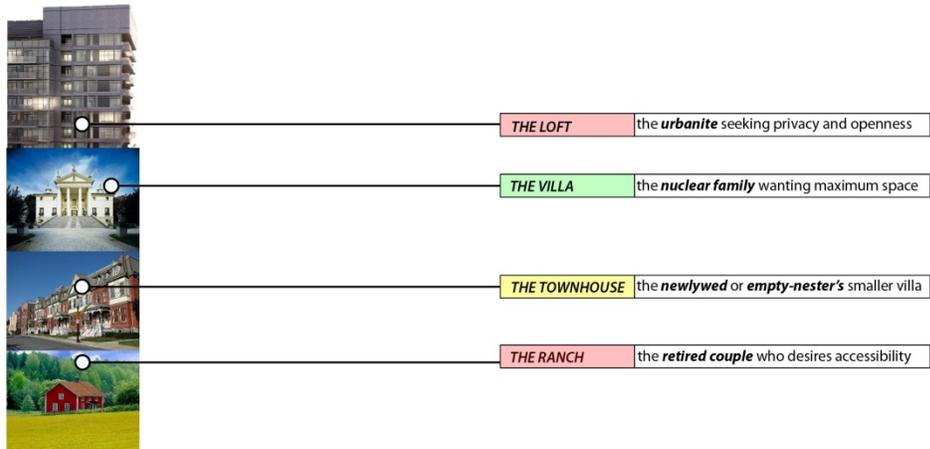
The Lawn

It is important to recognize the significance of the lawn as a programmatic necessity in the suburban home. This situation did manifest itself randomly but has been molded from a numerous cultural efforts in the history of America. Influences range from ancestors coming from England where the climate proved fertile for green pastures and implementing their landscape in the United States to visions by Thomas Jefferson of broad pastoral landscapes for the people of America. Large green spaces like the National Mall and Central Park have become icons in more

dense areas but the lawn was commercialized during the industrial revolution.²¹ During WWII maintaining the lawn was a sign of patriotism which lifted morale in times of high anxiety that showed everything was alright.²² Images of the lawn and victory gardens were seen in advertisements for consumer products. Furniture, appliances, and homes were all framed by the green carpet that a house eloquently sat on. The lawn and victory garden became war therapy for returning veterans and people were told to “grow vegetables for victory.”²³ The lawn was an open air living room that became so popular plates, walls, curtains were often painted green. The lawn was an image of American affluence that, like the house, was always on display. This image can be coupled with the idea of setting the house back from the street to increase privacy. The lawn then served as a security blanket from the neighbors and unwanted guests. The image of the lawn is the primary setting for the home in the American Dream today, engrained in the culture of middle class desires that the thesis proposal must address. The lawn is the foundation for the more expansive site context referred to here as the yard studied in Chapter 3.

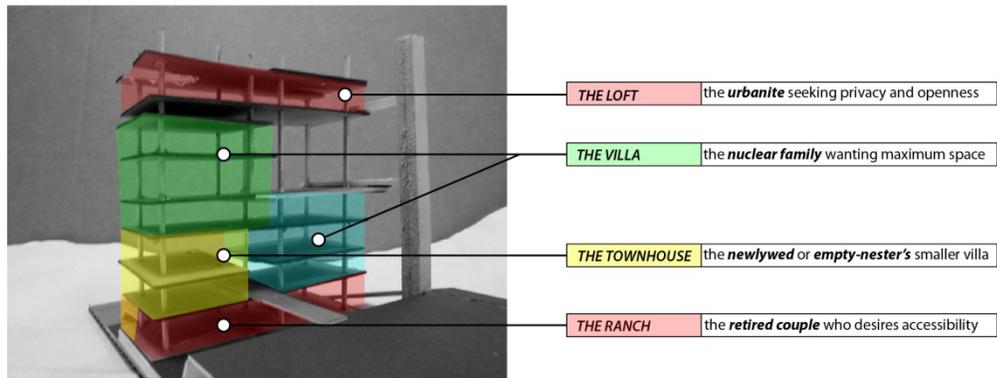
Home Translation: Transform

The purpose of this research is not to remove familiar forms and associative promenades that exist in the suburbs. A methodology of transformation was used to abstract common sequences, events, and spaces, and types into a more dense and suitable form that reflects contemporary demands and desires. Figures 2.11 and 2.12 show how diverse yet typical American types can be studied to provide a customized home for an individual family. Different house types are then combined into one building. This means that different types of families can live within the same image and project a similar status as their neighbors. This doesn't develop into a homogeneous condition as seen in the suburbs but provides for an endless combination of houses and blocks to create a diverse residential fabric. Figures 2.13-2.21 demonstrate the concepts and development of the proposed house types within the thesis. Figures 2.22-2.26 then demonstrate the passage through layers in traveling from the public street to the private home.



American House Types

Figure 2.11 Popular American House Types (source: Author)



[Re: America] House Types

Figure 2.12 Implementation of House Types into Re:America Proposal (source: Author)

House Type 1: The Loft

The Loft is developed to serve those who value privacy and don't possess the need or desire for expansive amounts of outdoor space. The kitchen is set up as a command center that dictates between public and private. The Loft can have up to three bedrooms but would primarily serve the owner by having a detached studio (full kitchen and bath) that could open across the patio and into the primary living area of the home. Outdoor amenity is achieved through multiple balcony experiences that are coordinated to provide layered zones along the periphery of the home for increased privacy and separation.

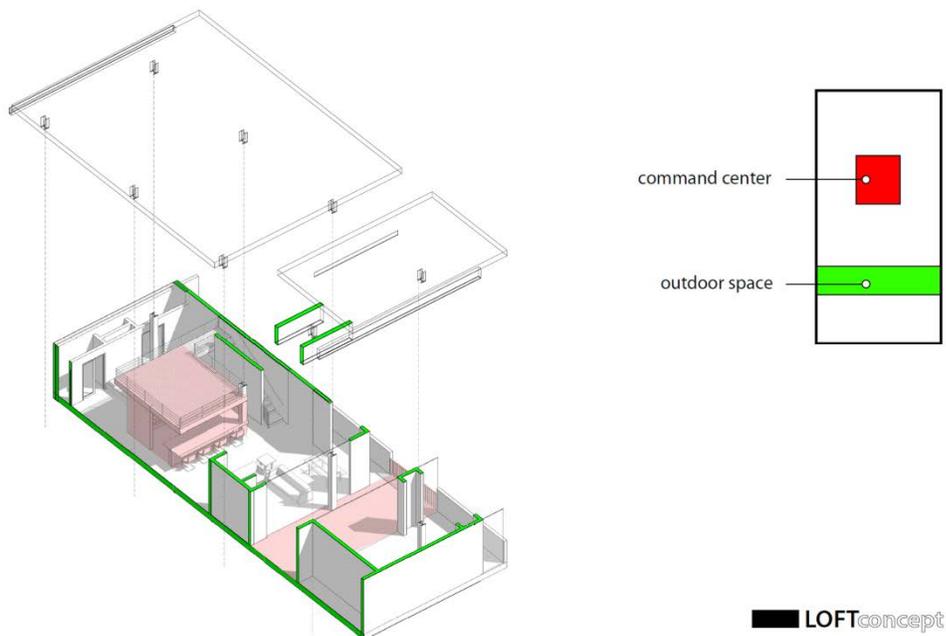
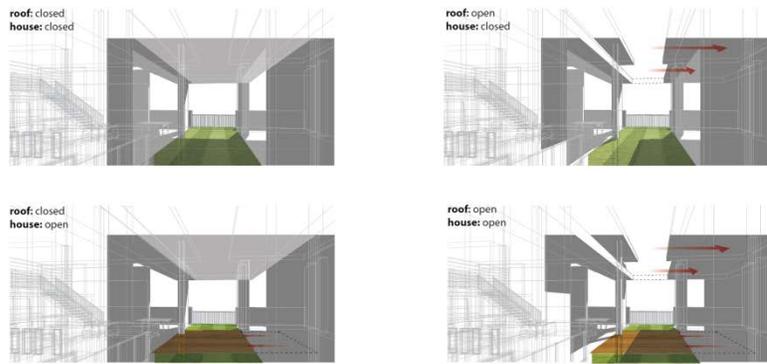


Figure 2.13 The Loft Concept (source: Author)



Loft: Outdoor Configurations

Figure: 2.14 The Loft-Outdoor Customization (source: Author)

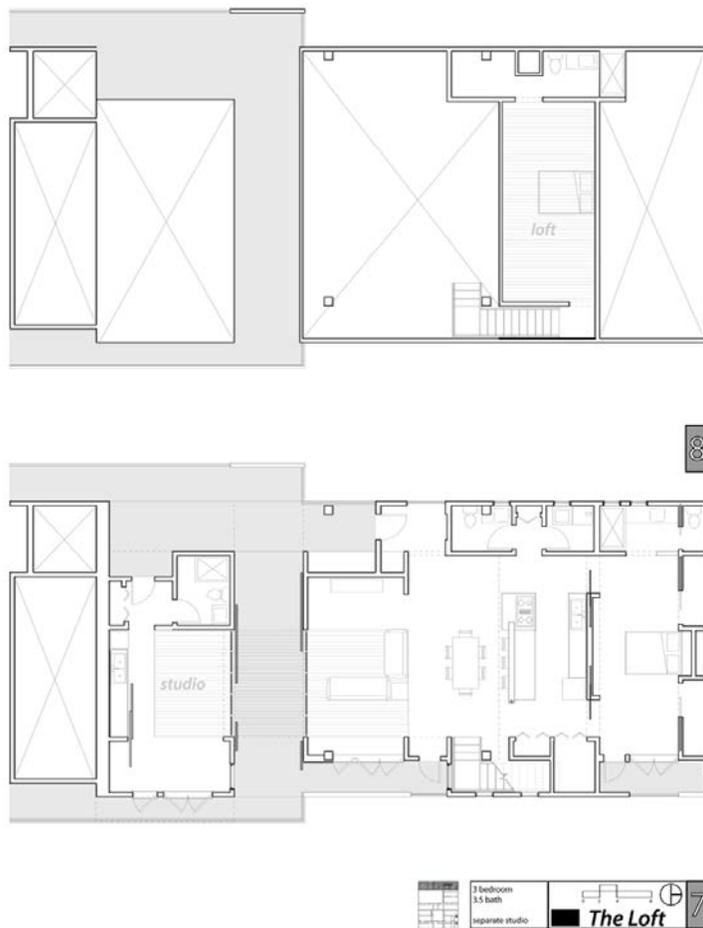


Figure 2.15 Loft Plan (source: Author)

House Type 2: The Townhouse

The Townhouse is meant to provide a two bedroom house with an optional ground floor third bedroom that could be utilized within the home, rented out, or used as in live/work fashion. The townhouse (figures 2.16 and 2.17) has identifiable entrances from the street and at the plinth level in the rear of the house. The three story house is designed for open living space, privacy, and a natural lighting by means of the open stairwell. The bridge from the plinth to the townhouse as well as the small front set of stairs provides layers of privacy in the higher density system.

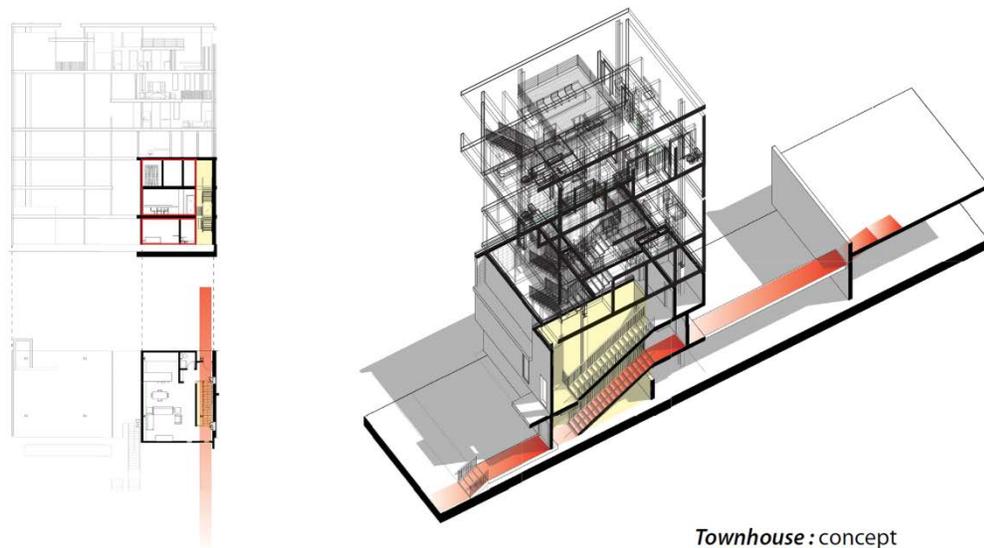


Figure 2.16 Diagram of Townhouse Concept (source: Author)

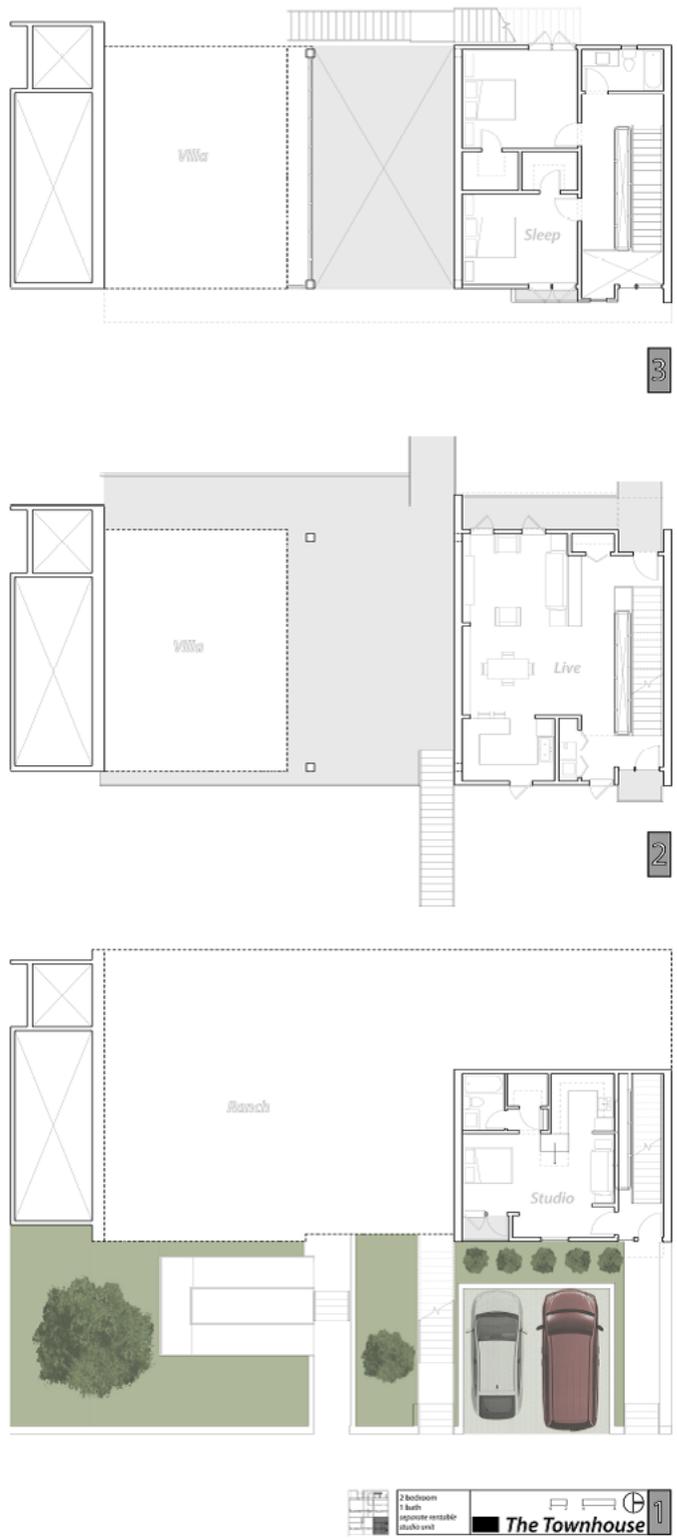


Figure 2.17 Plan of Townhouse (source: Author)

House Type 3: The Ranch

The Ranch is a fully accessible four-bedroom house on the ground floor of the building. Effort was made to separate the public and private functions of the house across a thickened wall condition to provide such boundary. The kitchen serves as a nexus between living and dining while simultaneously creating an open relationship to the back patio and yard. The plan (figure 2.19) shows the spatial continuity from front to back through the core of the house while the master suite is detached from the other three sleeping areas to increase privacy. A ramp is provided for two and a half foot rise to the living level increasing privacy and separating from street grade.

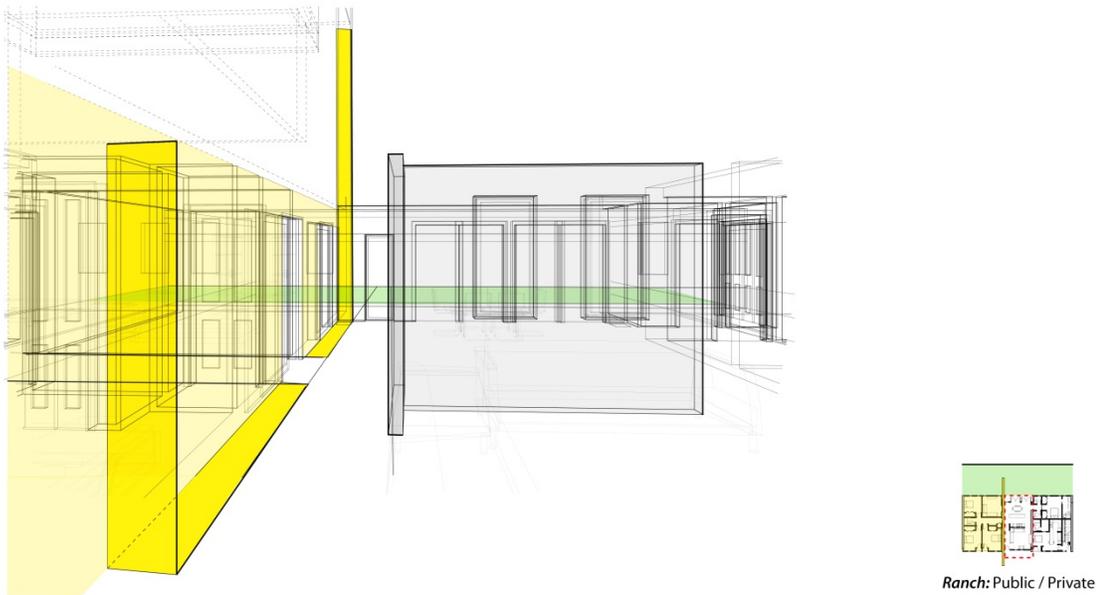


Figure 2.18: Diagram of Ranch Concept (source: Author)

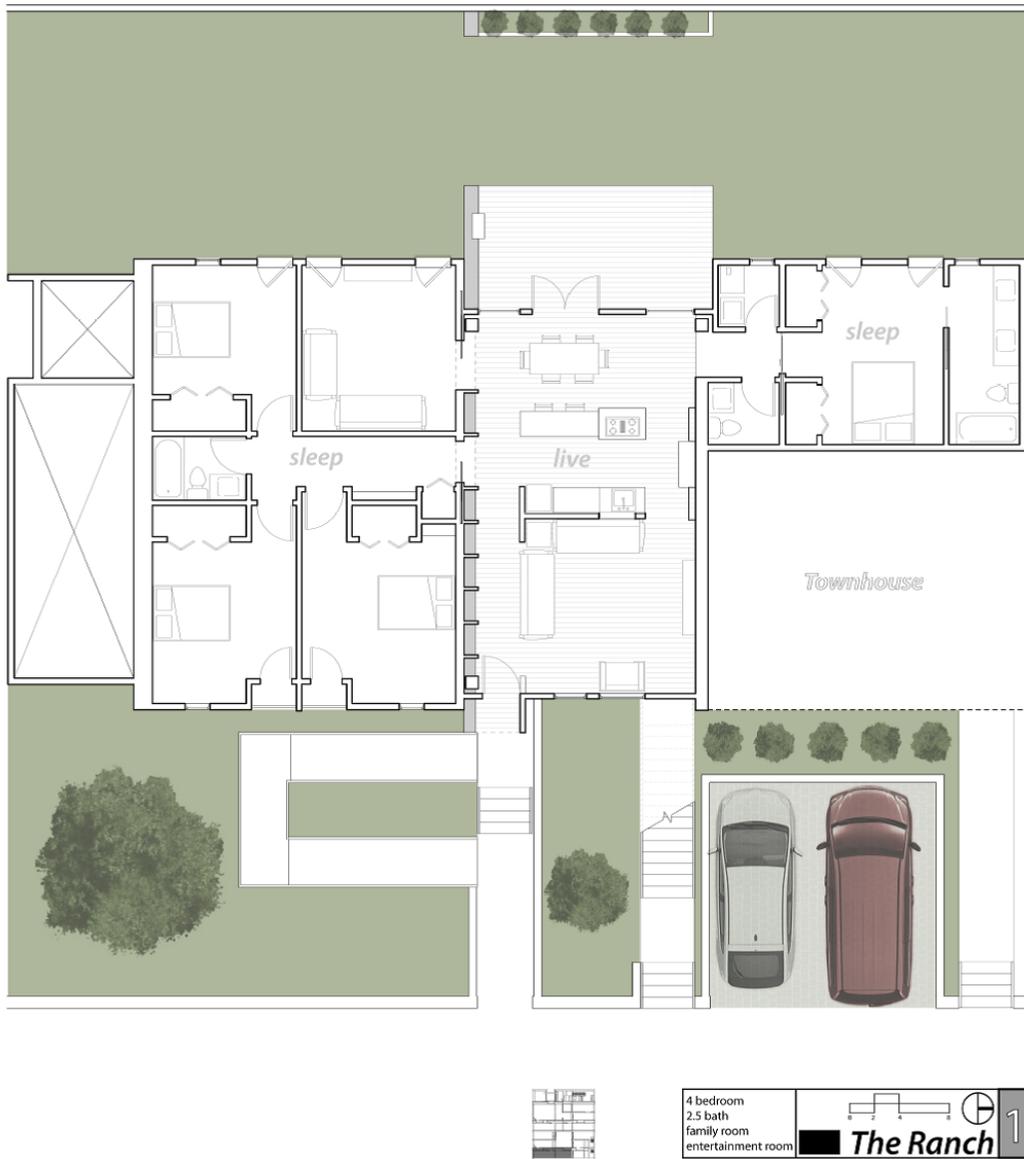


Figure 2.19: The Ranch Plan (source: Author)

House Type 4: The Villa

The Villa transforms the traditional layout of the suburban home from an isolating grid condition created by circulation. The kitchen becomes the command center that oversees living, dining, and the front yard. Sectionally, the basement is lifted above the living area to extend access to the outdoors while the sleeping area of the four bedrooms lies below the living area in a more secluded location. Square footage in plan is substituted for double height volume in the living and dining areas. Small balconies line the periphery of the sleeping level to provide a thickened zone of separation both climatically and spatially.

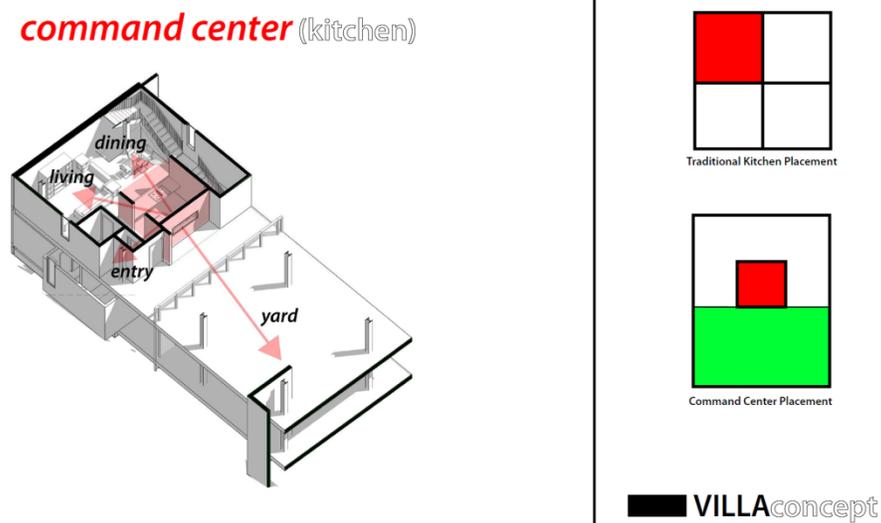


Figure 2.20 Villa Concept Diagram (source: Author)

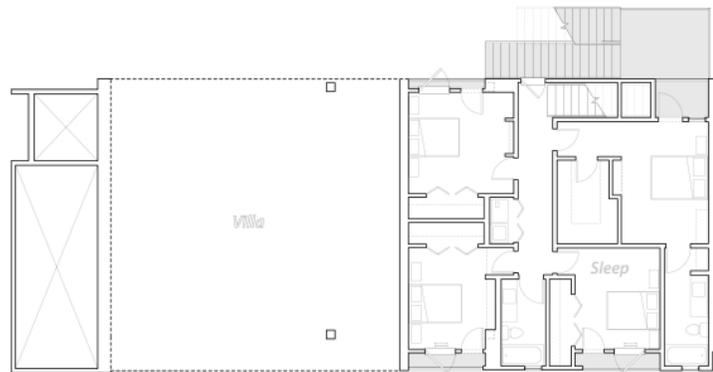
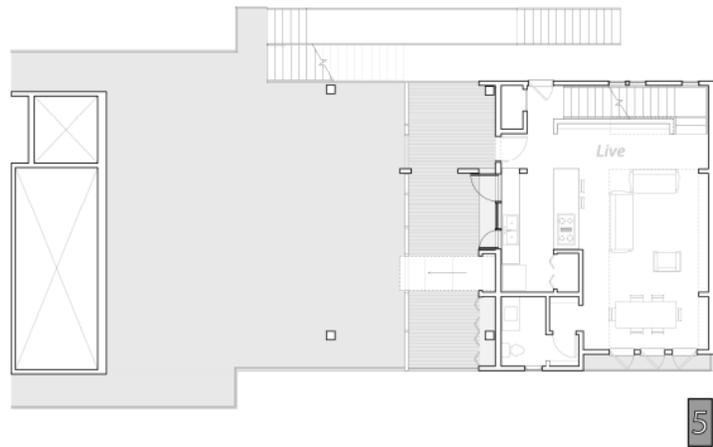
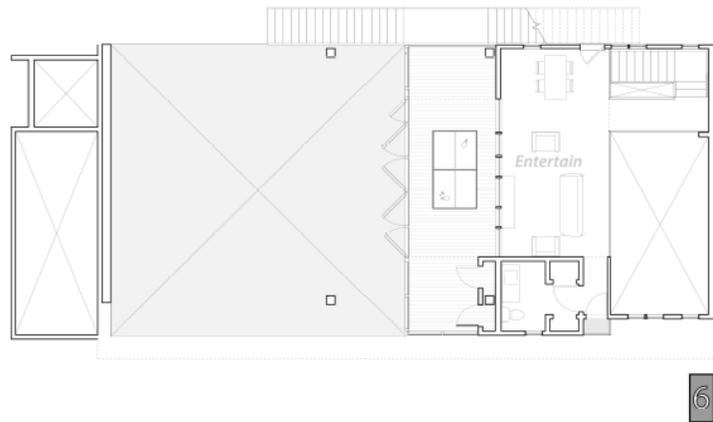


Figure 2.21 Plan of the Villa (source: Author)

Promenade: Public to Private

A significant focus of the research was studying suburban promenades through additive objects and zones that created implied boundaries and increasing levels of separation and privacy. This was transformed in the current proposal to mirror those benchmarks in the promenade. The goal is to reinforce the suburban rituals and simultaneously remove the high density “corridor” connotation of city living. Figures 2.22 through 2.27 take snapshots from moments along the promenade at integral transitions of public to private. This series samples a promenade for the villa though similar sequences would result for all house types to a greater or lesser degree.

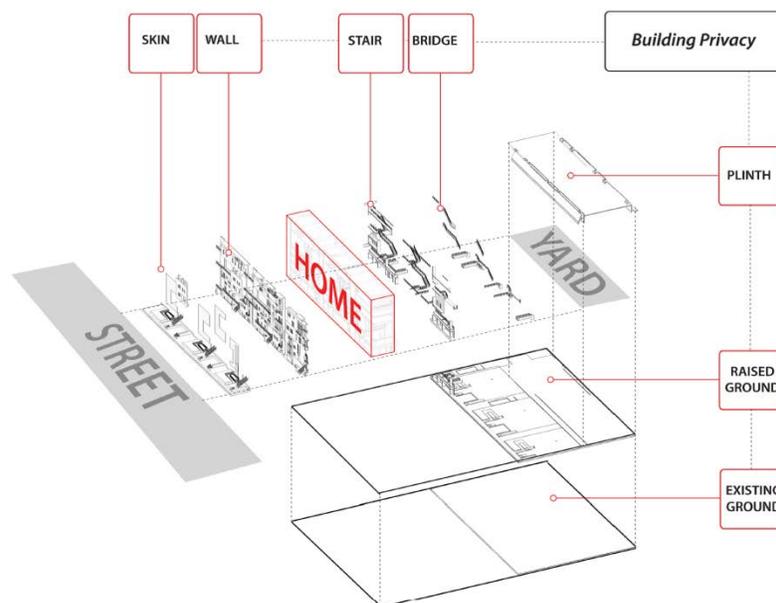


Figure 2.22 Public to Private Layering (source: Author)

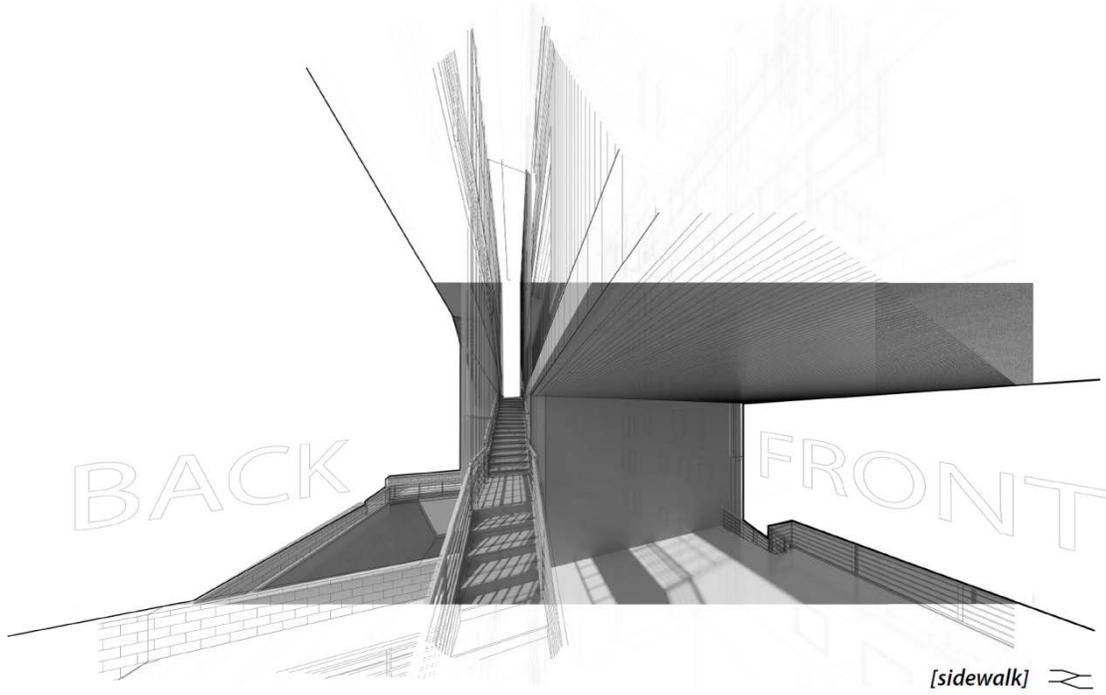


Figure 2.23 Stair Perspective Diagram (source: Author)

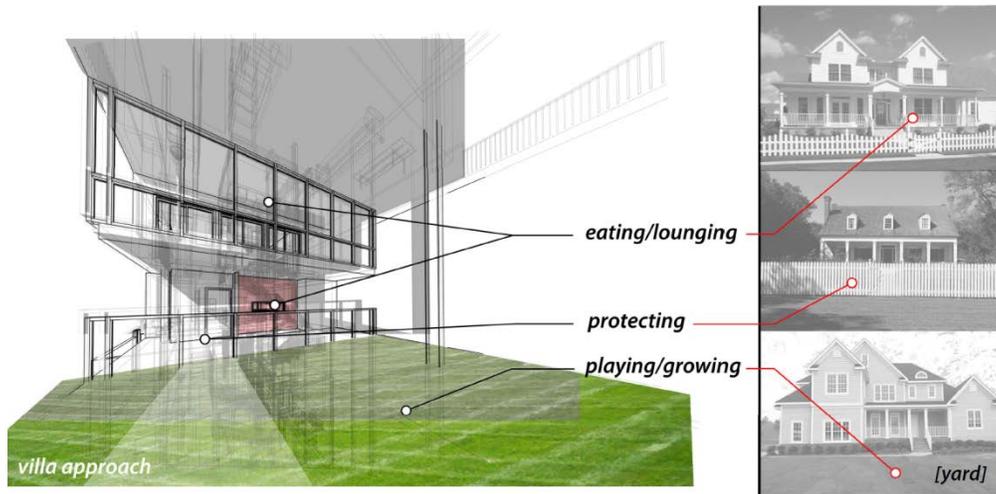


Figure 2.24 Villa Approach Perspective Diagram (source: Author)

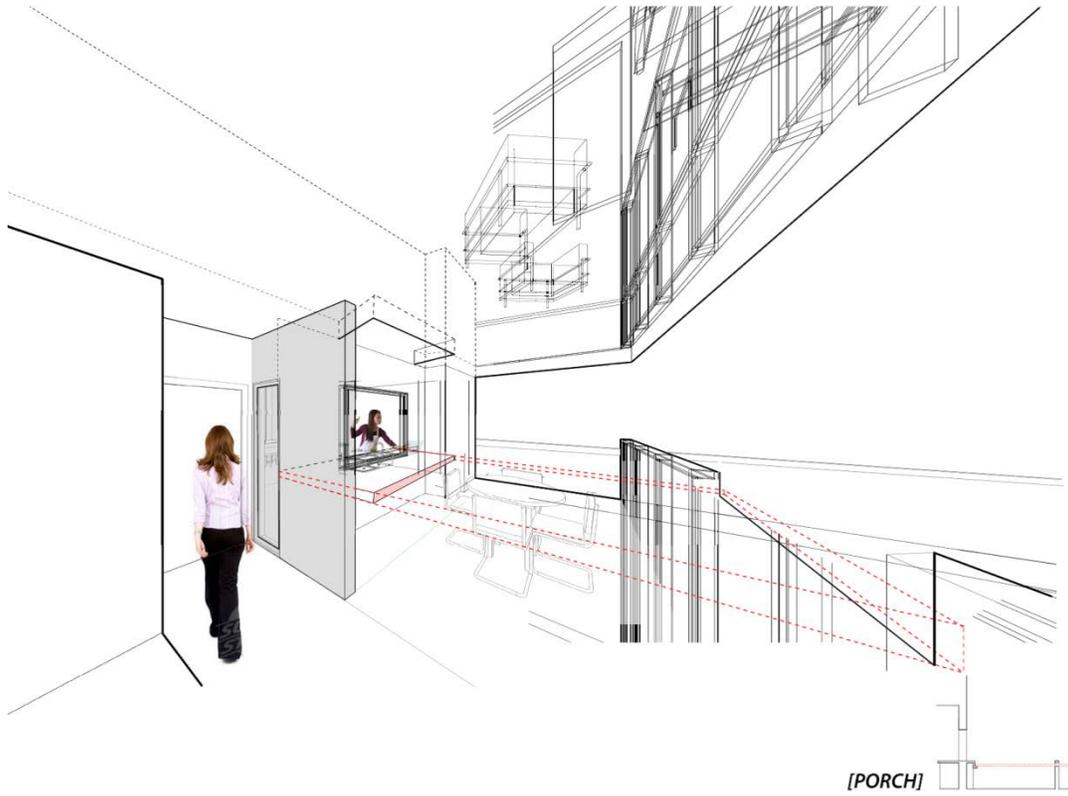


Figure 2.25 Villa Kitchen Concept (source: Author)

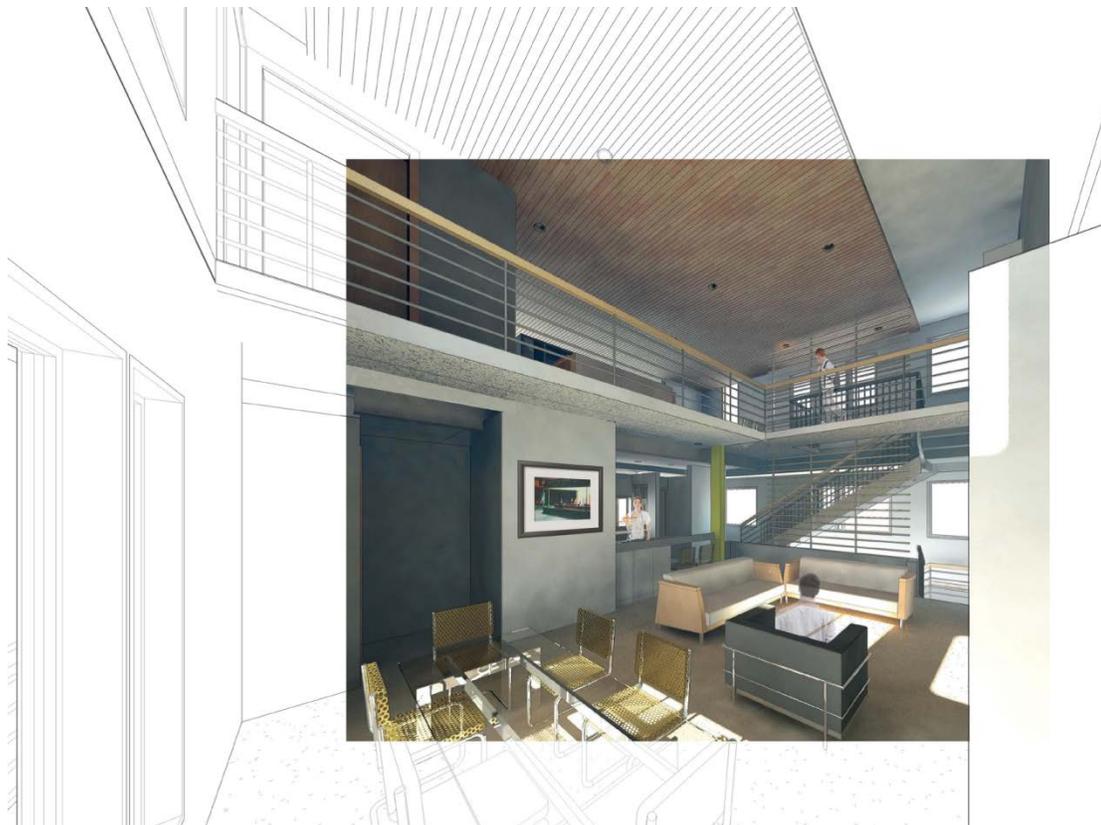


Figure 2.26 Villa Interior Perspective (source: Author)

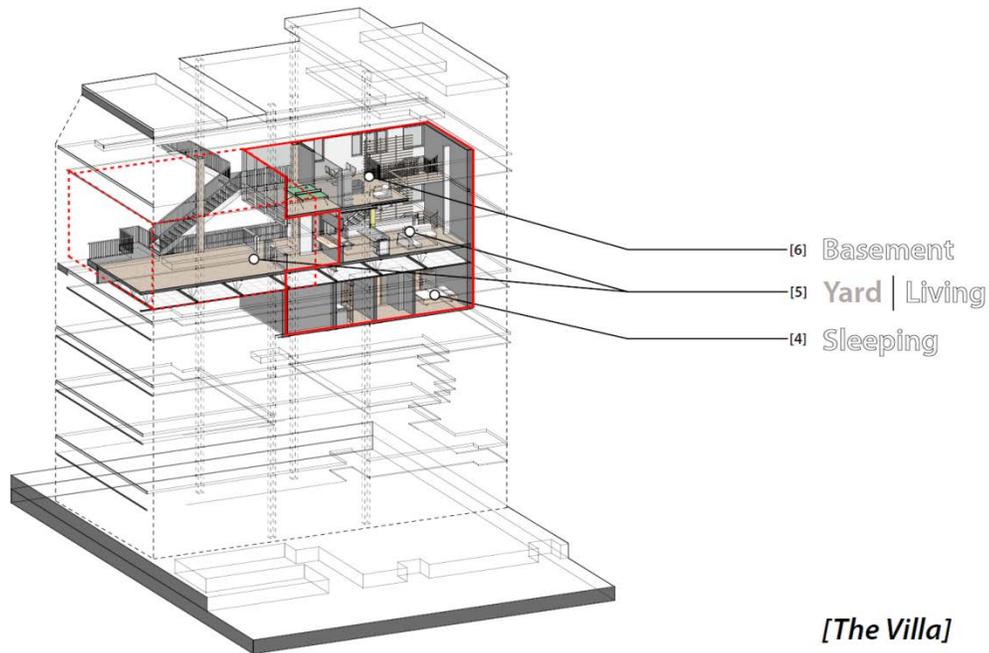


Figure 2.27 Villa location in Building (source: Author)

Building Section Development

The development of the building section began with unorganized expanses of interior and exterior space and evolved into more rational responses to the steel structural system and both storage and services. Figures 2.28 through 2.31 highlight this progression and culminate with the building façade. This allows for a direct comparison between the interior and exterior. Thickened zones are created at moments throughout the section to provide for a sound buffer, storage/amenity space, and access to services. This concept is highlighted in figures 2.35 and 2.36.



Figure 2.28 Building Section Process 1 (source: Author)

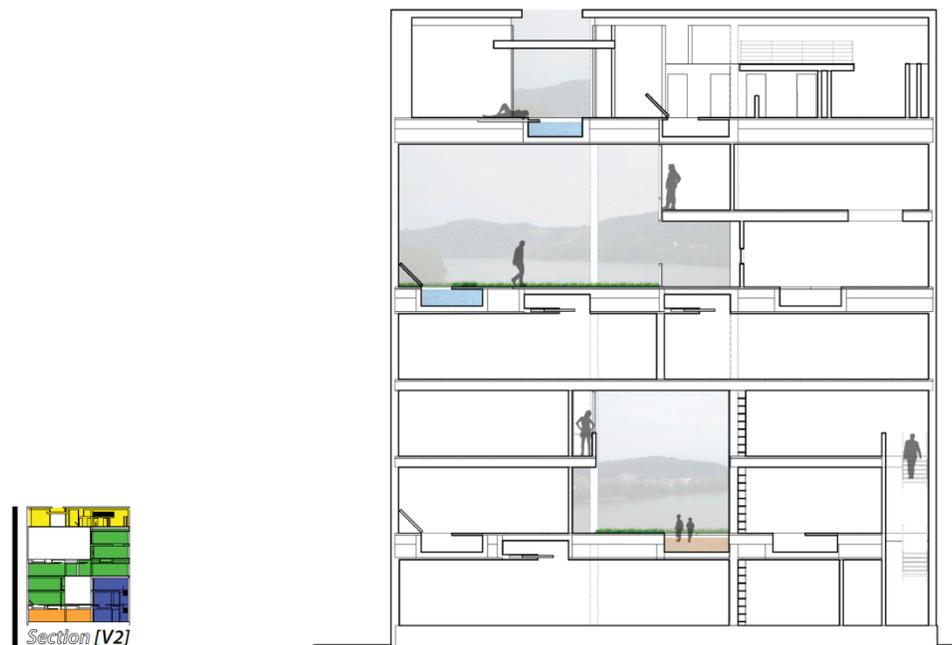


Figure 2.29 Building Section Process 2 (source: Author)

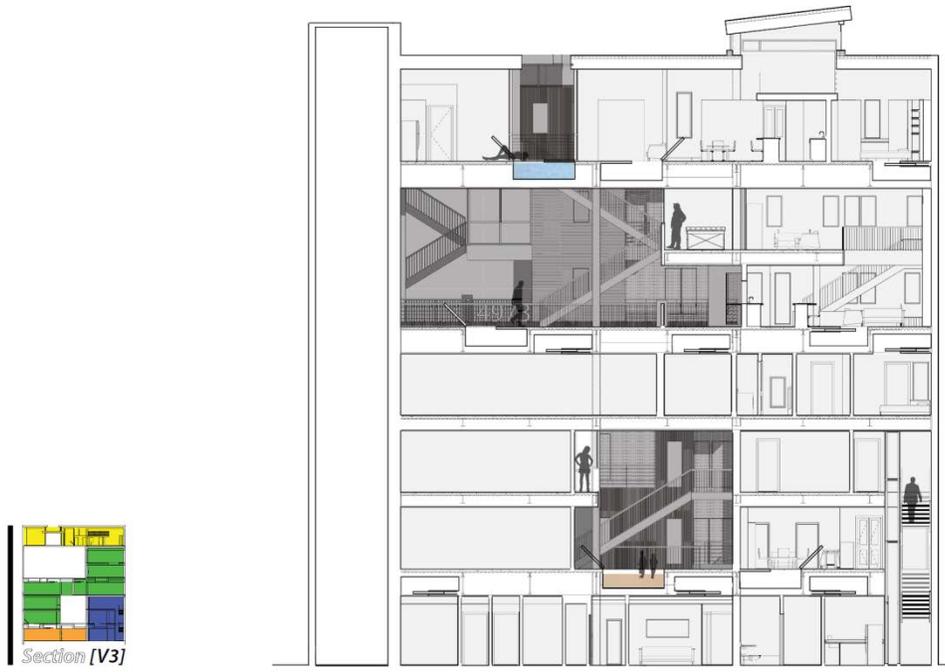


Figure 2.30 Building Section Process 3 (source: Author)



Figure 2.31 Building Elevation (source: Author)

Elevation and Skin Development

The building elevation is meant to project the assembling of the interior house for ownership/ identification purposes. A perforated metal skin is abstracted from the traditional suburban material pallet to a pattern system that creates a consistent element to bind the houses together as they move down the street (figure 2.33). The skin highlights the promenade from stair to yard to porch to home while simultaneously creating relationships across buildings to minimize the segmenting effect of party walls.

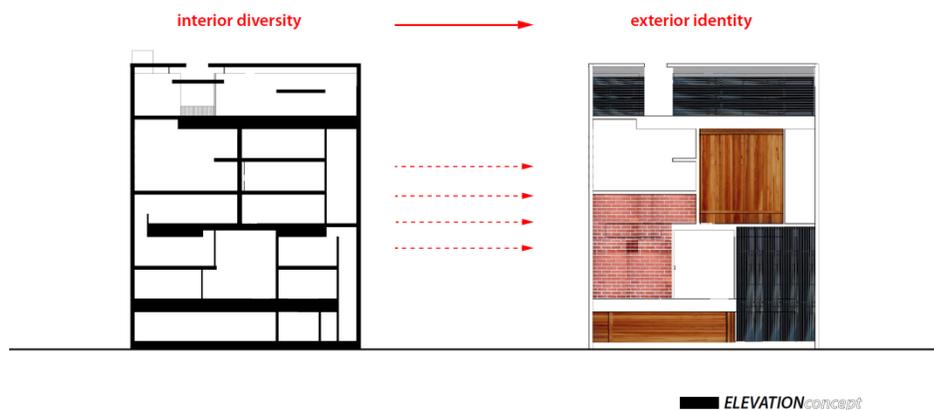


Figure 2.32 Building Section to Elevation Translation (source: Author)



Figure 2.33 Facade Skin Abstraction (source: Author)

Section Customization

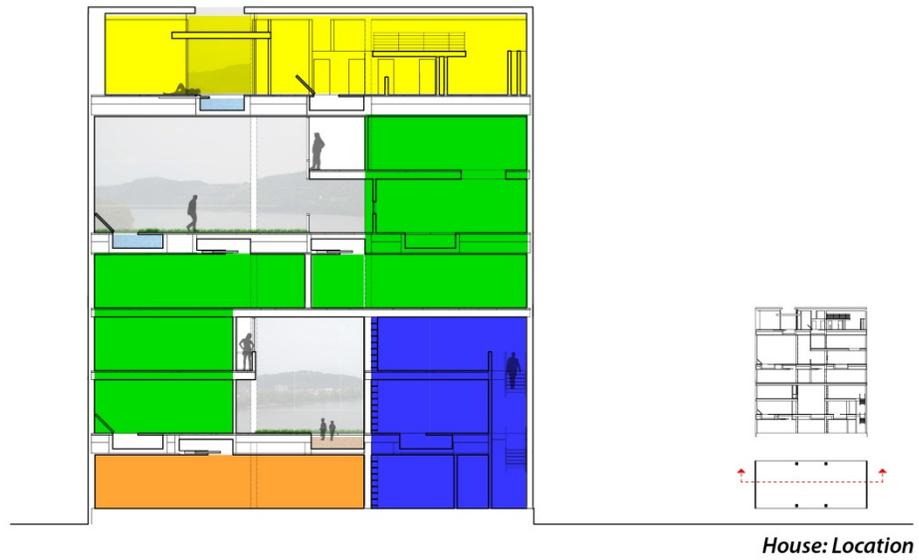


Figure 2.34 House Distribution Diagram (source: Author)



Figure 2.35 Section Grounding Diagram (source: Author)



FLEXSPACE

Figure 2.36 Flex Space Examples (source: Author)

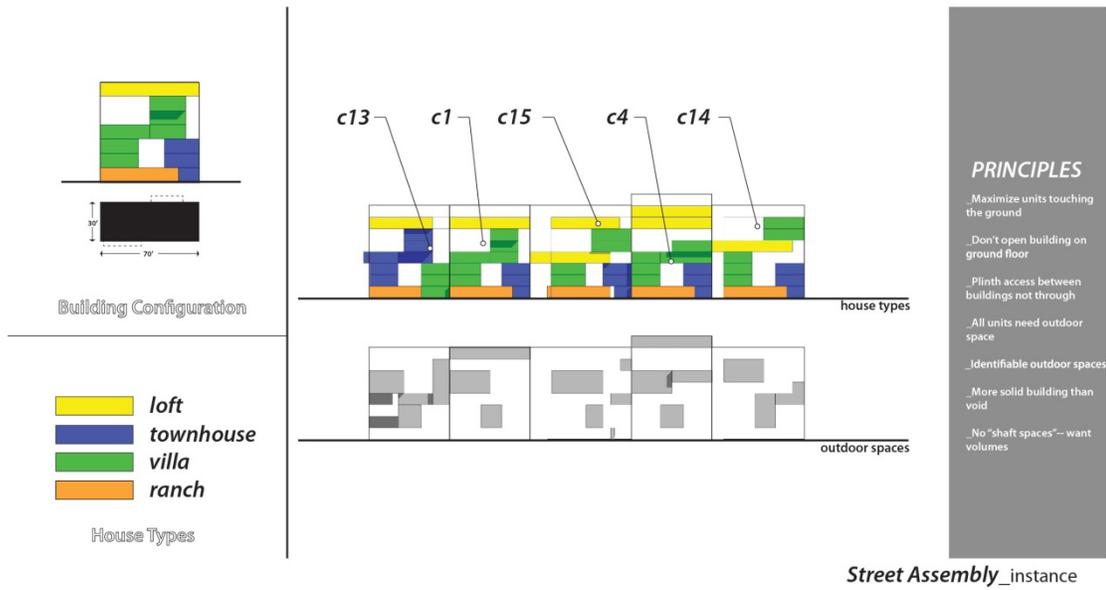


Figure 2.37 Street Assembly Principles (source: Author)

Chapter 3: The Yard

20th Century Infrastructure as Testing Ground

This research uses site as a catalyst for investigating the cultural components of the American Dream today by connecting to the 20th century infrastructure that stimulated the perversion of the suburban dream. The intent is to redefine and challenge preconceived notions that have developed over time. These elements are the highway, railroad, river, and proximity to a major job center (city). The site was also chosen because it is located adjacent to an inner-ring suburb that has the framework of a neighborhood, though it could be described as being in a state of disrepair today.

Even though this site is highly specific it is comprised of commonly found components that come together on the fringes of many rust-belt American cities. This research is then an exploration of one of these situations and seeks to provide a framework for the development of similar conditions across America.

Etna: Accessible Space; Isolated Place

The site lies in the municipality Etna Borough, which is part of the Shaler Area School District. Etna Borough is one of the first municipalities outside the city of Pittsburgh. It is separated from the city by the Allegheny River that runs along the southern edge of the site. The site is currently the Etna Industrial Park that sponsors a range of light manufacturing warehouses, self-storage, and bus parking.

Though the site is located within close proximity to the city and the suburb along major routes of access it is isolated by its peripheral elements. The site is bound by Rt. 28 and Pine Creek to the north and both railroad tracks and the Allegheny River to the south. Rt. 28 is an elevated highway that was built in 1956 named the Etna Bypass that runs into the city of Pittsburgh to the Southeast. The bypass separates the town proper that is north of the highway from the site and riverfront to the south. The three lines of train tracks at the southern edge of the site running along the Allegheny River are still operated today and sever any connection the site may have to the riverfront.

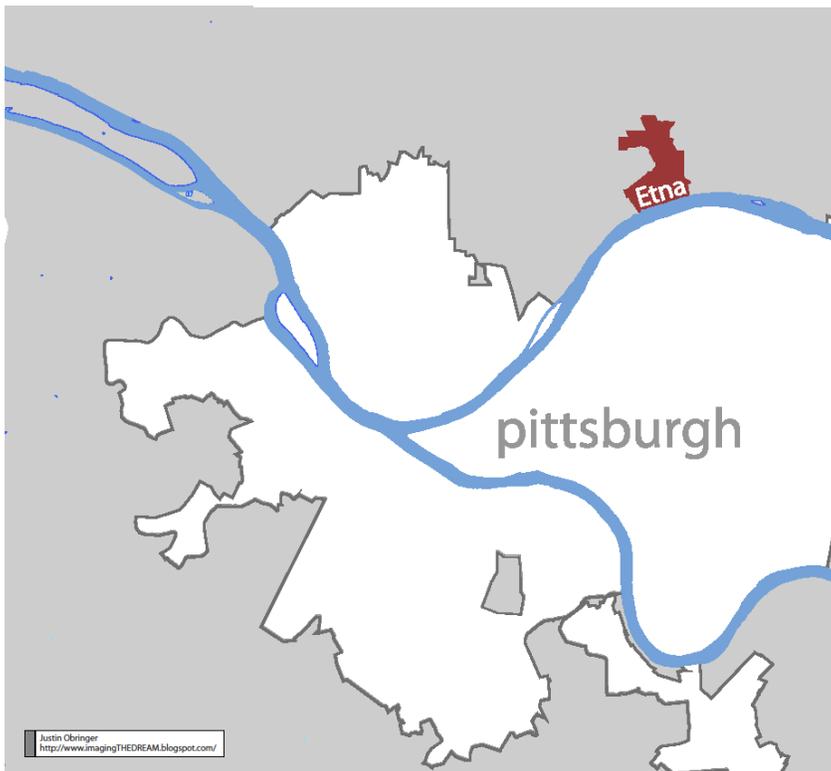


Figure 3.1: Etna Borough in relation to the city of Pittsburgh (source: Author)

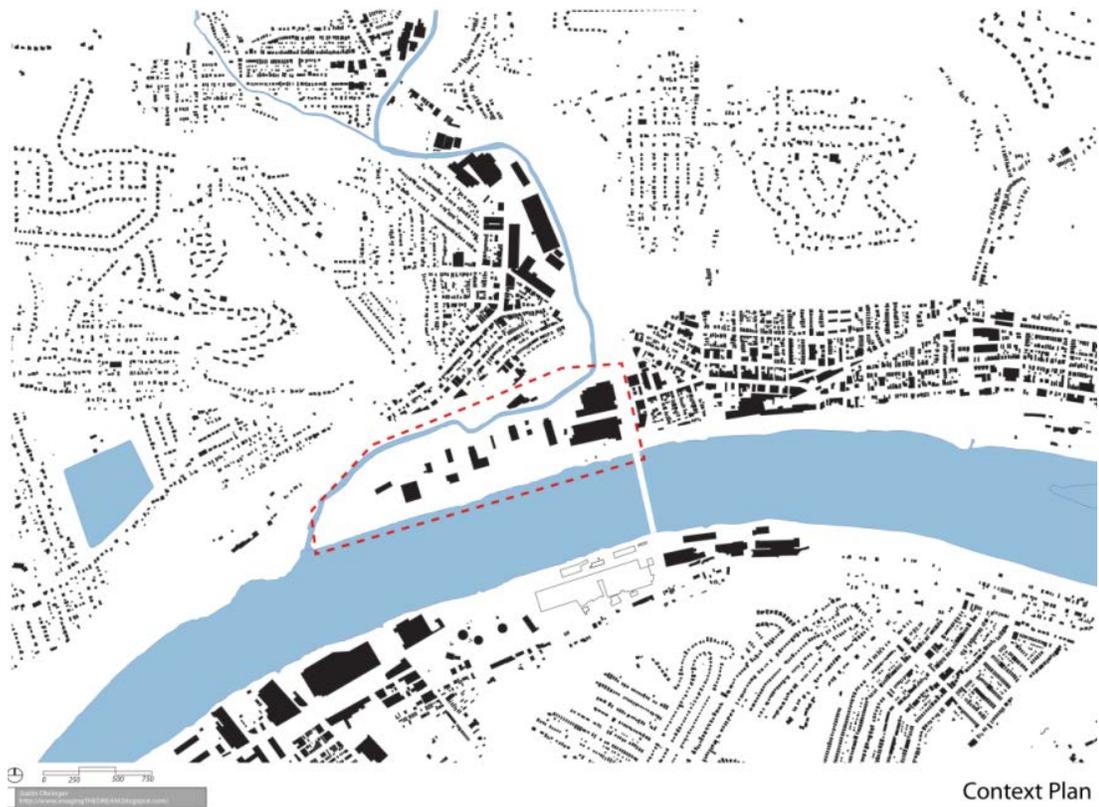


Figure 3.2: Figure Ground of site and context (source: Author)

A peninsula to the west that is created by the intersection of Pine Creek as it runs into the Allegheny River terminates the site. It is also separated from any fabric to the West because of the continuation of Rt. 28 along the Riverfront. Directly to the East of the site is an elevated bridge that takes Rt. 8 running from the exurbs to north across the Allegheny River to the Pittsburgh neighborhood of Lawrenceville to the South. This bridge separates the site from the town of Sharpsburg lying further east.

Site Layers: A Tour

Etna is comprised of very distinct layers that rarely overlap. The following series could be described as a section cut of photos and diagrams that explore the different layers in further detail to understand the proposed site and its context. The site is bound by both highway and railroad though connections to the river and to the town of Etna will be explored. The section (fig. 3.3) reveals the flatness of the immediate area. The edges around the site are heightened by their coupling nature. The creek and highway, the railroad and river, isolate the site from its surroundings.

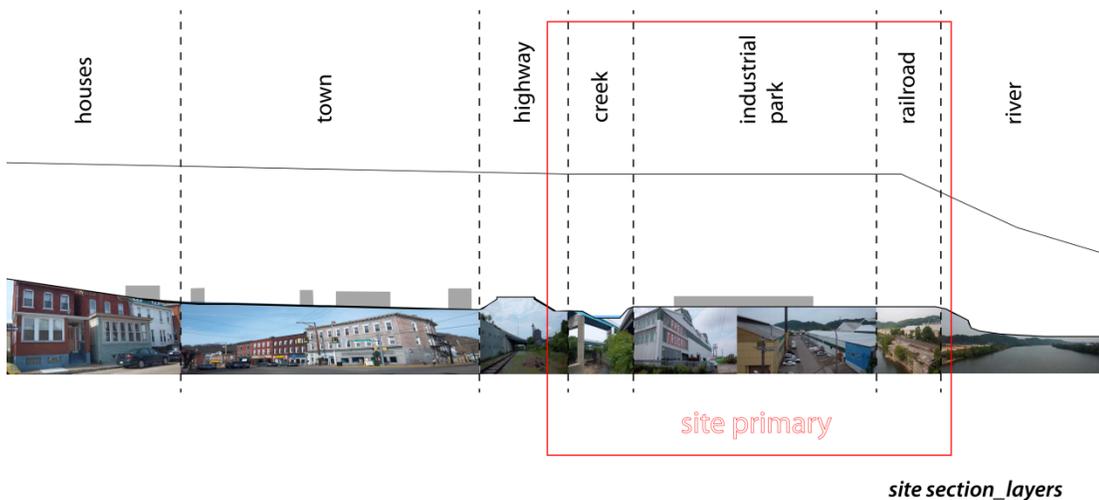


Figure 3.3 Site Section Layers (source: Author)

Layer: Town



Figure 3.4: Main Street Etna (source: Author)

Figure 3.5: key plan of Main Street (source: Author)

Butler Street functions as the “Main Street” of Etna. The core used to be the site of numerous hotels, a theater, and thriving businesses with residential above. Though the buildings remain, owners today are hesitant to utilize this mixed use strategy which stagnates the life of the core.

Layer: Housing



Figure 3.6: (Above) Etna Housing Stock (source: Author)

Figure 3.7: (left) Key plan of the residential area of Etna (source: Author)

Etna’s housing stock is made up of mostly single family houses with small side alleys that rarely have garages. The topography in the upper parts of Etna allows for the houses to sit up above the street. The housing stock has diminished in lower Etna of the years

because of the frequent floods that occur. These houses are rarely rebuilt and over time result in less and less tax revenue for the town.

Layer: Highway



Figures 3.8/3.9/3.10: (above) Highway separating site from historic Etna (source: Author)
Figure 3.11 (left) key plan showing intersection (source: Author)

The intersection of Rt. 8 and Rt. 28 creates a sea of overpasses at the junction of the proposed site, Etna, and Sharpsburg. The recent expansion of the highway has created a solid barrier between the town of Etna and the proposed site with a small opening to provide access to the railroad tracks. The highway creates abrupt edges along places like this community baseball field. Many backyards are also just as abrupt in their relationship to the highway.

Layer: Pine Creek

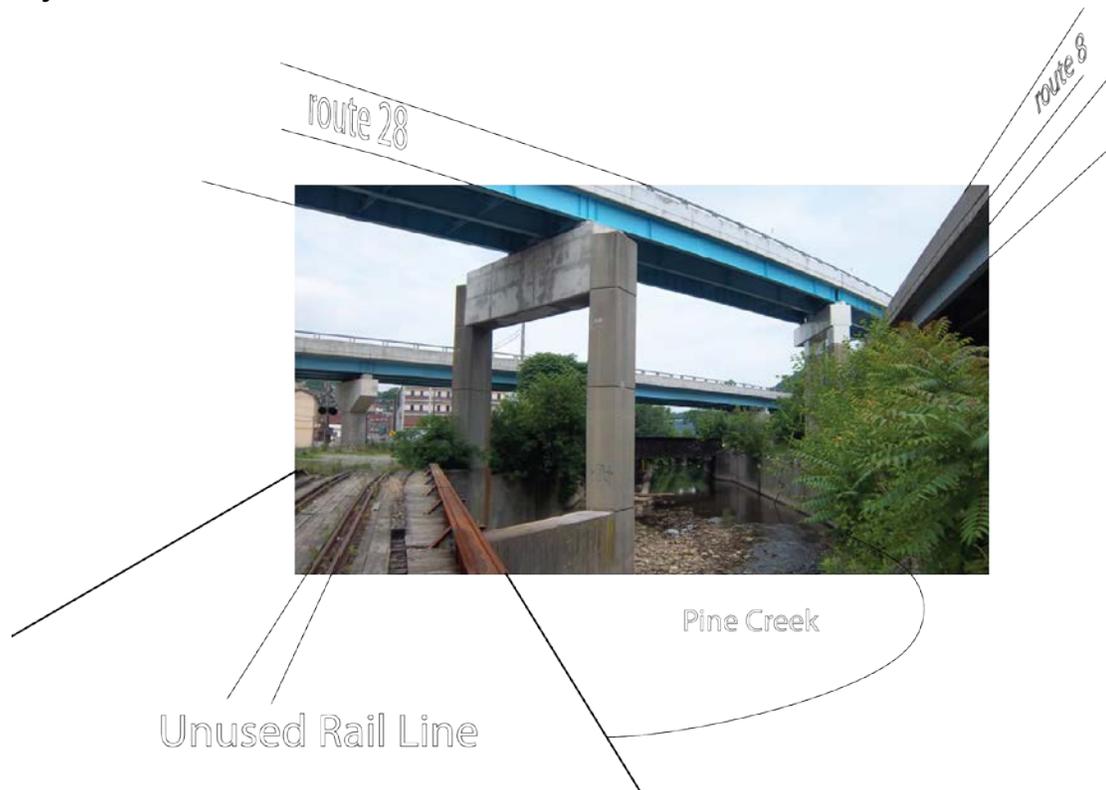
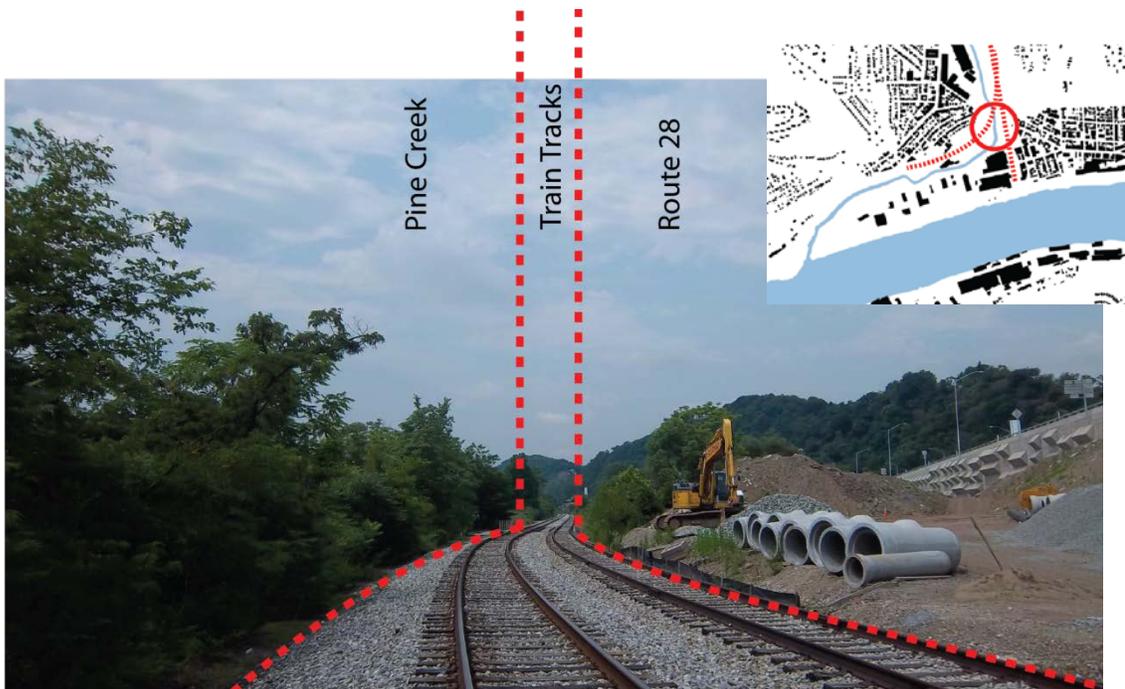


Figure 3.12 (above) 3.13 (below): Pine Creek weaves from the north until it runs into the Allegheny River. It is largely unnoticeable to the pedestrian as it is masked by the various infrastructural pieces that intersect adjacent to the proposed site (source: Author)

Figure 3.14: (right) key plan of pine creek (source: Author)



Layer: [site] Etna Industrial Park, Railroad, River

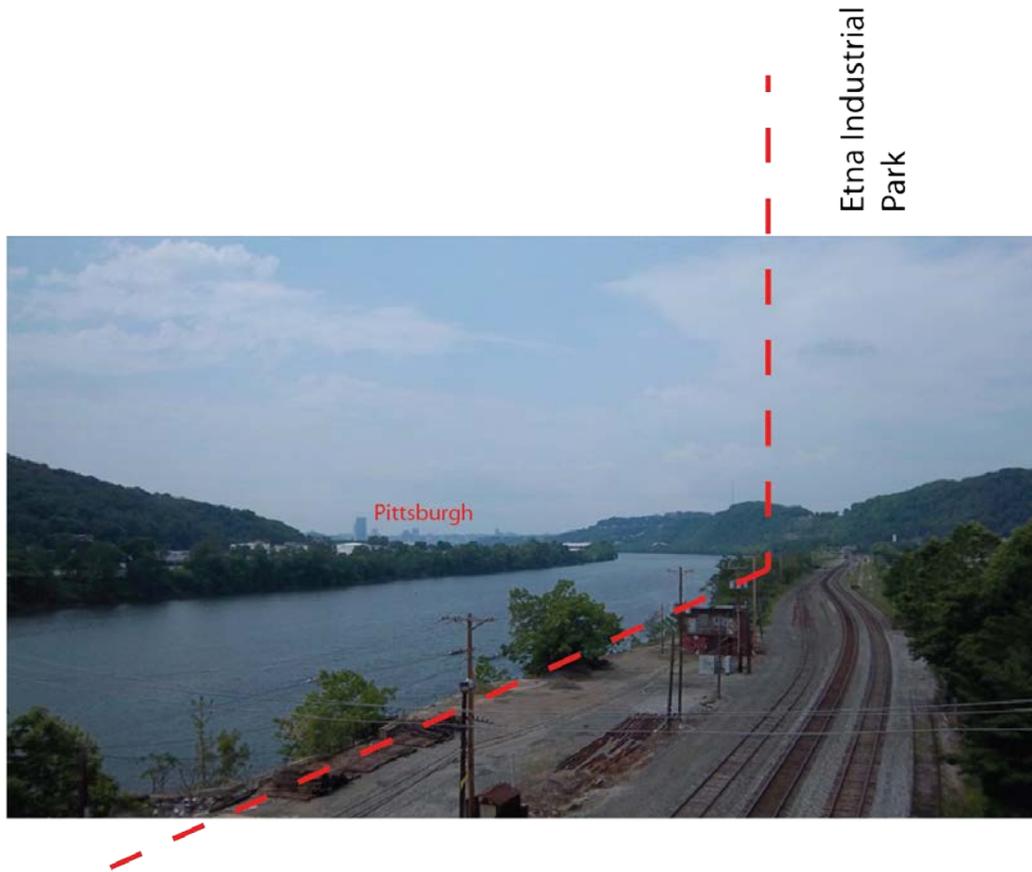


Figure 3.15 (top)/ 3.16 (above): The site, Etna Industrial Park, is comprised of a series of warehouses and storage facilities. Views of downtown Pittsburgh are seen in the distance as a series of railroad tracks separate the industrial park from the Allegheny River (source: Author)
Figure 3.17: (above right) key plan of Etna Industrial Park (source: Author)

Layer: Neighboring Contexts



Figure 3.18: A view of the site from across the river. The image shows the 40 foot drop from site to water in the foreground and the rolling hills that surround the site in the background (source: Author).



Figure 3.19 (above): Photograph of Sharpsburg, to the east of the site, is lies in a similar situation as Etna though it is more developed and has a stronger main street (source: Author)

Figure 3.20 (left): key plan locating Sharpsburg (source: Author)



Figure 3.21: (above) Lawrenceville, across the river from the proposed site, has recently been declared the future intermodal transit neighborhood of the city of Pittsburgh. The industrial site has been cleared of its vacant buildings within the last two years (source: Author)

Figure 3.22: (left) Key plan locating Lawrenceville (source: Author)

Site Operation 1: Observe

The following series of initial diagrams isolate the numerous variables that comprise the site. The objective is to gain a greater understanding of the effects of the variables as they come together to create this specific situation. The last two diagrams in the series are conclusion diagrams which layer multiple variables to provide a more gestalt understanding of the place.

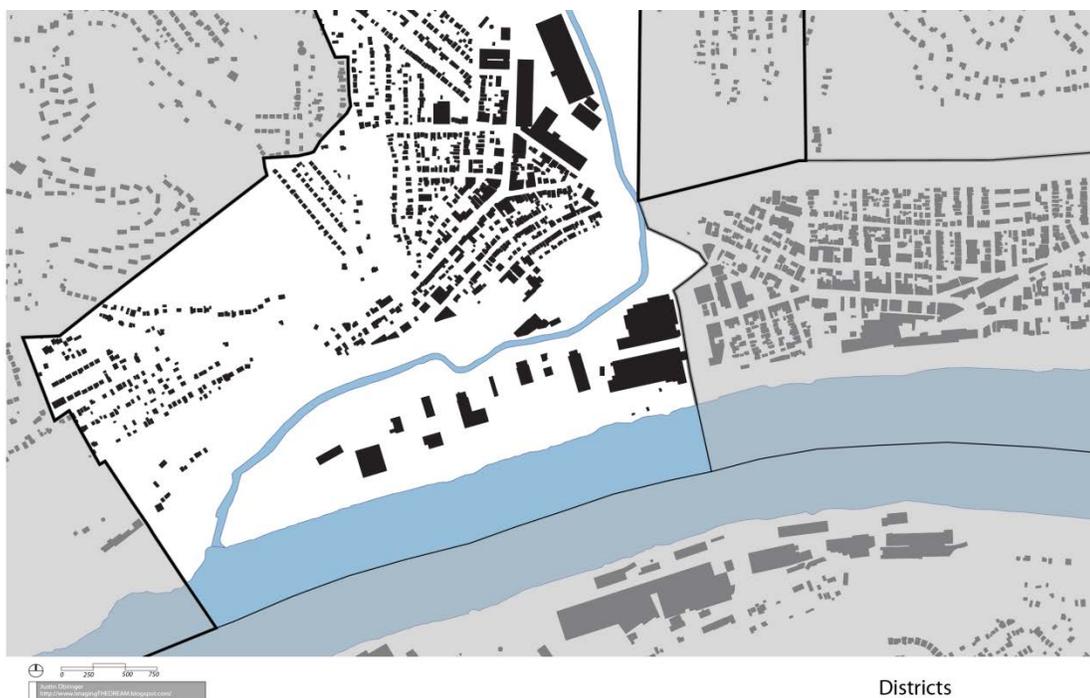


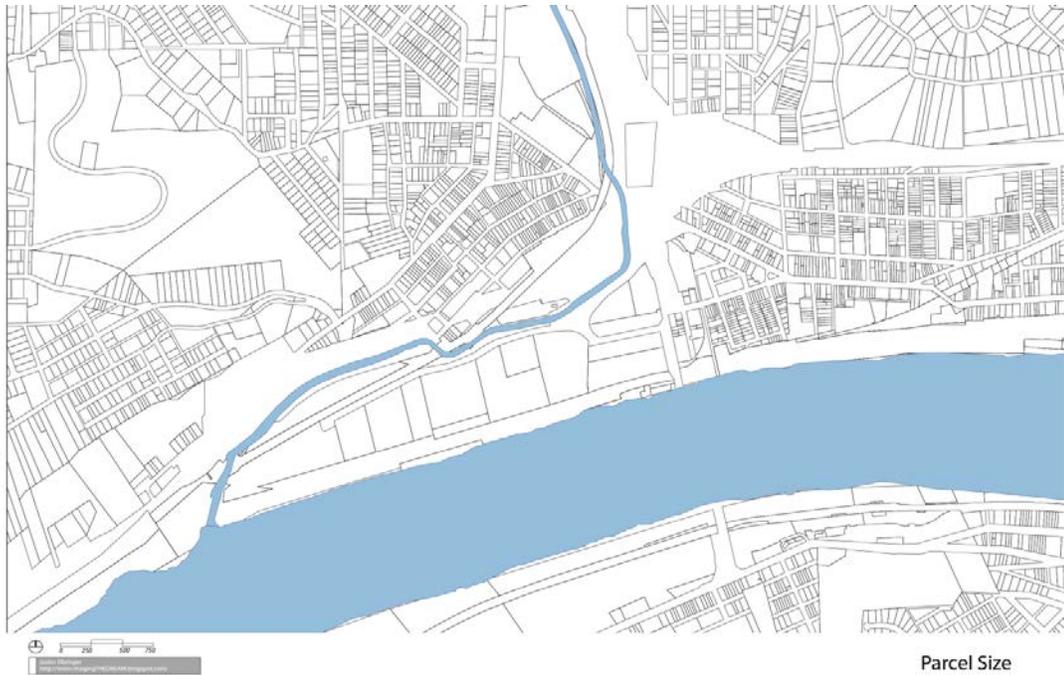
Figure 3.23: Districts (source: Author)

Etna is primarily a North/South municipality bound by Sharpsburg to the East and the city of Pittsburgh to the South. The site proposed for this thesis comprises almost all of Etna's waterfront real estate along the Allegheny River.



Figure 3.24: Floodplain (source: Author)

The 100 year floodplain encompasses much of lower Etna and a significant portion of Sharpsburg to the East of the site. The Borough of Etna and Allegheny County provided inconsistent flood data where it is ambiguous whether or not the immediate site lies within the 100 year flood plain (seen dashed). If flooding were to occur it would most likely result from an overflow of Pine Creek to the North of the site as opposed to a flooding of the Allegheny River which lies roughly 40 feet below the site. The site was partially chosen based on the parcel size found in the general area. Even though Main Street Etna and Sharpsburg consist of dense fabric and small plots the industrial park that was chosen only consists of 14 different parcels which could make it easier for development. The parcels also show the discrepancy that the industrial park creates within the neighborhood context.



Parcel Size

Figure 3.25: Parcel Size (source: Author)



Natural Features

Figure 3.26: Natural Areas (source: Author)

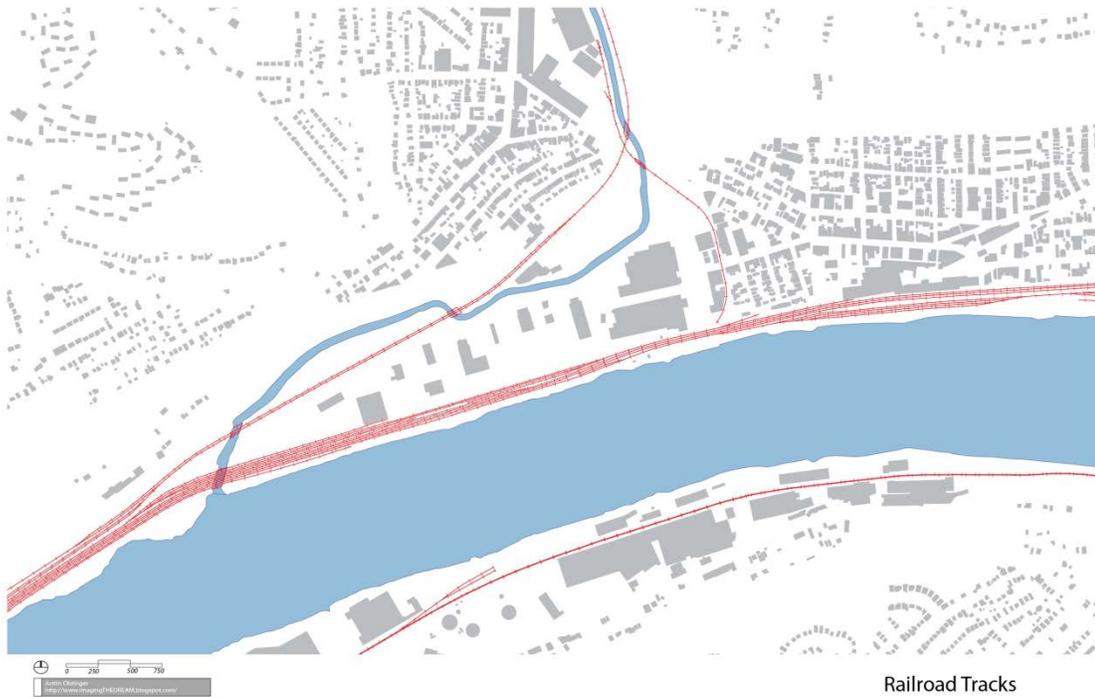
The large swaths of green space are located on significant topography that makes development a challenge. Small layers of green space line Pine Creek and the Allegheny River but provide little buffer from the infrastructure around the site.



Surface Parking

Figure 3.27: surface parking (source: Author)

Most of the area consists of small patches of surface parking though the site chosen is over 50% surface parking. This amount of pavement adds to the runoff into Pine Creek and the Allegheny River and represents underutilized space in the area.



Railroad Tracks

Figure 3.28: Train Tracks (source: Author)

Four lanes of train tracks separate the immediate site from the riverfront to the South while one track runs to the North of the site along Pine Creek. This line is rarely used today though it originally served a passenger train between Pittsburgh and Butler, PA to the North.

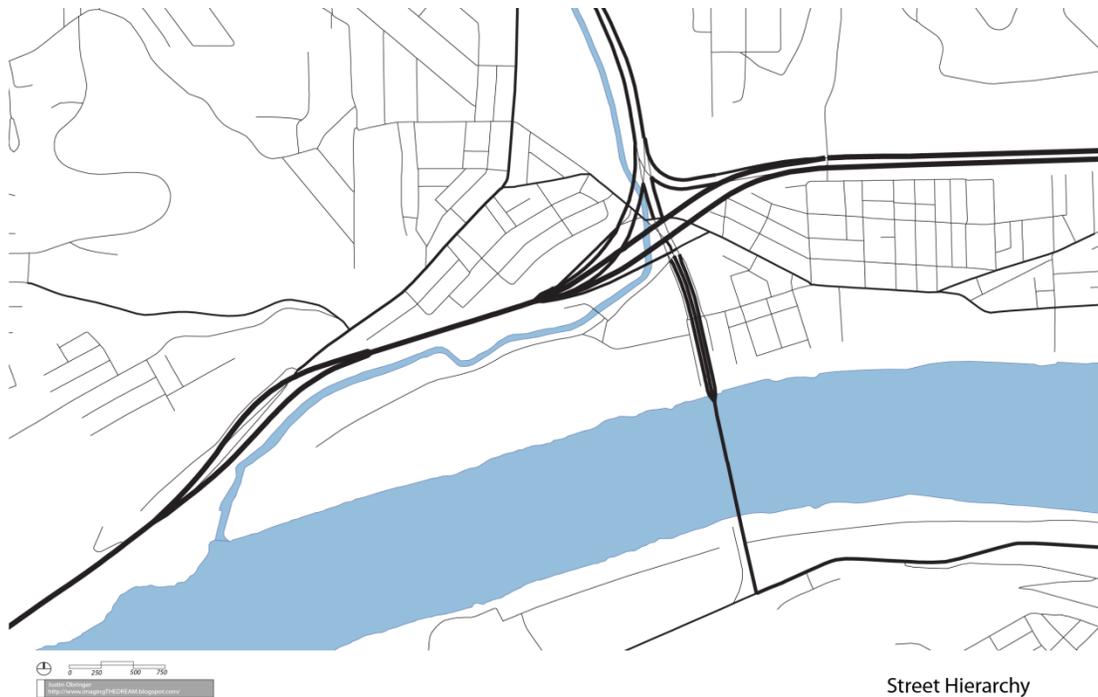
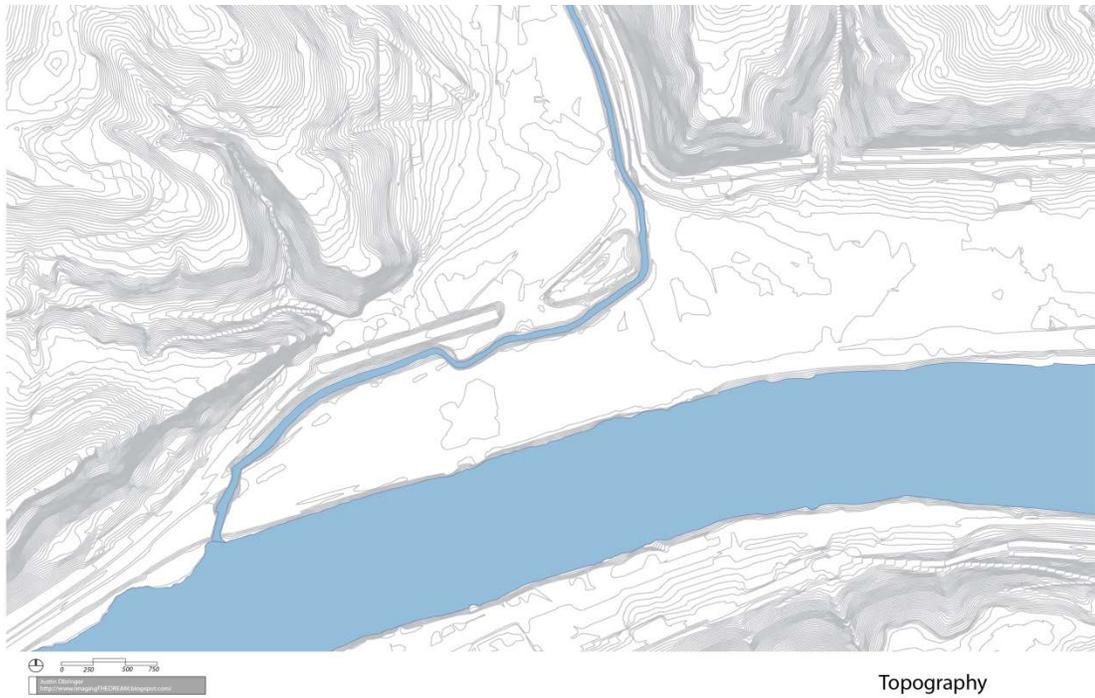


Figure 3.29: street hierarchy (source: Author)

The Primary thoroughfares are Rt. 8 and Rt. 28. Rt. 8 runs North/South and culminates in a bridge adjacent to the site that runs across the Allegheny River into the city while Rt. 28 runs East/West taking commuters from downtown to the suburbs northeast of the city. Etna's commercial properties lie on Butler Street which connects east to Sharpsburg. The thesis site is accessed from one small road that terminates before reaching the west of the site.



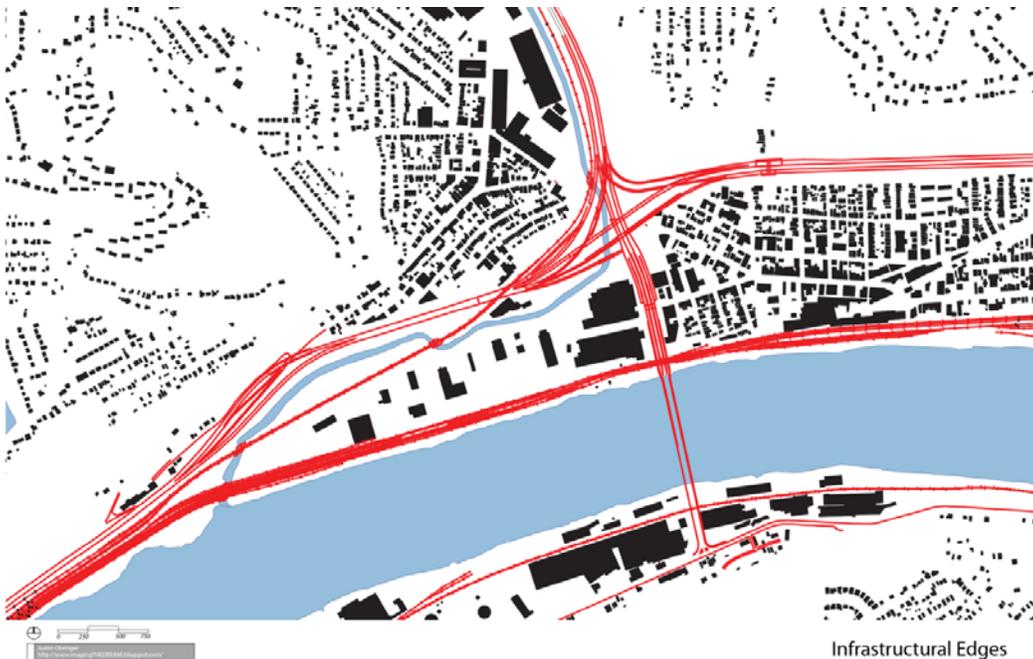
Topography

Figure 3.30: site topography (source: Author)

The site lies at the intersection of the Pine Creek and Allegheny River valleys.

Though the site itself is large and flat there is a sense of enclosure created from the rolling hills that surround.

Observation Conclusions:



Infrastructural Edges

Figure 3.31: Highways and Railroads (source: Author)

This diagram combines the railroad and street hierarchy layers to demonstrate the isolated nature of the site. Heavily bound on all sides the infrastructure acts as a frame for the site, Etna, and Sharpsburg which deters any connections between them and the riverfront.

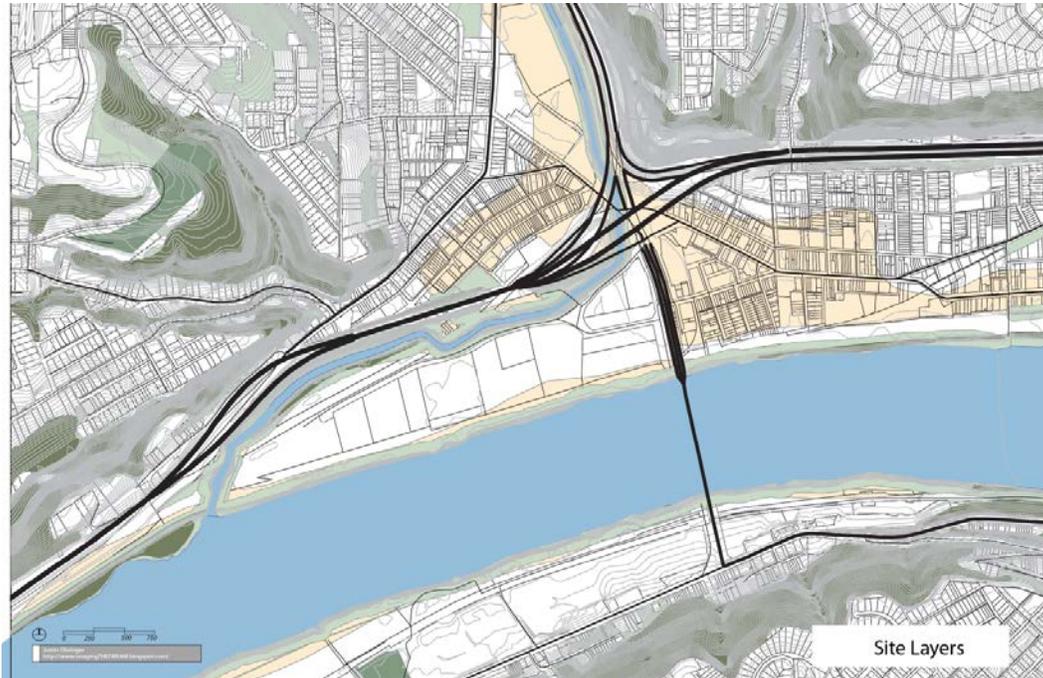


Figure 3.32: Site Layering (source: Author)

This diagram combines the topography, street hierarchy, natural features, flood plain, and parcel size layers. When the layers come together they frame the site and the riverfront across from the site that reveal themselves as voids or relatively blank canvases within the fabric of the neighborhoods.

Site Operation 2: Overlay

The second set of diagrams is a series of scaled collages. The original fabrics vary in their density, typology, and attitude towards water and public space to offer a greater understanding of scale for the thesis site. In addition to scale, attitudes about connections, building typologies and open space were studied. Based on the preceding conclusion diagrams the site was expanded to the Lawrenceville neighborhood of the city of Pittsburgh across the Allegheny River. Though this is not the primary site of research it serves to provide a potential dialogue between the two sides of the river which, in its current context, acts as a barrier between city and suburb. It should be noted that the Pittsburgh Department of Planning has recently conducted a development study that has been approved where the neighborhood of Lawrenceville will serve as an intermodal transportation center with a new light rail line extending east of the city. Seamless access to this development will provide another advantage/opportunity for developing the riverfront site in Etna. Additionally, each overlay is coupled with one to two images of the precedent. This is to reveal what character of place results from the overlaid fabric and its specific attributes.

Overlay: Frankfurt, Germany

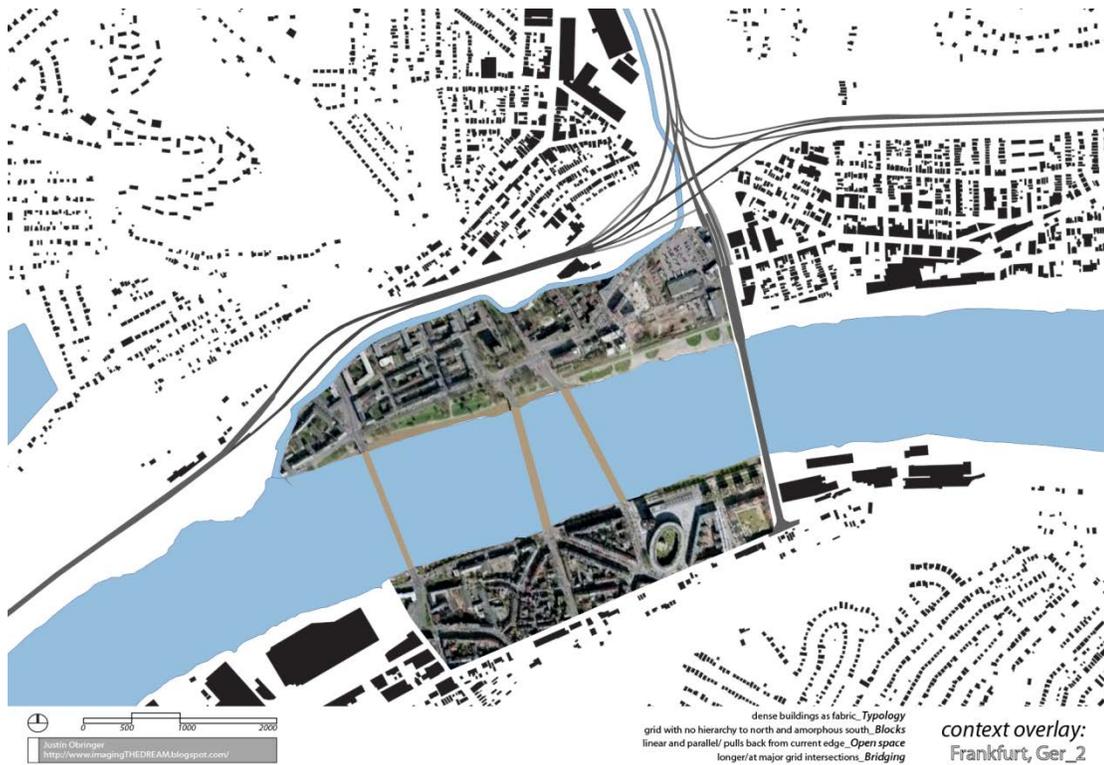


Figure 3.33: Frankfurt Overlay (source: Author)

The city of Frankfurt, Germany provides a linear riverfront park with a dense building fabric. Multiple moments of bridging could occur along the main avenues and have the potential to connect to a more figural civic building in Lawrenceville. The blocks resemble a grid though they often do not adhere to the grid specifically. This overlay provides an opportunity for a couple of building fabrics on the site that may reflect a change in typology or program.



Figure 3.34: The Frankfurt waterfront serves as a front yard for the mid-rise housing that fronts the river (source: Author)

Overlay: Frankfurt, Germany 2

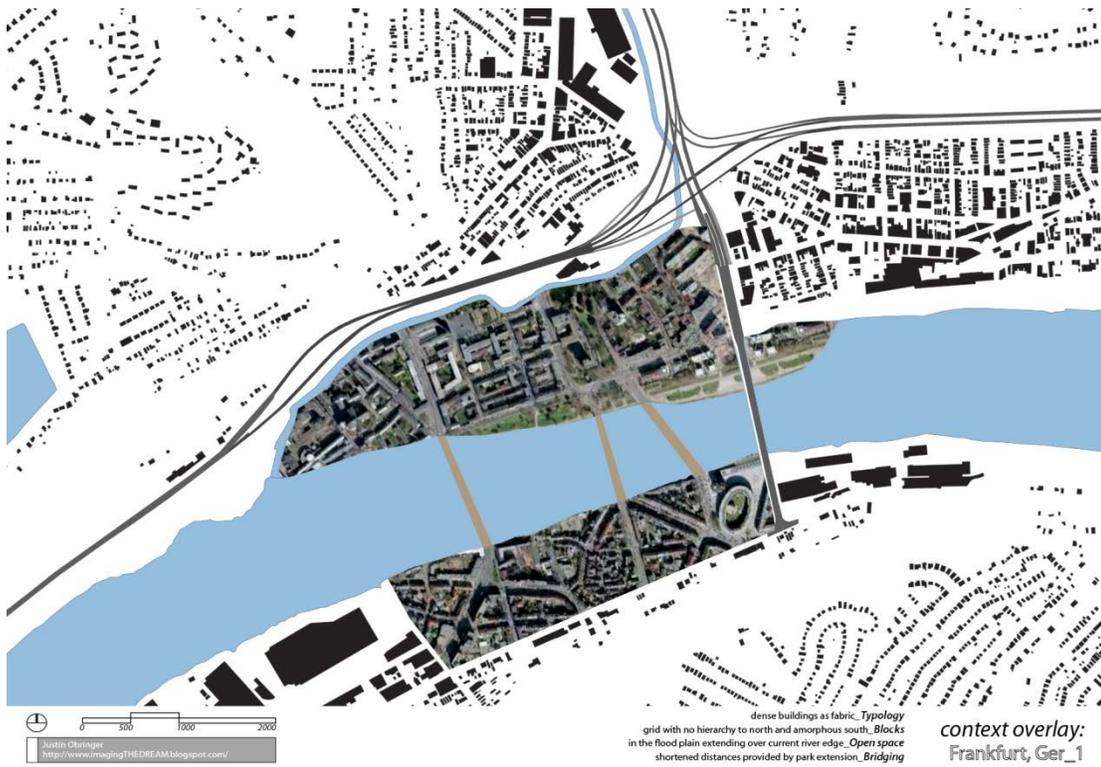


Figure 3.35: Frankfurt Overlay 2 (source: Author)

This overlay is once again of the city of Frankfurt, Germany but the riverfront edge is extended to accomplish two things. First, to shorten the distance of pedestrian bridges across the Allegheny River, and the second is to increase the flow of the water as the width opens up to provide the potential for hydroelectric power for the new development. This extended linear park would be welcomed to flood as the water levels of the river change.



Figure 3.36: The Frankfurt riverfront (source: Author)

Overlay: Bath, England

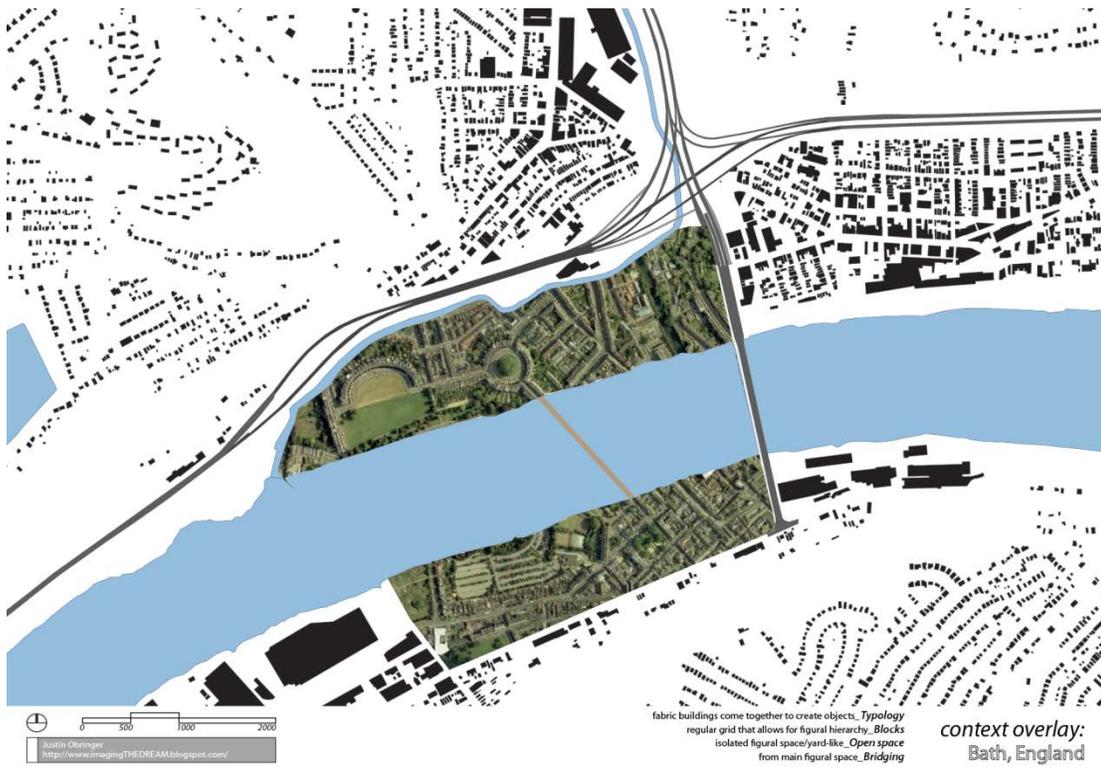


Figure 3.37: Bath, England Overlay (source: Author)

The city of Bath, England is characterized by its figural buildings and open spaces. Individual dwelling units present themselves in grandeur and stand out amongst the regular grid of city fabric. Bridging could occur from a main figural/public space. The large swath of green space is along a significant slope and provides views over the town.



Figure 3.38: The crescent in Bath (source: Author)

Overlay: Dublin, Ireland

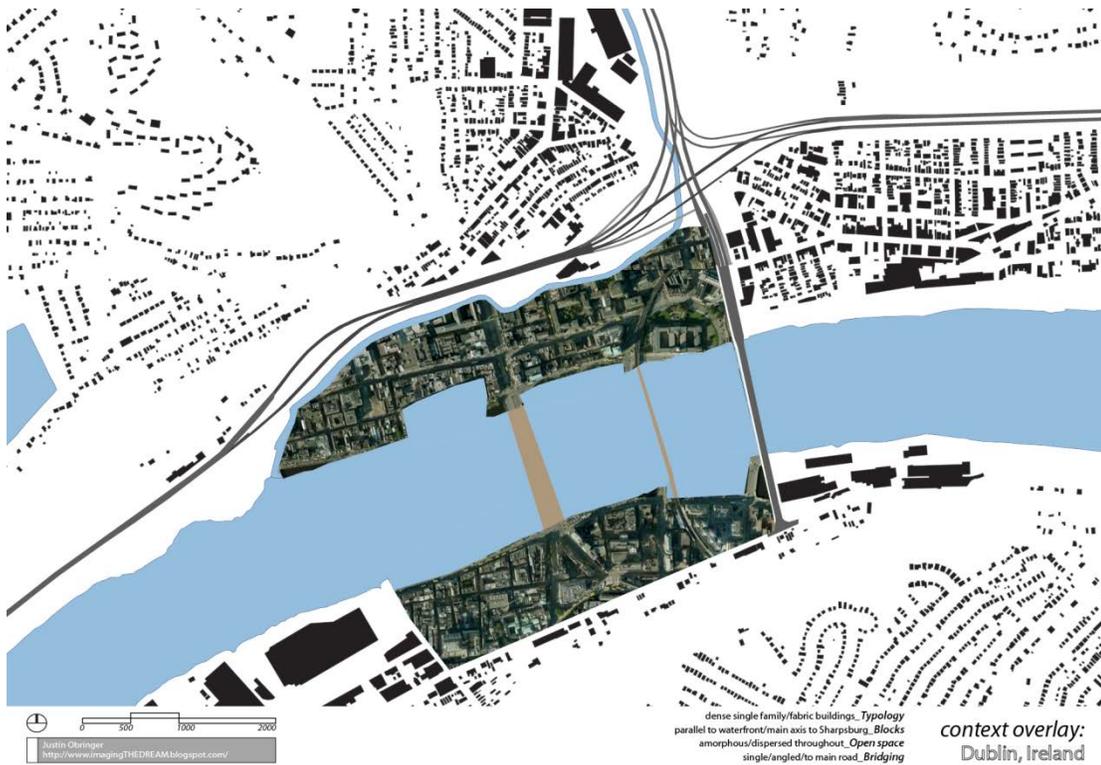


Figure 3.39: Dublin Ireland Overlay (source: Author)

The city of Dublin, Ireland consists of a mix between a regular grid and one that shifts with the river. The river passing through the city is much smaller than the Allegheny River in Pittsburgh and thus allows for more connectivity. This overlay proposes the possibility of pulling back into the site to create a longer riverfront edge. Open space in Dublin exists mainly along the river's edge with no large figural green space along the water.

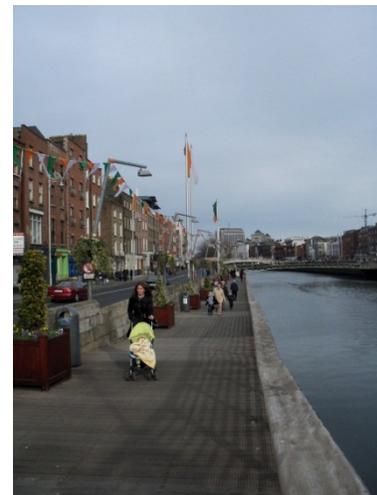


Figure 3.40: The Dublin waterfront space is minimal but provides for pedestrian movement along the river edge. The scale of buildings is similar to that of Frankfurt, Germany (source: Author)

Overlay: Coatesville, PA (Design by Erdy McHenry Architects)

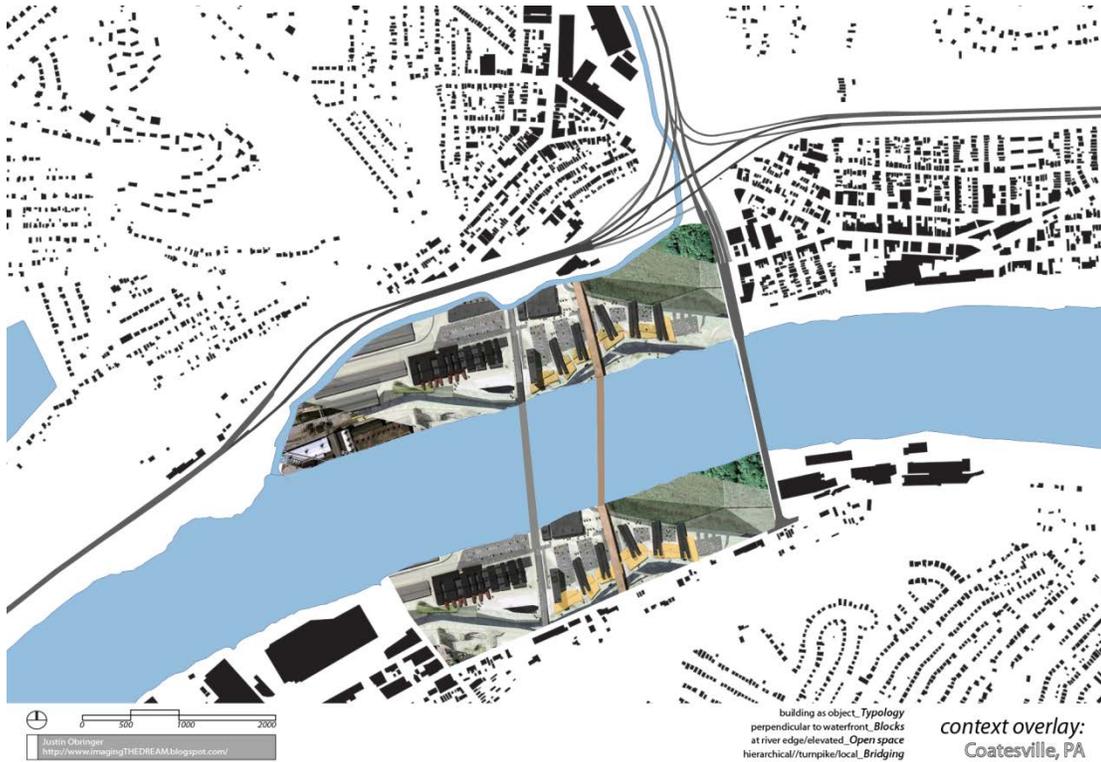


Figure 3.41: Coatesville Development Plan Overlay (source: Author)

The former industrial town of Coatesville, Pa has a proposed redevelopment designed by Erdy McHenry Architects of Philadelphia. Buildings are objects within the landscape and there is a proposed adaptive reuse of a mill. This overlay suggests two types of building fabric and surface parking courts between the buildings with a significant amount of open space left natural. Bridging could occur at two levels one local/pedestrian and one a more significant bridge for automobile traffic.

Figure 3.42: This rendering by Erdy McHenry Architects shows the range of typologies and their relationship to the Brandywine Creek adjacent to the site (source:www.em-arc.com)



Overlay: Etna, PA

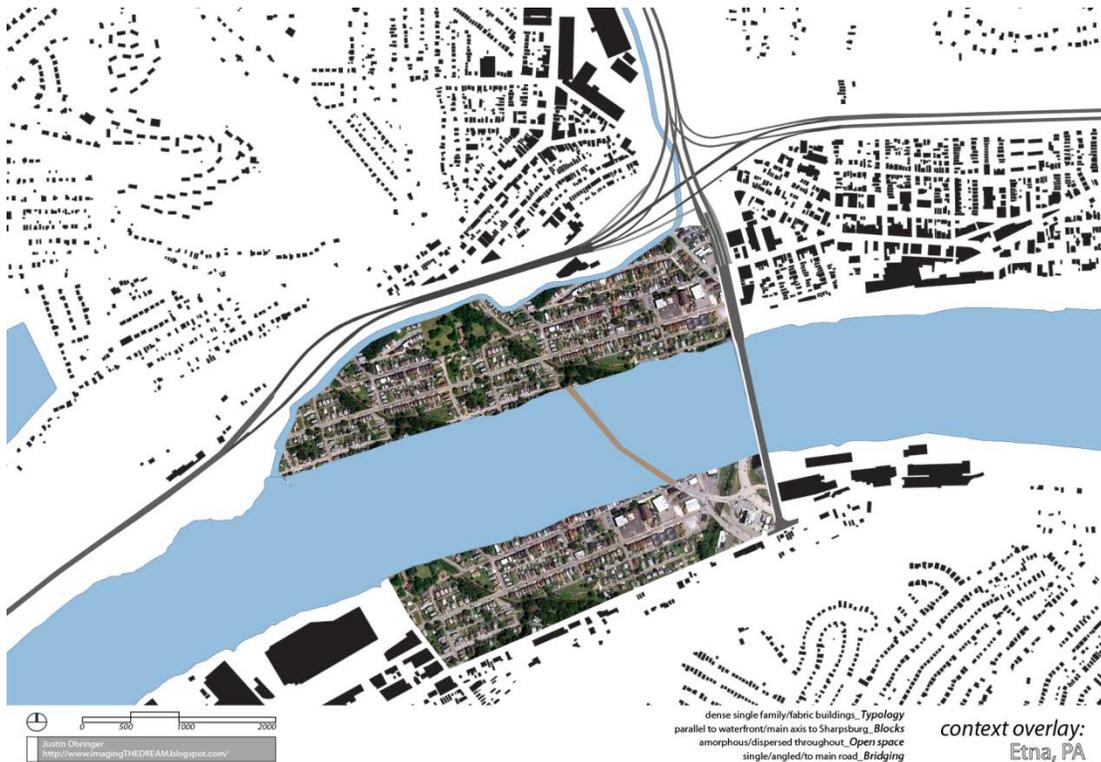


Figure 3.43: Etna Pennsylvania, Overlay (source: Author)

This overlay is taken from Etna's housing fabric to the north of the proposed site. The long East/West grid could provide connections into Sharpsburg. The buildings are single family houses and open space is dispersed through different pockets of semi-public space. This overlay suggests a three block by seven block development that would relate to the scale of the surrounding neighborhood.



Figure 3.44: Typical housing in Etna with small side alleys and close proximity to the street many of which lack garages (source: Author)

Overlay: Downtown Pittsburgh, PA

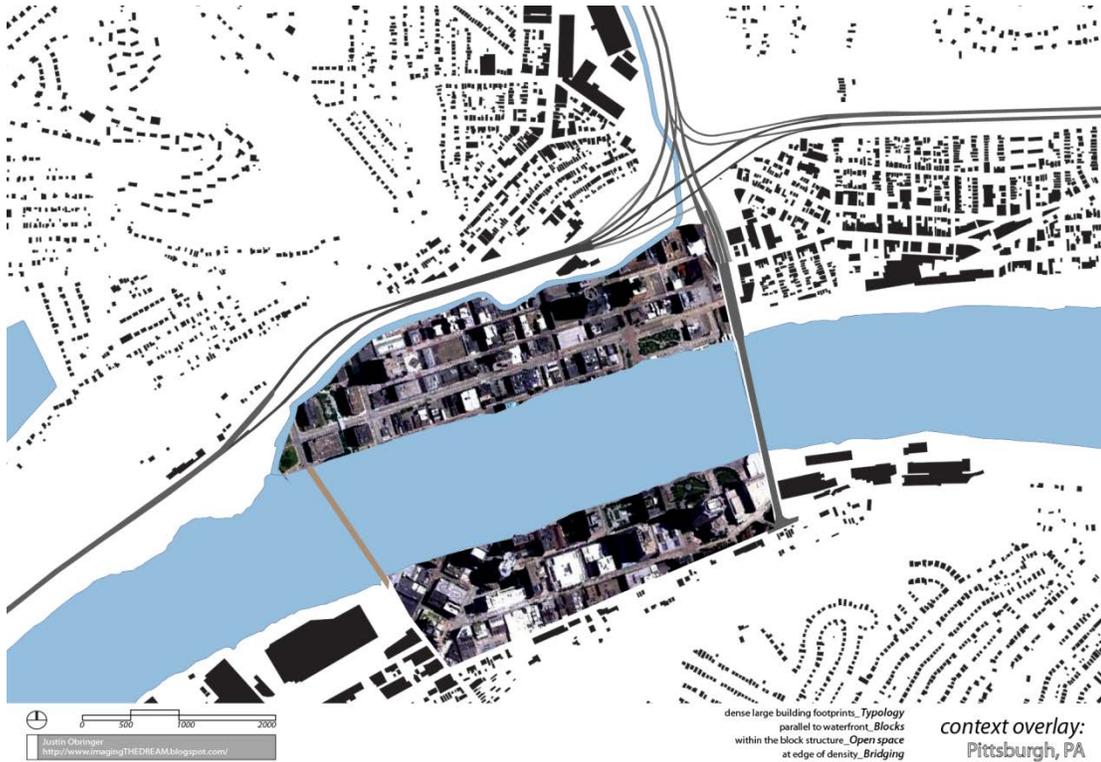


Figure 3.45: Pittsburgh, Pa Overlay (source: Author)

This overlay sponsors four blocks of Downtown Pittsburgh in depth. Small portions of the block are given to green space though infrequently. The grid suggests an extension into Etna and bridging that may flank the site and sponsors large building footprints.



Figure 3.46: A view of the overlaid fabric. This block structure and size sponsors large buildings of all types (source: Author)

Overlay: Northern Liberties, Philadelphia, PA

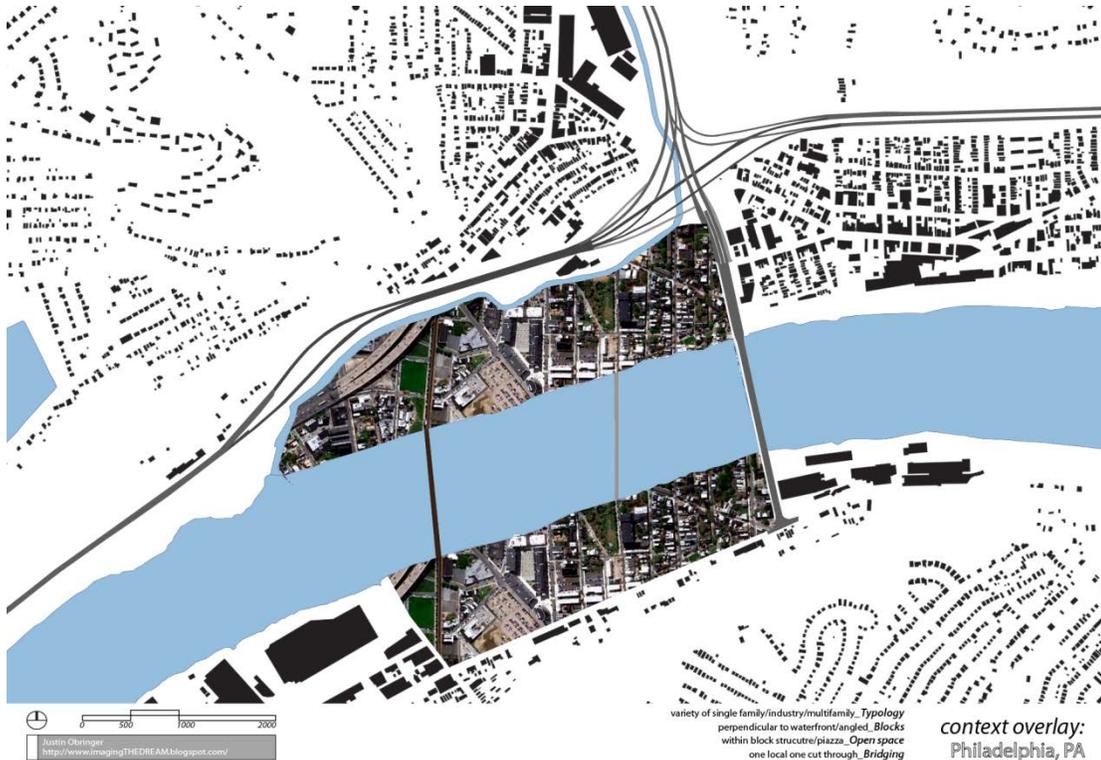


Figure 3.47: Northern Liberties, Philadelphia Overlay (source: Author)

The Northern Liberties neighborhood of Philadelphia demonstrates the ability to have between four and five different urban fabrics on the site. The core of the neighborhood is a “Piazza” designed by Erdy McHenry Architects which serves to anchor the area. Blocks run perpendicular to the riverfront and bridging could occur at the seams of the multiple fabrics. This overlay suggests that light industry could remain on the site with the integration of housing and cultural moments throughout. Open space is irregular and unplanned, often leftover space from undeveloped sites with the exception of the “Piazza” which is hardscape.

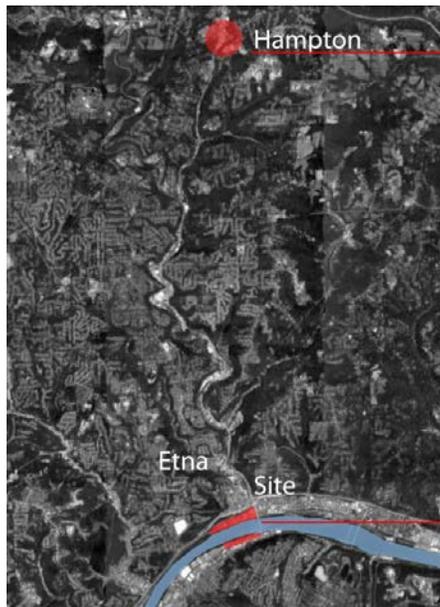


Figure 3.48: The Piazza and Nolli Housing by Erdy McHenry Architects. Housing is raised on a plinth of commercial activities to activate the both inside of the plaza and the streets to its periphery (source: Author)

Overlay: Hampton Township, PA



Figure 3.49 (above): Suburb, Hampton Township Overlay (source: Author)



Hampton Township could be stereotyped as a “typical American suburb”. It is mostly comprised of cul-de-sac developments and single family houses. As seen in the overlay, this McMansion town bears no resemblance to the proposed site regardless of orientation. It was difficult to find an appropriate place to bridge the Allegheny River since the context is primarily isolated by thin strips of green space. The proposed thesis site is approximately 60% of the way to downtown Pittsburgh from Hampton categorizing it as an outer ring suburb. This overlay provides the context to compare an exurb from potential inner-ring development with regard to density, diversity, and relationship to site.

Figure 3.50 diagram of Etna to Hampton (source: Author)

Overlay: New York, NY [1]

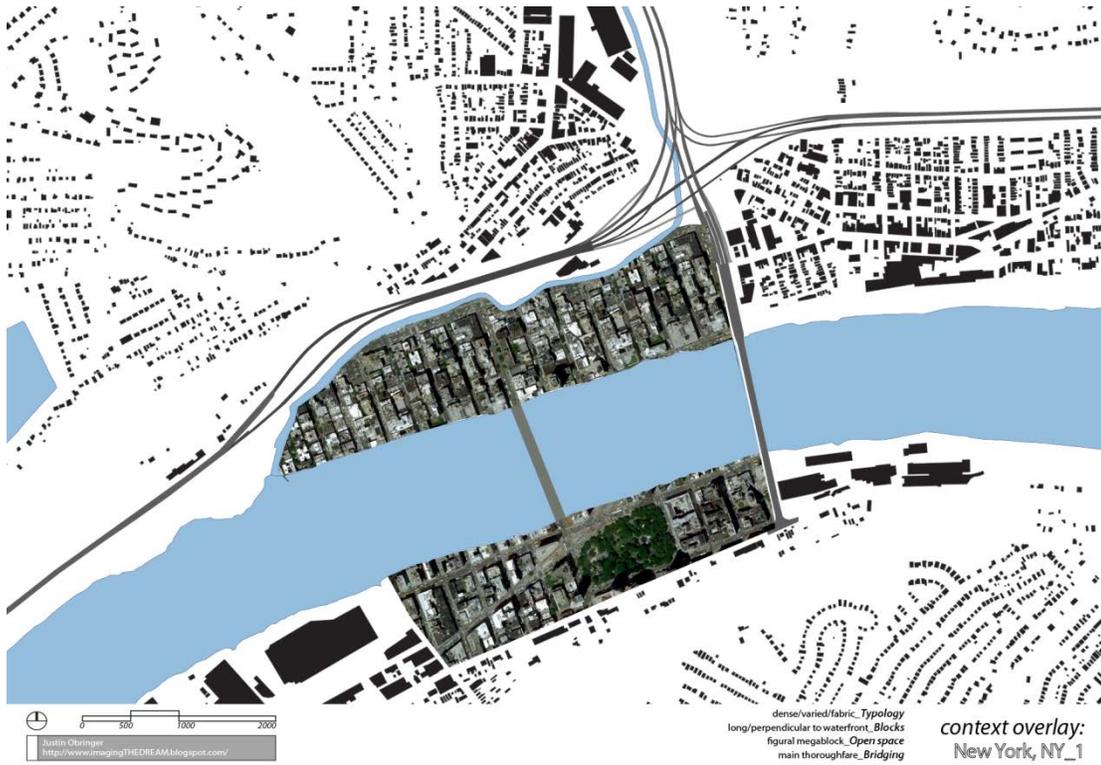


Figure 3.51: New York City, Perpendicular Overlay (source: Author)

The 1811 grid is a canonical urban block overlaid for the scale comparison perpendicular to the riverfront. This overlay suggests the possibility for many connections up into the town of Etna and a significant amount of access to the river from the site. The overlay does however shut the site off from Sharpsburg to the East. Open space is focused into a large single urban park rather than a linear network and bridging could occur at a moment of hierarchy in the grid that could be the main connection into Etna. As the image to the left suggests, the size of this grid may sponsor a strong street wall and a high density development as typical in New York.

Figure 3.52: (left) photograph of New York City (source: Author)

Overlay: New York, NY [2]

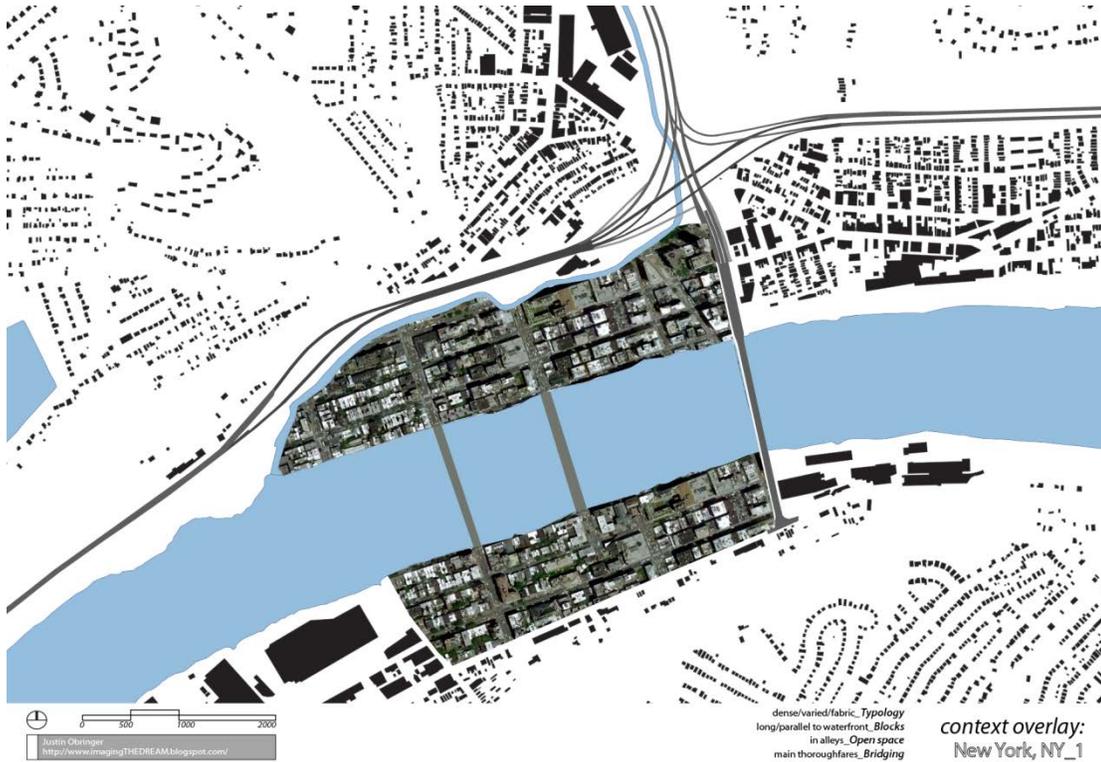


Figure 3.53: New York City, Parallel, Overlay (source: Author)

This version of the 1811 grid runs parallel to the riverfront and may lend itself to connecting into Sharpsburg more fluidly while only bridging into Etna a significant moments. Less public access is provided to the riverfront though private frontage is increased.

Overlay: Chatham Village, Pittsburgh, PA



Figure 3.54 (above): This overlay of the planned community Chatham Village (of the garden city movement) suggests two distinct fabrics for the site with bridging at the seam. Chatham Village fronts internal grouped courtyards and its backs face the street (source: Author)

Figure 3.55: (left) The backs are designed though and provide balconies and a single car garage with a small driveway (source: Author)



Figure 3.56: (bottom left) Similar to Bath, England the houses are grouped together and present themselves as a larger unit. Topography is used to further separate the public from the private. Since there is very minimal connection from the community to the neighboring fabric it functions as a gated community nestled into the landscape. (source: Author)

Overlay: Back Bay, Boston, MA [1]



Figure 3.57: (above) The Back Bay in Boston has a very clear grid structure that is defined by a large green swath through the center. This overlay places the green space along the river and provides for reasonable access to the river, Etna, and Sharpsburg. The location of this neighborhood in Boston suggests that across the river a completely different fabric could exist with bridging into a main civic space. Since the other side of the Allegheny River is the city of Pittsburgh this tactic may be reasonable. There are two different fabrics for two different purposes as exemplified by the images to the left (source: Author)

Figure 3.58: (upper left) residential street in Boston (source: Author)

Figure 3.59: (left) varying building types in Boston (source: Author)

Overlay: Back Bay, Boston, MA [2]

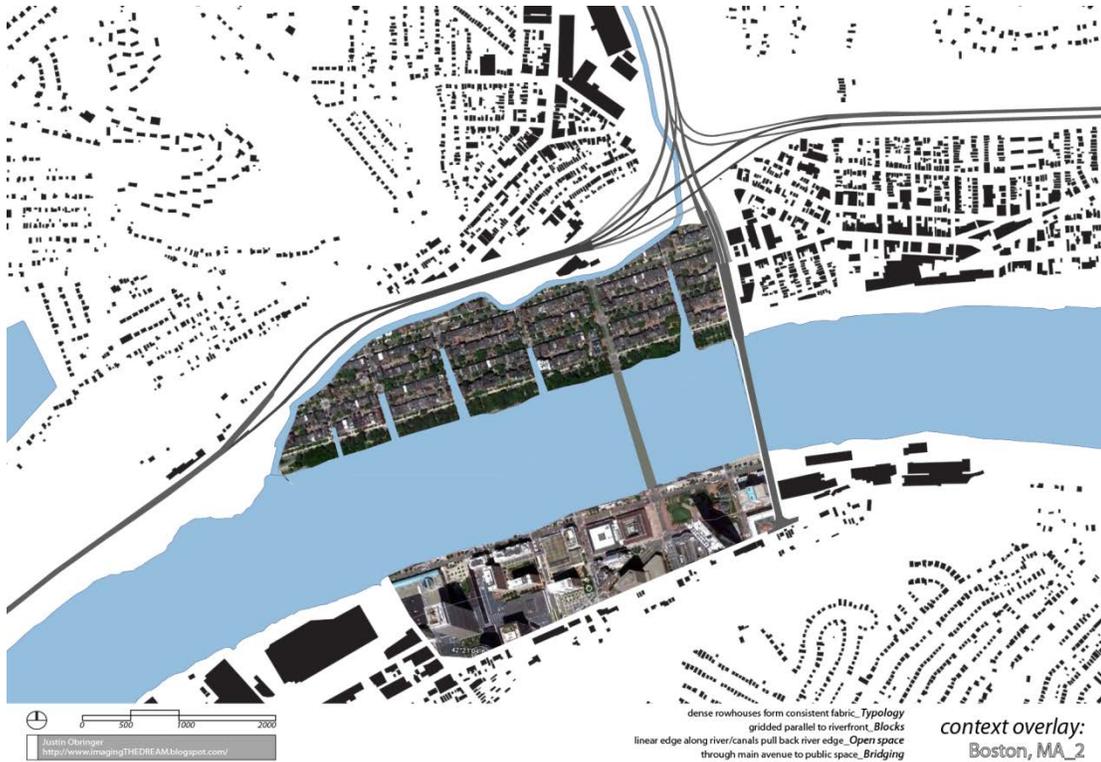


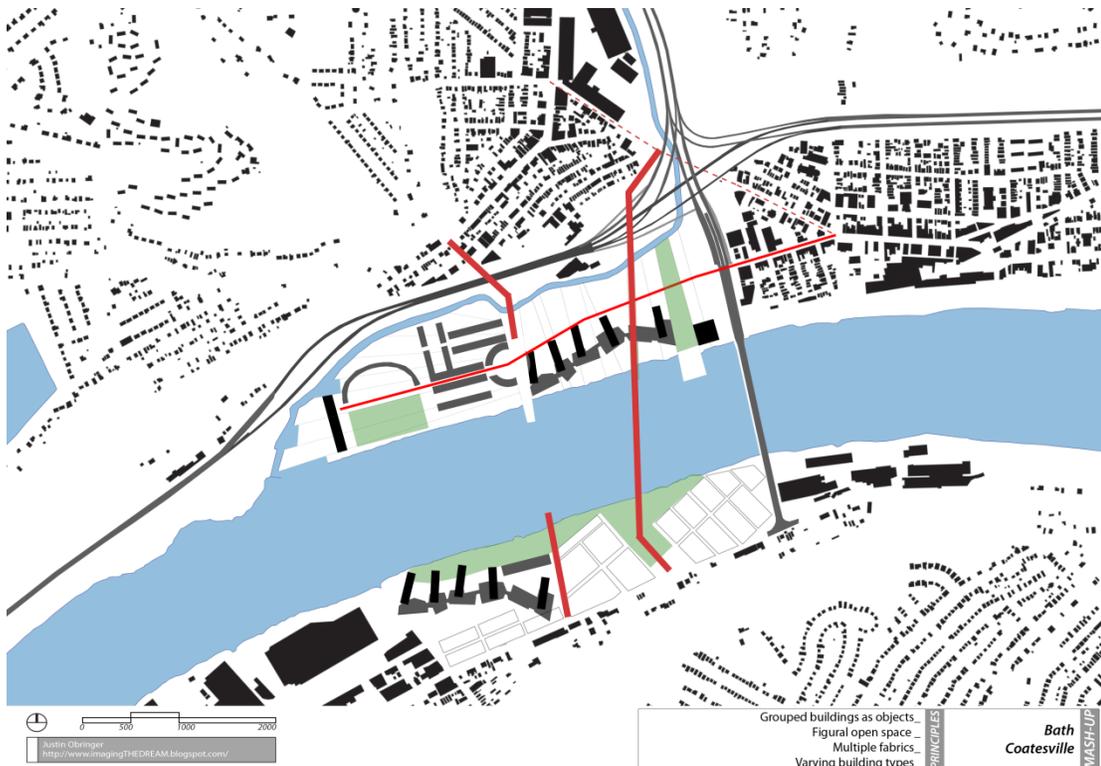
Figure 3.60: Back Bay Boston, Overlay (source: Author)

This version of the Boston fabric is the same except the north south connections are subtracted to allow for the river to penetrate deep into the site. This is also seen in Baltimore, MD along the harbor where the inlets allow for more access to the water and promote a clearer way for buildings to front (the amenity) and potentially could be used to define different fabrics or neighborhood clusters.

Site Operation 3: Collage

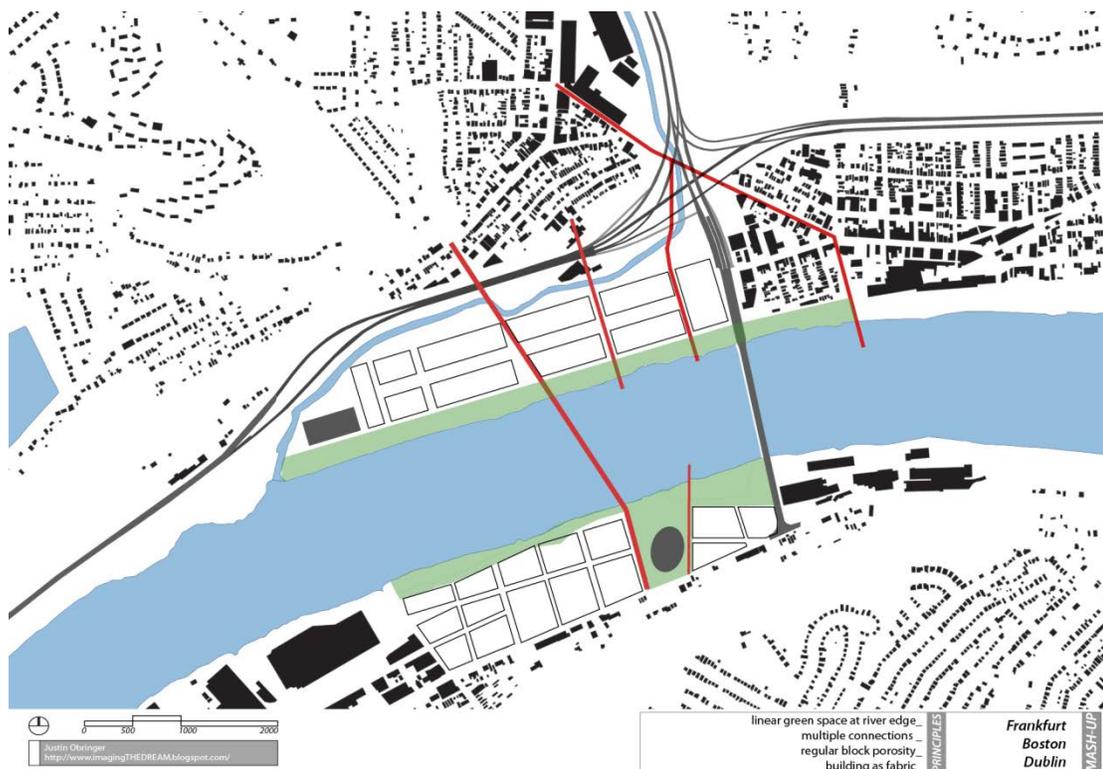
The collage or mash-up is combines multiple overlays into a system of strategies for developing the site. The previous series of context overlays were grouped based on similarities in their principles of typology, block, open space, and connection. The primary purpose is to begin to develop a series of fabrics and potential connections from the site into its surrounding contexts and how the buildings may orient and cluster themselves into identifiable parts. The four mash-ups show similarities and differences but embody the language of their precedent overlay coming together. Though program/land use wasn't specifically addressed the emergence of potential opportunities or moments where community elements could be inserted into the primary housing structures did occur.

Figure 3.61_Collage 1: Object-Landscape (source: Author)



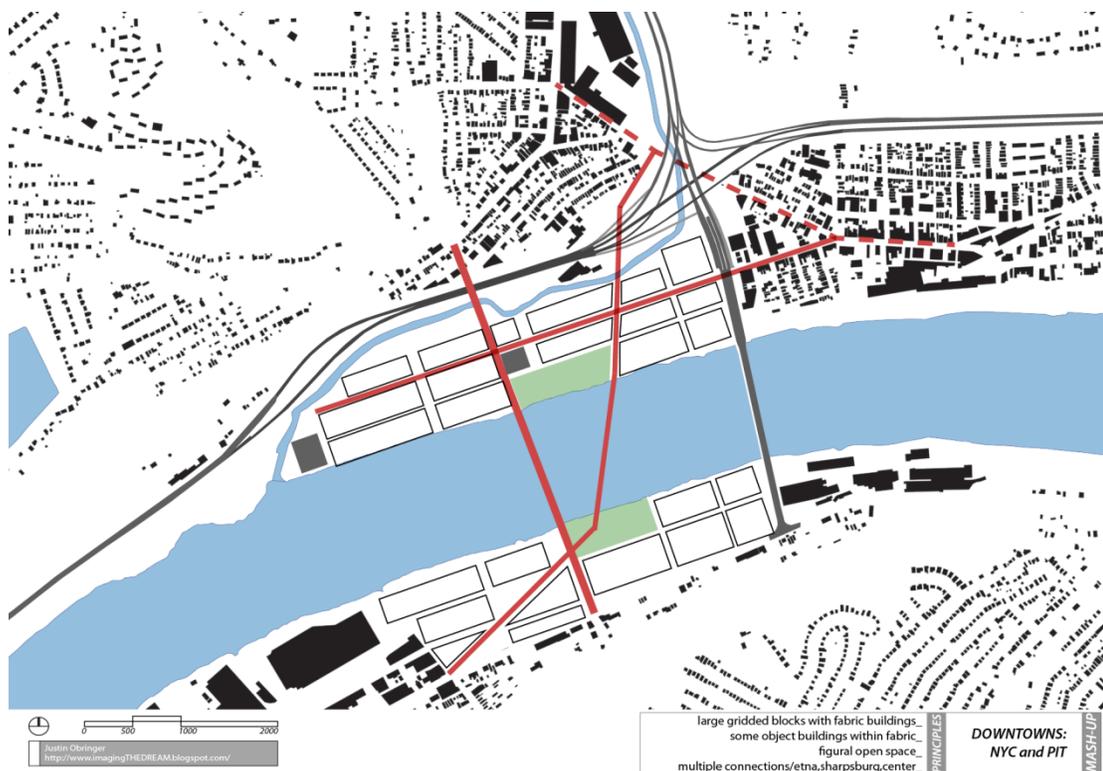
Bath and Coatesville were merged (**figure 3.61 above**) based on the following principles; they consist of grouped units that emerge as figural objects. Figural open space and multiple fabrics are found through a diversity of building types. The resulting diagram proposes a pedestrian connection from the void created from the highway/Pine Creek intersection to Lawrenceville. There are potentially two to three fabrics that could emerge across the primary site and buildings are staggered to provide dynamic views into the landscape. A second connection into the West end of Etna is proposed as an effort to facilitate a circuitous path through the site. One main axis is extended from the Western peninsula (potentially an object building) into Sharpsburg.

Figure 3.62_Collage 2: Pier-ing (source: Author)



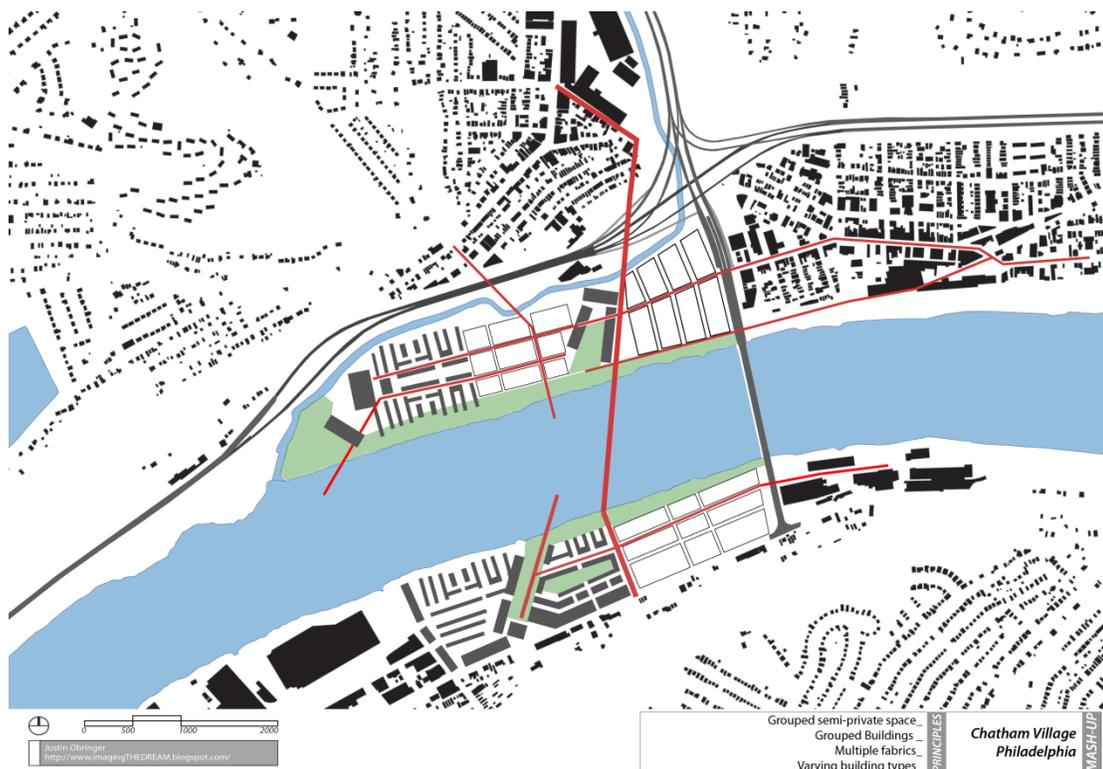
Frankfurt, Boston, and Dublin were combined (**Figure 3.62 above**) primarily because of their treatment of open space. The linear park along the river's edge provided a clear diagram for both parallel and perpendicular movement. Users would either run along the park or move to the park/riverfront. This mash-up suggests multiple connections from Etna to the riverfront over/under/and through the highway. Possible extensions out over the water could occur to exaggerate and celebrate this movement. The collage also suggests an attitude to a figural building in Lawrenceville that could provide a direction for development. Given the plan for Lawrenceville in the future this could be an intermodal transit station. The linear park could slide into Sharpsburg and the diagram/ movement to the water could continue east.

Figure 3.63_Collage 3: Object-Grid (source: Author)



As opposed to the first mash-up the combination of object-landscape, the merging of New York City and Pittsburgh (**Figure 3.63 above**) promote a relationship of object buildings and figural green space within a consistent grid fabric. This diagram proposes a promenade from Etna to downtown Pittsburgh through mirroring green spaces along the river. Both object building and green space adheres to the dominant downtown grid. The grid allows for a strong east west axis into Sharpsburg but its termination is unresolved. Addressing the peninsula and preventing the cul de sac effect from occurring will be important for the object-grid scheme. Potentially a bridge along the Western edge of both the proposed site and Lawrenceville could address this issue.

Figure 3.64_Collage 4: Figure-Field (source: Author)



Combining the Chatham Village neighborhood of Pittsburgh and the Northern Liberties neighborhood of Philadelphia (**Figure 3.64 above**) was done because of the opportunity for multiple organizational fabrics to be utilized across the site. Grouped semi-public space and varying buildings types results in a significant amount of diversity potential while maintaining a clear dialogue between the site and Lawrenceville. This diagram proposes two bridges from Etna into the site with a broader public access that passes adjacent to the main public space across the Allegheny. The cul de sac nature described in the last mash-up still exists here yet it is celebrated with an extended gesture in the direction of Pittsburgh. This could serve as a landmark or gateway into and out of the city from both highway and river.

Translation: Adapt

The Yard exists at multiple scales within the proposed development. As previously described, each house has its own outdoor space or what could be labeled as lawn. Whether or not it is blanketed with green grass it is still an owned piece of elevated land. These spaces open to the plinth which can be seen in figures 3.73/74/75. The concept for the plinth was developed by researching the suburban cross-section and the existing relationship of multiple “yards” in the suburb and comparing the patterning to that in the city (figures 3.71 and 3.72). The plinth demonstrates a commitment to the automobile that is so engrained in American culture. The plinth provides covered garage parking at one space per house. The space is also accompanied by a storage shed. Each house would effectively own their specific parking spot and associate storage shed. Above, the plinth becomes a joint park space for the block. The storage units provide enough depth for adequate vegetation to line the edges of the plinth. The vegetated strips provide an added layer of separation from the semi-private plinth across the bridges and into the private realm.

The plinth is open ended to the river which provides a sense of place and allows for views from the houses that surround (figure 3.75) Beyond the scale of the plinth, the development seeks to create a garden-like community highlighted by ample green space, a river walk boulevard, and seamless connections into neighboring communities. The proposed grid was derived by creating network loops into historic Etna, Sharpsburg, Lawrenceville, and with EXTECH. This provided for hierarchy and increased access to restaurants, shops, and even highway. Figure 3.79 is a series of site diagrams presented at A7. This series embeds the main conceptual and tectonic principles inherent in the development and building plan.



Figure 3.65 Pittsburgh to Etna Diagram (source: Author)

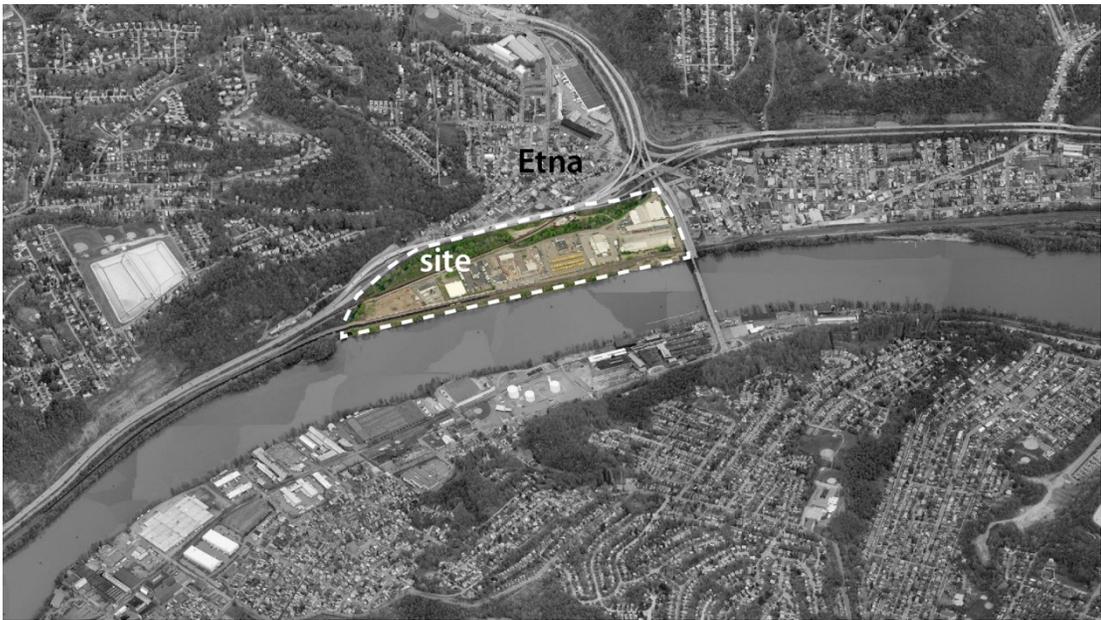
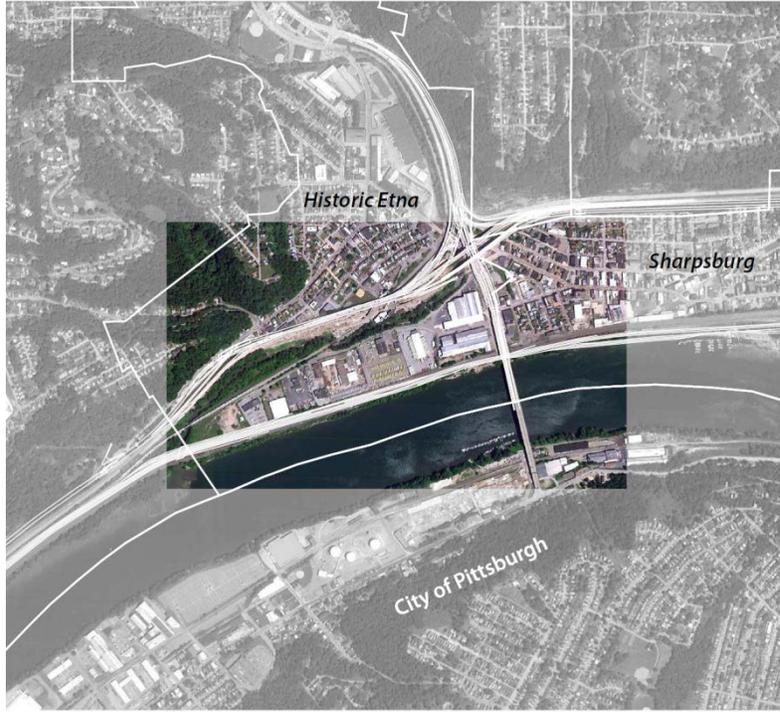


Figure 3.66 Site and Context Diagram (source: Author)



[site] Etna, PA

Figure 3.67 Site Constraints Diagram (source: Author)

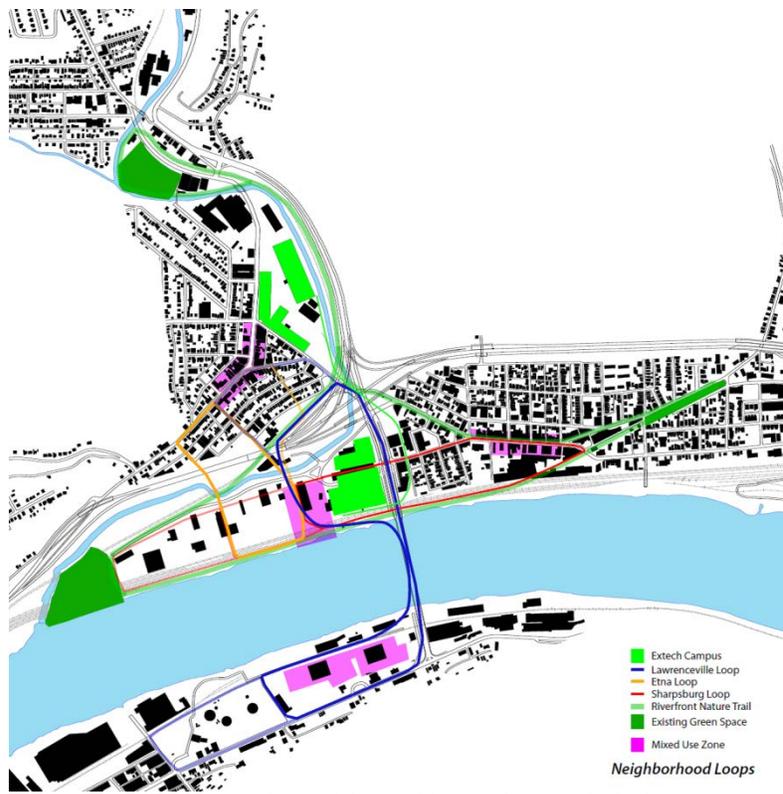


Figure 3.68 Network Loops Diagram (source: Author)

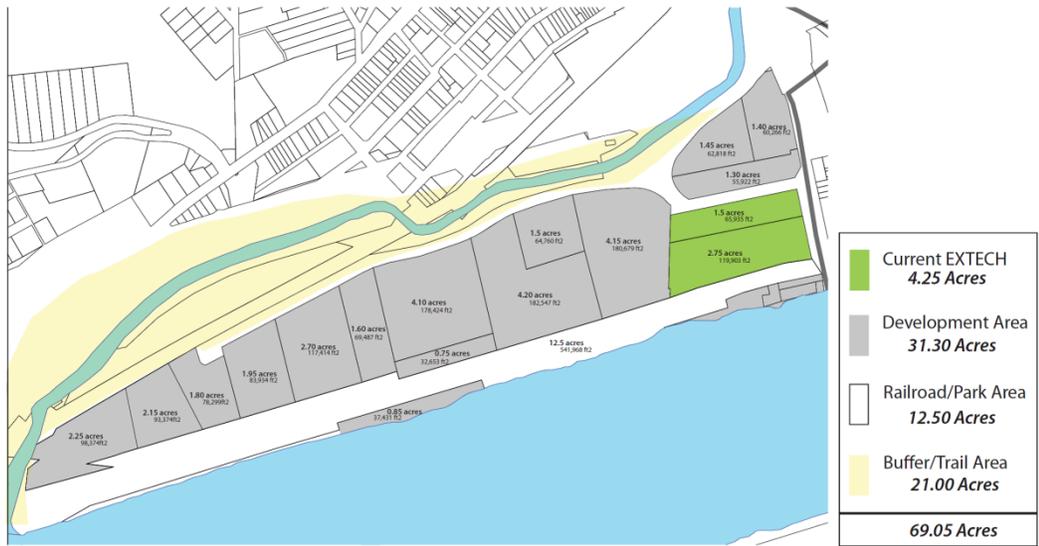
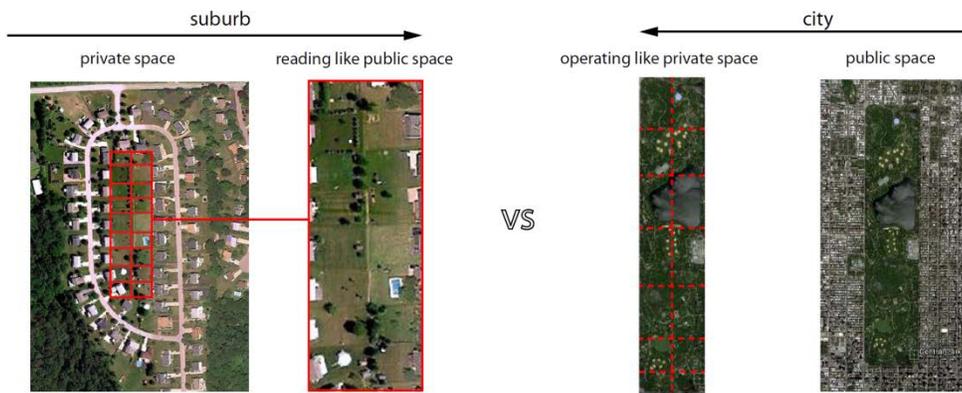


Figure 3.69 Parcel Size and Development zones (source: Author)



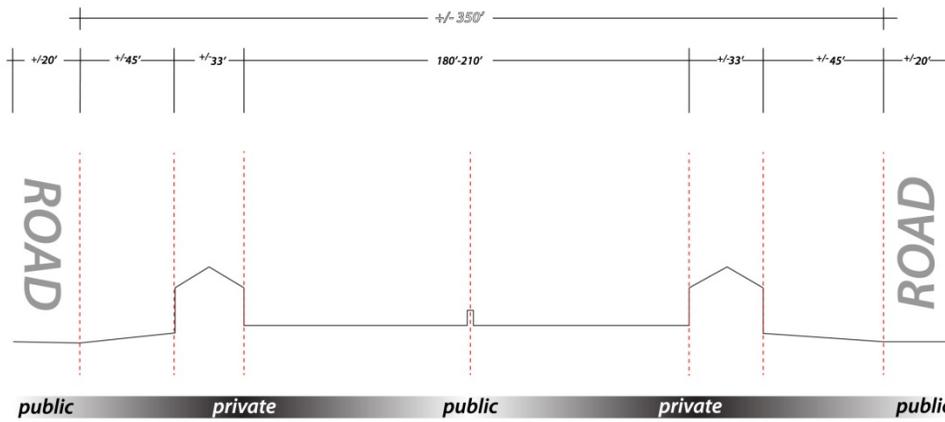
Figure 3.70 Development Plan (source: Author)



Separation between private realms is delineated by surface pattern.
 Variation in color, texture, height, and edge treatment mark boundaries.

delineating public private

Figure 3.71 Assigning Open Space Diagram (source: Author)



suburban cross-section

Figure 3.72 Suburban Cross-Section Diagram (source: Author)



Figure 3.73/3.74 The Re: America cross-section and plan detail (source: Author)

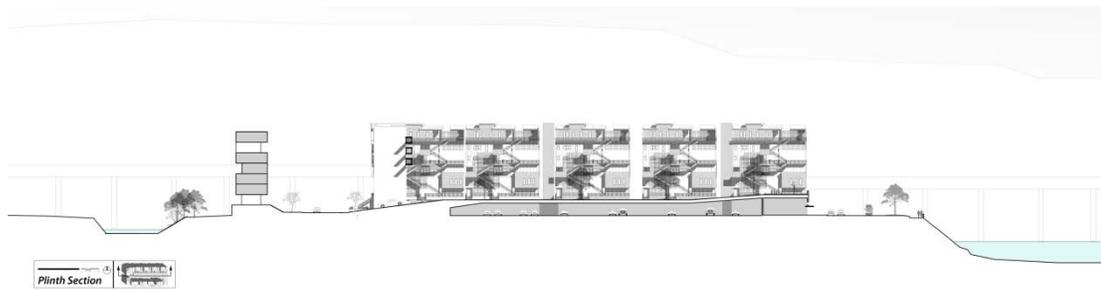


Figure 3.75 Plinth Longitudinal Section(source: Author)



Figure 3.76 Street Longitudinal Section (source: Author)

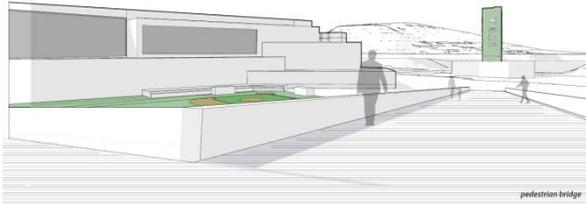


Figure 3.77 Development Perspective(Source: Author)

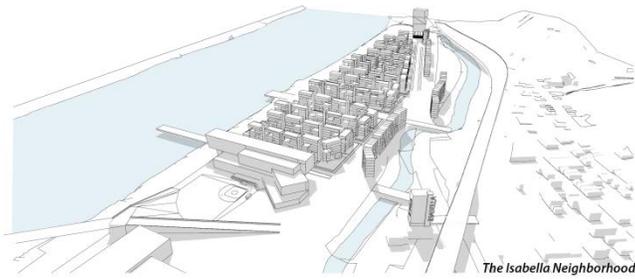
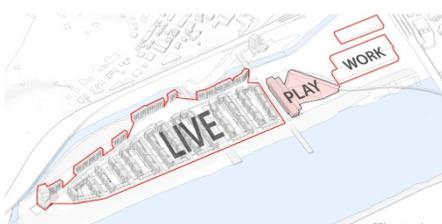
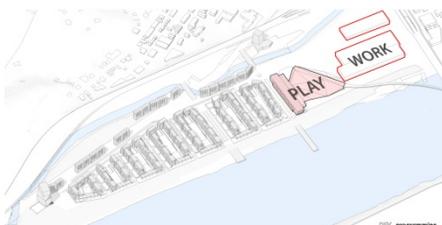
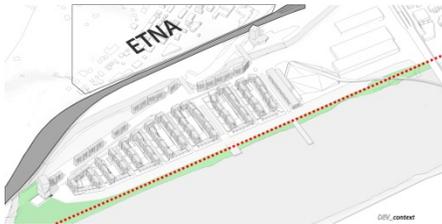


Figure 3.78 Development Aerial (source: Author)

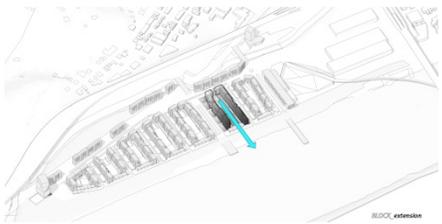
Site Diagram Series

Figure 3.79 Site Diagram Series from A7 Presentation (source: Author)











DEV_activities



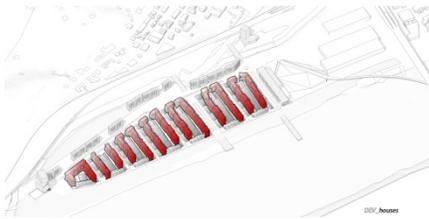
DEV_activities



DEV_backyards



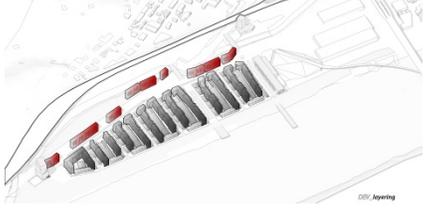
DEV_space



DEV_houses



DEV_extension



DEV_heyting

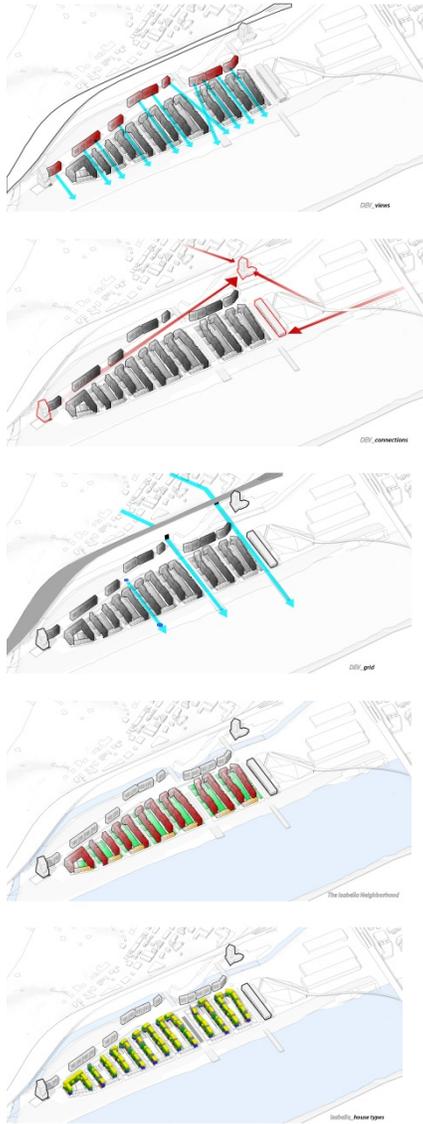


Figure 3.79 Site Diagram Series from A7 Presentation (source: Author)

Conclusion

Simultaneous with this investigation is the recent exhibition at Moma in New York City entitled *Foreclosed: Rehousing the American Dream*, which addresses the housing crises. The unsustainable state of the suburbs is being scrutinized by economists, architects and many other fields of thought. The idea that the suburbs and their associated images are detrimental to the economy has been proved undoubtedly in recent years however; the housing bubble is, like the form, the symptom not the root of the problem. Although economists, even congressmen predicted the housing bubble in the 1970s no motion was taken to avert it. The field of architecture takes just as much, if not more, responsibility for this catastrophe than any other field. Instead of innovating, inventing, and rethinking designs and the ways in which people live and function, designers and builders succumbed and simply produced instead of envisioned. "The Dream" became as commonplace and innocuous as the architecture.

In order for form to truly change, first the architect must re-embrace the essence of the dream, not regurgitate the singular perversion which has attached itself to society today. Since "The Dream" is neither form specific nor site specific, the ideal architecture would allow maximum freedom within a structured and ordered development. Etna, is a case study of a site whose history, and transportation opportunities make it a favorable location to re-instate the freedom of thought that once coincided with the interpretation of "The Dream." The proposed form occupying the site does not dismiss but repackages the idea of ownership which was and still is integral to the realization of "The Dream." However the result is not stagnancy but rather a platform for the development of each person's individual dream. This customization, or the freedom for customization is the final factor that must be addressed in any proposed architecture whose aim is to re:enterword "The Dream."

Notes

1. A rough 10 years for the middle class by Annalyn Censky
2. Home ownership: Biggest drop since Great Depression by Les Christie
3. From: The Fabrication of Place in America: The Fictions and Traditions of the New England Village. 2010.
4. James Adams, The Epic of America, 1931
5. The Anaesthetics of Architecture, by Neil Leach
6. An Everyday Modernism: the Houses of William Wurster
7. Colomina, Beatriz, Domesticity At War
8. Webster's online dictionary
9. Kenneth Frampton, "Towards a Critical Regionalism" Labour, Work and Architecture. 2002.
10. Ibid.
11. Michel Foucault. Of Other Spaces, Heterotopias. The basis of a lecture given by Foucault in March of 1967.
12. Ibid.
13. Ibid.2
14. This quote was borrowed from a paper by Ian MacBurne of the Architectural Association entitled The Periphery and the American Dream.
15. Etna Centennial Book
16. Ibid.
17. Census.gov
18. www.etnalive.org
19. Quoted from, Colomina, Beatriz, Domesticity At War
20. Census.gov
21. Balmon, Diana. A Landscape Manifesto
22. Colomina, Beatriz, Domesticity At War
23. Virginia Scott Jenkins. The Lawn: A History of An American Obsession

Bibliography

- Adams, Robert. *What We Bought: the New World, Scenes from the Denver Metropolitan Area, 1970-1974*. Hannover: Stiftung Niedersachsen, 1995.
- Bekaert, Geert, and Andrew May. *Xaveer De Geyter Architects: After-sprawl: Research for the Contemporary City*. Rotterdam: NAI, 2002.
- Censky, Annalyn. "A Rough 10 Years for the Middle Class." *CNNMoney - Business, Financial and Personal Finance News*. CNN, 21 Sept. 2011. Web. 21 Oct. 2011.
- Christie, Lee. "Home Ownership: Biggest Drop Since Great Depression." *CNNMoney - Business, Financial and Personal Finance News*. CNN, 7 Oct. 2011. Web. 21 Oct. 2011.
- Colomina, Beatriz. *Domesticity at War*. Cambridge, MA: MIT, 2007.
- Easterling, Keller, and Anne Rieselbach. *Situating: Greg Kochanowski, ROEWUarchitecture, Lateral Architecture, Dan Hisel, LinOldhamOffice, Interboro*. New York: Princeton Architectural, 2006.
- Foucault, Michel. "Of Other Spaces," *Diacritics* 16 (Spring 1986), 22-27.
- Gausa, Manuel, Jaime Salazar, and Paul Hammond. *Housing: New Alternatives, New Systems*. Basel [etc.: Birkhäuser, 2002.
- Gertner, Jon. "The Futile Pursuit of Happiness." *New York Times*. New York Times Company, 07 Sept. 2003. Web. 5 Nov. 2011.
- Guallart, Vicente. *Geo Logics: Geography, Information, Architecture*. Barcelona: Actar, 2008.
- Hanlon, Bernadette. *Once the American Dream Inner-ring Suburbs of the Metropolitan United States*. Philadelphia: Temple UP, 2010.
- Hayden, Dolores. *Redesigning the American Dream: the Future of Housing, Work, and Family Life*. New York: W.W. Norton, 1984.
- Ireson, Ally, and Nick Barley. *City Levels*. Basel: Birkhäuser, 2000.
- Le Corbusier. *Towards a New Architecture*. New York, NY. Dover Publications, 1986.
- Leach, Neil. *The Anaesthetics of Architecture*. Cambridge, MA: MIT, 1999.

- Lucy, William H. *Foreclosing the Dream: How America's Housing Crisis Is Reshaping Our Cities and Suburbs*. Chicago: American Planning Association Planners, 2010.
- MacBurnie, Ian. "The Periphery and the American Dream." *Journal of Architectural Education* (1996): 134-43.
- Marcuse, Peter. "Tradition in a Global City?" *Traditional Dwellings and Settlements Review* 17.2 (2006): 7-17.
- Olsen, Joshua. *Better Places, Better Lives: a Biography of James Rouse*. Washington: ULI - Urban Land Institute, 2003
- Tschumi, Bernard. *Architecture and Disjunction*. Cambridge (Mass.): MIT, 1994.
- Venturi, Robert, Brown Denise Scott, and Steven Izenour. *Learning from Las Vegas: the Forgotten Symbolisms of Architectural Form*. Cambridge (Mass.): MIT, 1977.
- Venturi, Robert. *Complexity and Contradiction in Architecture*. New York, NY. The Museum of Modern Art, 2002.
- Whitaker, Craig. *Architecture and the American Dream*. New York: Clarkson N. Potter, 1996.
- Wortham-Galvin, B.D. "The Fabrication of Place in America: The Fictions and Traditions of the New England Village" *Traditional Dwellings and Settlements Review* 21.2 (2010): 21-33.