In Search of Forms In The Design of an Urban Intervention

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DEDICATION

In memory of my friend and fellow graduate architecture student James Andrew Jackson.

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ABSTRACT

Urban interventions are too often regarded by long-time inhabitants of city neighborhoods as a means to displace them from their homes to make room for expensive chain stores and exclusive residential buildings - gentrification. This view is unfortunately correct more often than not.

An intervention should instead aim to improve the physical environment, public space. It will allow equal access to all residents. The street will shift from automobile centered to people-centered. The introduction of vegetation to the urban environment in an intervention not only improves air and water quality and reduces urban heat, but offers long lasting positive effects on the general well-being of residents by providing psychological relief.

The forms that shape this urban intervention will take the above mentioned items into consideration, and in addition possess qualities that spur interactions that shape memory of the place. Undulations, extrusions that provide shade and shelter, bridging features - allow an urban scene to unfold. Careful placement of vertical planes will provide a sense of enclosure and a place for respite from the hectic activity beyond.

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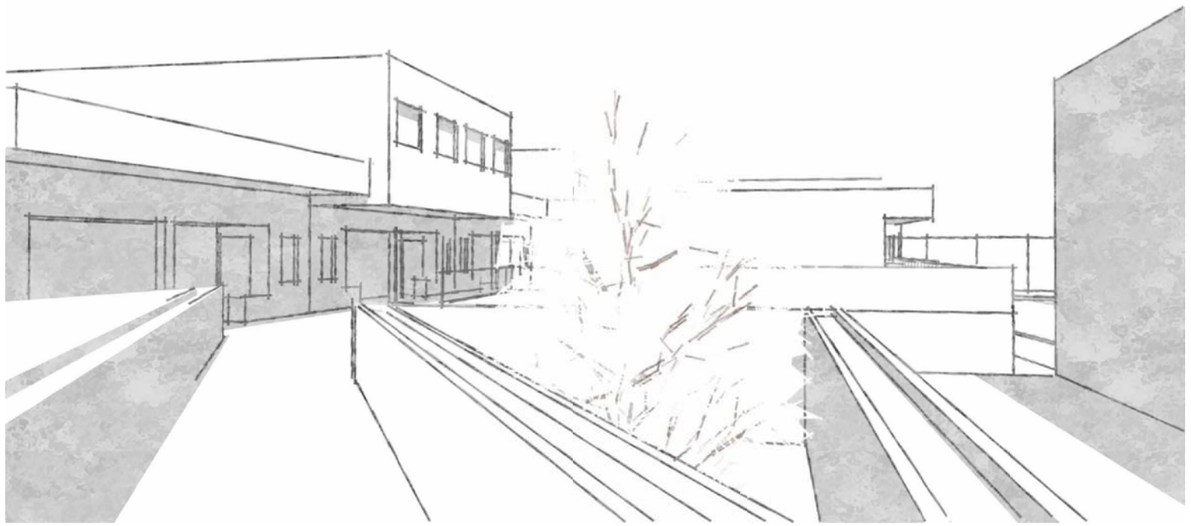

LOCUS - THE MEMORY OF PLACE

What is locus? How does it relate to collective memory, or architecture? Aldo Rossi tackles these questions in "The Architecture of the City." A city is comprised of the built environment - works of architecture and supporting infrastructure - and the people and events that take place within its confines. The relationship between the three builds collective memory.

Rossi writes, "One can say that the city itself is the collective memory of its people, and like memory it is associated with objects and places. The city is the locus of the collective memory. This relationship between the locus and the citizenry then becomes the city's predominant image, both of architecture and of landscape, and as certain artifacts become part of its memory, new ones emerge."

In other words, Rossi clarifies by stating "The architecture of a place is the outward shell of its being." Certain buildings and structures, or groupings of them, are designed and situated to frame a space, encouraging the public o occupy it. The built environment consists of elements that generate urban conditions that come to characterize a city due to the collective memory that is formed over time within it.

Rossi continues, "Memory, within this structure, is the consciousness of the city; it is a rational operation whos development demonstrates with maximum clarity, economy and harmony that which has already come to be accepted." Continuing with this logic, it can be concluded that for a successful intervention to take place in the urban environment, the past must be linked to the present and at the same time room must be left for future possibilities to form new memory of place.

Figure 1.1 - Lennox Street circa 1965; photo by Walter McCardell

Figure 1.2: Temple Gardens, circa 1973 Photo by Weyman Swagger

DEFINING GENTRIFICATION

Care must be taken with how an urban intervention will impact the community it is situated within. Many projects are intended as local improvements, but they change the character of a neighborhood in ways not desired by existing residents.

An example of gentrification is when projects are constructed with the expectation of significant price-hikes in property value. This forces out existing businesses who can no longer afford increasing rent, and existing residents who cannot keep up with rising property taxes or rents. With gentrification comes the arrival of many new, usually more wealthy residents who desire to shape a neighborhood into a popular new cliche, and in the process wipe out the existing memory of place; the destroyers of collective memory, the death of locus. The new environment is ubiquitous, place-less so to speak, and that is no way to live.

It needs to be noted that gentrification is not the same as change in a neighborhood over time; this happens in all neighborhoods and is normal. Gentrification is not the improvement of houses or public space within a neighborhood. Improvement of existing structures and public space is encouraged. Gentrification is not the arrival of different people in small numbers; people come and go in neighborhoods. Gentrification is not the introduction of an intervention on an otherwise derelict or unused lot. A carefully placed urban intervention is the opposite of gentrification - it acts as an urban catalyst that invigorates and enriches a neighborhood.

1.6

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Gentrification is a problem faced by cities nationwide. Photo descriptions and credits are in clockwise order starting from top right of page.

FIGURE 1.3 - Baltimore's Hampden neighborhood, The Avenue. Largely untouched as of yet. Public domain photo

Figure 1.4 - gentrification in progress in Hampden's residential quarters. There is no regard for the scale of surrounding houses or for providing places that encourage human interaction. Photo by ArchPlan

Figure 1.5 - Local Hell's Kitchen pizzeria forced out and replaced by national conglomerate business; photos by James and Karla Murray

Figure 1.6 - New York City 2nd Avenue Deli (opened 1954) replaced by Chase Bank in 2006; photos by James and Karla Murray

1.3

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CHARACTERISTICS OF A GOOD INTERVENTION

Kevin Lynch states in *City Sense and City Design* that "Knowledge of how people react to their physical environment, and how they invest it with emotional qualities, is quite as important as knowing the technical or economic or sociological resultants of a given form. It may be extremely useful, simply to know something of the features which seem to be most significant to people, so that these features may receive special design attention." A good intervention will take into account any particular interests a community may have. A designer should seek to know, for instance, if the community in question holds a weekly movie viewing projecting onto the side of a building, or whether an emphasis is placed on frequent large gatherings, gardening, or fostering the creation of local art. Incorporating some of these findings into the intervention will provide maximum benefit to the community at large.

An intervention must be accessible to all residents. If the goal is to create a more richly woven environment, emphasis of the street needs to be placed on the circulation of pedestrians, not vehicles. Vehicular traffic cannot be ignored, however it must be controlled. For example, If there is a problem with vehicles speeding through a neighborhood, the street can be made more narrow, with planter beds on the shoulders. The narrowness will make many drivers feel less comfortable traveling at higher speeds. Speed is controlled while introducing vegetation to the pedestrian thoroughfare.

Vegetation and green spaces should be included in an intervention, if not for environmental benefits, for recreation and well-being. These spaces enhance quality of life for a community. When provided an outdoor place to congregate, social exchanges can lead to trust building and an outlet for common interests. An intervention that provides these places offers a means to strengthen community bonds through social interaction. In addition, time spent in nature relieves mental fatigue.

An intervention should assume the scale of its environment. it should not dwarf the structures surrounding it, casting excessive shade and disrupting visual continuity. A well executed intervention will strengthen one or more of the elements of the city as described by Lynch in *The Image of the City*. The elements in question are paths, edges, districts, nodes and landmarks. The intervention may enhance paths of travel, delineate or soften the edge of a district, strengthen the identity of a district, serve as a node - a strategic spot or core - to become a focal point of a district, and / or serve as a landmark. Through all of the above mentioned considerations, the intervention will provide a means to build collective memory; locus strengthens.

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Figure 1.7 - Sagamore Pendry Hotel (image courtesy of Sagamore Pendry) is a successful adaptive re-use of an existing structure in Fells Point, Baltimore that stretches the edge of a district, and acts as a node. It is a strategic element of the neighborhood, attracting many visitors and increasing foot traffic to the local restaurants and taverns.

Figure 1.8 - Whitelock Community Farm (photo by Algerina Perna) is a popular community feature that came into being in response to a series of derelict structures being demolished to reduce crime. It has strengthened community bonds and become a community identifier.

Figure 1.9 - Power Alley at Powerplant Live complex (photo by Jeff Wolfram) The use of vegetation and lights combined with expanding the boundary of the restaurants into the pedestrian street has blurred the notion of hard interior / exterior boundary. The alley transformation has created a node in downtown Baltimore. This place is focal point downtown.

NEMAUSUS HOUSING - NIMES, FRANCE

The Nemausus Housing, designed by Jean Nouvel, was aimed at providing housing at low cost for a young demographic in an area surrounded by low rise housing and industry. Although large, the project assumes the scale of its environment, being kept to three tiers of apartments (seven stories) above parking. For each structure, one side is flanked by cantilevered balcony spaces serving the individual apartments; on the other side that outdoor space instead becomes an external gallery that serves as an elevated pedestrian street (horizontal circulation) that accesses stair towers (vertical circulation). A central open courtyard is provided to preserve existing trees, as the site was previously an arboretum.

Parking is semi-buried below the structure, which rests on pilotis. The structure appears to hover over the ground plane, and visual continuity is preserved. Structural rhythm is established by columns and concrete slab walls which rest on them, spaced every 5 meters. Apartment footprints are 5x12 meter bays. There are 17 types of apartments ranging from individual flats to triplexes that fit within this structural framework.

The apartments are well lit with natural light, flexible in their open layout and allow for cross ventilation, all critically important features.

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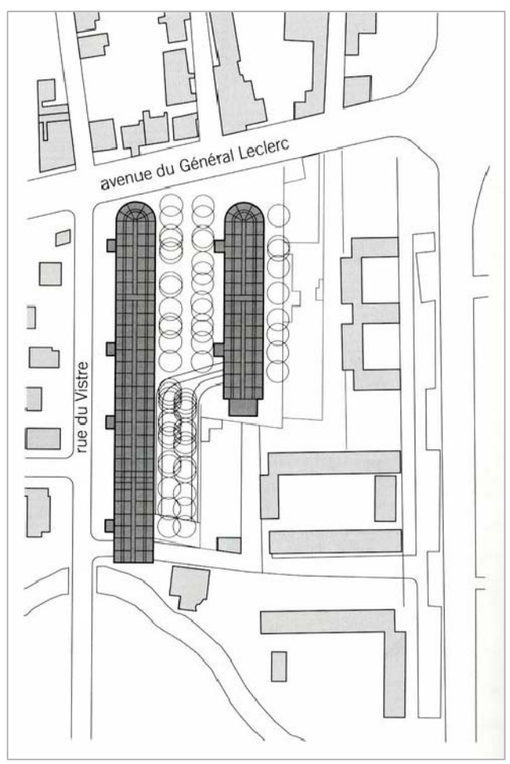

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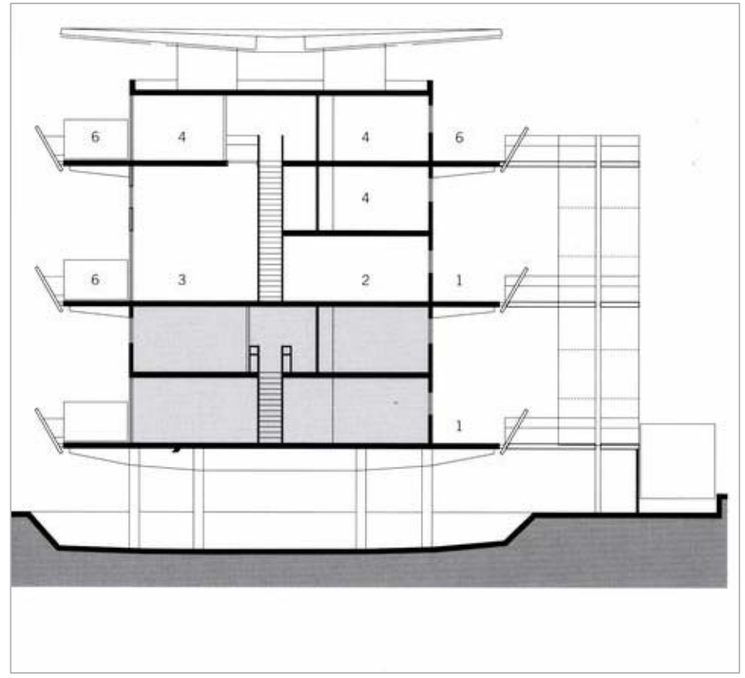
Figure 2.1 - The external gallery for horizontal circulation.

Figure 2.2 - Building section shows private balcony space (6) and external gallery access (1) as well as parking area below.

Figure 2.3 - Project site plan. Note the open courtyard, accessible to residents and non-residents alike.

Figure 2.4 - Photo of Nemausus as seen from the avenue du General Leclerc.



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DE DRIE HOVEN ELDERLY HOUSING, AMSTERDAM

The De Drie Hoven elderly housing complex was designed as a home for those with physical and mental disabilities, and in need of attention. With this in mind, Herman Hertzberger arranged the plans to create places that encouraged maximum social interaction. The corridors are treated as interior streets, all leading to a central "encounter" area that functions as a village square. Along these streets, transition space is provided to step aside and have a conversation, and serve as transition from corridor to living space.

Hertzberger employs subtle design strategies in De Drie Hoven that give residents the opportunity to make personal touches and lay claim to semi-public spaces. Aside from the transition spaces along the interior streets providing room for conversation, it provides a place small pieces of furniture and plants to be placed to bring a part of the living space out and add personality to a corridor purposefully left bare. Another example is found at the edge of the patios overlooking the courtyard. The top coursing of parapet blocks have been turned upright to allow for planters to be placed in them to make gardening more accessible to the residents.

De Drie Hoven consists of multiple building segments connected by a continuous structural framework to promote accessibility for the residents. Four courtyards are formed by the segments of the building leading to the central encounter area. Its system of columns, beams and floors is modular, allowing flexibility for the many programs that it houses and making future expansion possible.

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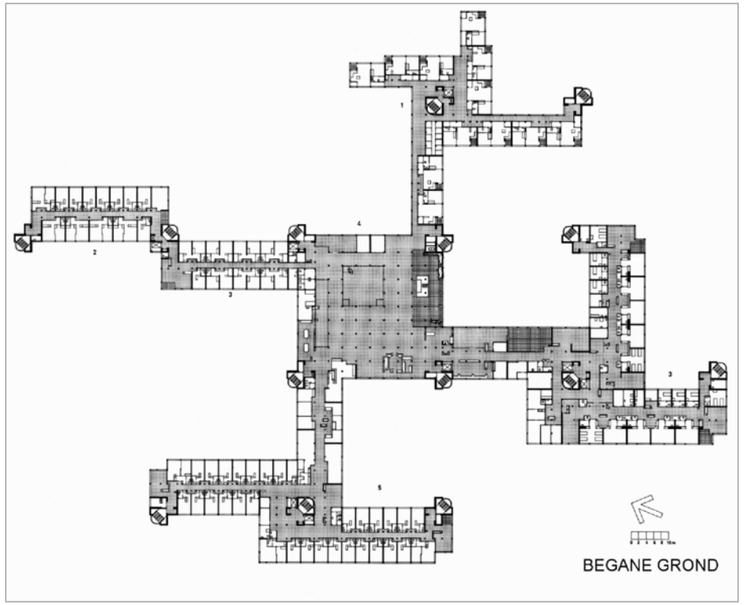

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Figure 2.5 - Axonomoetric view of the De Drie Hoven complex.

Figure 2.6 - Upturned top coursing of patio parapets encourage resident gardening.

Figure 2.7 - Transition space between corridor and living space.

Figure 2.8 - Upper level plan. All corridors lead from living spaces to large central "encounter" space.

Figure 2.9 - Courtyard path with winding water feature.

2.7

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NEXT 21 HOUSING - OSAKA, JAPAN

Next 21 is an experimental housing project designed by Yositika Utida as a means to show how urban life can improve with the introduction of new technology in the future, referring to the 21st century. It consists of a reinforced concrete skeleton and standardized facade system; the 18 units within were designed by 13 different architects. The residential unit designs can be reconfigured because they possess raised access flooring; this offers design flexibility for future families that move in that may have different space requirements. The raised access flooring allows utilities to pass over beams and avoid the use of "sleeves." The ducts and piping are then led to main horizontal utility zones at each level, within the external gallery, or as the architect refers to it, the "street in the air."

There are large public spaces provided to build a sense of community among residents. In 2000, new residents moved into the building who initially were not familiar with gardening. By 2002 they reported that they had acquired new gardening skills and greatly enjoyed it as a means of relaxation. It is of note that a 1999 survey found 22 species of wild birds, 20 species of new plants brought in by birds, and 16 types of butterflies on the premises.

The open courtyard is able to be crossed by bridges at the upper levels and is said to have a positive impact on noise reduction. It offers people passing by a moment to stop and relax. The surrounding property owners have responded to NEXT21 by increasing the amount of vegetation found on the properties nearby; in this way it has become an key landmark of the community and a catalyst that has sparked change of its neighbors for the better.

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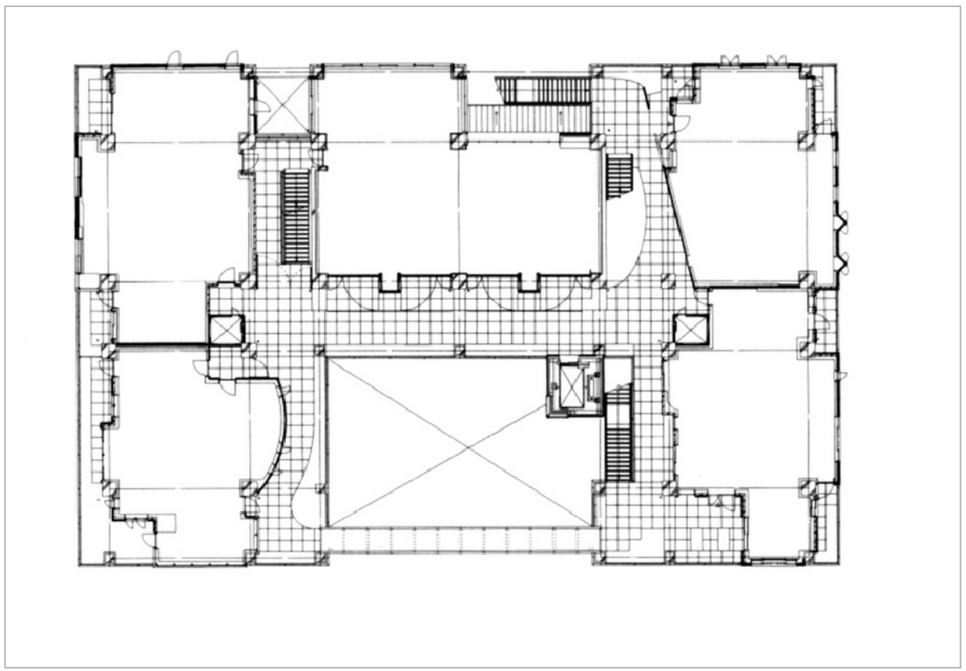

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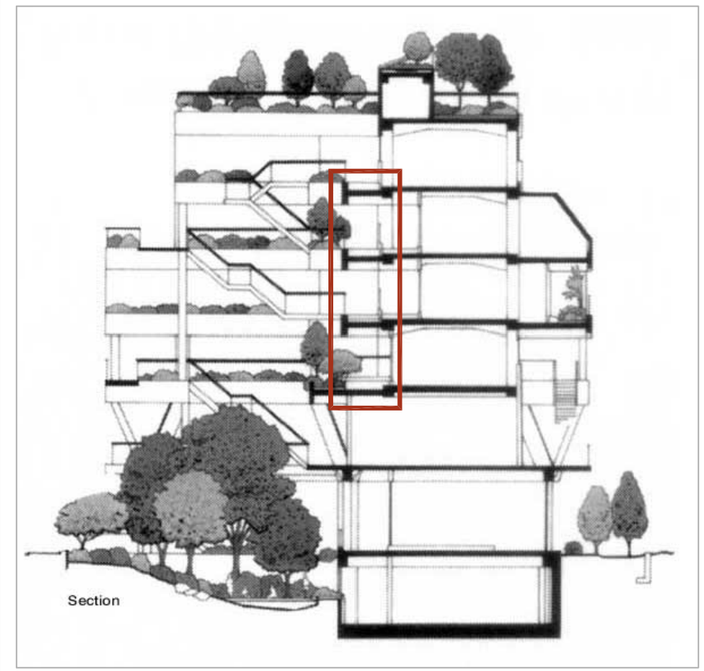
Figure 2.10 - View from neighboring building.

Figure 2.11 -Building section highlighting terrace gardens. Note spaces at the external gallery that act as the horizontal utility zones at each level.

Figure 2.12 - looking across the courtyard from upper bridge.

Figure 2.13 - Plan of the 3rd floor.



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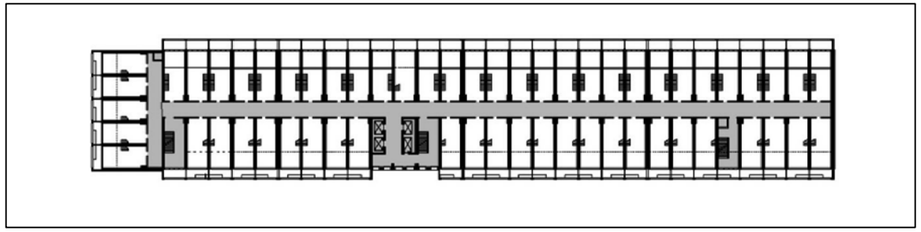
UNITE D'HABITATION - MARSEILLE, FRANCE

The Unite d'Habitation was designed by Le Corbusier as a self sufficient "vertical garden city" to house post-war France. Designed for 1600 occupants, the building contains 337 apartments and various other supporting functions, including shopping levels and a school and health clinic, within its concrete framework. The apartments act as cellular structures inserted into the frame, much as a bottle is inserted into a wine-rack. Many of these apartments lock around the large internal double-load corridors. Accessed on either side of the corridor, the apartments then wrap either below or above the corridor. In total, there are 24 apartment types inserted into the building.

many of Le Corbusier's five points of architecture from the 1920's are utilized in Unite d'Habitation: pilotis lift the building off the ground to create circulation space beneath, a free facade is utilized as a brie-soleil and coordinated with balconies, a rooftop terrace is provided to claim roofspace while still serving its necessary protective function, and uniform horizontal windows light the apartments evenly. The plan is no longer a totally free floor plan due to structural constraints placed by the large load bearing apartment partitions, however it can be said that volume is freed by the way the apartments stack and interlock.

For all of its success, one major drawback of the Unite design is the access corridors. Le Corbusier referred to them as "interior streets," however they are nothing more than hallways; they are gloomy, sometimes dark, and window-less with no elements that can be described as street-like. This critique can be used in future structures utilizing similar access corridor design. Perhaps the volumes are arranged in such a way that light can be brought into the corridor.



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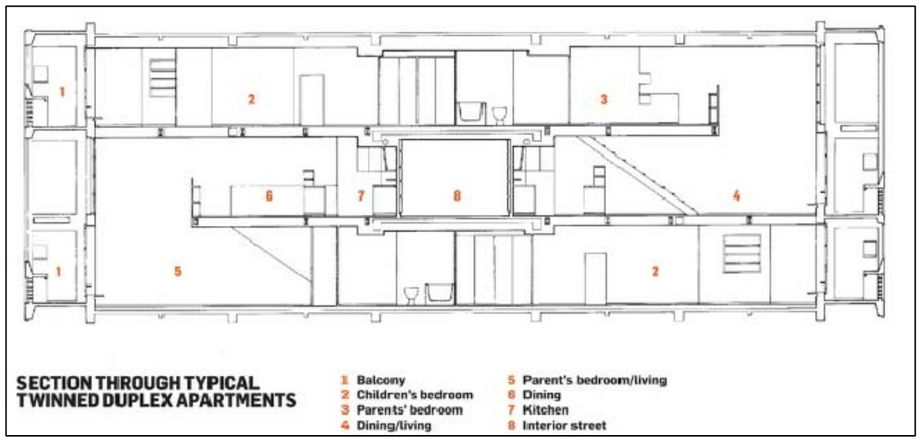

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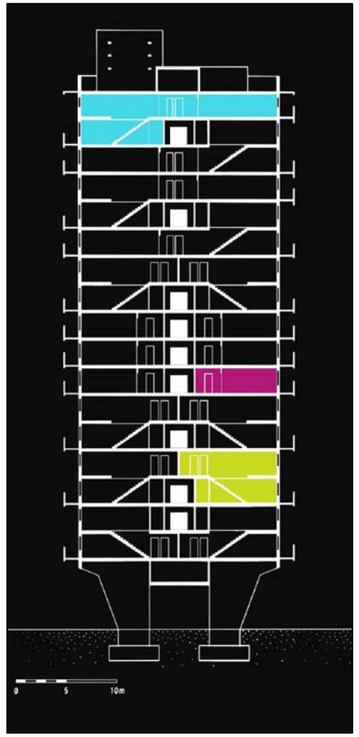

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Figure 2.14 - Aerial view of Unite d'Habitation

Figure 2.15 - Typical double height apartment sitting room.

Figure 2.16 & 2.17 - Typical floor plan showing double-load corridor; the enlarged section below shows how Corbusier double stacked and interlocked his apartments to allow the apartments to stretch the width of the building above and below the corridor to allow cross-ventilation and double-height windows.

Figure 2.18 - overall section of building showing mix of apartment types

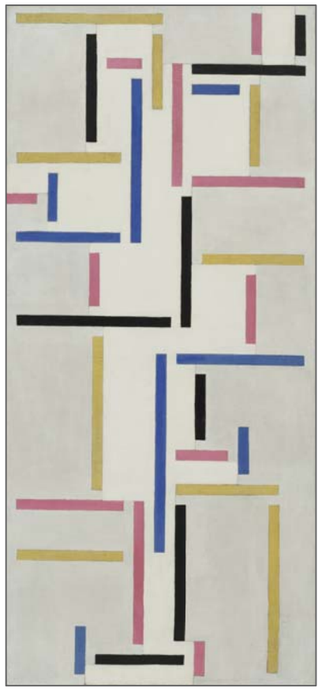
THE INFLUENCE OF MODERN ART

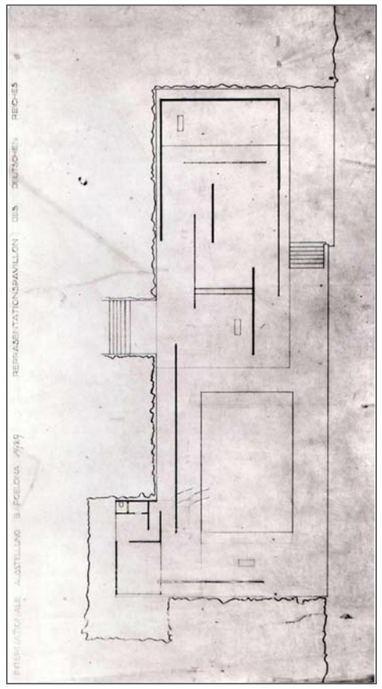
Architects draw inspiration not only from the work of other architects, but also from other sources, including art. In many cases it is not always obvious, as an architect may select a single element from a given work as inspiration for part of a project. In some cases, however, it seems fairly apparent that certain given artists' works or art movements propel the design of the building in question. Shown here are several examples of this type of straight-forward nod to fine art.

In the works selected and shown in the pages to follow, specific elements of a particular work are highlighted for their influence on this thesis. The urban intervention incorporates these elements throughout the stages of development to arrive at the final design.

2.19 2.20 2.21

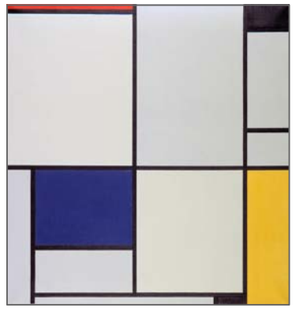
The work of Alfons Mucha (figure 2.19 depicts Dance, circa 1898) epitomizes the Art Nouveau movement. The graceful curves and attention to fine detail seems to have been lifted from canvas to built form in the work of Gaudi (figure 2.20 Casa-Batlio) and Victor Horta (Figure 2.21 Hotel Tassel)





2.26 2.27

Figure 2.26 depicts Rhythm of an Autumn Dance by Theo van Doesburg (circa 1918), which very well could have been an influence on the floating arrangement of walls as shown in Mies van der Rohe's Barcelona Pavilion



2.24 2.25

Piet Mondriaan's Tableau I (circa 1923) shown in Figure 2.24 may have been direct inspiration for Gerrit Reitveld's Schroder House shown in figure 2.25. The Schroder House was designed to capture the essence of the De Stijl movement.

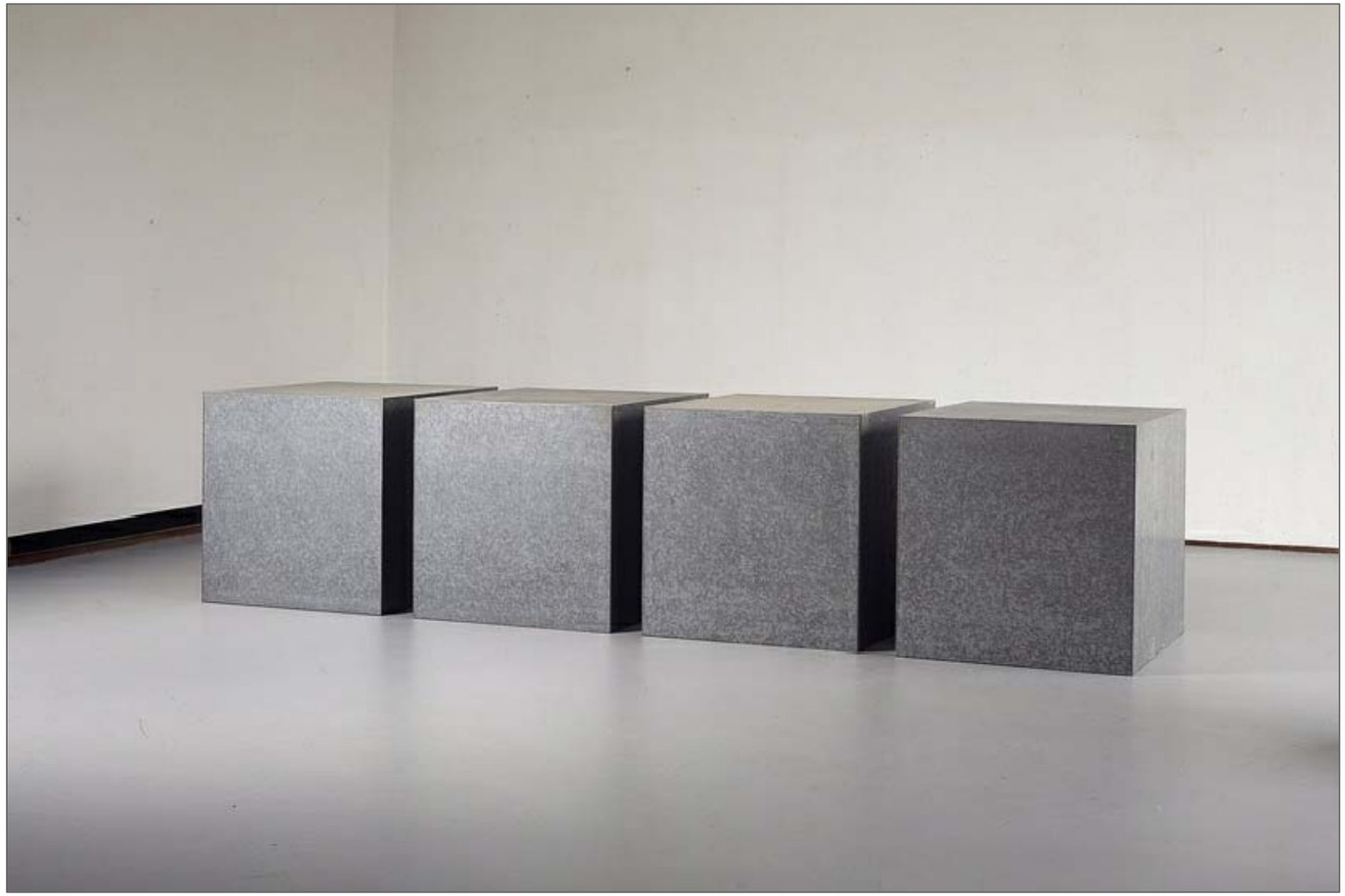
Zaha Hadid's Vitra Fire Station shown in figure 2.22 is possibly the most famous fire station constructed. One can look to the Constructionist work of Lyubov Popova and his work Abstraction (figure 2.23 courtesy of ArtNet) and see the resemblance to the fanning and overlapping forms of the painting with red at the heart of the color palette a nod to the fire trucks within the station.

2.22 2.23

GALVANIZED IRON 17 JANUARY 1973

The primary aim of this work is to focus attention to pure form, the in-between space and the shadows cast into it, and the texture of the object's surface when cast in light. When one views this arrangement from different vantage points in the gallery space light and shadow, and surface reflectivity change. One becomes aware of his or her presence in the room with these objects.

Carrying into architecture, George Nelson's housing prototype *Tomorrow's Home: Comfort in Cubes* immediately comes to mind. The cube is the driving element. The in-between delineates spaces and functions. The arrangement of these elements drives the overall form, which becomes more horizontal the further the elements are carried. How forms sit in relation to each other; is the rule of spacing ever broken, and if so, why? Judd's work elicits these questions. His arrangements vary at times based on the size of the space allotted. The care taken placing these forms in the gallery can translate into the care that should be taken when positioning built form on site.



TO SUSAN BUCKWALTER 1964

"Although Judd continued to make handmade objects, he also began to have works constructed by fabricators. By using industrial materials and manufacturing processes, he wanted to eradicate evidence of the artist's hand. *To Susan Buckwalter* 1964 introduces galvanized iron, a material he liked because it had no art historical context yet had a painterly quality in the way the light caught its open surface pattern. Four metal boxes, hung at regular intervals on the wall are connected by a lacquered aluminum pipe inset into the top front edges. The spaces between the boxes have as much presence as the boxes themselves, and emphasize the depth from front to back."

Tate-Modern exhibition guide

This installation first captured my attention with the contrast of light / heavy. The material gives the impression that the individual boxes are very heavy; we perceive cubes of metal as being the opposite of light, and yet these cubes are connected with such a slender piece of pipe above and at the same time are floating above the gallery floor. One can't help but stare because we are so used to seeing heavy masses supported with equally sturdy structure below.

This brings us to architecture - buildings can be designed to appear heavier or lighter than they really are, utilizing correct proportioning, material and color. It is particularly interesting to see buildings that appear to be floating, or resting on what is seen as impossibly little supporting structure.

15 UNTITLED WORKS IN CONCRETE, 1980-1984

The 15 Untitled Works in Concrete was produced in stages, with trial and error in the construction of the forms taking place over the years of production. A master plan was laid out in the beginning to establish an overall East-West axial arrangement over 978 meters. This image is a view from the 10th work looking towards the 11th.

A rule is that one type of form us used for each piece regardless of the arrangement of the forms. Piece 10 is of particular interest because the spacing of the forms is stretched beyond the otherwise regular 7:4 meter spacing to increase the open feel of the forms.

Completed in November 1983, these forms are far more precise than the earlier forms after Judd hired a concrete expert to direct the construction firm on the production of the forms and pouring process.

The result is spectacular; heavy material juxtaposed with such an airy feel. The position along the East-West axis lending to the balance of light and shade, the precision of form using a very raw material and the spacing between forms framing a perspective view of the following piece.

The most striking feature of this piece carried into architectural design is the thickness of the concrete in relation to the overall dimensions of the form. To create such a light feel the concrete is only 25 centimeters thick compared to the overall form dimensions of 2.5 x 2.5 x 5 meters leaving 90 percent of the form open.

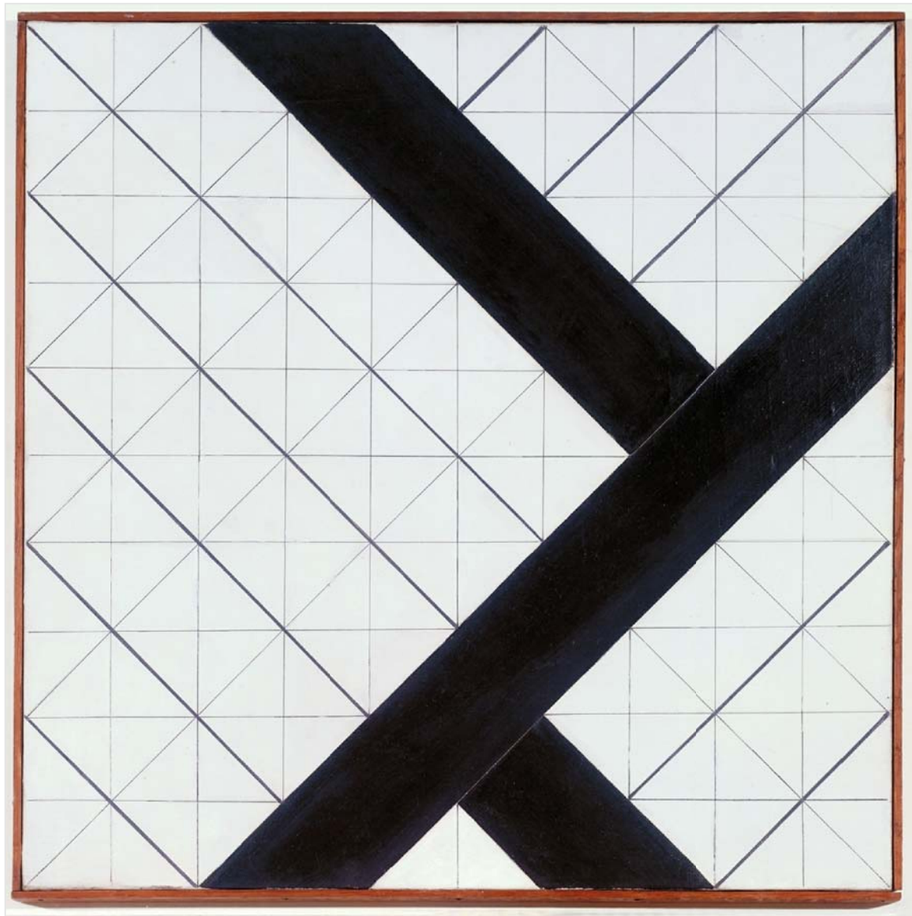
COUNTER COMPOSITION VI

Counter-Composition VI is an oil painting by Dutch artist Theo van Doesburg. Doesburg was drawn to the work of Mondrian and was a founder of the De Stijl movement. The De Stijl art utilized only vertical and horizontal lines to form the grids from which form and color were shaped and selected.

With Counter-Composition, the diagonal grid was reintroduced and Elementarism was realized. This is 'Based on the neutralization of positive and negative directions by the diagonal and, as far as color is concerned, by the dissonant.' (Quoted in Jaffe 1956, p.126)

This painting features two grids, one on a horizontal / vertical axis, and the other on a diagonal. These two axis are faintly visible against the white background and the three intersecting black bars boldly break the horizontal grid and follow the diagonal, with the diagonal grid lines perpendicular to the bold bars standing out subtly more than to other grid lines, achieving excellent visual balance.

Architecturally, the introduction of a separate grid imposed on another opens up a myriad of new design possibilities to derive new forms. Emphasis can be placed on the breakaway from the standard grid or at the intersection of the two.



LARGE BLUE HORIZONTAL

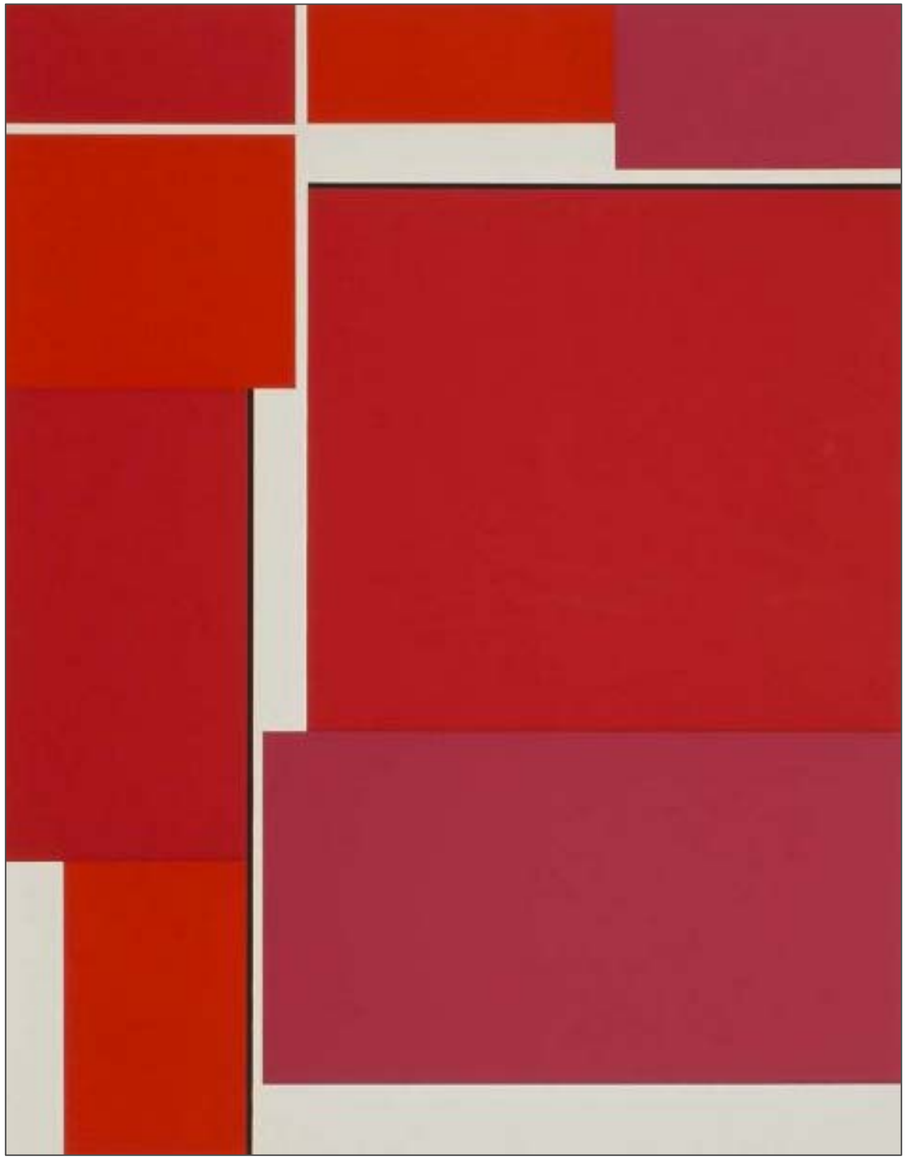
Ilya Bolotowsky was heavily influenced by Mondrian's De Stijl work, with the canvas space defined by the horizontal / vertical grid and selectively filled with primary colors. This is apparent in Large Blue Horizontal, however in this painting, it is not just black lines defining space to be filled in or left white. White lines work in tandem with black lines of varying width to define the composition. The primary colors are not perceived as infill, but as lines themselves as well. Color defines the canvas space as much as black and the absence of color. There is a balance of horizontal and vertical with the heavy blue anchoring the composition as a whole.

The use of color in architecture has the power to alter how we perceive the overall form. Large Blue Horizontal shows us that when used properly, the arrangement of color can soften vertical elements to emphasize a horizontal arrangement. One can't eliminate vertical elements though if balance of composition is desired.

INTERLOCKING REDS

Ilya Bolotowsky painted Interlocking Reds in 1970. This piece is an example of Bolotowsky's return to rectangular geometric forms in the latter part of his career. His work is heavily influenced by the De Stijl movement, however this piece breaks the rules implied by the work of Mondriaan or von Doesburg. The use of pure red in the sense of the primary color has been broken - in fact the use of blue and yellow has been completely abandoned in favor of various shades of red, some containing more yellow and being closer to orange. The initial cross-like grid suggested by the white lines and volumes is broken by subtle pushing and pulling of the red volumes.

The exploration of the various shades of red and how they compliment and contrast each other has steered the use of color in the intervention. The gentle pushing and pulling of these color volumes was an influence on how the overall form of the intervention took shape as the design evolved from the initial cubes and rectangles, which can be seen in the Application of Studies portion of this book.



AUTUMN RHYTHM

Jackson Pollock painted Autumn Rhythm in October of 1950, three years after his first drip painting. The paint was poured, spattered dribbled and flicked onto the unstretched canvas on the floor of his studio space using sticks, dowels and trowels of various sizes to build up a dense entanglement of lines.

This piece, although lacking a central focal point, balances weight and boyancy, light and dark with its heavy black lines leaving lighter colors to occupy the in-between. It is described by some as ordered chaos; yet Pollock was in complete control as he created it, controlling how much paint was used as he progressed.

The concept of ordered chaos can be introduced to architecture with beds of dense vegetation planted freely. A great example is the Next21 housing complex shown earlier. The planter beds are the ordered confining elements with the vegetation left mostly to grow on its own, becoming very dense. The ratio of trees to plants and shrubs create a light / heavy dynamic seen in the courtyard, rooftop and terrace edges. They lend density to the project and introduce a non-linear element to contrast with their rectangular and arced layouts. The spontaneity of the planting and pollination is an important element.

Neighborhood Selection: Reservoir Hill

Reservoir Hill is a North-West neighborhood, also known as Whitelock. It is located south of Druid Hill Park, North of the affluent Bolton Hill neighborhood, west of the Jones Falls expressway and east of Penn-North neighborhood.

The neighborhood contains two historic segments and is home to a wide range of buildings. It contains some of the best Victorian, Italianate and Second Empire style homes to be found in the city. There are also brownstones and many smaller brick row houses. The variety of building types captures the evolution of the urban environment of the area from large estates of Walter Brooks and Robert Whitelock, to dense row house neighborhood, including multi-story apartment buildings.

As pictured below, the early traditional row homes were designed with flat facades and little decoration. They would evolve to designs that included projecting bays and balconies.

FIGURE 3.2: Reservior Hill rowhome renovation; ©Fred B. Shoken

FIGURE 3.1: Street map of Baltimore City, courtesy of TouchOfModern Inc.

NEIGHBORHOOD CONSIDERATIONS

Reservoir Hill contains stretches of sloping neighborhood streets where there is an upper level overhang, providing a place of transition between inside and outside (Figure 3.3).The shifted mass above the entry is taken into consideration with the design of the intervention. The stepped lawn & garden areas serve as horizontal datum lines to give a sense of scale to the slope of the street. This is another element that is incorporated into the intervention. Many homes in the neighborhood boast spacious balcony spaces (Figure 3.4); being one of the defining elements on many of the streets, balconies are carried into the design of the intervention.

3.3

3.4

3.5

3.6

Residents of Reservoir Hill take their gardening seriously! There is an annual Reservior Hill Garden & Home Tour during which residents show off their cultivation skills for bragging rights. Many blocks of Reservoir hill contain homes with lush backyard retreats (Figures 3.5 & 3.6). Aside from the popularity within the community, gardening is an activity that promotes exposure to sunlight and fresh air for reduced stress and better overall well-being. For these reasons, personal gardening space will be provided via built-in balcony planters for each residence located within the intervention, in addition to public courtyards featuring many planter beds.

Photo credits:
3.3 Algerina Perna, 2001
3.4 Kim Hairston, 2002
3.5 Lloyd Fox, 2014
3.6 Lloyd Fox, 2014
3.7 Amy Davis
3.8 William L. Klender, 1980
3.9 Lloyd Fox, 2015
3.10 Kim Hairston, 2011
3.11 Kim Hairston, 2011
3.12 Algerina Perna, 2012

Reservoir Hill contains five parks and one community farm (figures 3.9 - 3.12). The community farm is one of the most popular attractions for nearby residents, bringing them together to share gardening knowledge and the responsibilities of upkeep. The small footprint, however, restricts the number of residents that can participate. On the following page it is noted that this intervention will dramatically increase the availability of space for resident farming with the entire rooftop of a parking garage dedicated to farming and gardening.

3.9

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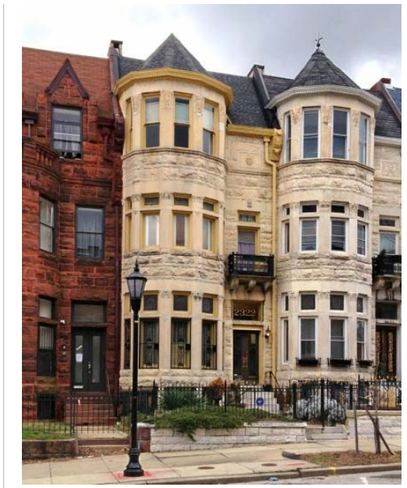
3.11

3.12



3.7

3.8

Reservoir Hill contains blocks of rowhomes that feature stepped and undulating facades (Figures 3.7 & 3.8) that are visually associated with the neighborhood. This characteristic will be incorporated into the form of the intervention.

Choosing the Site

Reservoir Hill contains several sites that would be well suited for interventions. The location selected, however, offers 3 things that the other smaller sites don't necessarily provide to the same degree: maximum program flexibility, the best views for future inhabitants and an opportunity to address extremely poor existing urban site conditions.

The building(s) must integrate with the site and engage the surrounding community as well. The size of the lot allows for the construction of a structure that is both residential and commercial at a scale that will not dwarf the surrounding homes and apartment buildings; the structure can spread horizontally instead of being forced to take a more vertical approach. Situated directly across from Druid Lake, the site offers great views to future occupants. The lake and lakeside trail will also offer added recreation value to the residents of the entire community if they are provided with a means of access via an elevated pedestrian walkway crossing over the busy 4 lane Druid Park Lake Drive.

Parking in this community is already an issue. There is adequate street parking for residents of the town houses, however there is very limited parking availability for apartment residents and guests of any residences. The inclusion of a multi-purpose parking structure would provide retail and limited parking on ground level, with two levels of parking above and a rooftop garden collective that could be shared by neighborhood residents. An additional elevated pedestrian bridge could connect this structure to the rest of the complex and allow for safe and sheltered travel to residences in inclement weather. The scale of this garage is sensitive to the adjacent housing.

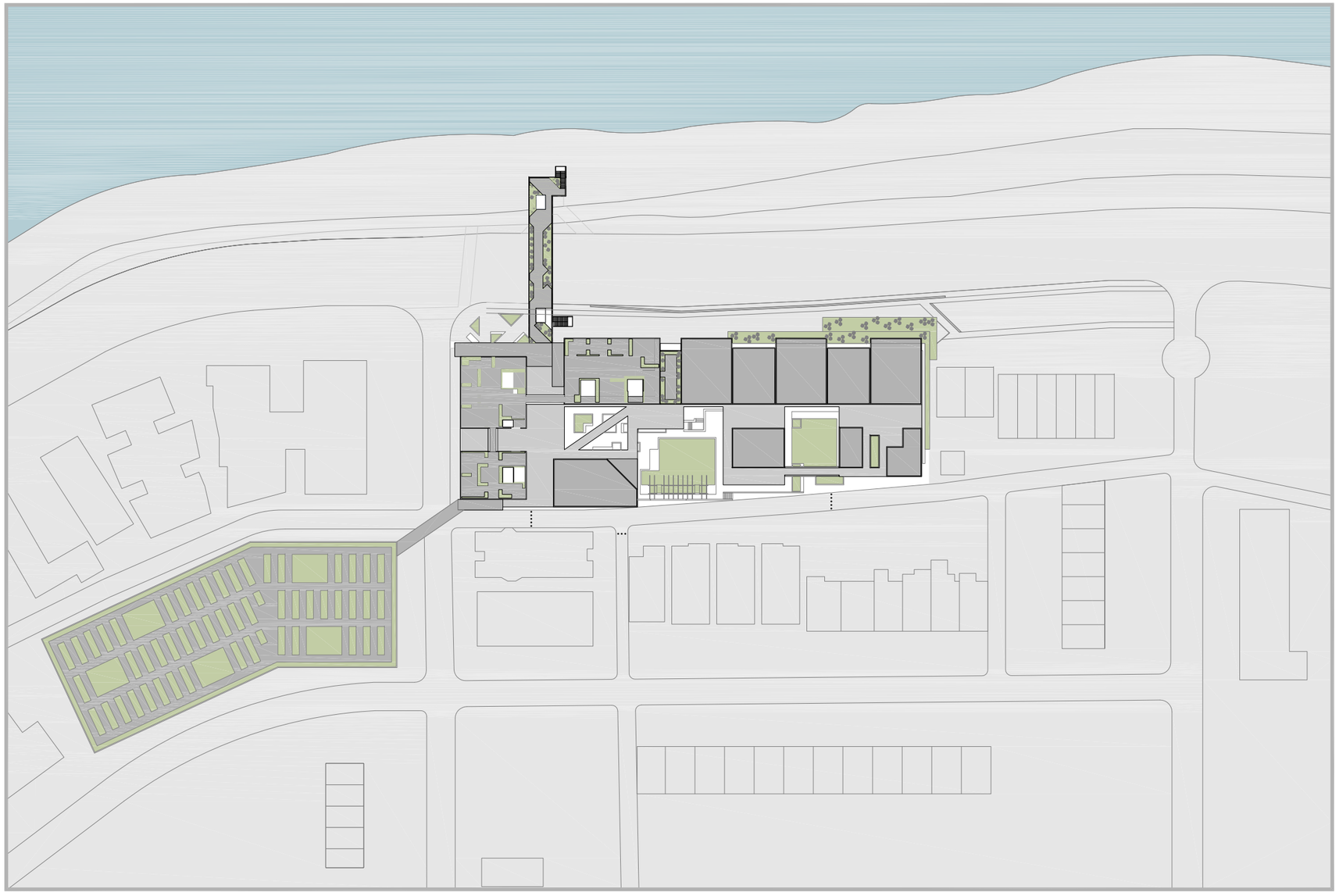


FIGURE 3.13: PARTIAL PLAN OF BALTIMORE'S RESERVOIR HILL NEIGHBORHOOD WITH X.X ACRE SITE

SITE ANALYSIS

From these two photographs one can see that as of now, the site is a patchy grassy area, often not cut. It does not offer much to the current neighborhood residents due to the fact that it is close to a major thoroughfare, Druid Park Lake Drive; children are not left unsupervised due to the nearby expressway entrance road and the topography of the site does not provide good conditions for recreational sports. The size of the site (1.25 acres of developable land after utility setbacks), however will allow for a structure to be built large enough to accommodate many functions, some of which can benefit existing residents, such as a small dog park, fitness center and daycare center.

The residents whose homes back up to the site currently have no view, other than an unkempt field and vehicles traveling by in excess of 50 miles per hour. The intervention to be proposed will act as a visual anchor and noise barrier for these residents. The form of the intervention will taper upwards; from two levels above ground adjacent to the rowhomes on the far left of figure 3.14, to four levels above ground level facing the large apartment building across the street, seen at the far right of figure 3.14.

The lower photograph shows cars parked on the side of the street and along the alley (Henderson Lane), pulled as far over as possible to reduce chances of being hit when a car turns off of Druid Park Lake Drive. The neighborhood suffers from a lack of parking for both residents and especially any visitors. For this reason, a lot that is caddy-corner to this site (currently an asphalt lot undersized for the apartment building it serves) is going to be appropriated for the intervention program to allow for a multi-level parking garage to be constructed. This garage will incorporate retail shop space at ground level and also public gardening space on the rooftop. The residents of this neighborhood love gardening and welcome any additional public gardening space, for growing vegetables and for pure enjoyment alike.

Figure 3.14: Southwest view of 1.25 acre site of urban intervention

Figure 3.15: Northeast view of 1.25 acre site of urban intervention

INITIAL CONCEPTS & SKETCHES

Initial planning was inspired by Donald Judd's Galvanized Iron. The cubes were initially straight in line and equally spaced. They were then staggered on the North - South axis (Figure 3.16 & 3.18) to provide additional visual rhythm. When program concerns such as parking and space for recreation became unable to achieve given the initial project footprint, the decision to elevate the structure was made. This elevated structure started as a monolithic mass (Figure 3.19), but as the volume was depressed in some areas, the form began to develop into something slightly closer to what would become the final form (Figures 3.17 & 3.20). After a series of short pen / ink sketches, the design was transferred to SketchUp in favor of being able to rapidly alter the design and explore form changes with more accurate perspective.

Figure 3.16: Staggered cubic forms equally spaced on East - West Axis

Figure 3.17: Plan view of form after sketch 3 was made

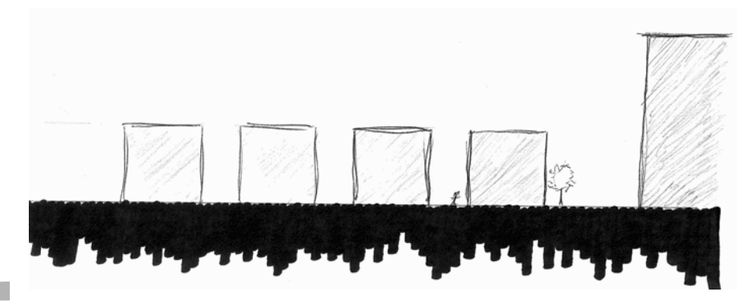


Figure 3.18: Sketch #1

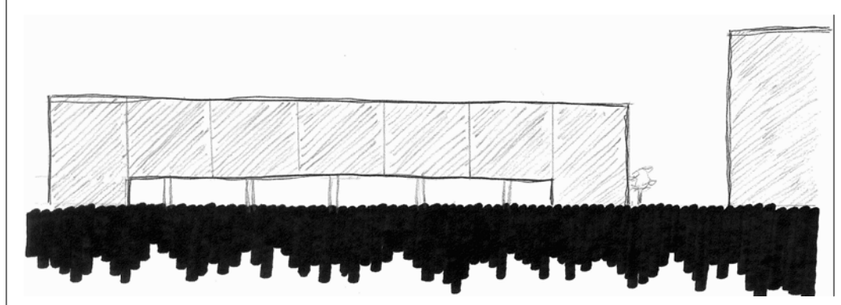


Figure 3.19: Sketch #2

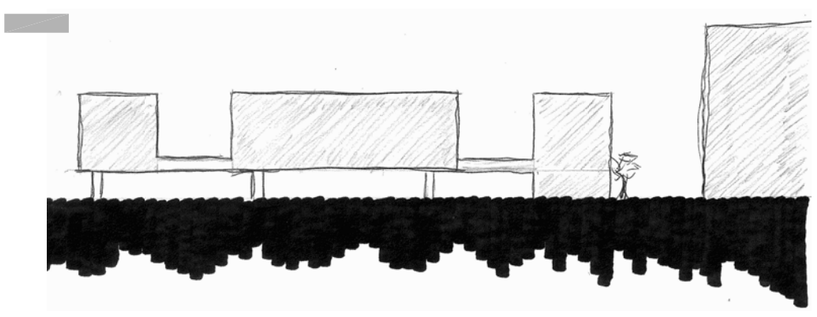


Figure 3.20: Sketch #3

INITIAL MASSING STUDIES

Initial massing studies were performed in SketchUp; benefits of the program include being able to rapidly alter the design while making light studies. The first SketchUp tasks completed were repeated pushing and pulling of the cubic volumes until satisfactory visual undulations clearly showed.

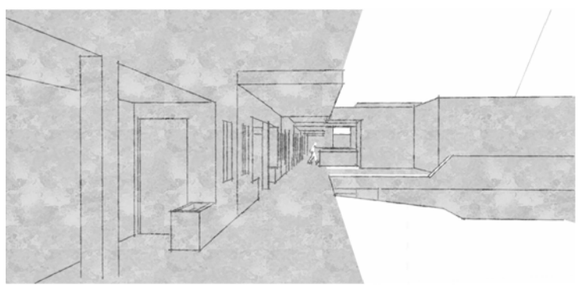


Figure 3.21 Early view of gallery on first floor

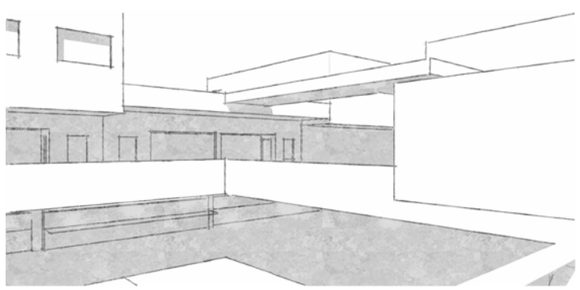


Figure 3.22 Early view across west courtyard

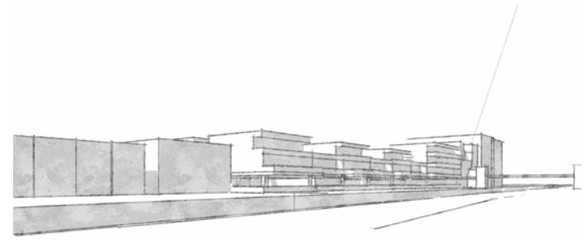


Figure 3.23: Early Southwest perspective

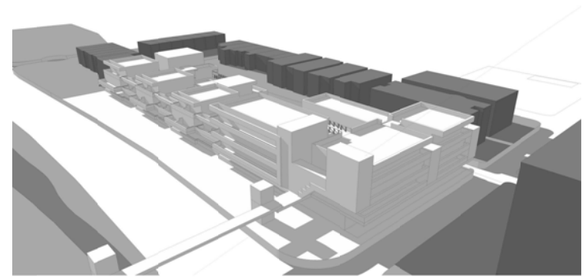


Figure 3.24 Design development - shaping mass

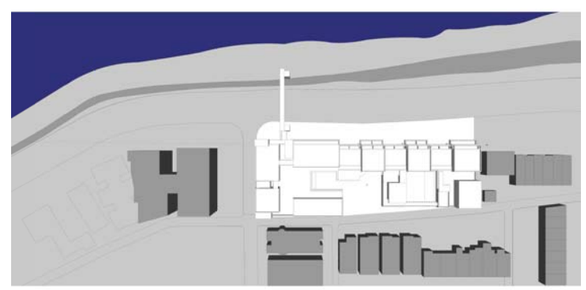


Figure 3.25 Design development plan view

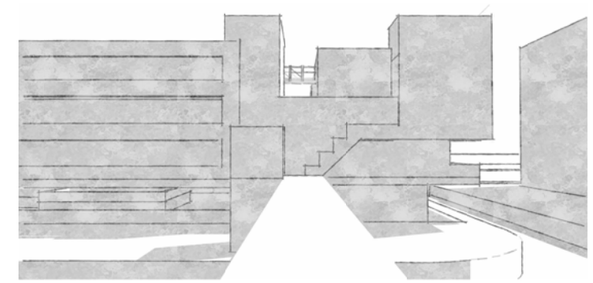


Figure 3.26 Design development - circulation

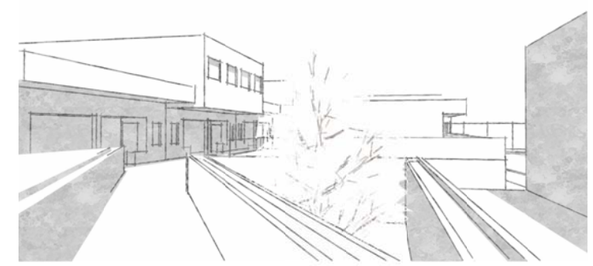


Figure 3.27 Courtyard design refinement

NEIGHBORHOOD IDENTIFYING SIGNAGE

Art Nouveau style was popular in Europe and North America, especially between 1890 and 1910. Boecklin font was chosen as the font that best characterizes Reservoir Hill due to the fact that the bulk of the neighborhood was developed after Reservoir Hill was annexed into Baltimore City in 1889. Many of the houses built in the 1890's and early 1900's featured heavy ornamentation in addition to bowed, undulating facades (Figures 3.28 & 3.29 shown on right), eclectic in nature. While the houses surrounding the site of the intervention do not feature these design cues, the site lies in the center of the north edge of the neighborhood. The inclusion of this signage in the neighborhood will strengthen sense of place and act as a readily visible identifier of where someone is in relation to the city as a whole.

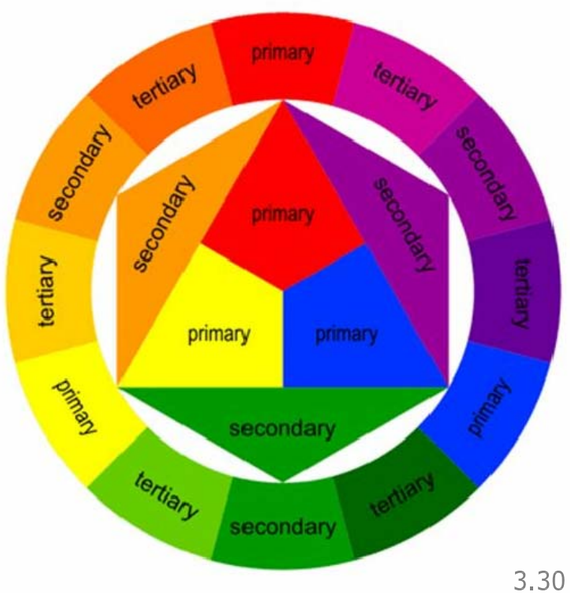
3.28

3.29

THE IMPORTANCE OF COLOR

Color is a pleasure. It can trigger powerful emotions in people, affecting the way they feel when they view something, having the ability to sooth and calm, or produce anxiety and fear (see figure 3.32 - chart based on the studies of Ashton Hauff). Color carries visual weight - if chosen and correctly placed, it can demand a viewer's attention, standing out from everything else. When combined correctly, colors can create harmony. Analogous colors, or those that are adjacent or in close proximity to each other on the color wheel (Figure 3.30) tend to work very well with each other in a design. Something that designers must account for is that color perception can change based on the color surrounding it. When set against another color or different hue, a color may seem more vibrant or more subdued. Josef Albers' book *Interaction of Color* (Figure 3.31) is an excellent design guide for those who are interested in these interactions. The colors chosen for study and integration into the intervention design are red, orange and a gray that is dark and warm.

Primary, Secondary, Tertiary Colours



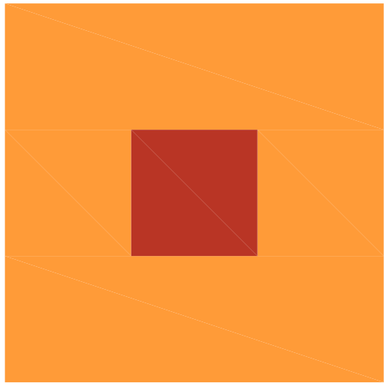
3.30

3.31

3.32

SIMULTANEOUS CONTRAST & ADVANCING / RECEDING COLOR

Simultaneous Contrast is the concept of how we see color changing depending on the other colors surrounding it (See figures 3.33 & 3.34). As previously noted, color is perceived as to how it relates to its surrounding environment. Advancing / Receding colors can be found in figures 3.34 & 3.35 as well as 3.36, 3.37 and 3.38. Warm and bright colors jump out at the viewer, whereas drab and cool colors appear further away.



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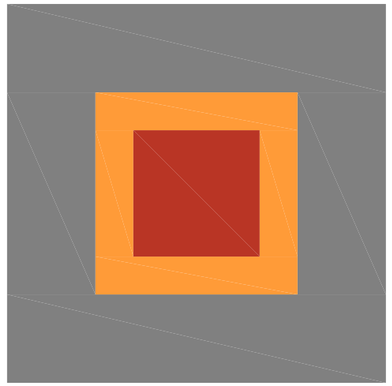

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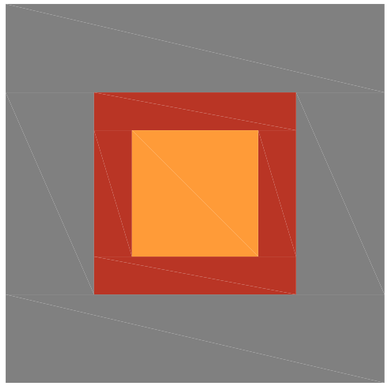

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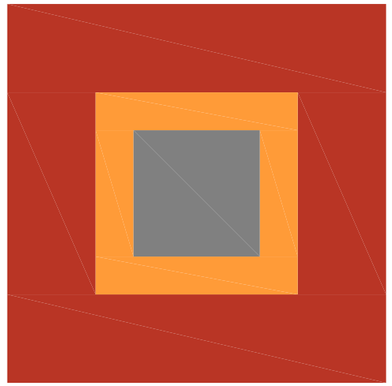

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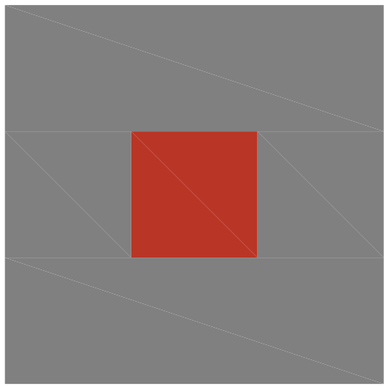

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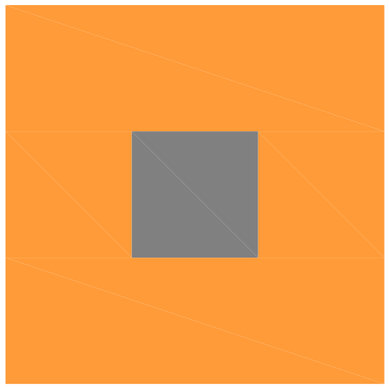

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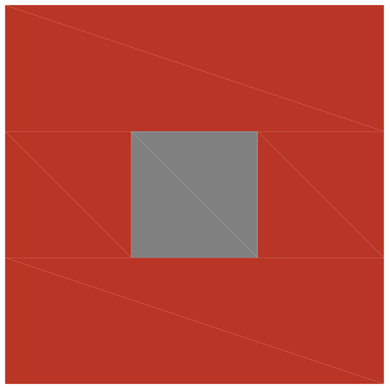

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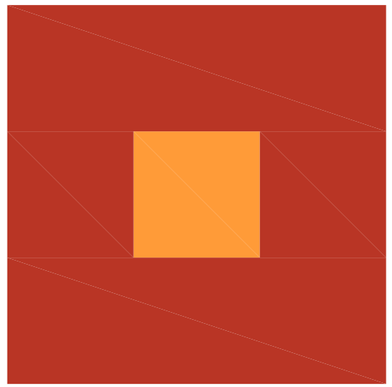
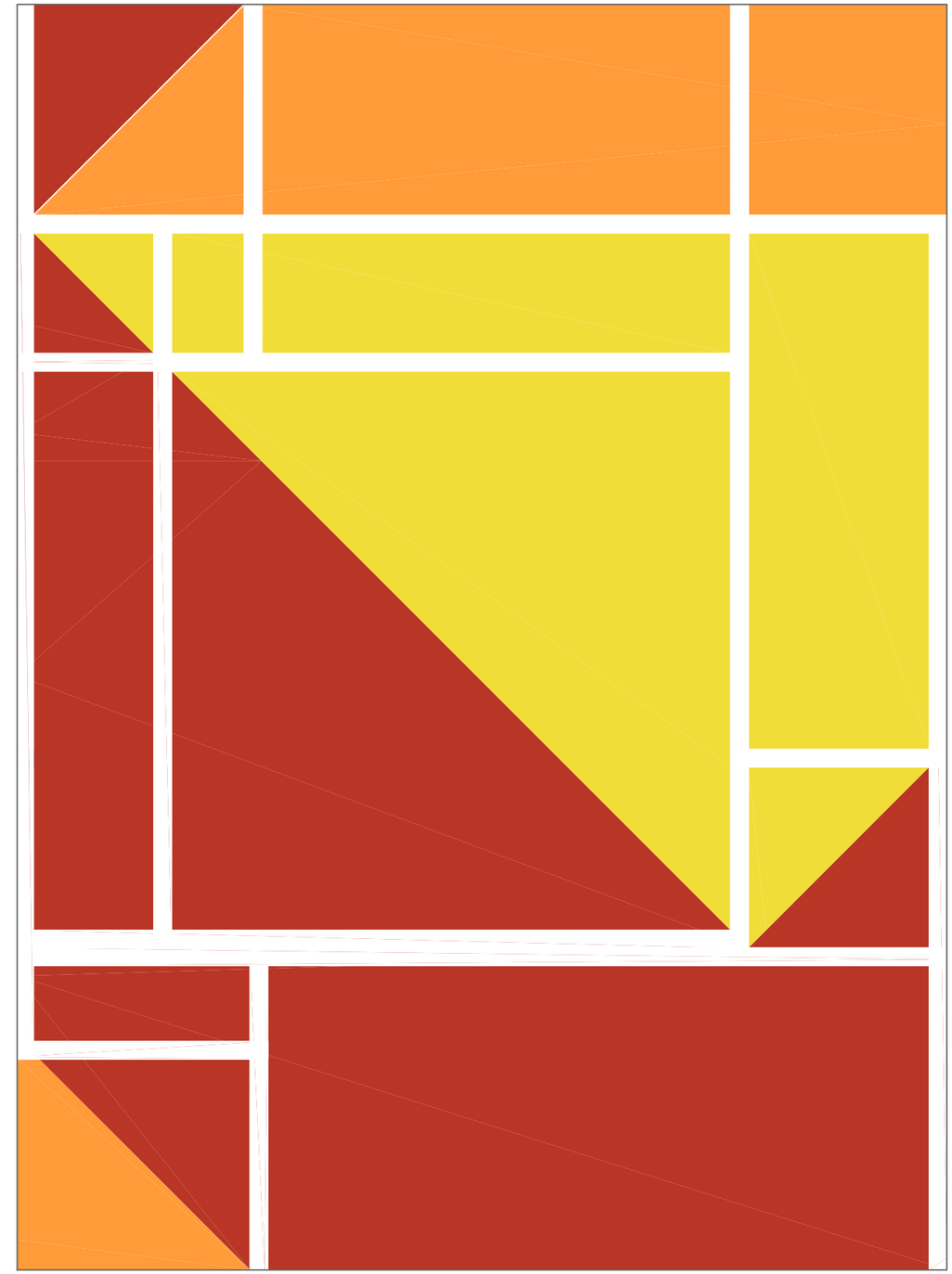


3.41

APPLICATION OF COLOR STUDY

This piece represents an application of the color studies coupled with inspiration from the works of van Doesburg and Bolotowsky. Primary colors red and yellow were used, set to a diagonal grid. Superimposed is a series of white lines of varying thickness set on a horizontal / vertical grid, informed by various points of intersection of the colors on the diagonal grid. Orange was chosen instead of blue as the product of the red and yellow. These colors represent the color palette of the urban intervention, minus the gray elements.

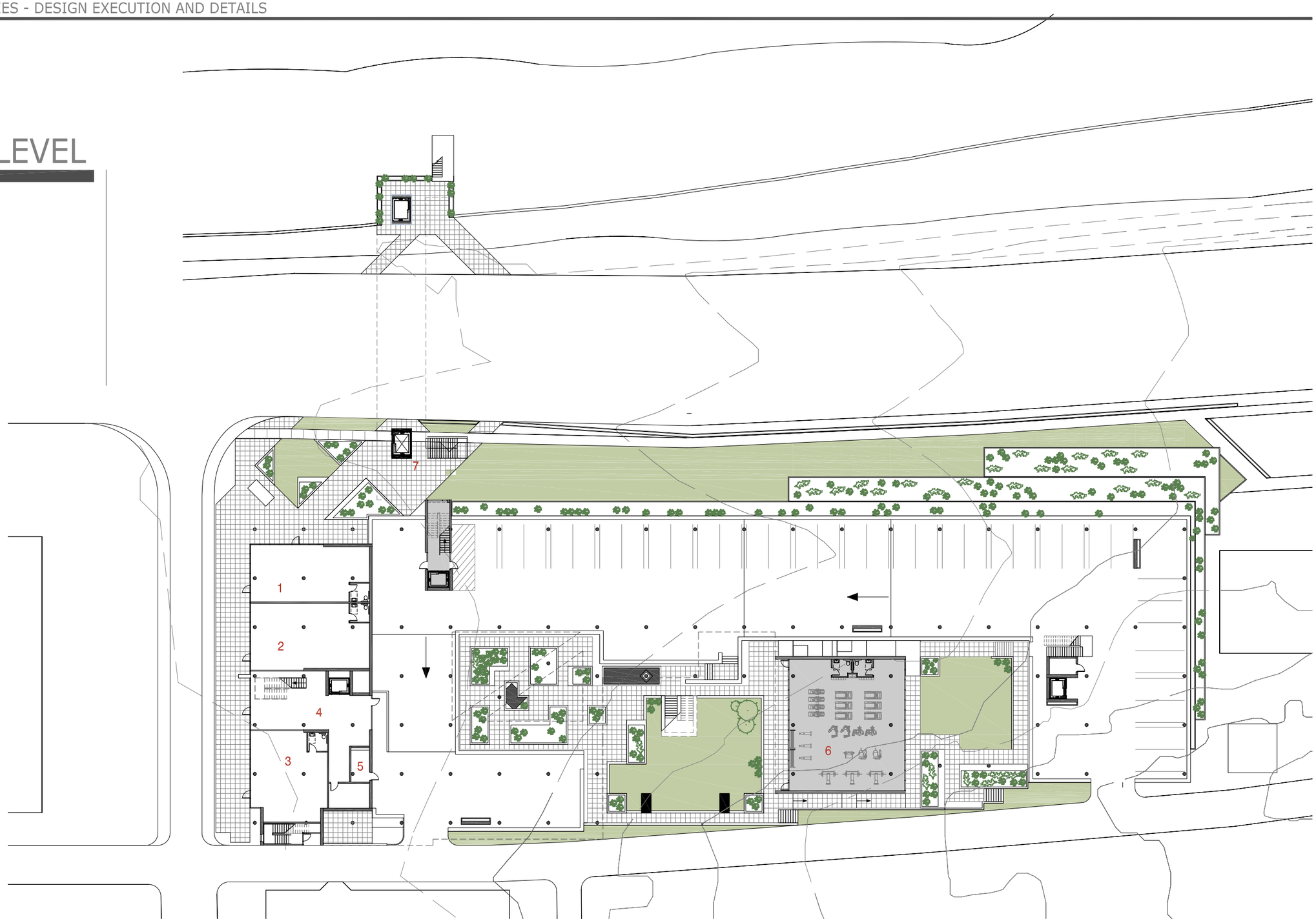


GROUND LEVEL

Ground Level Floor Plan
Scale 1:40

1 - Commercial space
2 - Commercial space
3 - Commercial space
4 - Entry lobby for residents
5 - Mail room
6 - Community gym
7 - Pedestrian bridge access

0 20 50



1st FLOOR PLAN

1st Floor Plan
Scale 1:40

1 - Pedestrian bridge entry and circulation access
2 - Lower level of split level apartment Type A
3 - Laundry room
4 - Game room / clubhouse
5 - 1st floor of two story apartment
6 - Single story apartment
7 - Daycare center
8 - Remote work / study area

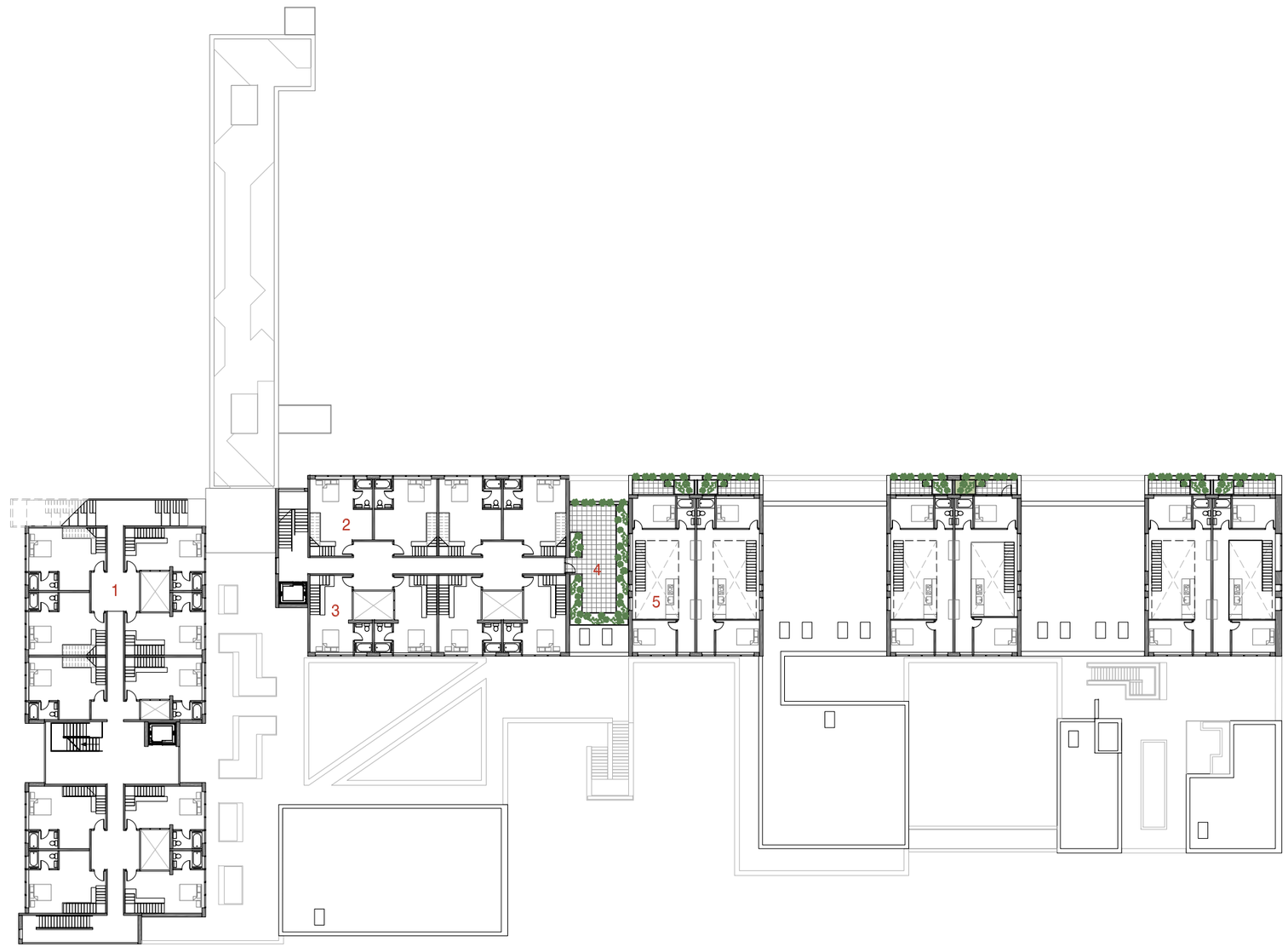
0 20 50

2nd FLOOR PLAN

2nd Floor Plan
Scale 1:40

1 - Square in apartment "street" - transition space
2 - Lower level of split level apartment Type B
3 - Upper level of split level apartment Type A
4 - Outdoor terrace
5 - 2nd floor of two story apartment

0 20 50

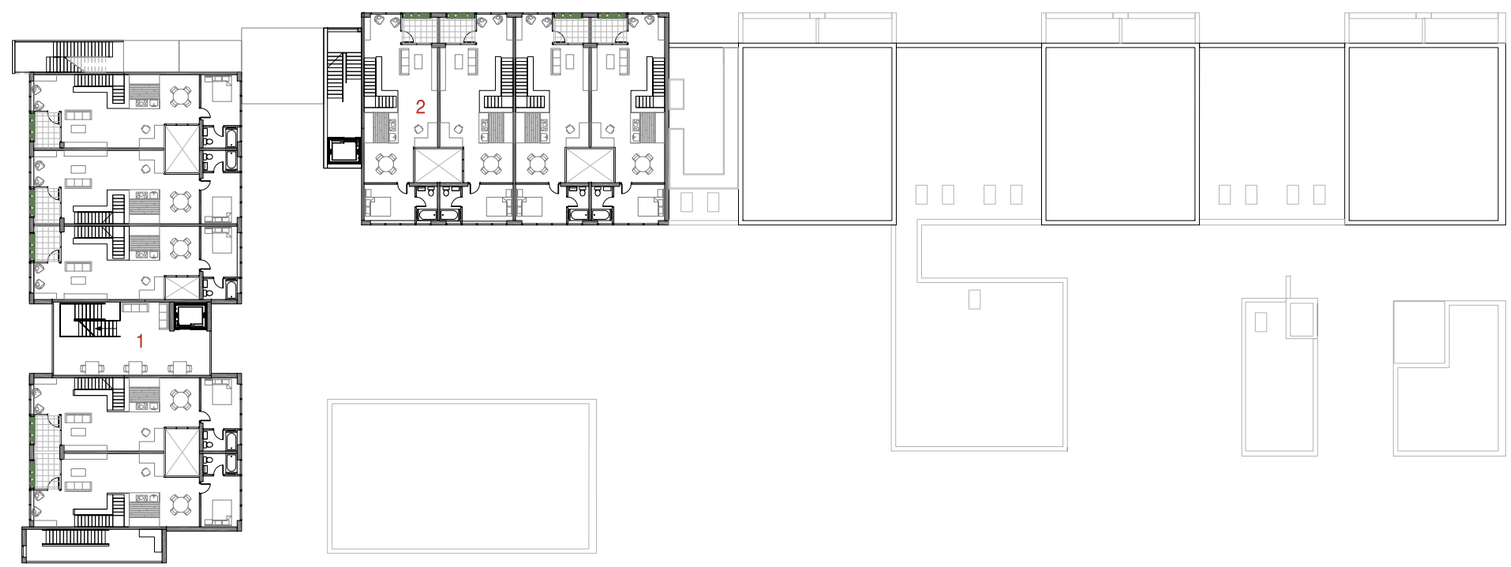


3rd FLOOR PLAN

3rd Floor Plan
Scale 1:40

1 - Lobby - interaction / study / play space
2 - Upper level of split level apartment Type B

0 20 50

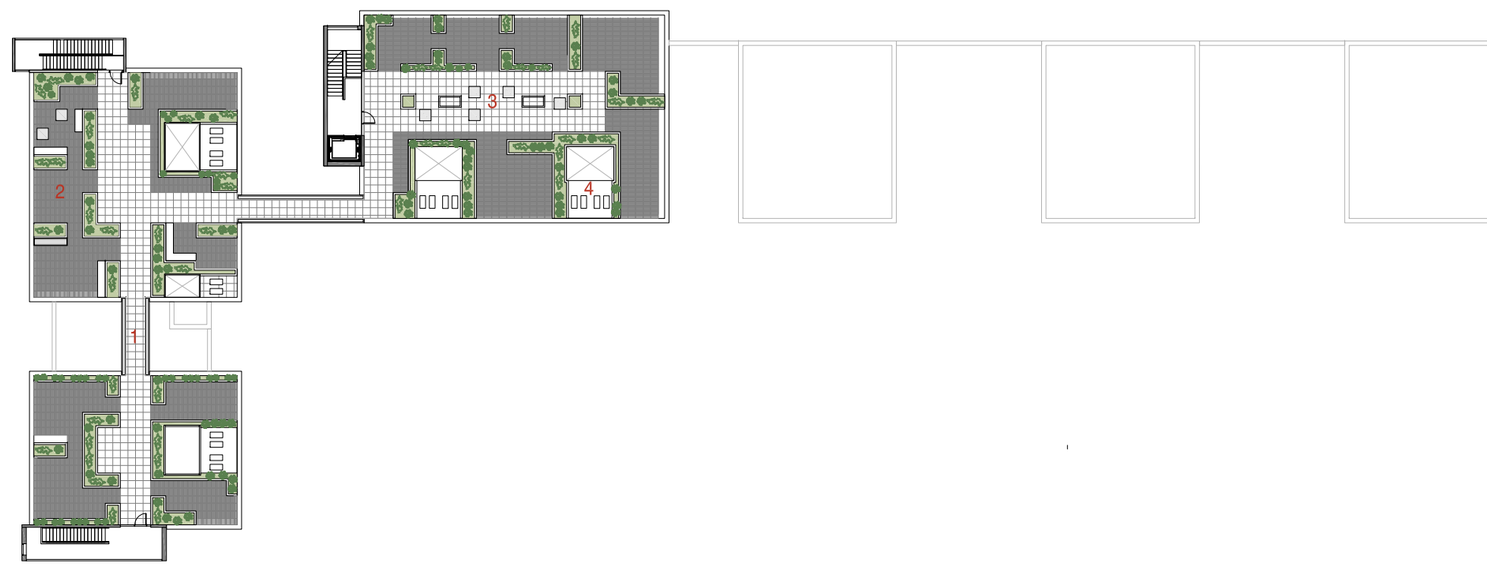


ROOFTOP TERRACE

Rooftop Terrace Plan
Scale 1:40

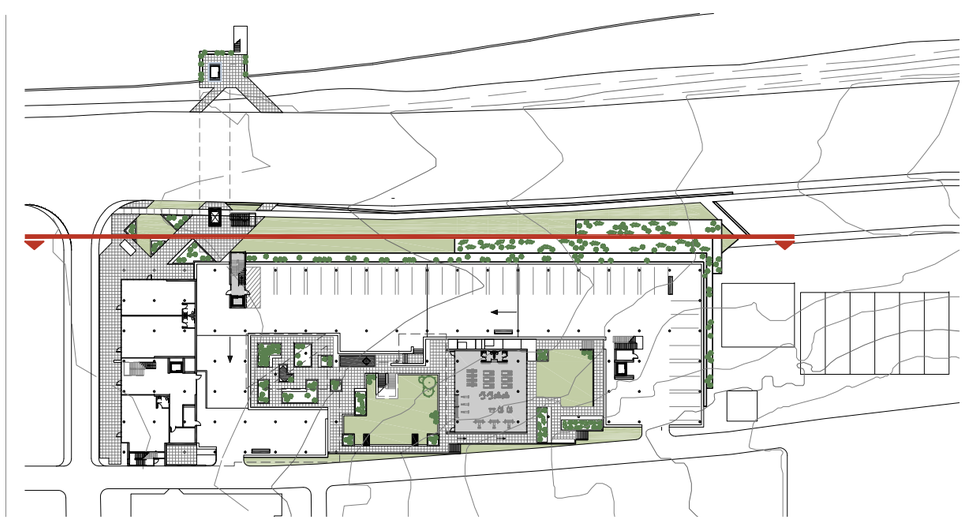
1 - Elevated Terrace Bridge, Typical
2 - Terrace Lounging Area, Typical
3 - Rooftop Fireplaces / Common Area
4 - Split System Bank (serves apartments below)

0 20 50



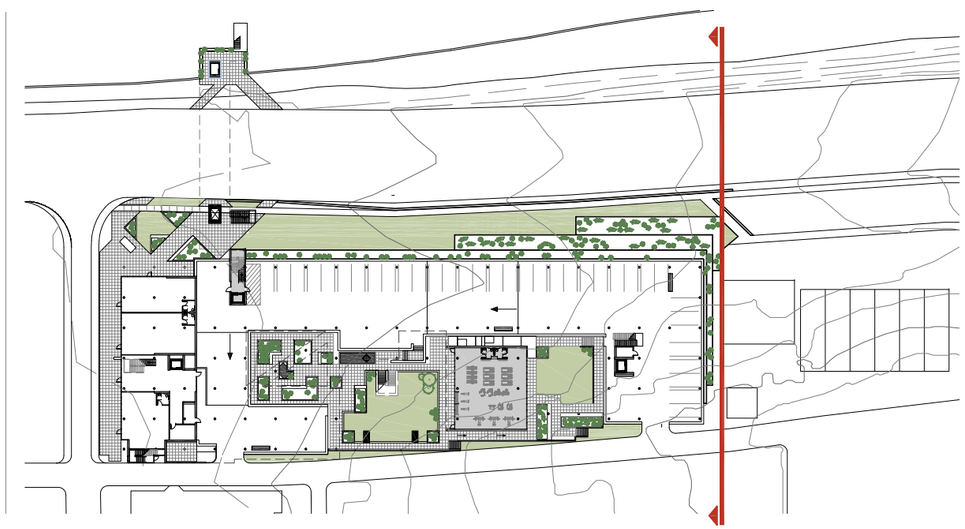
NORTH ELEVATION

The existing homes within the Reservoir Hill community, and the rest of the city, are grouped to assume the scale of the city block. Although individually the homes feature vertical elements, the structure they form as a whole is horizontal; monolithic from a distance. This horizontal nature is carried into the intervention. The structure tapers down to respect the scale of the homes adjacent to it, and tapers up to address the taller apartment building across the street. It sits on a stepped base that reveals the change in elevation and is lifted from the base by pilotis to lighten the appearance and provide clear views out to the lake beyond.



EAST ELEVATION

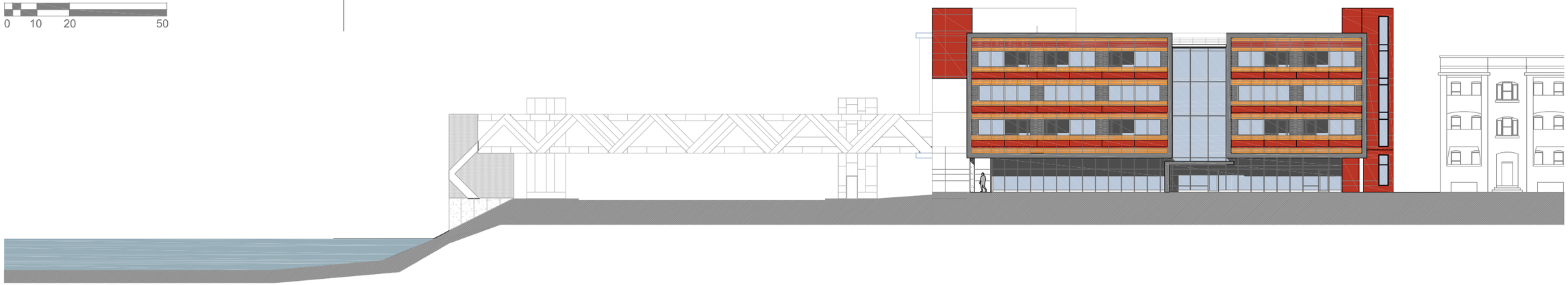
Due to the drop in elevation over the length of the site, stepped planter beds were placed to soften the visual impact of the elevation change and act as horizontal datum lines, stepping down with the slope of the hill. The stepped beds also serve as an aesthetically pleasing means of transitioning to the neighboring home - instead of being confronted with a concrete wall upon leaving their home, the neighboring residents have been provided with additional visual and physical access to vegetation. The placement of the beds invites neighbors to lay claim to portions of the planters bordering their property and add plants to their liking.



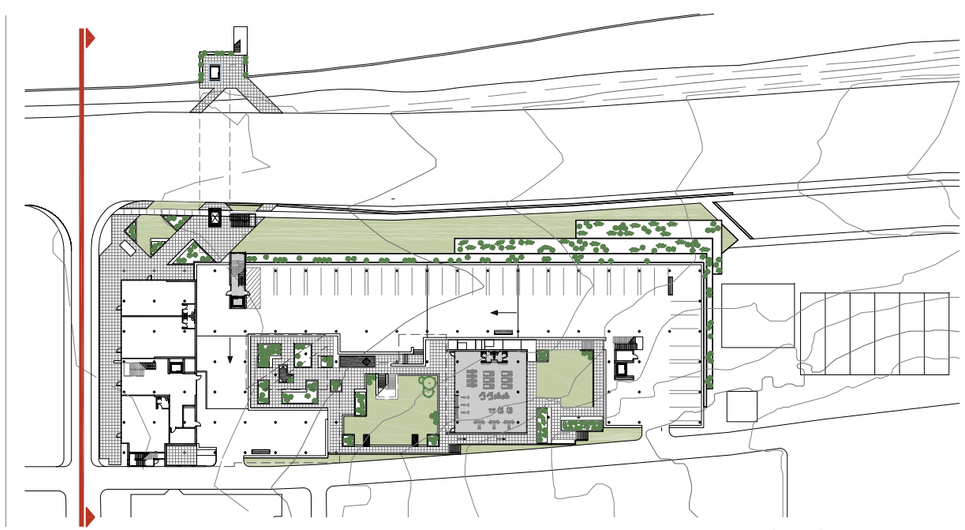
WEST ELEVATION

West Elevation Scale 1/32"

0 10 20 50



The horizontal nature of the intervention is carried on as one turns off of Druid Lake Park Drive and onto Linden Avenue, which is where this elevation is shown from. The structure is flanked with a stair tower stressing the vertical nature of the apartment building adjacent to it. The glass storefront on the ground level is situated in front of the column line within to give the building form a very light, almost floating appearance from a distance. Shadows are cast as a result of a generous cantilevered structure above the ground floor, offering sheltered outdoor space to be enjoyed by pedestrians that choose to shop or dine at this location. The sheltered walkway offers program flexibility - it is perfect for outdoor display of goods or for outdoor dining, whichever programs come to occupy the space offered. This is engaging the building with the street.



Ground Floor Plan For Reference

EFFICIENCY APARTMENT

Efficiency Apartment plan and sections Scale 1/8"

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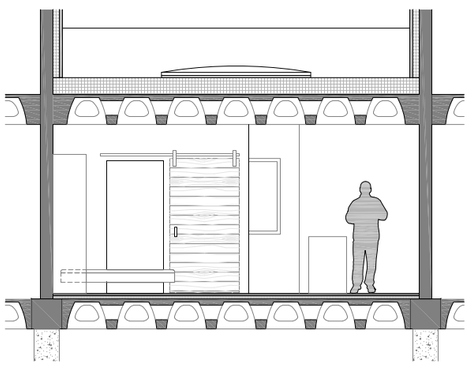
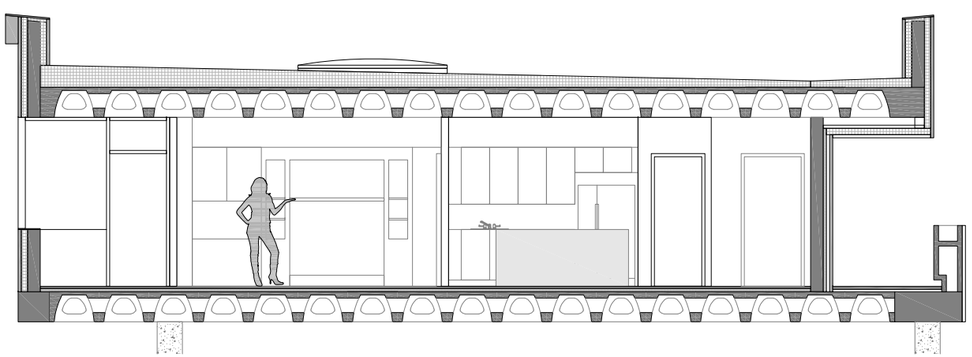
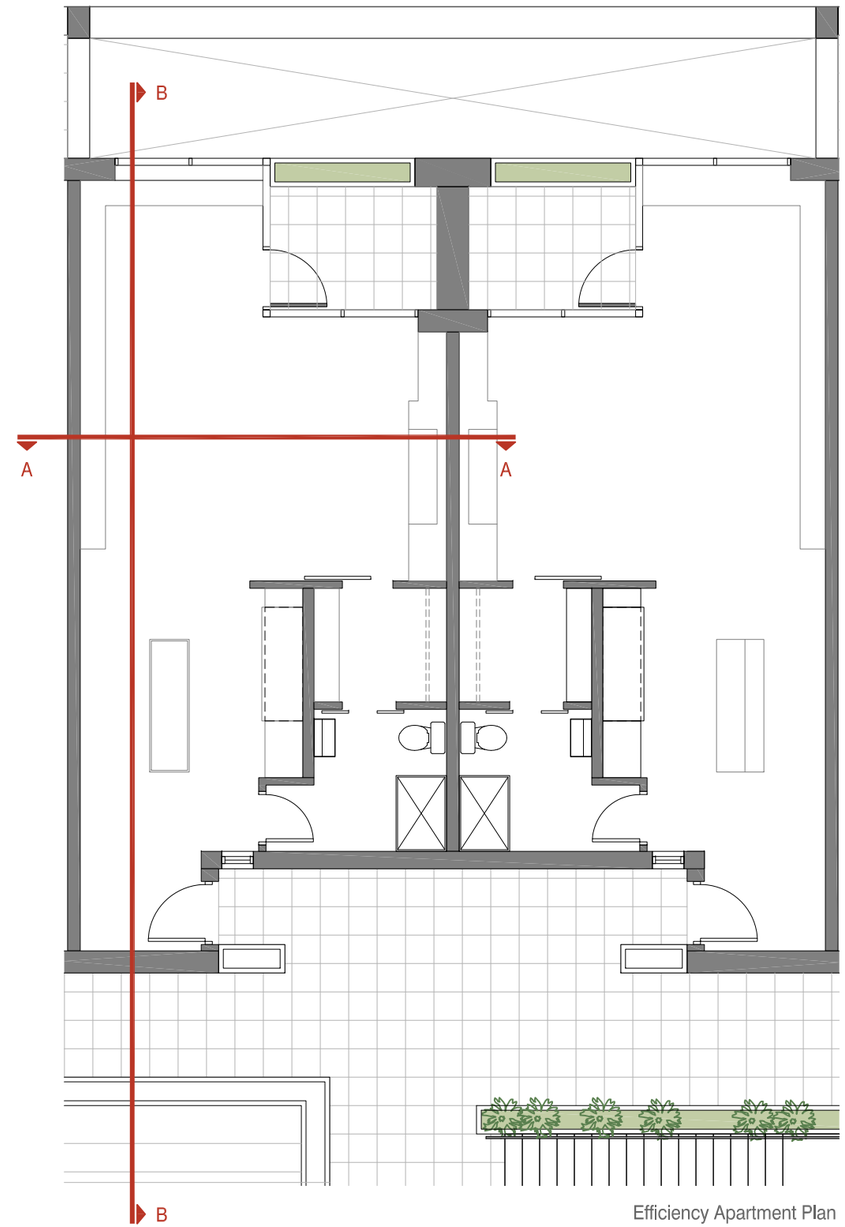


Efficiency Apartment section AA



Efficiency Apartment section BB

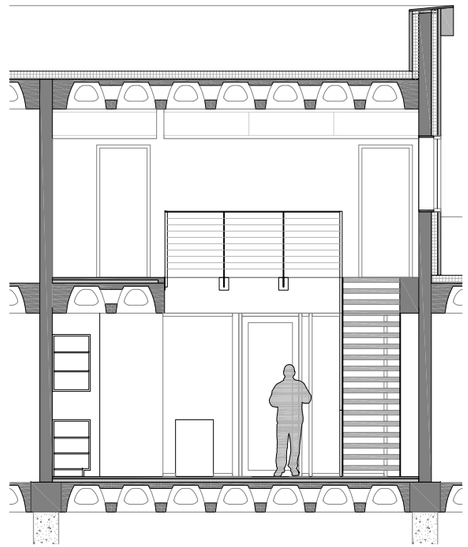


Efficiency Apartment Plan

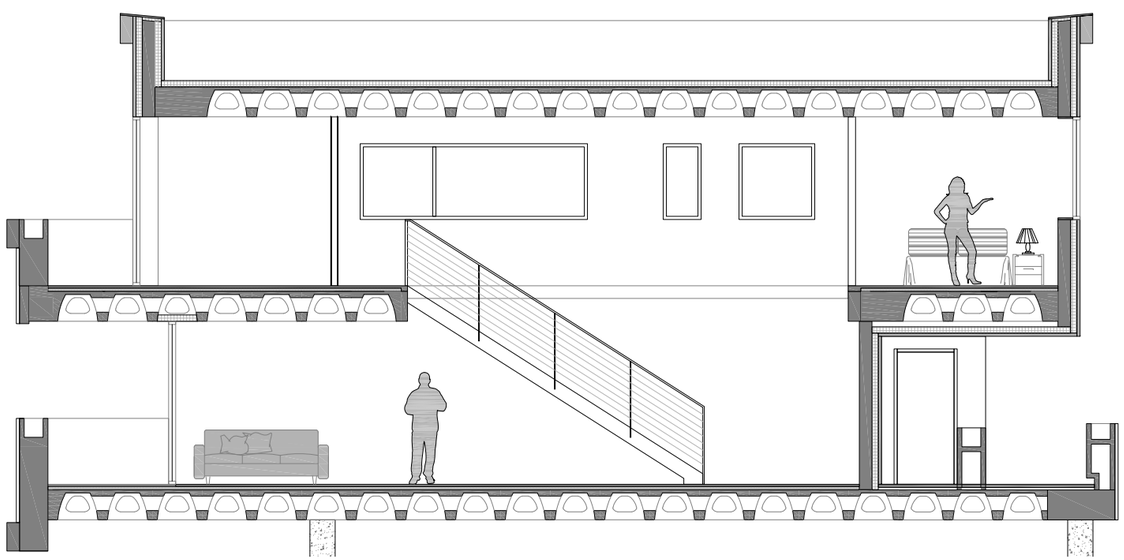
2 BEDROOM APARTMENT

2 Bedroom Apartment plan and sections Scale 1/8"

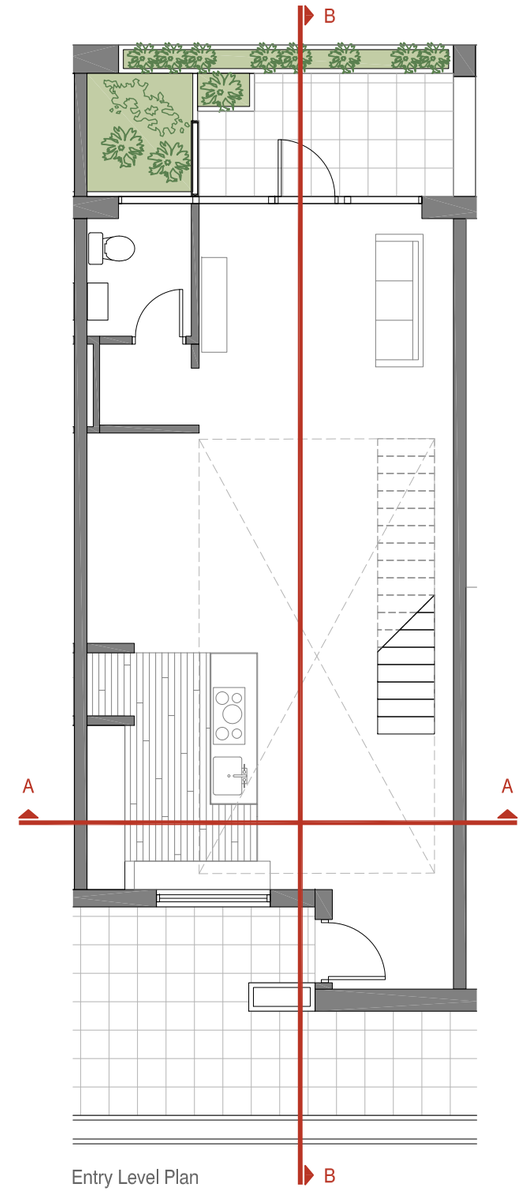
0 5 10



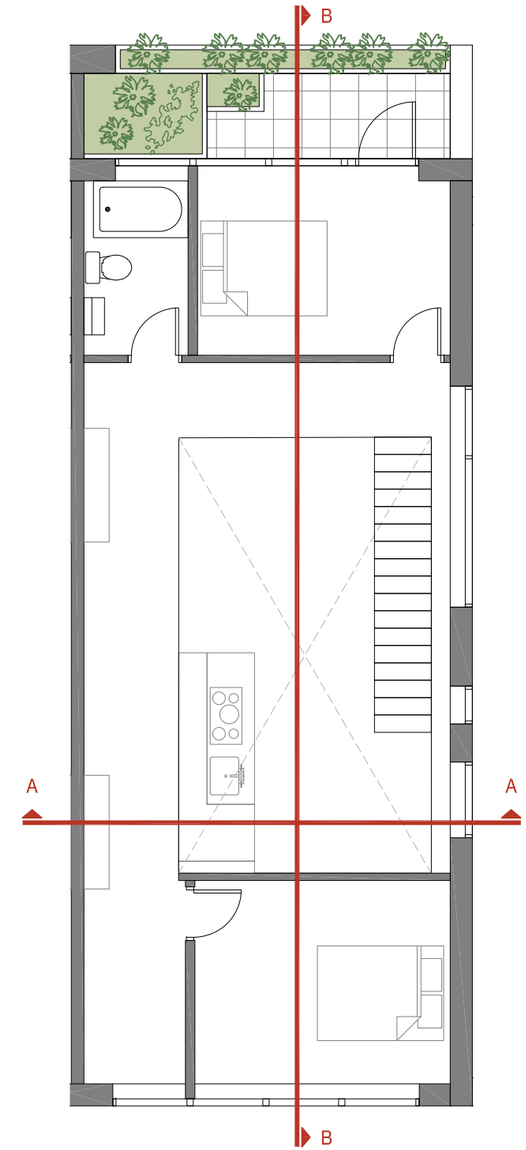
Section AA



Section BB



Entry Level Plan

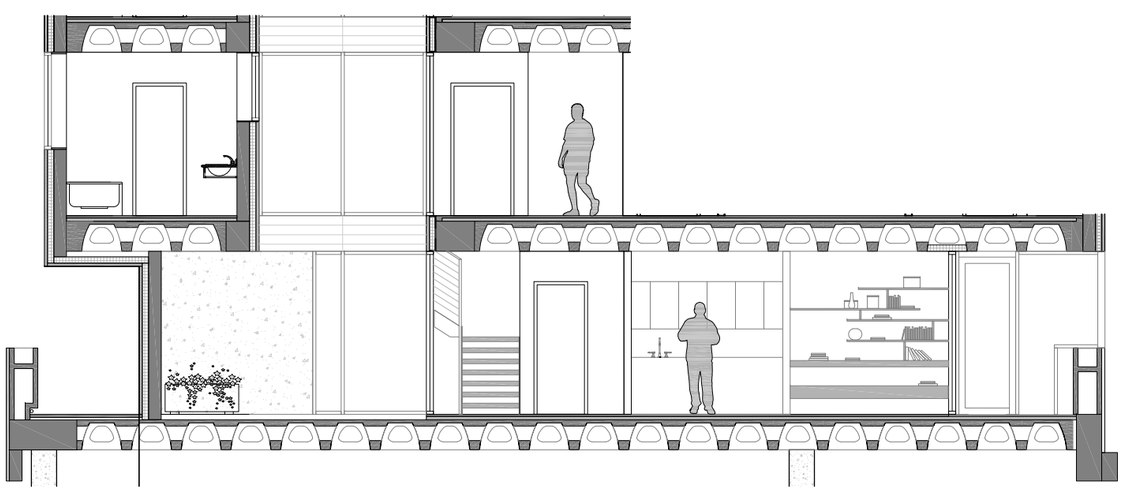


Upper Level Plan

SPLIT LEVLEL APARTMENT 'A'

Split Level Apartment 'A' plan and sections Scale 1/8"

0 5 10



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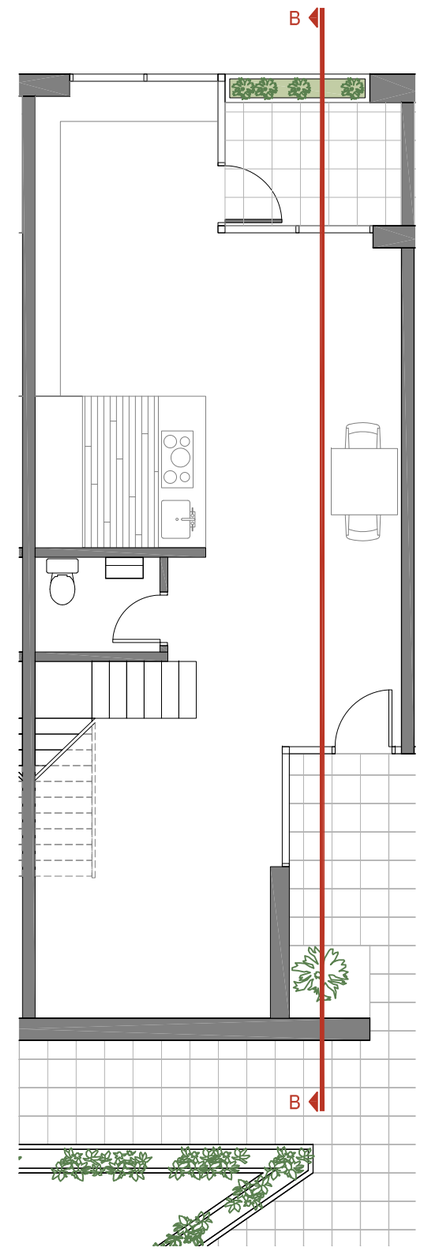
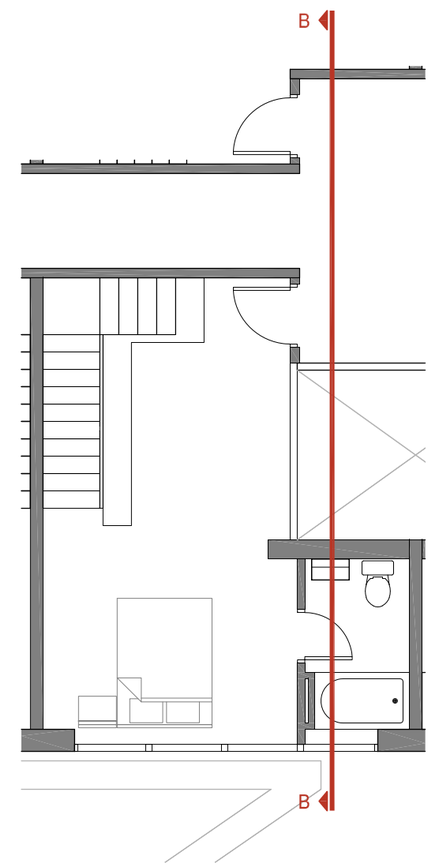


Entry Level Plan

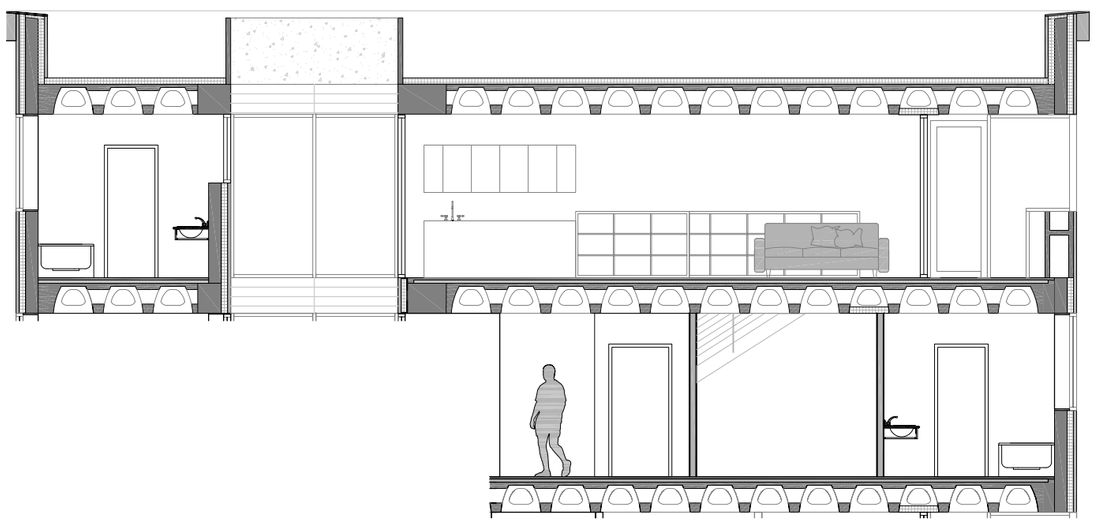


Upper Level Plan

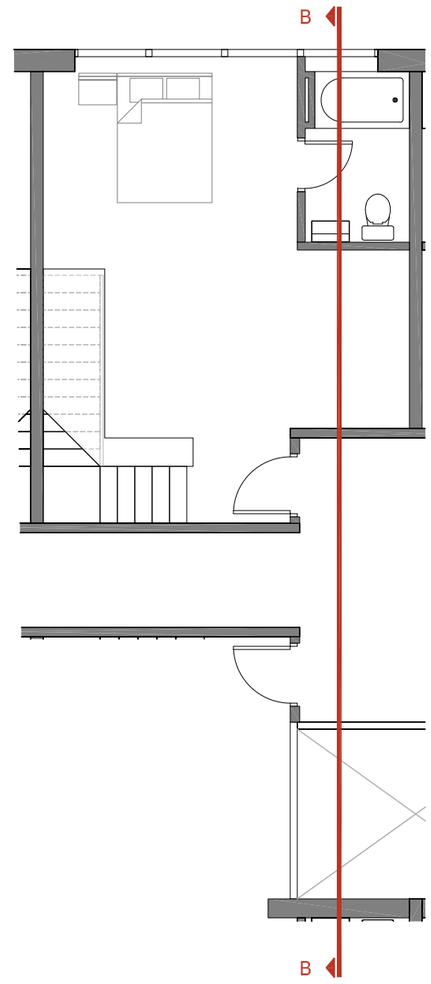
SPLIT LEVLEL APARTMENT 'B'

Split Level Apartment 'B' plan and sections Scale 1/8"

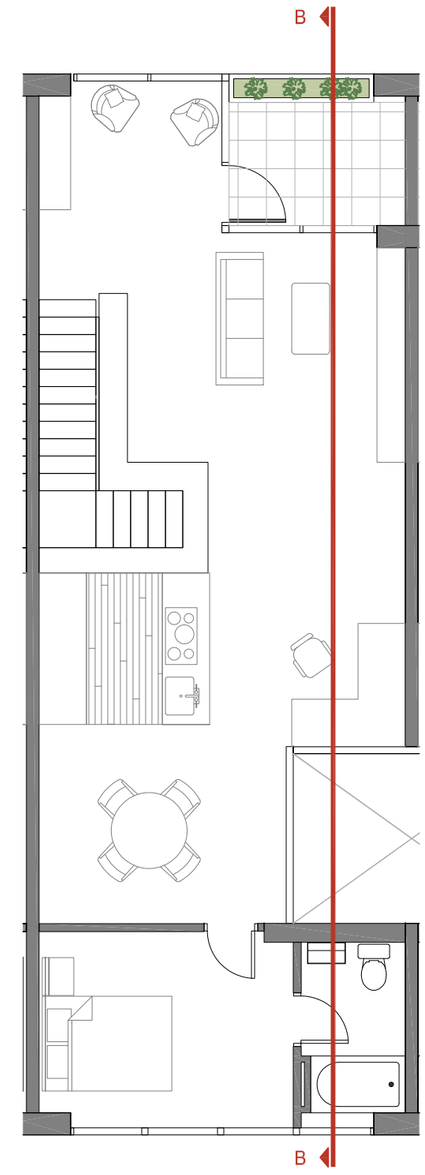
0 5 10



Section BB

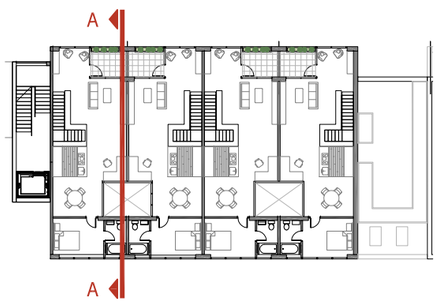


2nd Floor Entry Plan

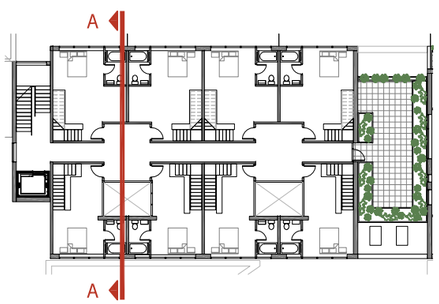


Upper Level Plan

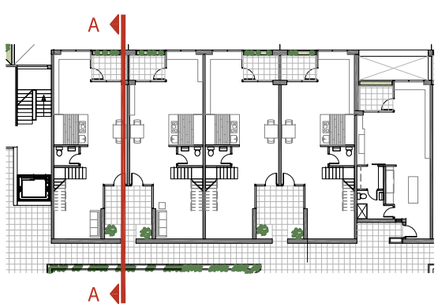
SECTION THROUGH SPLIT LEVLEL APARTMENT STRUCTURE



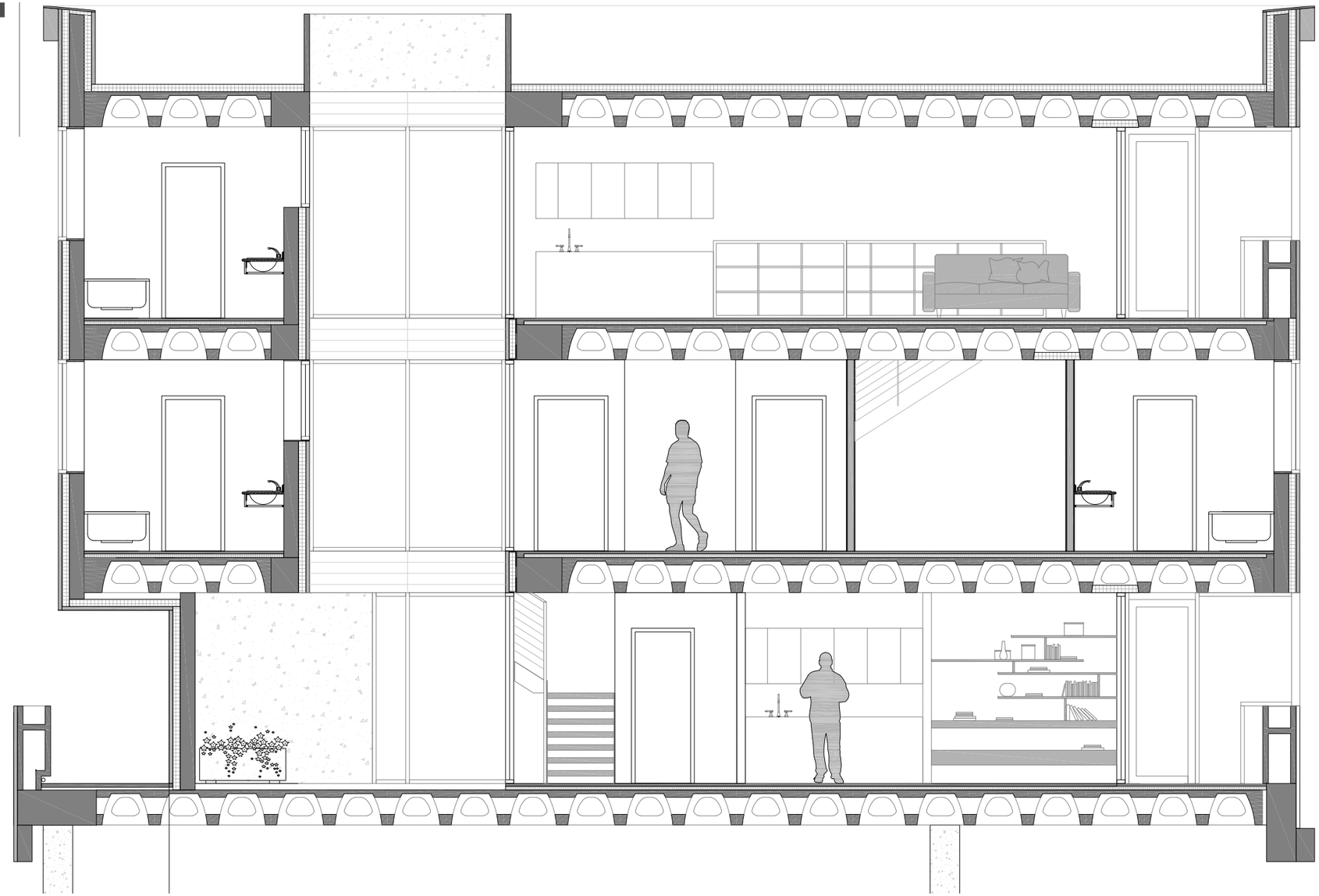
Split level apartment structure - 3rd floor 1:40



Split level apartment structure - 2nd floor 1:40



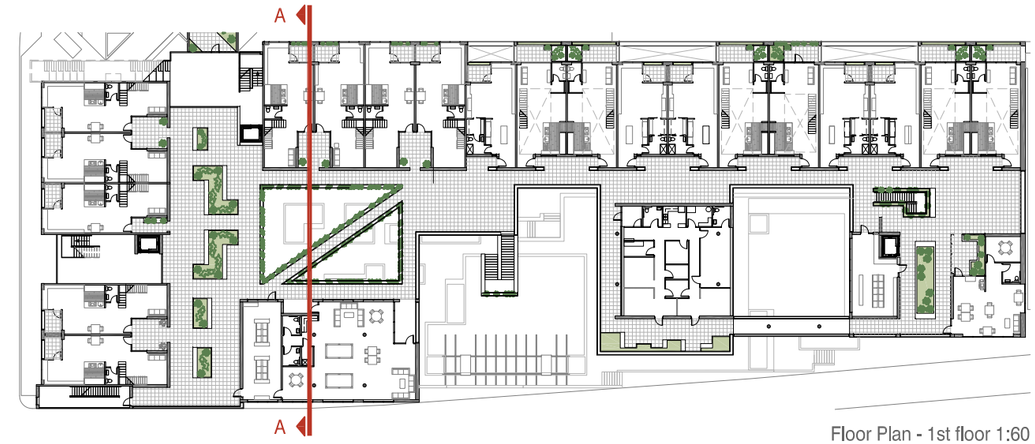
Split level apartment structure - 1st floor 1:40



Split Level Apartment Structure Section AA Scale 3/16"

BUILDING SECTION

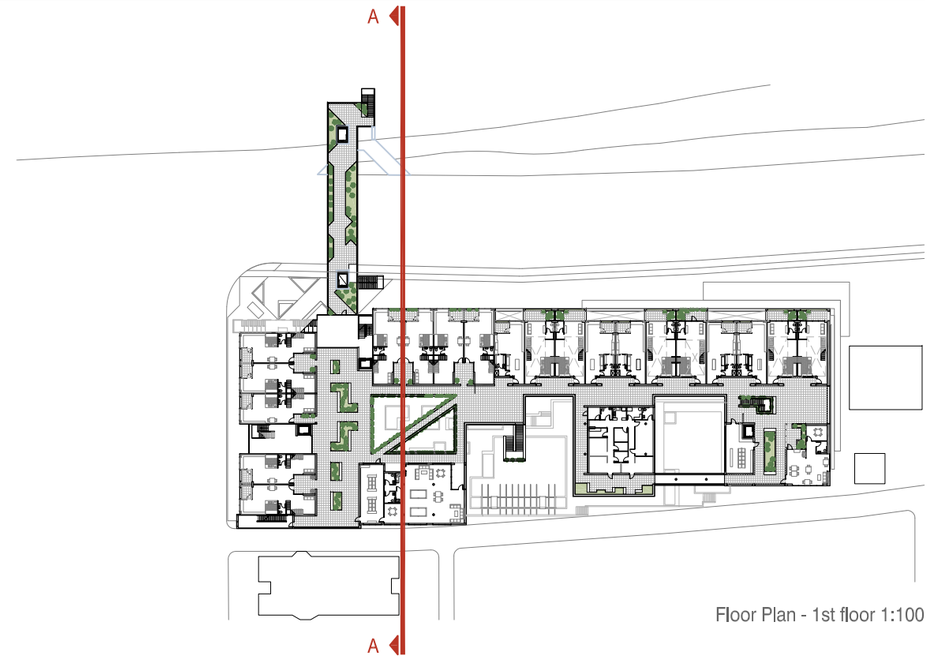
0 10 20



Floor Plan - 1st floor 1:60

Section through split level apartments, courtyard and clubhouse - AA Scale 3/32"

BUILDING + SITE SECTION

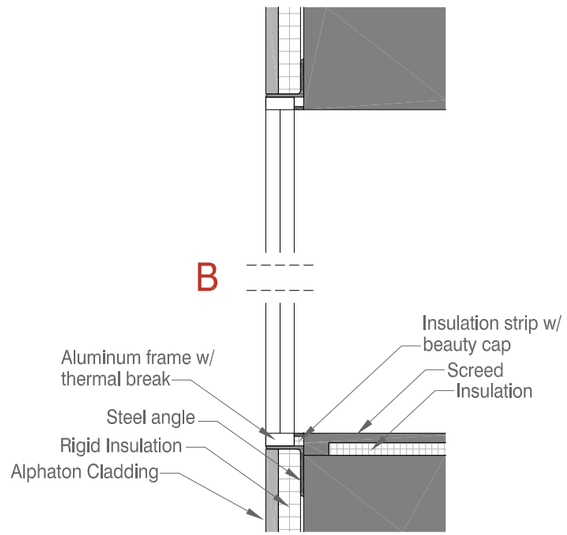


Floor Plan - 1st floor 1:100

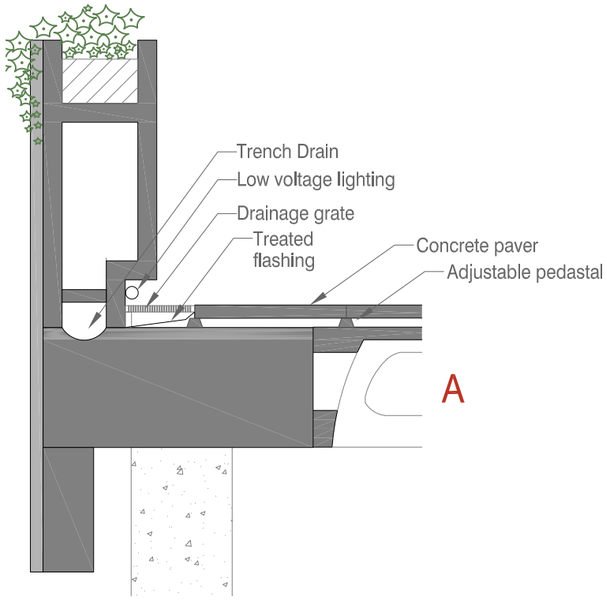
0 25 50 75 100

Section through split level apartments, courtyard and clubhouse - AA

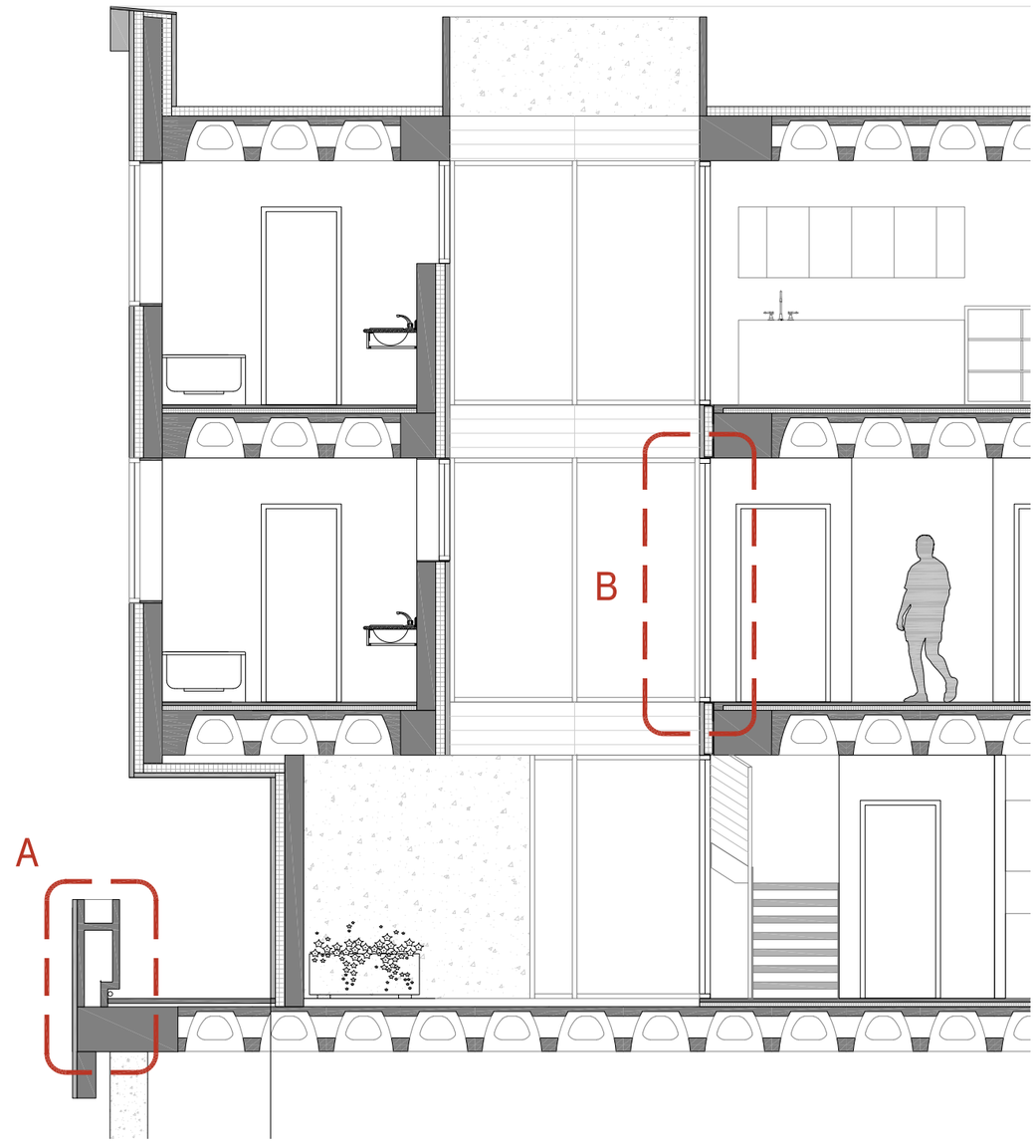
DETAILS



Flush window mounting detail at interior light well of split level apartments - Scale 3/4"=1'-0"



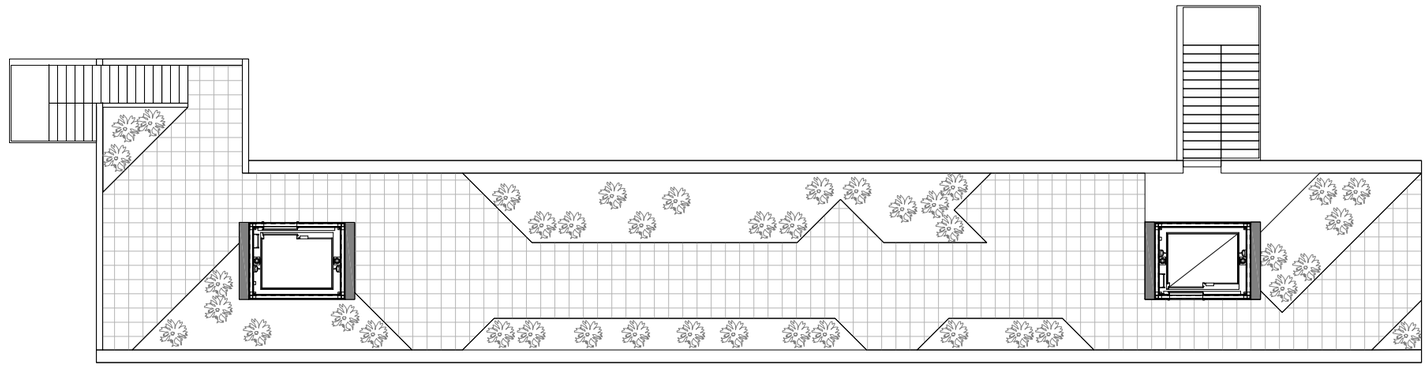
Drainage detail for exterior circulation along 1st floor apartment entrances - scale: 3/4"=1'-0"

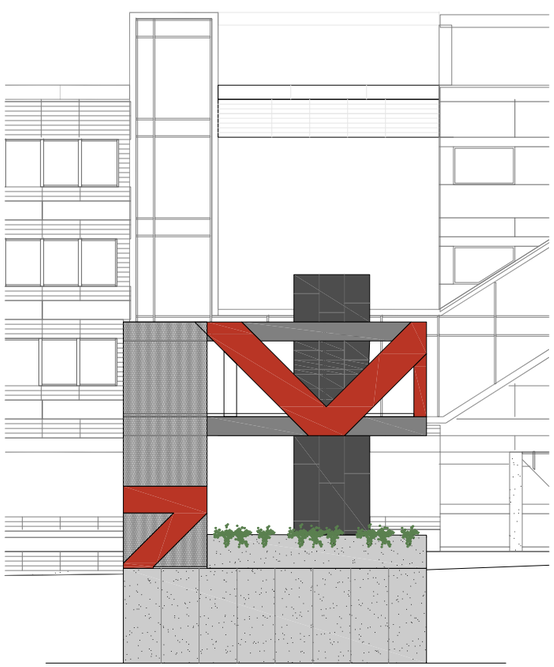


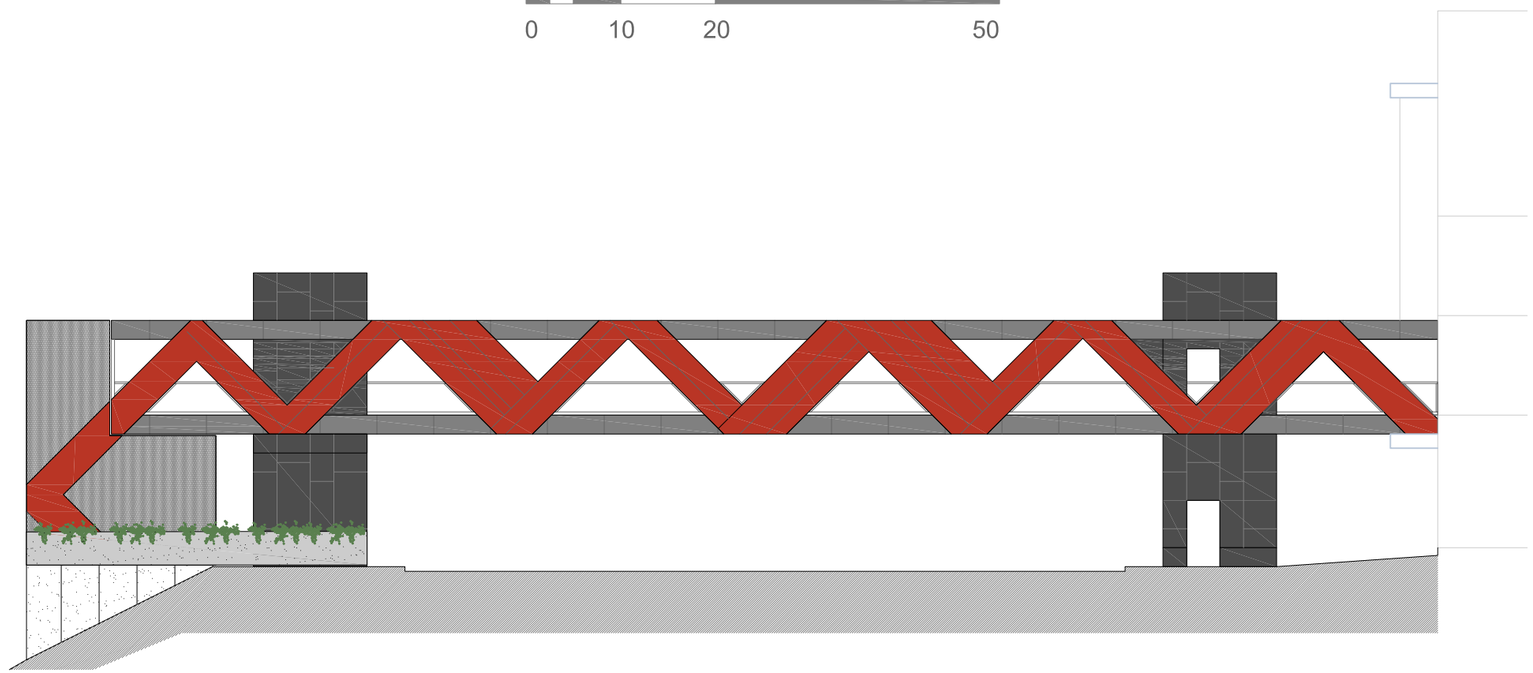
Split Level Apartment Structure Section AA Scale 3/16"

PEDESTRIAN FOOTBRIDGE

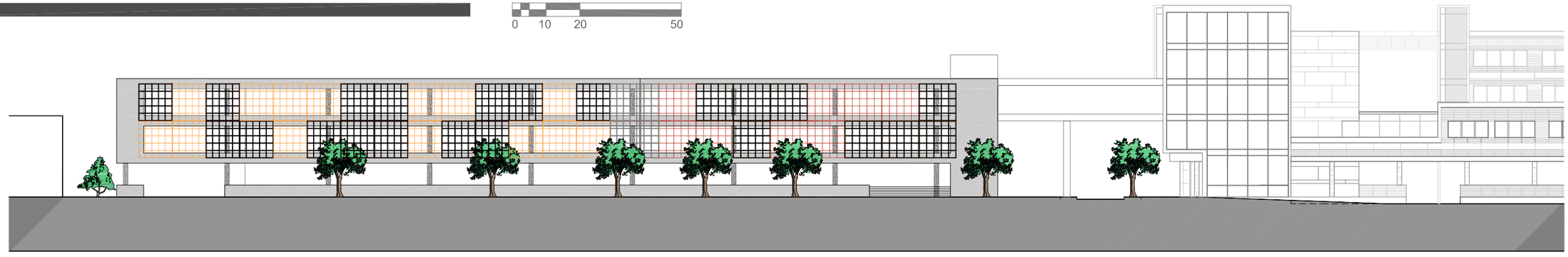
This pedestrian footbridge is a connection between the Reservoir Hill community and Druid Hill Park with its jogging and bike trail leading around to the Baltimore Zoo. The bridge takes residents over the heavily trafficked Druid Park Lake Drive and reconnects them with nature. The trusses expand and contract in width, elements to encourage movement. Truss openings provide views out to the neighborhood and the park. The walkway itself is lined with planter beds, alluding to what will be found at the destination point. The layout of the planter beds provide places where the bridge path expands into areas for seating or group meet-ups and make it more than just a bridging element, but a destination, a place in and of itself that merits pause.





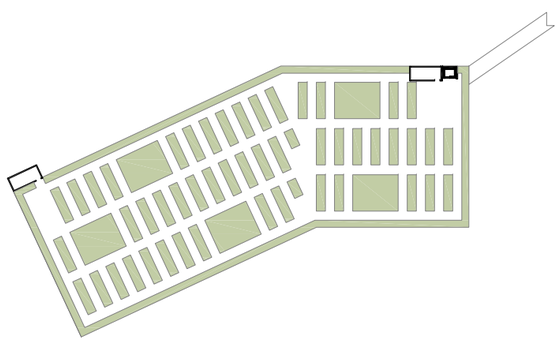


COMMUNITY PARKING GARAGE

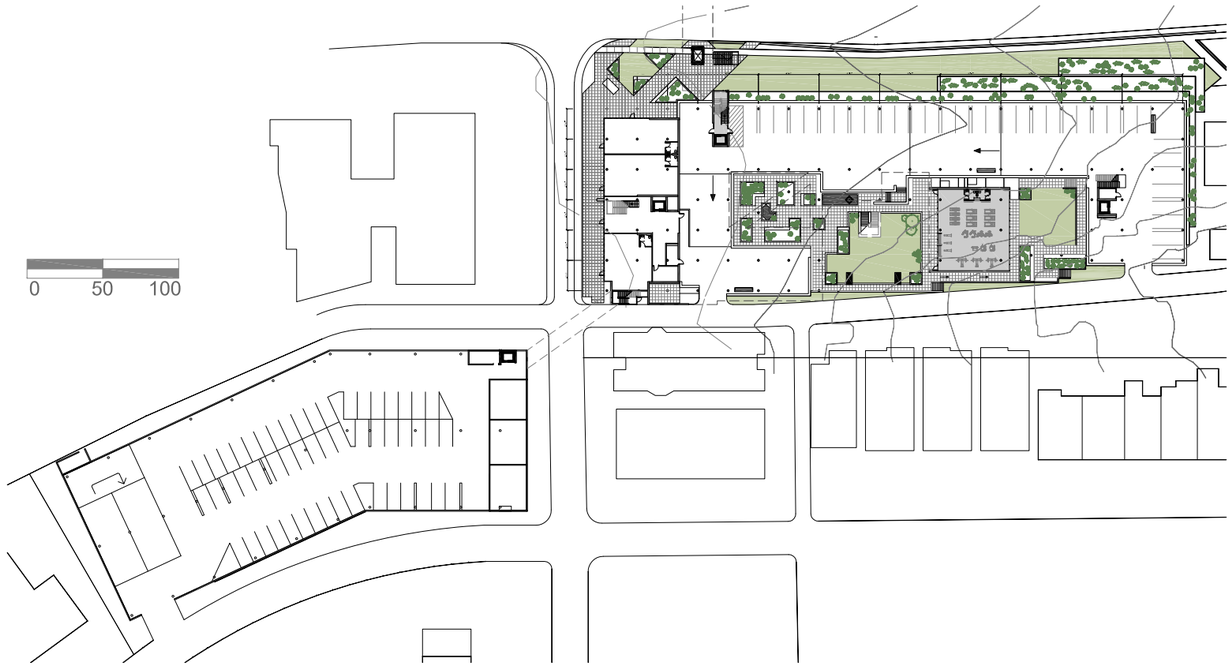


South Elevation

This parking garage is needed by the community at present, as there is a dearth of parking in this neighborhood. It will especially be needed with the construction of the rest of the urban intervention; there would be an additional influx of vehicles driven by individuals looking forward to accessing Druid Hill Park via the new pedestrian bridge crossing Druid Park Lake Drive. The garage will provide 150 parking stalls for use by existing neighborhood residents, visitors and residents of the urban intervention. A pedestrian bridge connects the 3rd level of the parking garage with the second story of the intervention housing at the stair tower shown in plan below. The rooftop of the parking garage is dedicated to community farming, as there is not enough farming area existing in the community to meet the needs of the residents. In addition to the rooftop gardening space, shop space at ground level compliments the commercial space available across the street with the rest of the intervention.



Rooftop of the parking garage Scale 1:100



Ground level of the parking garage Scale 1:100

CONCLUSION

The objective of this project was to shape an urban intervention that will improve the physical environment of a neighborhood and provide spaces for interaction that shape the memory of place. The combination of this objective coupled with a complex program and a challenging site was overwhelming at the start. The necessity to complete this thesis for professional development spurred me to push past a natural fear of failure and pick up the pen and start sketching, which led to modeling.

Good architecture is built not only on success, but also failure. We have access to incredibly large bodies of information that allow us to combine our desires as designers with understanding of what has worked in the past, and what hasn't. Even a master architect such as Corbusier had projects turn out with design flaws, one of which was noted in this project and turned out to be an inspiration for improving living and circulation space.

As designers we have to accept the fact that some solutions are better than others. The only way to arrive at the better solutions is to design a lot, to bury the bad under a mountain of work so that when the bad solutions are exhausted the good ones emerge. I found that throughout the design process, the solutions that were derived to solve a particular problem or meet a specific need came to inform me of the design direction that needed to be taken to continue working through the project. The work began to drive itself and all I could do was continue working to see where the design took itself when followed to its logical conclusion.

I truly believe that the designs offered in this book would make Reservoir Hill a better place. Being a driver of Locus could only be confirmed with time. I do not believe that this design would work in any other place. Yes, certain elements can be borrowed, but architecture is the product of a response to a specific place. This is modern architecture for Reservoir Hill.

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