

# **The Architect as Craftsman**

An exploration into craft at the urban scale

By Amanda C.I. Shore

2011

A thesis submitted to the Faculty of Graduate  
and Postdoctoral Affairs in the partial fulfillment  
of the requirements for the degree of  
Master of Architecture in M.ARCH (Professional)

Carleton University  
1125 Colonel By Drive  
Ottawa, ON  
K1S 5B6



Library and Archives  
Canada

Published Heritage  
Branch

395 Wellington Street  
Ottawa ON K1A 0N4  
Canada

Bibliothèque et  
Archives Canada

Direction du  
Patrimoine de l'édition

395, rue Wellington  
Ottawa ON K1A 0N4  
Canada

*Your file Votre référence*

*ISBN: 978-0-494-87823-1*

*Our file Notre référence*

*ISBN: 978-0-494-87823-1*

#### NOTICE:

The author has granted a non-exclusive license allowing Library and Archives Canada to reproduce, publish, archive, preserve, conserve, communicate to the public by telecommunication or on the Internet, loan, distribute and sell theses worldwide, for commercial or non-commercial purposes, in microform, paper, electronic and/or any other formats.

The author retains copyright ownership and moral rights in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

#### AVIS:

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque et Archives Canada de reproduire, publier, archiver, sauvegarder, conserver, transmettre au public par télécommunication ou par l'Internet, prêter, distribuer et vendre des thèses partout dans le monde, à des fins commerciales ou autres, sur support microforme, papier, électronique et/ou autres formats.

L'auteur conserve la propriété du droit d'auteur et des droits moraux qui protègent cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

---

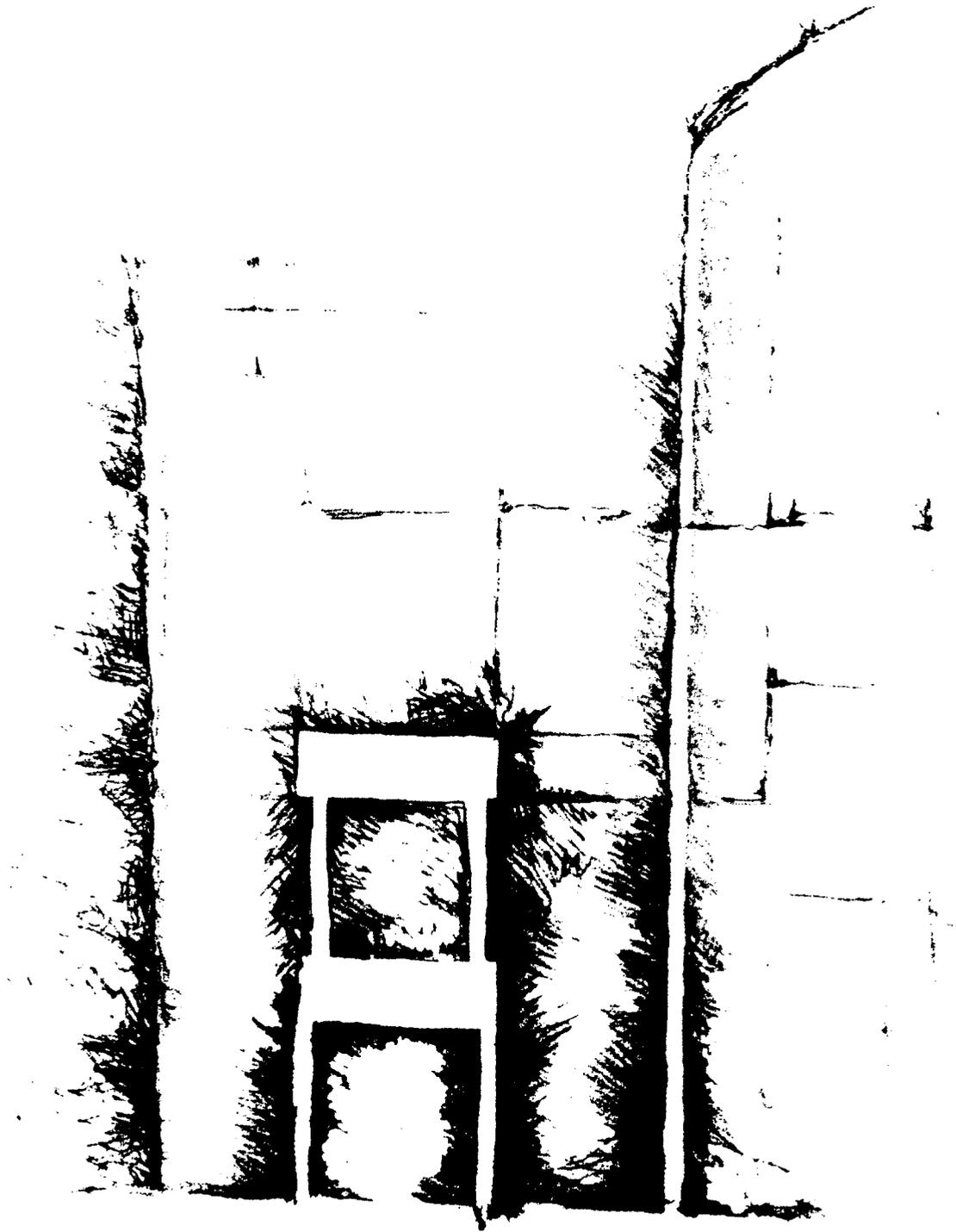
In compliance with the Canadian Privacy Act some supporting forms may have been removed from this thesis.

While these forms may be included in the document page count, their removal does not represent any loss of content from the thesis.

Conformément à la loi canadienne sur la protection de la vie privée, quelques formulaires secondaires ont été enlevés de cette thèse.

Bien que ces formulaires aient inclus dans la pagination, il n'y aura aucun contenu manquant.

Canada



## **The Architect as Craftsman**

An exploration into craft at the urban scale

By Amanda C.I. Shore

2011

## Abstract

The idea of craft at the urban scale is explored through the lens of architect as craftsman. What is craft? Who are the craftsmen and what is craft at the urban scale? Several characteristics emerge as important when defining what is craft: *domain shift, trial and error, resistance and ambiguity, complexity* and *use of tools*. These ideas are explored through the direct and indirect craft processes of Charles and Ray Eames and Gerrit Rietveld, and the contemporary example of the architect developer, extending the notion of craft beyond the design phase. Through the design and build of a chair, the craft process is tested, bringing into focus the elements of the city that should be considered when building for Bologna, and the site itself. It is through this exploration that the city of Bologna is investigated and a design is proposed for the STAVECO site, just south of the city centre. A parking lot performance space along with an accompanying market building is proposed and designed, addressing the parking pressures of the city, the site's previous use, and the city's dedication to public art festivals, where the city is often used as a canvas for such events. This space, along with the market, also address the site as an important threshold between the city and the surrounding hills. Craft at the urban scale is explored throughout the research, design, building of the chair, and the consideration of the site and surrounding environment. Craft emerges from this enquiry as an iterative process, dependent on exploration, questioning, and a desire to learn and grow from existing environmental factors.

## Table of Contents

List of Figures / Appendix List  
i

Introduction  
1

Craft  
3

Crafting Definitions  
12

Master Craftsmen  
15

Contemporary Architect Craftsmen  
28

A Crafted City: Bologna  
38

Crafting Architecture  
52

Conclusion  
64

Appendix  
69

Works Cited  
97

List of Figures / Appendix List

Figure 3.1	Series of experimental molded plywood chairs. 1945. . . . .	Page 17
Figure 3.2	Plastic armchair in Eames house. 1949. . . . .	Page 17
Figure 3.3	Case Study poster in <i>Arts and Architecture</i> magazine. 1945. . . . .	Page 19
Figure 3.4	Eames House construction with Charles and Ray Eames . . . . .	Page 20
Figure 3.5	View through living room of Eames House. . . . .	Page 20
Figure 3.6	Eames storage units. 1950. . . . .	Page 21
Figure 3.7	Exterior of Eames House, Pacific Palisades, 1945-1949. . . . .	Page 21
Figure 3.8	Red Blue Chair. . . . .	Page 22
Figure 3.9	View of Schröder House . . . . .	Page 22
Figure 3.10	View of the southwest and southeast facades. 1987. . . . .	Page 24
Figure 3.11	View of the interior, 1987. . . . .	Page 24
Figure 3.12	The Berlin Chair, 1923. . . . .	Page 25
Figure 4.1	K Lofts - After and Before, Jonathan Segal. 2006. . . . .	Page 34
Figure 4.2	R3 Triangle Building, Lloyd Russell. 2006 . . . . .	Page 35
Figure 5.1	Map of Bologna. <i>Google Maps</i> , 2011. . . . .	Page 39
Figure 5.2	Bologna streets with porticos, Amanda Shore, 2011. . . . .	Page 41
Figure 5.3	Narrative of time on the buildings, Amanda Shore, 2011. . . . .	Page 41
Figure 5.4	Cars parked in the middle of the street, Amanda Shore, 2011. . . . .	Page 42
Figure 5.5	View from above, Bologna. Amanda Shore, 2011. . . . .	Page 43
Figure 5.6	Via Clavature, Bologna. Amanda Shore, 2011. . . . .	Page 43
Figure 5.7	Piazza Maggiore, Bologna. Amanda Shore, 2011. . . . .	Page 45
Figure 5.8	Hills around Bologna. Amanda Shore, 2011. . . . .	Page 46
Figure 5.9	STAVECO area south of the historic centre, Bologna. Site plan; Beni Ministero della Difesa, 2011. . . . .	Page 47
Figure 5.10	STAVECO site pictures. Amanda Shore, 2011. . . . .	Page 49
Figure 5.11	Drawing depicting STAVECO as the hinge between the city and the hills. Amanda Shore, 2011. . . . .	Page 51
Figure 6.1	Chair model One. Amanda Shore, 2011. . . . .	Page 54
Figure 6.2	Chair model Two. Amanda Shore, 2011. . . . .	Page 54
Figure 6.3	Chair model Three. Amanda Shore, 2011. . . . .	Page 54
Figure 6.4	Chair Model Four. Amanda Shore, 2011. . . . .	Page 55
Figure 6.5	Chair Model Four construction drawings, Amanda Shore, 2011. . . . .	Page 55
Figure 6.6	Drawing experimentation of relationship between chair and building. Amanda Shore, 2011. . . . .	Page 58

Figure 6.7	Drawing representing the fusing of site, city and hills. Amanda Shore, 2011. . . . .	Page 58
Figure 6.8	Initial sketches for parking structure, Amanda Shore, 2011. . . . .	Page 59
Figure 6.9	Narrowing in on a design, sketches, Amanda Shore, 2011. . . . .	Page 60
Figure 6.10	Sketches for market beside parking/theatre structure. Amanda Shore, 2011. . . . .	Page 61
Appendix 1	STAVECO site plan and existing program . . . . .	Page 69
Appendix 2	Chair progress photos . . . . .	Page 70
Appendix 3.1	Collages emphasizing the site as a threshold, - 3.3 or gateway between the city and the hills. . . . .	Page 71- 73
Appendix 4	Drawing illustrating threshold as a way to activate site . . . . .	Page 74
Appendix 5	Existing and proposed program for STAVECO site . . . . .	Page 75
Appendix 6.1	Parking Structure – Performance Space Plan. . . . .	Page 76
Appendix 6.2	Parking Structure/ Performance Space Section . . . . .	Page 77
Appendix 6.3	Parking Structure/ Performance Space Elevation . . . . .	Page 78
Appendix 7.1	Market Space Plan, Ground Floor . . . . .	Page 79
Appendix 7.2	Market Space Plan, Second Floor . . . . .	Page 80
Appendix 7.3	Market Space Plan, Third Floor . . . . .	Page 81
Appendix 7.4	Market Space, North Elevation . . . . .	Page 82
Appendix 7.5	Market Space, East Elevation . . . . .	Page 83
Appendix 7.6	Market Space South Elevation . . . . .	Page 84
Appendix 7.7	Market Space West Elevation . . . . .	Page 85
Appendix 7.7a	Parking Structure/ Performance Space with Market in situ . . . . .	Page 85a
Appendix 8	Drawing, Café detail and view of market from above . . . . .	Page 86
Appendix 9	Drawing, Detail of market booths . . . . .	Page 87
Appendix 10.1	Sectional Market Model . . . . .	Page 88
Appendix 10.2	Market Model, Cardboard and basswood . . . . .	Page 89
Appendix 11.1	Drawings, black and white . . . . .	Page 90
Appendix 11.2	Drawings, colour . . . . .	Page 91
Appendix 12.1	Context drawing, looking North . . . . .	Page 92
Appendix 12.2	Context drawing, looking East . . . . .	Page 93
Appendix 12.3	Context drawing, looking South . . . . .	Page 94
Appendix 12.4	Context drawing, looking West . . . . .	Page 95
Appendix 12.5	Context collages . . . . .	Page 96

When someone is called a craftsman, certain connotations come to mind. Whether something is well designed, well thought out or expertly executed, this notion of the craftsman is one of great skill and know-how, through experience and time, effort and, subsequently, expertise through repetition. The craftsman's reputation is well regarded and valued for the time and effort that has been invested in a product, concept or idea. Craftsmen, according to Richard Sennett in his book entitled, *The Craftsman*, abound in all areas, not limited to "handicrafts", carpentry, or pottery making, for example. The element of craft resides in the individual who sets about a task and attempts to address it to the best of their ability, through time, skills and dedication. Though many individuals can claim to address and adhere to these elements, it is also through their process, and what it entails, that sets the craftsmen apart from their contemporaries. This craft process is of paramount importance. It sets the course for the task at hand, yet also instills the importance of the actual process itself, something that can be applied to any situation.

The architect craftsman emerges as a figure that engages in a process of craft, using their skills, making connections and creating architecture that is contextually relevant, solidly designed and the result of much experimentation, practice and trial and

error. They set themselves apart from other architects not only with the depth that they consider the tasks posed to them, but by their store in process and its constantly adapting and evolving nature, whereby informing and strengthening their design. Architect craftsmen explore their architectural projects and designs through this process, creatively addressing design ideas and concepts. A strength of these architect craftsmen is the ability to apply their craft process in other realms as well, allowing for exploration and experimentation to help further inform the way they design. Architects have used the design of chairs as a way of exploring and refining process or particular architectural designs. Chairs provide a smaller context in which to experiment, aiding in design development, exploration of a new craft process, and, can even result in the design of a new chair.

Through the study of various architects, past and present, the role of the architect craftsman, and its subsequent influence on the urban scale is explored. From this emerges the question of what is craft at the urban scale. Using the city of Bologna's closed ex military site, STAVECO, as a testing ground, the ideas of the architect craftsman, process, craft and the urban scale are explored and carried out. The design and creation of a chair establish a tangible exploration of, and connection to, the craft process and enhance the development and design set for the site. The site, vast in size, provides an interesting and realistic glimpse of the challenges and considerations when thinking about what is craft at the urban scale.

Richard Sennett's book entitled, *The Craftsman*, presents an interesting and compelling look at the idea of craft and craftsmanship. Broken down into three parts, *Craftsmen*, *Craft*, and *Craftsmanship*, each section contributes to the understanding of craft, both in the past and in the present. Craft becomes an active entity in the understanding of good work and has influences on how skill, intuition and improvisation are understood, and even demystified. Sennett makes interesting connections to the prevalence of craft in society and gives insight into how such expertise forms, and, in turn, has the ability to strengthen the surrounding community.

When Sennett discusses craft, he does not characterise it in the way that is traditionally discussed, or associated. Craft, according to *The Canadian Oxford Paperback Dictionary*, can be defined as a trade or an art (statecraft; the craft of pottery); the product of such a skill; a skill, especially in practical arts; and, the activity of producing handiwork.<sup>1</sup> It has broad associations with handicrafts, and is often discussed in its role within the Arts and Crafts movement. For this thesis, however, craft begins to take on a related, yet different meaning. Though it can still have associations with a

---

<sup>1</sup> Alex Bisset, ed., *The Canadian Oxford Paperback Dictionary*, (Oxford University Press: Canada, 2000), 220

trade, for example, it takes on a much broader, more encompassing scope. Heavily influenced by Sennett, craft here is seen as an active entity, a process that results in something that is well thought out, designed and executed.

In order to begin to understand this new and innovative way of thinking about craft, I highlight and discuss topics from Sennett's book in relation to my ideas about craft. I then discuss it in relation to architecture. It is my thought that when the combination, practice and application of these elements is seen through the lens of architecture, it can be formulated as craft at the urban scale.

---

Craft, according to Sennett, can be defined by doing something well for the sake of doing a good job, not because it will yield more money, or increased prestige, but because the act of doing something well, and the product that results, is rewarding in itself. This quest for creating a great product or solution opens up to experimentation and has the potential to solve other problems and fuel further questions at the same time.<sup>2</sup> This is explored in Sennett's book, where many professionals from various fields go through this process. The crafted baker, for example, will want to create a perfect loaf of bread. This is not because it will allow him to sell more bread, in fact it likely will make him sell less because of the time and dedication it takes to deduce, experiment, and come up with the best possible loaf he can make. One experiment might produce just as many new questions as answers. The baker does this for the satisfaction of making the best bread he knows how. This process of questioning and answering leads to a process of evolution where new products, processes and ideas can take shape.

With the introduction of machines in the Industrial Age, the role of the craftsman and the idea of craft were put into question. Sennett discusses the introduction of machines, and their ability to outwork its contemporary craftsman. With their precision and strong "work ethic," the machine had the ability to threaten the livelihood of the craftsman. This created, and still continues to this day, a dependency on the machine to create a perfect, uniform product. The danger is the machine's

---

<sup>2</sup> Richard Sennett, *The Craftsman*, (Yale University Press: New Haven and London, 2008), 20

inability to think, or to innovate. Sennett essentially proposes that the machine be used as a tool, one that can aid in advancing ideas and concepts, rather than being a means to an end.<sup>3</sup>

Sennett discusses various ways that the craftsman is able to identify with materials at hand, and through this knowledge, have a greater understanding of their future possible uses and relevance. When a craftsman is knowledgeable and well versed in such areas, they are able to then apply their skill set and knowledge to other domains.<sup>4</sup> Things in isolation that may seem unconnected, can in fact, through a series of interactions, become connected, as Sennett describes. For example, by having a full understanding of the purpose and value of a trombe wall, an architect may make a connection to a new way of designing the layout of a factory. It takes an individual with a particular background and know-how to be able to apply their knowledge to another area, and improve upon it. This relates to the “domain – shift” that Sennett discusses, where a tool, idea or concept is applied to something else in a new way.<sup>5</sup> This can be a slow process that might take generations to form and enter the mainstream. Sennett uses the example of the shift from forming earthenware on a solid base, to one on a half-cut gourd, allowing it to rotate and enabling the potter with a greater ease of movement and facility in forming a rounded pot.<sup>6</sup> This particular shift did not happen quickly. Rather it took generations to make the switch from one mode to the other. This slow route is integral to the exploration, manipulation and creation of new ideas and processes. Yet domain shifts can also happen more quickly by making a connection of two seemingly opposite ideas or bodies of knowledge.

Moving into technique and expression, Sennett begins to discuss the importance of trial and error. This process allows the craftsman to wallow a while in the error in order to learn from mistakes, gain skill, and evolve.<sup>7</sup> By removing fear from failure or

---

<sup>3</sup> Richard Sennett, *The Craftsman*, (Yale University Press: New Haven and London, 2008), 105-106

<sup>4</sup> Richard Sennett, *The Craftsman*, (Yale University Press: New Haven and London, 2008), 120-130

<sup>5</sup> Richard Sennett, *The Craftsman*, (Yale University Press: New Haven and London, 2008), 127

<sup>6</sup> Richard Sennett, *The Craftsman*, (Yale University Press: New Haven and London, 2008), 120-121

<sup>7</sup> Richard Sennett, *The Craftsman*, (Yale University Press: New Haven and London, 2008), 160

error, the tendency to freeze will diminish and allow the craftsman to learn from failure, experiment and progress. As Sennett says, “Technique develops, then, by a dialectic between the correct way to do something and the willingness to experiment through error.”<sup>8</sup> This dialectic becomes integral in the craftsman’s quest for innovation.

The tools of the craftsman also serve as a way to innovate and explore a field or practice. Sennett mentions two types of classifications for tools: one being “fit-for-purpose”, the other being “all-in-one.”<sup>9</sup> The fit-for-purpose tool is made for an exact purpose. Since it only has one function, it does not allow for exploration into its further possible uses. It impedes innovation as it only has one function or purpose. The all-in-one tool, however, encourages innovation and creativity as it does not only do one thing. It allows the craftsman to explore his or her possibilities, thus prompting innovation and creativity. The tools of the craftsman help the hand in practicing control and restraint needed to wield such instruments effectively. The hand that holds a knife, for example, used not only for slicing, but also crushing, needs to control the weight and force that goes into using such a tool. “Restrained power of the craftsman’s sort, coupled with release, takes a further step. The combination provides the craftsman’s body self-control and enables accuracy of action; blind, brute force is counterproductive in handwork.”<sup>10</sup> Such technique, Sennett illustrates, must be practiced and become intuitive in order to effectively use such tools precisely and to their maximum potential.

The use of tools comes up again within Sennett’s discussion on dynamic repair and innovation. Repairing something is an important way to figure out how something works, and when using an all-purpose tool to do so, a deeper understanding can be achieved.<sup>11</sup> The all-purpose tool allows the person doing the repairs a chance to explore through experimentation and can, therefore, lead to innovation. The fit-for-purpose tool will fix the problem, while the all-purpose tool has the ability for improvement and creativity. A “dynamic repair” occurs when this experimentation leads to a change in

---

<sup>8</sup> Richard Sennett, *The Craftsman*, (Yale University Press: New Haven and London, 2008), 160

<sup>9</sup> Richard Sennett, *The Craftsman*, (Yale University Press: New Haven and London, 2008), 160

<sup>10</sup> Richard Sennett, *The Craftsman*, (Yale University Press: New Haven and London, 2008), 171

<sup>11</sup> Richard Sennett, *The Craftsman*, (Yale University Press: New Haven and London, 2008), 200

form or function, and can create a domain shift.<sup>12</sup> Not as much a slow generational shift as described earlier, but instead a shift from one area of knowledge to another. Sennett uses the example of Christopher Wren, who applied his scientific knowledge to the design and layout of a city plan.<sup>13</sup>

Practice in craft is needed to perfect certain tasks and evolve. Such practice comes from repetition, which will, in turn, translate into understanding.<sup>14</sup> Once the craftsman becomes practiced at doing something, the hands will start to react to what the eyes are seeing, and the task will become intuitive. Sennett uses the example of the glassblower who must relearn a process in order to master something new. Repetition in the new task allowed her to practice and understand what she was doing. She gained insight that would eventually help her to anticipate what the material was going to do before it did it, allowing her to react accordingly. According to Sennett, she called this “corporeal anticipation, always being one step ahead.”<sup>15</sup>

Sennett discusses the importance of learning to work with resistance and ambiguity. Navigating resistance and working with it can once again tap into innovation. Instead of fighting it, flexibility and “going with the flow” become important. Resistance should be something one learns to work with and understand, and once this is realized, a project, idea or process can be more easily thought out and better realized.<sup>16</sup> “Don’t try too hard” is a quotation that Sennett references in order to reiterate that when one tries too hard to make something work, it can come out forced, and, in the end, may not be as efficient a way of getting something accomplished.<sup>17</sup> As Sennett summarizes,

The skills of working well with resistance are, in sum, those of reconfiguring the problem into other terms, readjusting one’s behaviour if the problem

---

<sup>12</sup> Richard Sennett, *The Craftsman*, (Yale University Press: New Haven and London, 2008), 200

<sup>13</sup> Richard Sennett, *The Craftsman*, (Yale University Press: New Haven and London, 2008), 203

<sup>14</sup> Richard Sennett, *The Craftsman*, (Yale University Press: New Haven and London, 2008), 172

<sup>15</sup> Richard Sennett, *The Craftsman*, (Yale University Press: New Haven and London, 2008), 174-175

<sup>16</sup> Richard Sennett, *The Craftsman*, (Yale University Press: New Haven and London, 2008), 226

<sup>17</sup> Richard Sennett, *The Craftsman*, (Yale University Press: New Haven and London, 2008), 217

lasts longer than expected, and identifying with the problem's most forgiving element.<sup>18</sup>

Sennett uses the example of complexity as a way for the craftsman to engage people. In the design of a city, for example, he discusses the grey areas in cities that allow for users to interact with specific spaces. Allowing citizens of a city to interpret these spaces creates an identification and meaning for, and of, the place. It is with this in mind that Sennett suggests leaving intentionally complex design when creating buildings or neighbourhoods, stating, "Additions of complexity can prompt people to engage more with their surroundings."<sup>19</sup> The idea of ambiguity leads into this approach as well. By leaving areas of intentional ambiguity in urban design, creating sites of possible confusion and disorientation, inhabitants must learn to navigate through such areas, and by doing so, will be gently forced to learn, or understand, their city.<sup>20</sup>

Sennett thoroughly explores the intricate workings of the craftsman and his craft. By using this as a framework to consider craft in the realm of architecture, the idea of the architect craftsman can be identified and explored. The architect as craftsman employs these methods creating architectural projects that encompass craft, and therefore, craft at the urban scale.

If the architect is to be seen through the lens of a craftsman, the architect must strive to look at each project as if it presents new questions, ideas and possibilities. Each building, home or design should be seen as presenting new ideas unique to the conditions of the site and situation. The project must challenge and attempt to create something that fits as best as it can within, and for its' surrounding environment.

The same is true with the use of technology within the practice of architecture. If relying too heavily on computer modelling programs, projects can become routine and the ability to experiment and be creative is confined to the extent of the limits of the computer program. This limits, or stunts, creativity as it can only be approached with

---

<sup>18</sup> Richard Sennett, *The Craftsman*, (Yale University Press: New Haven and London, 2008), 222

<sup>19</sup> Richard Sennett, *The Craftsman*, (Yale University Press: New Haven and London, 2008), 225

<sup>20</sup> Richard Sennett, *The Craftsman*, (Yale University Press: New Haven and London, 2008), 235

specific knowledge of the program and with a specific structure based on the limits of the computer program. In addition, though computer programs can perform set tasks well, it cannot think or reason, making it, if not dangerous, then unwise, to rely on too heavily. Though such programs have the ability to expand the horizon of architecture and its possibilities, it is essential that this tool be used in conjunction with human thought, reasoning and moderation. Without human intervention, the urban fabric will not truly be able to reflect the needs, desires and complexities of its human inhabitants. Used as a tool, however, the architect craftsman can continue to evolve and innovate in ways the computer, and its programs alone, cannot.

By keeping up to date with contemporary building techniques and materials, and being knowledgeable on design practices, current events and on advances and innovations from fellow professionals, the architect craftsman can make connections between various realms of knowledge and apply it to architecture. This results in more complex designs and ensures that the field of architecture can advance and its relevance be maintained. When making connections to new ideas and practices, inherent in this is the need to experiment, to test out new theories. This in itself is an extremely important step in the craft process and it is where the importance of trial and error emerge. Testing out new practices and ideas, and being able to make mistakes and learn from them is critical to the evolution and growth of the field. Though failure is not an option in the design or building of a space, the practice of experimentation leading up to a final design or build becomes essential. Rather than choosing something just because it has been done before, experimenting with new ideas, practices and materials can eventually translate to innovative approaches to design. The importance of practice is further extended when discussing the notion of dynamic repair that Sennett discusses. In architecture, it requires a deep understanding of a design, a building or a process. When this is achieved, two separate entities can unite into something new and innovative.

The architect craftsman works with the all-purpose tools of the site, such as sightlines, sounds, and unique physical attributes, in order to explore and shape the design for buildings, or cities. Learning to use minimum force, as mentioned in Sennett's

discussion of tools, might be the equivalent of using these particular “tools” to understand the site, creating an intuitive design. Brute force is what might result when these tools are not acknowledged or referred to. The “brute force” design, might, therefore, look forced and out-of-place. This can be likened to an architect that studies the site and its intricacies and designs a home accordingly versus an architect that builds a home on a space according to a predetermined, non site-specific design.

Within the realm of craft in architecture, innovation and success in the field also comes with much repetition and practice, and, working with resistance and ambiguity. When considering repetition and practice, each building, design or idea should build off knowledge gained from previous iterations, use of tools, and past experiences. Practice of skills should happen at all times, creating processes that become fine-tuned and eventually second nature to how architecture is approached and practiced. Working with resistance and ambiguity when thinking about craft at the urban scale can be interpreted as working with, rather than against, the environmental factors and characteristics that are presented on site.

Complexity engages people to create a relationship with craft. In the realm of architecture, keeping design varied, complex and somewhat unexpected can forge a more personal relationship with a particular architectural space. It can deepen a person’s relationship with, and appreciation for the site and project, making the experience a personal one as well.

---

Sennett’s discussion on craft helps to set the groundwork as to what is craft at the urban scale and who or what is an architect craftsman. Though it can be claimed that all architects adhere to these particular notions and use these tools within their own realms of architecture, it is clear that not all architects are architect craftsmen. Some architects utilize these ideas and notions more so than others, improving their skills and forging deep understanding of the intricacies within the profession. It therefore comes down to how architects put these practices to use, and

the extent of the depth and intricacy of their process that sets these architect craftsmen apart from other architects.

Following Richard Sennett's argument in *The Craftsman*, is it possible to hypothesize that craft could play a role in shaping our urban environment? What would define the role of the "architect-as-craftsman" and what would distinguish their work? It is in this chapter that I begin to lay out the idea of craft within architecture, and the importance of the craftsman's approach in considering craft at the urban scale.

---

The architect-craftsman is an informed individual who is able to combine knowledge and intuition to create designs that they can communicate to a broad community. Though education and skill are important, it is the depth of this knowledge and its use that form the architect craftsman. The architect craftsman is constantly being educated in architecture and architectural practices as well as any other area of interest, through lectures, reading materials and conversations with contemporaries. They learn about current design issues and practices, making connections and informed decisions on their architecture projects based on ideas learned. This knowledge, and an awareness of what is going on around them, is also important to the role and success of the architect craftsman. Knowledge of materials, contemporary building practices, as well as an understanding of what was done in the past, is important, yet the architect

craftsman goes beyond this. They are in tune with the characteristics of the community in which they are building, by either living in it, or by attending community events and programs that allow them to understand the needs and desires of a neighbourhood or community. The architect craftsman is also aware and involved in the greater architecture and design community at large, keeping informed on what is happening on a broader scale, with the desire and mindset to learn and grow from the knowledge of other professionals in the field. Lastly, the architect craftsman must be able to communicate their designs and intent to other people, using approaches that enhance the design, intent and understanding of a project. The use of hybrid methods of representation that show not only the design but the feeling of the site helps to illustrate this.

These architect craftsmen use, in conjunction with the above, the tools around him or her (physical or metaphorical) to actively engage in the design process, making decisions, choosing materials, and creating architecture that plays off of its urban context. Using Sennett's terms, they create through trial and error, domain shifts, complexity and, working with ambiguity and resistance, a building/ city/ urban landscape that seeks to evolve and be innovative from, and within, its existing environment. Craft at the urban scale is what results when the architect craftsman brings together his or her informed way of designing and thinking, as described above, and applies it to a project of architecture. In combination with Sennett's ideas of informed decision-making through expertise and experimentation, it is an iterative process that builds off of the old and uses site-specific materials to help enhance design. These designs are informed by their surroundings, resulting in projects that are specific to the place in which they are built. They also build off experience gained from previous projects, resulting in this iterative process, where each architectural act helps to inform the next one.

Craft, then, is an approach and process that requires a combination of these stated elements to make the necessary connections to create design that not only works itself into the existing urban fabric, but enhances and improves on it. In a crafted city,

urban spaces begin to feel like communities, where residents' reasons and desires for living in the urban environment are being met, and even exceeded. This success is demonstrated by a high occupancy of these architectural projects; the proximity to work, rest, and recreation of the inhabitants; the ability for the project to age well; and, its ease of adaptation to other programs over time.

---

It is with this in mind that I begin to consider these ideas, making connections to architects who embodied, and embody, these elements of craft, in their work and throughout their lives. This enhances their craft process and in turn, reinforces these ideas.

I began my exploration by looking at the team of Charles and Ray Eames and the work of Gerrit Rietveld, especially his collaboration with Truus Schröder on the Schröder house. Both groups not only engage in the craft process, but embody it as architect craftsmen. The consideration of craft is a part of their daily lives and therefore works itself into all aspects of their ideas and designs. Through this process, they work through the small scale to further produce on a larger scale. I saw this method as an interesting and an attractive way to explore the process of craft, through which insight can be gained from the resulting product and the process itself.

---

The architect craftsman can experiment with craft through the design of furniture, in particular chairs. Chairs, and furniture, have been used as a small-scale way of exploring the design for architectural projects, such as the chair and subsequent home by Gerrit Rietveld. Chairs can also be seen as a way of exploring the ideas and tenets of craft, which, through practice and repetition translate into a way of approaching design. This then translates into its application of craft in a building.

The team of Charles and Ray Eames is an important example of architect craftsmen. By employing the methods of the architect craftsman, the Eames' created a

body of work, ranging from toys to furniture to films to architecture that, to this day, continue to have an impact on their users and environments.

Charles Eames had a belief in “design as a process, rather than a single outcome- a process that’s never really over,”<sup>1</sup> according to Eames Demetrius, grandson of Charles. This is seen throughout the body of the Eames’ work. Many of their ideas stem from this process of evolution, with various iterations along the way becoming realized, and successful, projects on their own.

Each project and idea seemed to evolve into one another. Each iteration offered another opportunity to hone the material tighter and get to its essence. Such iterations were sometimes transformative as well. In exploring each project, new connections and reconnections of and to ideas were made.<sup>2</sup>

Many projects were created in such a manner. In an effort to understand how to make a single sheet plywood chair, for example, the Eames' experimented with many different ideas and iterations, trying to understand all they could about making and shaping plywood. Much experimentation in material and design took place, resulting in several variations of plywood chairs. When the tools did not exist to further evolve their ideas, they would not hesitate to fully understand the process and create the tool themselves, rather than send it out for someone else to figure out.<sup>3</sup> After trying all angles on single plywood sheets, and learning every aspect of it, it was concluded that the single plywood sheet was not the most suitable shape for mass production.<sup>4</sup> Instead of abandoning the idea, however, they turned to chairs with separately moulded plywood seats and backs (Figure 3.1). Though they began experimenting with other materials

---

<sup>1</sup> Eames Demetrius, *An Eames Primer*, (Universe Publishing: New York, 2001), 35

<sup>2</sup> Eames Demetrius, *An Eames Primer*, (Universe Publishing: New York, 2001), 21-22

<sup>3</sup> Eames Demetrius, *An Eames Primer*, (Universe Publishing: New York, 2001), 25

<sup>4</sup> Pat Kirkham, *Charles and Ray Eames: Designers of the Twentieth Century*, (MIT Press: Cambridge, 1995), 214

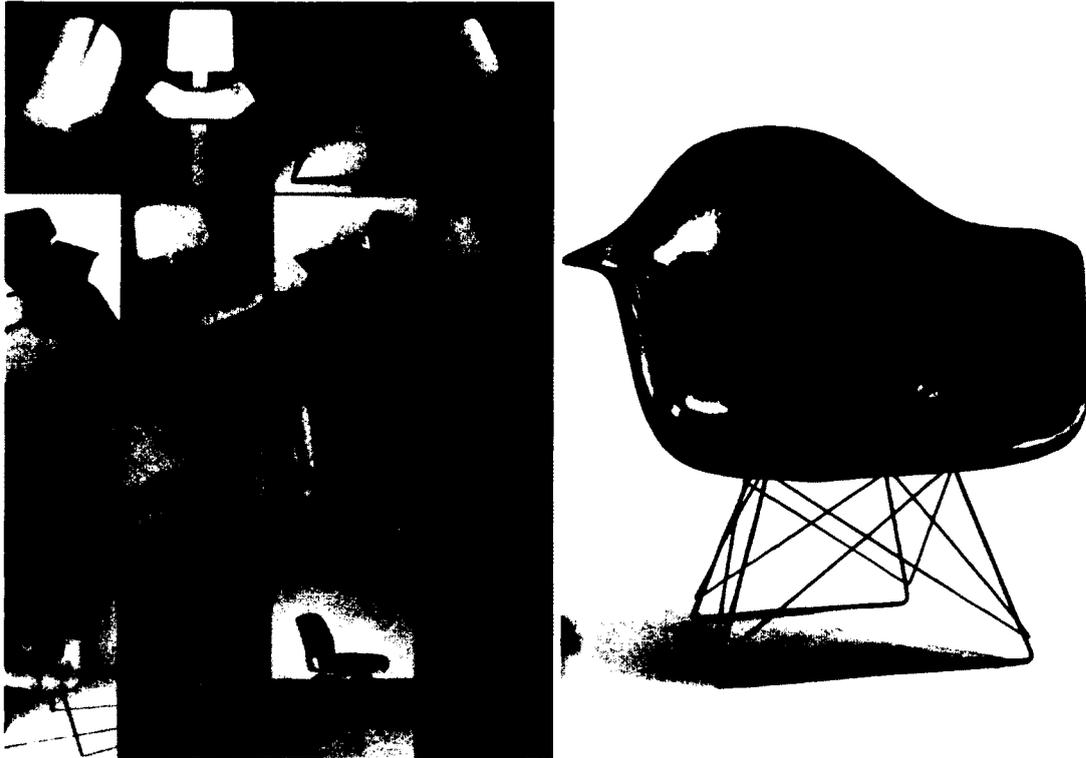


Figure 3.1 Series of experimental molded plywood chairs. 1945. *Eames*.

Figure 3.2 Plastic armchair in Eames house. 1949. *Eames*.

such as fibreglass in 1948, resulting in their iconic series of side chairs and armchairs beginning in 1950 and their further iterations we know of today (Figure 3.2), they came back to plywood again in 1956 with the Lounge Chair and Ottoman.<sup>5</sup> As Demetrius expands, “The Eames’ process depended on the ability to take small steps, massage the results, and keep moving forward, always improving, iteration by iteration.”<sup>6</sup>

The Eames’ saw value in repetition and learning-by-doing. “Charles saw that the ultimate efficiency was in maximizing the number of times one could go through a process. In project after project, the hands-on process, the ability to do something over and over until it was right, was the key.”<sup>7</sup> This process provided them with knowledge and insight into the process and product, and allowed them to internalize their

---

<sup>5</sup> Pat Kirkham, *Charles and Ray Eames: Designers of the Twentieth Century*, (MIT Press: Cambridge, 1995), 229

<sup>6</sup> Eames Demetrios, *An Eames Primer*, (Universe Publishing: New York, 2001), 115

<sup>7</sup> Eames Demetrios, *An Eames Primer*, (Universe Publishing: New York, 2001), 25

mistakes, learn from them and grow with this new acquired knowledge.<sup>8</sup> When asked what quality makes a good architect, Charles goes another step further in this regard, referring to the ability of anticipation, when referencing a conversation he had once with Eero Saarinen.

One of the things we hit upon was the quality of the host. That is, the role of the architect, or the designer, is that of a very good, thoughtful host, all of whose energy goes into trying to anticipate the needs of his guests- those who enter the building and use the objects in it. We decided that this was an essential ingredient in the design of a building or a useful object.<sup>9</sup>

This refers to the craftsman's ability, through repetition and trial and error, to anticipate or be one step ahead of a material, a process or, as the case may be, the needs of a client/ user. Charles did this not only for his design of his homes, but for all his projects, from his thorough understanding of the materials for his chairs, to the content of his films.

When looking at the design and build of their Case Study #8 home, the same attention and thought characterized by the Eames, can be seen in the design, evolution and life of what was to be known as the Eames House. Built in 1949, the final house underwent major design changes from its initial iteration. The Case Study House Program, launched in January 1945 by John Entenza, director of *Arts and Architecture*, was to partially "sponsor the design and construction of low-cost, single-family homes for the middle class as models of postwar living."<sup>10</sup> Saarinen and Eames were among the eight architects chosen to design one of the eight homes.<sup>11</sup> Each group had a hypothetical client with differing needs, which the home was to be based around. This

---

<sup>8</sup> Eames Demetrios, *An Eames Primer*, (Universe Publishing: New York, 2001), 27

<sup>9</sup> Diana Murphy, Ed., *The Work of Charles and Ray Eames: A Legacy of Invention*, (Library of Congress and Vitra Design Museum or Harry N. Abrams: New York, 1997), 132

<sup>10</sup> Diana Murphy, Ed., *The Work of Charles and Ray Eames: A Legacy of Invention*, (Library of Congress and Vitra Design Museum or Harry N. Abrams: New York, 1997), 25

<sup>11</sup> Pat Kirkham, *Charles and Ray Eames: Designers of the Twentieth Century*, (MIT Press: Cambridge, 1995), 103



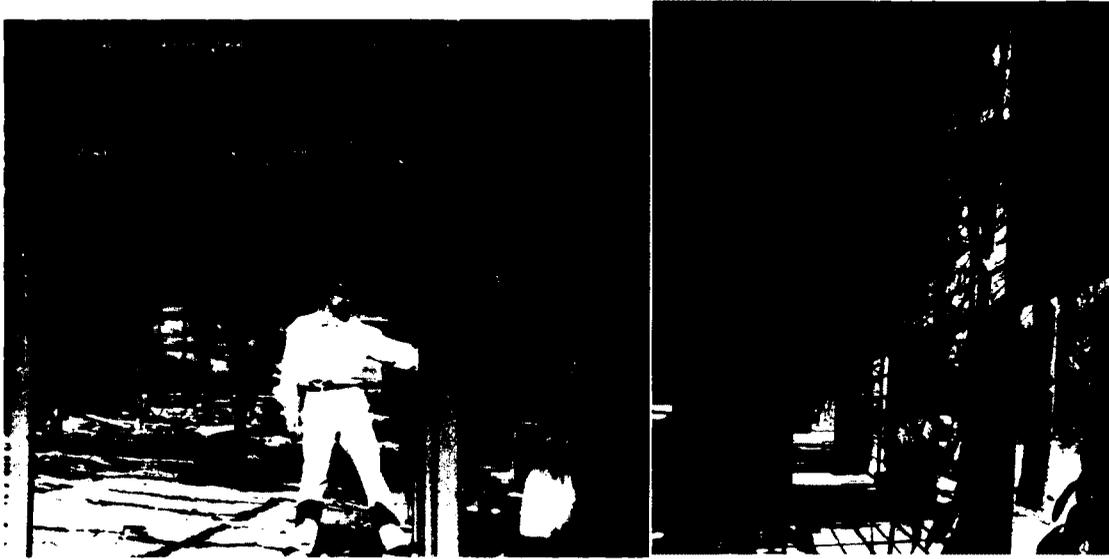


Figure 3.4 Eames House construction with Charles and Ray Eames, *An Eames Primer*. p. 120.

Figure 3.5 View through living room of Eames House, *Charles and Ray Eames: Designers of the Twentieth Century*. p. 118.

The final version of the house was built in 1949 (Figure 3.5).<sup>15</sup> As Demetrius very succinctly sums up,

In a sense, they were applying to this work of architecture their learn-by-doing process... Playing with the elements the first time around had given them some insights. But completing the drawings, living with the site, seeing the delivered materials, and spending time with the model – all these things together primed the pump for an intense couple of months of redesigning while under the gun ... The Eameses earlier time was not wasted- it was what was necessary.<sup>16</sup>

The Eameses worked with the designs they had and continued to explore and engage with the site and the design, creating a home that is, to this day, fully integrated in its surroundings, and reflective of the lives of the people who lived within it.

Charles and Ray Eames are examples of craftsmen because they thought about process, design and application. Regardless of subject or scale, they maintained the same rigour

<sup>15</sup> Brigitte Fitoussi, *Eames: Furniture 1941-1978*, (Assouline: New York, 2003), 10

<sup>16</sup> Eames Demetrios, *An Eames Primer*, (Universe Publishing: New York, 2001), 137

and attention to every project. Charles, who throughout all his projects saw himself as architect, “seeing problems in terms of their basic structure,”<sup>17</sup> applied their work ethic and process to whatever project they undertook, from their approach to their films, chairs, and the way they considered and built their home. As Joseph Giovannini commented on the Eames house in his essay entitled, *The Office of Charles Eames and Ray Kaiser: The Material Trail* in the book, *The Work of Charles and Ray Eames: A Legacy of Invention*, “It seems to be one of their plywood cabinets blown up in scale. It is built out of off-the-shelf components, assembled off the back of a truck, in just over one day (Figure 3.6 and 3.7).”<sup>18</sup> Regardless of scale, they were able to maintain their ideals and apply them however they interpreted best, either within their process or physical project.

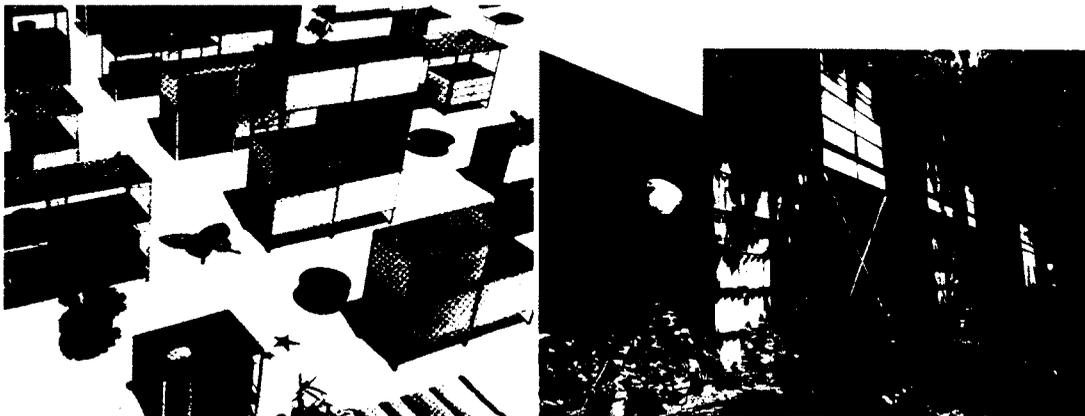


Figure 3.6 Eames storage units, 1950. *Charles and Ray Eames: Designers of the Twentieth Century*. p.257

Figure 3.7 Exterior of Eames House, Pacific Palisades, 1945-1949, *Charles and Ray Eames: Designers of the Twentieth Century*. Plates Section.

---

<sup>17</sup> Diana Murphy, Ed., *The Work of Charles and Ray Eames: A Legacy of Invention*, (Library of Congress and Vitra Design Museum or Harry N. Abrams: New York, 1997), 55

<sup>18</sup> Diana Murphy, Ed., *The Work of Charles and Ray Eames: A Legacy of Invention*, (Library of Congress and Vitra Design Museum or Harry N. Abrams: New York, 1997), 138

Gerrit Rietveld, active in the 1920's until his death in 1964, created a direct relationship with the furniture he made, particularly with the Red Blue Chair, designed in c.1918 (but not painted until c.1923), and his design of what was to be known as the Rietveld Schröder house, constructed in 1924 in Utrecht, the Netherlands (Figure 3.8 and 3.9). Though technically a furniture maker by trade, Rietveld went on to design many buildings throughout his career, with the Rietveld Schröder house being his first house commission, and his most famous. With the desire and willingness of Mrs. Truus Schröder to attempt something different, and the principles of the De Stijl movement as a guide, Rietveld, through the lens and training of a craftsman, created a house, and a body of work that, reflected not only some of the De Stijl principles and a new way of living, but a way of designing that remained constant throughout his work, regardless of scale.



Figure 3.8 Red Blue Chair, The Red Blue Chair. 1925. *Rietveld*. p. 74.

Figure 3.9 View of Schröder House, 1924. *Rietveld*. p. 99.

After working with Rietveld in 1921 on the renovation of her study in a previous home, Schröder chose to work with Rietveld again for the design of her future home for herself and her three young children, following the death of her husband. Having strong ideas about contemporary life and ways of living, Schröder became an important figure in the home's conception and design. As is stated by Paul Overy, in *The Rietveld Schröder House*, "Mrs. Schröder had no training or experience as a designer or architect, but she had a clear vision of how she wanted to live her life and the surroundings in which she wished to live it."<sup>19</sup> As an informal partner, Schröder was influential in much of the interior design of her home, and according to several early accounts and again reconfirmed after Schröder's death, the house was jointly designed by herself and Rietveld.<sup>20</sup>

Schröder was interested in contemporary ways of living, different from the bourgeois lifestyle that she had with her husband. With several pieces of Rietveld's early furniture works from c.1918 published in a 1919 *De Stijl* magazine,<sup>21</sup> and with Rietveld's and Schröder's memberships to *De Stijl*,<sup>22</sup> they seemed to have a similar vision of how to design a contemporary space for Schröder to live. Having experience with furniture making, Rietveld drew from this knowledge when designing the house. Often making three-dimensional models out of paper or cardboard before attempting a drawing,<sup>23</sup> he designed the house in a similar fashion, using his intuition and skill as a traditional craftsman to inform his process. The house, therefore, "was planned and put together like a piece of furniture."<sup>24</sup> Just as he did with the Red Blue chair, Rietveld designed the

---

<sup>19</sup> Paul Overy, Lenneke Buller, Frank den Oudsten, Bertus Mulder, trans. from Dutch, *The Rietveld Schroder House*, (De Haan/Unieboek B.V.: The Netherlands, 1988), 20

<sup>20</sup> Paul Overy, *Rietveld Furniture and the Schroder House*, exhibition catalogue, 20 October 1990-29 September 1991, (South Bank Centre: London, 1990), 14

<sup>21</sup> Marijke Kuper and Ida van Zijl, *Gerrit Th. Rietveld: 1888-1964, The complete works*, (Central Museum Utrecht: Belgium, 1992), 23

<sup>22</sup> Paul Overy, Lenneke Buller, Frank den Oudsten, Bertus Mulder, trans. from Dutch, *The Rietveld Schroder House*, (De Haan/Unieboek B.V.: The Netherlands, 1988), 23

<sup>23</sup> Paul Overy, Lenneke Buller, Frank den Oudsten, Bertus Mulder, trans. from Dutch, *The Rietveld Schroder House*, (De Haan/Unieboek B.V.: The Netherlands, 1988), 33

<sup>24</sup> Paul Overy, Lenneke Buller, Frank den Oudsten, Bertus Mulder, trans. from Dutch, *The Rietveld Schroder House*, (De Haan/Unieboek B.V.: The Netherlands, 1988), 33

house by taking it back down to its basic elements, creating a domain shift. Instead of legs/seat/back, it became walls/floor/ceiling, arranging them into new and dynamic ways (Figure 3.10 and 3.11) .<sup>25</sup> This exploration of planes is similar to his Berlin chair (Figure 3.12) and End table, designed a year before the Rietveld-Schröder house.<sup>26</sup> These pieces, like the Rietveld-Schröder house, are completely asymmetrical.

Rietveld continued to look at the design of the house as he would the design of his furniture. As his chairs were scaled to human dimensions, so too was the house. Gone were the too high ceilings that Schröder felt uncomfortable in, along with ornamentation, unnecessary forms and traditional materials.<sup>27</sup> It was intentional for both the Red Blue chair and the Schröder house to show that they were clearly made up of separate elements: “pieces of machined wood in the case of the chair,” and “the planes of walls, roof, floors in the house.”<sup>28</sup> Just like the chair, it looks easy to build and



Figure 3.10 View of the southwest and southeast facades, 1987. *The Rietveld Schroder House*, p. 51

Figure 3.11 View of interior, 1987 *The Rietveld Schroder House*, p. 11.

<sup>25</sup> Paul Overy, Lenneke Buller, Frank den Oudsten, Bertus Mulder, trans. from Dutch, *The Rietveld Schroder House*, (De Haan/Unieboek B.V.: The Netherlands, 1988), 33

<sup>26</sup> Paul Overy, Lenneke Buller, Frank den Oudsten, Bertus Mulder, trans. from Dutch, *The Rietveld Schroder House*, (De Haan/Unieboek B.V.: The Netherlands, 1988), 37

<sup>27</sup> Marijke Kuper and Ida van Zijl, *Gerrit Th. Rietveld: 1888-1964, The complete works*, (Central Museum Utrecht: Belgium, 1992), 16-17

<sup>28</sup> Paul Overy, Lenneke Buller, Frank den Oudsten, Bertus Mulder, trans. from Dutch, *The Rietveld Schroder House*, (De Haan/Unieboek B.V.: The Netherlands, 1988), 36

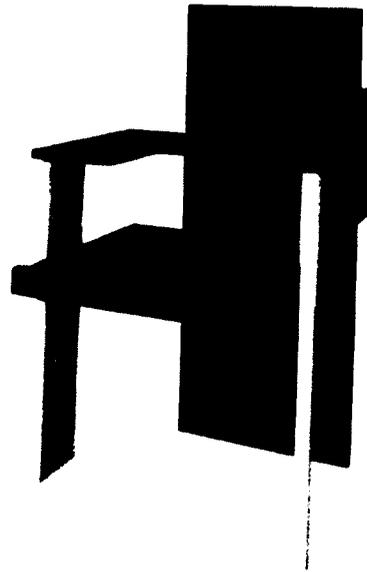


Figure 3.12 The Berlin Chair. 1923. *Rietveld*, page 92.

reproduce, which were the intentions for the Red Blue chair.<sup>29</sup> Regardless of scale or profession, and through a range of iterations, Rietveld continued to work out his ideas and thoughts on contemporary architecture and design.

His play with machine cut elements, and the hand-made alternative, is evident in both his chair and the house. Rietveld experimented with machine cutting, a new technique at the time, and created items that, though machine cut, had the look and feel of the hand-made.<sup>30</sup> Though practitioners of De Stijl promoted technology, as Rietveld did, the ideas were tempered by his feelings that the individual was of utmost importance.<sup>31</sup> His design of the house, then, is further similar to that of the chair, where there is a play between the look of the hand-made versus the reality of the machine-cut elements. The house, made of simple elements making a whole, has the air of

---

<sup>29</sup> Paul Overy, *Rietveld Furniture and the Schroder House*, exhibition catalogue, 20 October 1990-29 September 1991, (South Bank Centre: London, 1990), 17

<sup>30</sup> Paul Overy, *Rietveld Furniture and the Schroder House*, exhibition catalogue, 20 October 1990-29 September 1991, (South Bank Centre: London, 1990), 17

<sup>31</sup> Paul Overy, Lenneke Buller, Frank den Oudsten, Bertus Mulder, trans. from Dutch, *The Rietveld Schroder House*, (De Haan/Unieboek B.V.: The Netherlands, 1988), 39

standardization inherent in technologically produced items. In reality however, the open plan of the first floor is highly individualized, as it was built to adapt to the changing needs of the family within the space.<sup>32</sup>

Rietveld, having much experience in furniture making at the beginning of his architectural career, transferred his knowledge and process to think about and design a house. He used the methods and tools that he had learned in the act of making furniture, along with his ideas about life and contemporary living, and applied them to make a house. Though he shifted the scale of the project, he was able to maintain a similar way of approaching, and carrying out, his design. Rietveld once stated, "...when I got the chance to make a house based on the same principles as that (Red Blue – ed.) chair, I seized it eagerly." When discussing this comment with Schröder during an interview in 1982 at the age of 92, she replied, "...You know, once I said to that chair: you came before the house, you belong in the house... and... you are the house! They are so closely interrelated... The house and the chair are one. It belongs here. And so the house must have been generated from the chair..."<sup>33</sup>

Through the works and careers of Charles and Ray Eames and Gerrit Rietveld, it can be seen that craft manifests itself in various phases throughout the process of design. It can be present in the process an architect undertakes to realize a design, as in the Eames' work, or, it can be seen more concretely, as in Rietveld's work, where his chair studies and design had a direct influence on how he went on to design the house for Truus Schröder. Both forms, though each distinct, are integral to interpreting and applying craft in buildings, and at the urban scale. Through the design and evolution of their chairs, it was possible to explore intangible ideas and make them tangible. It is evident that each designer/architect was engaged in making relationships, finding connections and attempting to create works that were innovative in their existing environments, and, ultimately, great works of architecture.

---

<sup>32</sup> Paul Overy, Lenneke Buller, Frank den Oudsten, Bertus Mulder, trans. from Dutch, *The Rietveld Schroder House*, (De Haan/Unieboek B.V.: The Netherlands, 1988), 38

<sup>33</sup> Paul Overy, Lenneke Buller, Frank den Oudsten, Bertus Mulder, trans. from Dutch, *The Rietveld Schroder House*, (De Haan/Unieboek B.V.: The Netherlands, 1988), 61

---

The analysis and study of these two examples of architect craftsmen solidified the important role that process plays in the prevalence of craft in an architectural project. It helps in shaping ideas, informs design and allows craft to grow and evolve in architectural projects. This study introduced me to the various ways of approaching craft in architecture and emphasized that by the creation of a process, ideas and concepts can grow and evolve with time, knowledge, dedication and intuition.

## The Contemporary Architect Craftsman

As seen through the works of Gerrit Rietveld and Charles and Ray Eames, the architect craftsman can make themselves present and engaged in various phases of the design process. Though the resulting works of such architects manifest themselves in different ways, it is the architect's process and intent that bring these works together within the realm of craft at the urban scale. The architect as developer model is another example of the architect craftsman, where this kind of architect extends the notion of craft beyond the design phase, and further into the development and building stages as well. The architect craftsman can interact and engage with the urban fabric even more critically than, having the potential to influence an area over a period of time. Limited mainly in land availability and funds rather than time, these architect craftsmen have the ability to envision a broader community, one that can grow and mature with time. Though this can have a potential to be problematic, as it can create monopolies in the development of land, if addressed like the following architects, craft at the urban scale can be seen and celebrated.

It should be noted that this example of architectural practice, and the subsequent discussion in this chapter, is not meant to suggest that the architect-developer is somehow better than the other more traditional form of architect, with a

client- architect relationship. Rather, it is highlighted for its different approach to an already well established form of practice. Craft in architecture can be achieved through a rewarding client-architect relationship, yet I have chosen to discuss an alternative, less practiced approach to illustrate how craft at the urban scale can manifest itself in varying scenarios.

---

In a typical architectural design scenario, it is common for the architect to work amongst many players in order to design and construct a building. From engineers to clients to contractors, architects today are one in the mix of many agents working towards the goal of a completed building. As a result, some decisions on a project, be it a design or a final choice of a material, may not be made for the project's benefit. Questions of finance and time can cloud best practice or design solutions and the extent of the architect's design opportunities might not be fully realized. This could potentially result in a design that is generic and out of touch with its users. In response to such an environment, a small group of architects have attempted to challenge this more common model in order to gain control of the design and building process, ultimately creating buildings that, they believe, are better crafted, thought out and better suited to the surrounding environment and community.

The concept of an architect developing a project has been around in some form or another for many years. Yet the epicentre of this current and growing trend in the United States is in the unassuming city of San Diego, California. A core group of San Diego architects, namely Ted Smith, Jonathan Segal, Lloyd Russell, Sebastian Mariscal, and newcomer Mike Burnett, three of which are discussed here, have taken to this increasingly attractive way of practicing architecture and have been using San Diego as its testing grounds. In a city that was calling out for intervention and stimulation in the downtown area, San Diego proved, and still proves, to be a great and willing subject.

This small, but growing movement of architects, stemmed from a desire to side step, or employ, the middleman in order to create more control and creativity throughout the design and build process. This lets the architect hone in on this process,

allowing some leeway and dialogue for inevitable unforeseen elements, creating, in these architect's minds, better buildings. This flexibility and control will not only save time, since a middleman is not needed to relay information from builder/ contractor/ sub-contractor to architect, but also has the ability to account for, and take advantage of, individual site characteristics that might alter the design during the building process. Architecture awards winner Jonathan Segal, architect in San Diego, California, and a successful architect-developer, lets the building design evolve and change throughout the construction phase, something he would not be able to do under a developer or a client.<sup>1</sup> For him, letting the neighbourhood determine what the building will become is an important element of the design process and build. If he were not to have that freedom, his buildings would likely not fit as well as they do within the communities in which they are located. In this scenario, then, it is as if Segal's client is the neighbourhood, or city, in which he builds.

The intimate relationship of architect and site helps to realize a building that can connect to its community and last for many years. This relationship, therefore, requires careful meditation throughout the entire design and build process. It requires the architect to be flexible and lets them have the ability to "think on their toes." Since the architect-developer has a great personal connection with each building, as they are also the one funding the project, every decision has an even greater weight. The architect's projects represent themselves and their beliefs and they personally feel the outcome of every decision, especially in this scenario, since they are at the mercy of the citizens of the city, their unofficial client, to rent or buy their spaces.

The aim of the noted architect-developer's is to create something that matches the feeling and style of the neighbourhood, something that can insert itself amongst the existing fabric and, at the same time, be unique, as accorded by the site and its preferences. This model allows the architect to be flexible and have the utmost control to ensure the project is completed as sensitively as the architect deems necessary. The

---

<sup>1</sup> San Diego City Beat, *The Fearless Four*, by Kinsee Morlan. Web. July 11, 2007, <<http://www.sdcitybeat.com/sandiego/article-2796-the-fearless-four.html>>

architect-developer learns intimately about each project, using each successive experience as a guide on how to proceed on the next project. By asking questions and finding more questions in experimentation, the architect as developer has room to explore the whole field to be able to come out with a more comprehensive understanding of building than a typical architect might. Lloyd Russell, recipient of the Young Architect of the Year Award by AIA San Diego in 2007 and follower of the architect as developer model, says,

You finance the building, you build the building, you live in the building, you operate the building. There's a whole world and whole existence that helps educate you toward the next building- that's where the details come from, from being that immersed in the previous project.<sup>2</sup>

This type of architect develops an understanding of the building, the site and its situation differently than his or her more conventional counterpart. The ability to know the entire whole of a project has the potential to create a certain intimacy which can, in turn, help to design an insightful and well-crafted building.

Architect Ted Smith, often referred to as “the father of the so-called Architect as Developer movement” was first recognized for his efforts on his Go Homes project in the 1980's.<sup>3</sup> Tired of working as a spec home designer for a realtor, he left that job to start designing his own buildings. His GoHome project stemmed from a “small box-shaped house” that he built and ended up moving into after declaring bankruptcy in 1980. Interest in the house picked up with friends requesting small homes of their own. Using the same lot, Smith built small individual-looking units that shared one main kitchen, later to be known as the GoHomes. This would lead to him buying infill lots in the Little Italy of San Diego.<sup>4</sup> The buildings on these infill lots help to create a fluid urban

---

<sup>2</sup> San Diego City Beat, *The Fearless Four*, by Kinsee Morlan. Web. July 11, 2007, <<http://www.sdcitybeat.com/sandiego/article-2796-the-fearless-four.html>>

<sup>3</sup> The Architect's Newspaper, *The Producers: San Diego architects lay hands on development*, by Sam Lubell, Web. May 28, 2008, <<http://archpaper.com/news/articles.asp?id=1759>>

<sup>4</sup> San Diego City Beat, *The Fearless Four*, by Kinsee Morlan. Web. July 11, 2007, <<http://www.sdcitybeat.com/sandiego/article-2796-the-fearless-four.html>>

environment, where people living within them can connect to their surrounding neighbourhood, and city, making it an attractive place to live.

Smith's role as architect-developer allows him to act on his instincts and desire to improve on a place, and on a system, namely the realtor spec home markets that he left thirty years ago, and the state of building today. His efforts in the field are very much socially motivated and help to create a neighbourhood, and by extension a city, that thrives. He sought out a solution to something he saw and felt needed improvement and he continues to work in that similar vein today. Smith creates spaces that are not only well planned and placed, but socially responsible and aware within, and for, the existing environment. As Smith says, "When I'm talking about a good building, I'm talking about a socially responsible building. I'm not talking about a building that has the latest trendy look. Style is only skin-deep."<sup>5</sup> By working within this context, Smith looks to the city and its inhabitants to interpret the social needs of the city. This continual questioning and search of what is needed helps him to build architecture which fits into its existing context, while the process is consistent with the consideration of craft at the urban scale.

Jonathan Segal is another example of a long time architect-developer. On the San Diego scene for many years, he has been a big proponent of infill projects in the downtown core, helping to reconnect the city and its inhabitants. Over the course of his career, he has only ever had three clients.<sup>6</sup> The remainder of his projects have been completely controlled, from design to construction, by him and his firm. Having control allows him the freedom and flexibility to try new things. As Segal says in a documentary made for the Museum of Contemporary Art, San Diego, "We have the ability to experiment... We make mistakes but the fixes are our own."<sup>7</sup> This results in having the ability to study or experiment with something further, without it being deemed frivolous, unnecessary or too costly and therefore, left unexplored. If they make a

---

<sup>5</sup> San Diego City Beat, *The Fearless Four*, by Kinsee Morlan. Web. July 11, 2007, <<http://www.sdcitybeat.com/sandiego/article-2796-the-fearless-four.html>>

<sup>6</sup> Architectural Record, *The Union*, by Jane F. Kolleeny, Web. June 2008, <[http://archrecord.construction.com/projects/bts/archives/MultiFamHousing/08\\_TheUnion/default.asp](http://archrecord.construction.com/projects/bts/archives/MultiFamHousing/08_TheUnion/default.asp)>

<sup>7</sup> Breadtruck Films, Shorts. *Design+Build+Sustain*. Web. July 2011. <<http://breadtruckfilms.com/films/>>

mistake, they can experiment and fix it, without outside pressure. This can result in buildings that are innovative and, in Segal's case, "take care of themselves", as he says. He is able to incorporate strategies of cross-ventilation and solar paneling, for example, creating buildings that respond better to their existing environment.

Segal likes to work with and within the existing fabric of neighbourhoods. He makes the analogy that a city should be like a family: made up of various ages and growing over time.<sup>8</sup> It is important for Segal to have the old and the new beside one another. By removing the existing urban fabric, history is erased and there is no sense of time. By keeping it, there is not only contrast but also context, pattern and texture from which to grow. This allows Segal to be site specific, a condition that is important to him.<sup>9</sup> This is also consistent with the characteristics of the architect-craftsman. He uses the existing city context as a starting point, taking cues and building something new from what is already there. For his K Lofts project, he also consulted with the existing community, such as the residents, community stakeholders, local government officials and civic groups, for nine months to ensure the project would be consistent with the needs of the neighbourhood.<sup>10</sup> As stated in the project description on Segal's website, the design of K Lofts,

...provides a building with public and private space that enhances human scale and further promotes social interaction, shared use of space, defensible space to help revitalize this deteriorating community while at the same time enhancing the community's physical fabric.<sup>11</sup>

As the designer and developer for the project, he chose to engage the community to best account for their needs. In a neighbourhood needing affordable housing, he was

---

<sup>8</sup> Breadtruck Films, Shorts. *Design+Build+Sustain*. Web. July 2011. <<http://breadtruckfilms.com/films/>>

<sup>9</sup> San Diego City Beat, *The Fearless Four*, by Kinsee Morlan. Web. July 11, 2007, <<http://www.sdcitybeat.com/sandiego/article-2796-the-fearless-four.html>>

<sup>10</sup> Jonathan Segal Architect, *k lofts*. Web. August 2011, <<http://www.jonathansegalarchitect.com/segalfiles/klofts.html>>

<sup>11</sup> Jonathan Segal Architect, *k lofts*. Web. August 2011, <<http://www.jonathansegalarchitect.com/segalfiles/klofts.html>>



Figure 4.1 Jonathan Segal, *K Lofts - After and Before*. 2006. <[jonathansegalarchitect.com](http://jonathansegalarchitect.com)>

able to work with the community and existing site conditions to provide housing, generating fifty percent of its own electricity and create something interesting at the same time. In an effort to minimize costs, the existing convenience store and gas station were kept and integrated into the new design.<sup>12</sup> As a craftsman, he was innovative in his thinking, creating a real role for the community within the development context while at the same time thinking creatively on the possibilities and potential of the site.

Lloyd Russell spent part of his early career working for established architect-developers Ted Smith. When Russell left architecture school, he saw a discrepancy between what he was learning and what the reality was outside the limits of his school. Deciding to take real-estate classes, along with his experience in construction, led him to a job working for Ted Smith, where he learned the virtues of using his skills and

---

<sup>12</sup> Jonathan Segal Architect, *k lofts*. Web. August 2011, <<http://www.jonathansegalarchitect.com/segalfiles/klofts.html>>

knowledge in the full scope of the design and build process. Today, his firm continues in this similar path. He creates interesting and relevant buildings and spaces for his contemporaries by engaging in the entire design and build process. His R3 Triangle Building, designed and built by Russell, is located on an awkward, triangle-sized lot, next to the highway. He acknowledges the irregularities of the site and works with these resistances to create a mixed-use building that enhances an otherwise drab section of the neighbourhood in which it is located. His way of practicing allows him to explore and apply his craft in a way in which he might not otherwise be able to do. As Russell puts it, "When you see a building that's designed by a corporation or a committee, people are detached and you feel it. With us, you're physically on the site, touching, rubbing the building... That's one of the things that make these projects unique."<sup>13</sup> This intimate process allows him to explore this particular way of designing and building. This creates a unique understanding of the site, the building, as well as the specific techniques,



Figure 4.2 Lloyd Russell, *R3 Triangle Building*. 2006. <lloyd-russell.com>

---

<sup>13</sup> San Diego City Beat, *The Fearless Four*, by Kinsee Morlan. Web. July 11, 2007, <<http://www.sdcitybeat.com/sandiego/article-2796-the-fearless-four.html>>

equipping him with insight, as well as further questions as to how best proceed in his future projects. This leads to a constant flow of new ideas and innovation.

A shortcoming of this method of architecture is the possible lack of accountability to an outside source, being a client or a second or third party of some kind. It is up to the discretion of the developer, or architect-developer in this case, to decide what is to be built. Though Ted Smith claims to create housing that is socially responsible, for example, there is no specific barometer for measuring this claim. Though they are building for the inhabitants of the city, they are, for the most part, alone in deciding what exactly the city needs. These specific architect-developers mentioned, on the other hand, design many of their projects on small, or smaller, infill lots that are often overlooked by traditional developers. Either the sites are oddly shaped or located in less-than prime locations, they prefer to enhance the existing landscape rather than create a completely new one with large, monolithic structures. Yet, if not carefully considered, the role of the architect-developer can turn into more developer, less architect, risking the fine balance that these architects have currently established between design, development and craft.

These architects have selected a path that few have chosen to follow. It can be a hard road, with the risk of bankruptcy higher than that of the more typical architect. More responsibility and weight rest on their shoulders, but, to these architects, it is a necessary route and one that can lead to great rewards, namely the chance to create architecture that they care about and believe in. They have a belief in using architecture as a tool for renewal and growth of a city, and a society. They are able to follow their gut instincts, only restricted by their own budget or time, and can experiment and try out new building processes and design ideas. They are helping to shape the city and reconnect it with its inhabitants, creating more engaging communities within.

---

This architectural practice is interesting to explore in terms of its creation of craft at the urban scale since it is a process that is not commonly utilized, and, has the potential to create the exact opposite of what I have attempted to highlight; that this

kind of practice can generate interesting, site specific, architecture that is representative of craft at the urban scale. The key element here is the way that these particular architects consider their role and see it as an opportunity to explore and create things that, in a more typical client-architect relationship, might be hard, or impossible, to accomplish. This is useful in my research as it highlights a more unconventional way of generating a process of craft, further probing the possibilities of how to consider such design.

After spending the first semester of my thesis term studying in Bologna, Italy, I came away not only with academic knowledge but the very beginnings of a real understanding of European life and its particular nuances in daily life not present in Canada. Attempting to learn as much as I could about the city, its formal and informal elements alike, I immersed myself, as much as a new foreigner can for a three and a half month stay, in the daily life of the city. Walking along its streets, shopping in the markets, frequenting the many cafés and meeting and befriending locals all provided me with a great appreciation for, and much insight into, the city where the site of my thesis project is located. This opportunity afforded me the crucial ability to deepen my understanding of the city and with it, begin to think more critically about the very elements that define the city and citizens of Bologna. This, in turn, would help me to define and pinpoint my subsequent project in the area that is now known today as STAVECO.

---

Bologna, Italy, as with many European cities, has a long and varied history dating to before the Common Era. As a medieval town, it grew out from its centre over hundreds of years to become an active city within the Emilia Romagna region. As a main



road that turns into Via Emilia. Piazza Maggiore, a large and important square, is located immediately south of this division, essentially marking the centre of the city.

One of the earliest records mentioning the city that would one day become known as Bologna came from the work of Pliny the Elder, in his book entitled *Natural History*, published around 77-79 CE, while historical and archaeological findings confirm that there was a city in existence during the Bronze and Villanovan ages.<sup>3</sup> Many scholars agree that there were three to four circular walls surrounding the city throughout its history, the first of which was built in late fifth or early sixth centuries.<sup>4</sup> Each successive wall, excluding the second wall following the fall of the Roman Empire, was built larger and larger to accommodate the city's growth and set the potential for further expansion.<sup>5</sup> Though today only remnants of these walls exist, some in the form of gates, ruins, or small portions of buildings,<sup>6</sup> they nevertheless helped shape the current historical centre of Bologna. The third, or fourth, and final wall, completed sometime between 1371 and 1390, was nearly eight kilometres in length.<sup>7</sup> It was demolished at the turn of the 20<sup>th</sup> century - sometime between 1899 and 1903 - as a make-work project, and was replaced by a large ring road comprised of large boulevards known as the *Viale*. Though not as much a physical barrier as the wall, it serves as a way to demarcate the centre from its surrounding, present-day Bologna.

The historical centre of Bologna has a distinct flavour due to its many porticoes (figure 5.2). Essentially covered walkways, the porticoes are privately owned for public use. Initially meant to extend the space of homes without losing space for pedestrians outside, these covered walkways became a distinct characteristic of the city that

---

<sup>3</sup> Naomi Miller, *Renaissance Bologna: A Study in Architectural Form and Content*, (Peter Lang Publishing: New York, 1989), 6

<sup>4</sup> Naomi Miller, *Renaissance Bologna: A Study in Architectural Form and Content*, (Peter Lang Publishing: New York, 1989), 13

<sup>5</sup> Naomi Miller, *Renaissance Bologna: A Study in Architectural Form and Content*, (Peter Lang Publishing: New York, 1989), 13

<sup>6</sup> Naomi Miller, *Renaissance Bologna: A Study in Architectural Form and Content*, (Peter Lang Publishing: New York, 1989), 13

<sup>7</sup> Naomi Miller, *Renaissance Bologna: A Study in Architectural Form and Content*, (Peter Lang Publishing: New York, 1989), 13

eventually became mandated into the building practices of the Bolognese. This results in over forty kilometres of porticoes in Bologna.<sup>8</sup>

Many of the very old buildings bound by the *Viale* (within the historic centre) of Bologna radiate out from the heart of the city centre, where it is easy to lose oneself wandering. Lack of space dictates that there are fewer new constructions within the centre of the city than around its periphery. Along the north/northwest part of the historic centre and along the perimeter of the *Viale*, newer constructions exist and buildings range in ages. The old, existing buildings in the rest of the centre, some dating back to the twelfth century, have an organic sense of time about them. The craft process has manifest itself within many of these buildings and has, therefore, become possible to see and read a narrative of time on them and get a sense of their evolution and journey throughout history. When looking at a building's elevation, for example, it might be possible to see that it once had an arcade, visible now only in the shape of the bricks; a window might have been punched through the bricked up arcade, then filled in



Figure 5.2 Bologna streets with porticos. Amanda Shore, 2011.

Figure 5.3 Narrative of time on the buildings. Amanda Shore, 2011.

---

<sup>8</sup> Naomi Miller, *Renaissance Bologna: A Study in Architectural Form and Content*, (Peter Lang Publishing: New York, 1989), 33

again and later a door inserted, at odds with the existing symmetry, yet characteristic of filling a need for the program of the building (figure 5.3). This evolution of program, and therefore the physical space, illustrates the flexibility of building, and altering, in the past.

The lack of open space also influences the parking habits of the Bolognese. With a strong car culture where many people own some sort of motorized vehicle, if not a car, the question of where to park becomes important. The general lack of space creates an environment where citizens think about and consider open space in different ways. Unless a free, unobstructed space is fenced off, which is often the case with private property, it will likely have a car parked in it. A flat median in the middle of the street is sometimes even susceptible to parked cars (Figure 5.4).

The majority of the new buildings contained by the *Viale*, along with several new constructions in the very centre, maintain the look and style of the other old buildings around them. When there is a possibility to build, the people of Bologna seem reluctant to design constructions that do not look like, or mirror, the current and existing (old) fabric. New constructions often resemble the authentic, twelfth, thirteenth, fourteenth



Figure 5.4 Cars parked in the middle of the street. Amanda Shore, 2011.

century version next to it. This makes it hard to distinguish what is, and is not, new. Strict zoning laws, the result of a ground-breaking urban conservation plan, and reluctant citizens, do not want to enhance or add onto the existing, visible landscape today, in the form of infill projects or additions for example, unless it looks like the other old buildings around it. This is problematic because it becomes hard to build anything that represents the identity of the contemporary Bolognese community today. Though these zoning laws were quite innovative and a model to future conservation plans, it also made it hard to distinguish, when looking at their built landscape, who and what the contemporary citizens of Bologna are today.

This is in part because the city centre of Bologna is a fully developed flat landscape (Figure 5.5). Building and growth has seemed to reach its capacity, with only a real possibility for infill projects. Wide, busy streets intersect with smaller, quieter ones. Mixed-use characterizes the area with homes residing above and alongside shops with elaborate storefronts, restaurants with lively customers, and cafes of all shapes and sizes. Some streets are windy while others fan out as if the city pulses from the centre. It



Figure 5.5 View from above, Bologna. Amanda Shore, 2011.

Figure 5.6 Via Clavature, Bologna. Amanda Shore, 2011.

is abuzz with human activity and life, with people occupying the streets at all hours of the day. Whether it is a person walking their dog, or a bar spilling out onto the street, the city is alive (Figure 5.6).

The citizens of Bologna are a dynamic, diverse group interested in the arts, culture and history. They have many events and festivals throughout the year promoting art, dance, music, film and gender identity, for example. Festivals use the city as the canvas for their productions, having dance performances in the streets and in the piazzas, art exhibitions and music events in public spaces and buildings. History is present everywhere, a common feature in many European cities. Walking down old streets with old buildings evokes an earlier time, while important names and dates from Italian history are used as the names of piazzas and streets. This creates a constant attachment and acknowledgement of, and interaction with, the past. This, combined with seeing the city as a canvas, creates layered meanings throughout the city that can be drawn on to create interesting and contemporary spaces.

Known fondly as La Rossa, La Grassa and La Dotta (The Red, The Fat, and the Learned One), Bologna is rich with history, culture and traditions. La Rossa, the Red, is said to refer to the red roofs that characterize the city, or, by some other accounts, as a reference to the city's history of strong communist leanings. With its reputation for great food, Bologna is also, therefore, referred to as La Grassa (the fat one). Home to mortadella, other pork products, and Bolognese sauce, known as *ragù* in Bologna, among other uniquely Bolognese food, the citizens of Bologna take their food seriously. There is a pride in preparation, service, and enjoyment. The *caffé* and food are carefully prepared by the *caffé* owner/ barista and there is a pleasure in the exchange of food and conversation. Lastly, La Dotta (the learned one), refers to the tradition of education in the city. Home to the University of Bologna, it is said to be the earliest university in Europe, with its establishment dating back to 1088.<sup>9</sup> It has played a significant role in the history of Bologna and continues to be of importance today. With twenty-three

---

<sup>9</sup> Univeristà di Bologna, Our History, <<http://www.eng.unibo.it/PortaleEn/University/Our+History/default.htm>> (July 10, 2011).

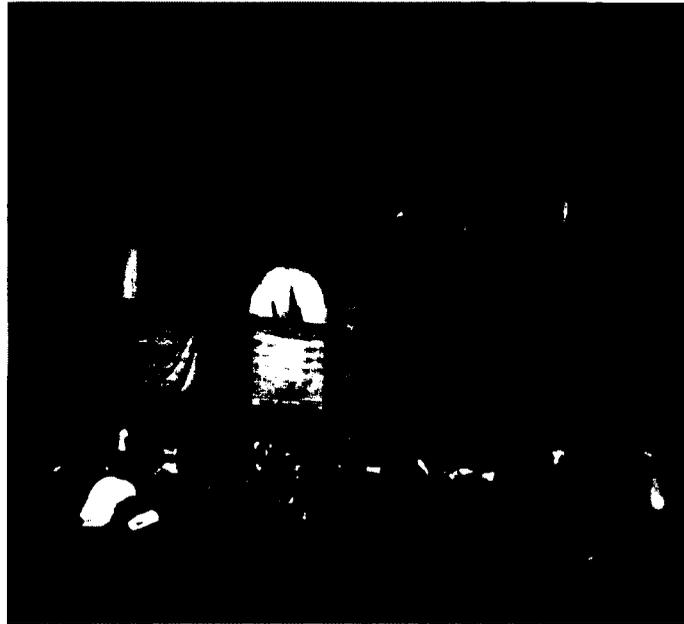


Figure 5.7 Piazza Maggiore, Bologna. Amanda Shore, 2011.

faculties, sixty-five departments<sup>10</sup> and many libraries all around, the city is home of many students and intellectuals.

Piazza Maggiore finds students and intellectuals alike gathering in the large square to meet, converse, relax and play. It holds a special place in the hearts and minds of the Bolognese and is literally the heart and centre of the city. Locals say that would rather change any other part of the city than see a change in Piazza Maggiore. Built in the thirteenth century as a market space, it took on its present form in the fifteenth century.<sup>11</sup> The space seems to function as it has done since its inception, with much activity and gathering. The piazza sits at the centre of the city with, not only present-day shops and cafés, but also, important medieval buildings surrounding the large square, being the Palazzo del Podestà (Palace of the Mayor), Palazzo Re Enzo (King Enzo's Palace), the d'Accursio Palace, where the present city hall is located, S. Petronio Basilica, and the Dei Bianchi Palace. Rallies, concerts and performances that take place

---

<sup>10</sup> Univeristà di Bologna, Academic Structures, <<http://www.eng.unibo.it/PortaleEn/University/University+Structures/Academic+Structures/default.htm>> (July 10, 2011).

<sup>11</sup> Iperbole: la rete civica di bologna, Arte e cultura: Maggiore Square, <<http://informa.comune.bologna.it/iperbole/cultura/articoli/8576/offset/0/id/8950>> (July 10, 2011).

in Piazza Maggiore today echo its role from centuries past. People cross Piazza Maggiore on a daily basis, heading from the south of the city to the north, or the other way around. It is a major thoroughfare that has become one of the main identifying symbols of the city.

Green space, unlike the Piazza Maggiore, is not a main feature of the city. On the whole, it is hard to find and fresh air is just as rare. With most of the green spaces being private, few have access to the centre city's greenery. Several small parks and piazzas with trees exist, but they are often quite small and underdeveloped. This leaves children with few green spaces in which to play in, few places for dogs to walk, and little space for the public to connect to a natural landscape.

Just south of the historic centre, however, the hills are a stark contrast to the busy and concentrated city. They are lush, green and fresh with clean-smelling air. It is characterized by its amount of unobstructed space, with homes spread out generously amongst the hilly paths and winding roads (Figure 5.8). These maze-like roads twist and curve up and down the hilly paths, passing homes, the occasional restaurant and open, uncultivated fields. Though often quiet with few inhabitants compared to the amount of



Figure 5.8 Hills around Bologna. Amanda Shore, 2011.

space, the hills are the destination for committed bicyclists, determined joggers and seasoned walkers. A Sunday morning on a sunny day may bring out a steady stream of individuals seeking exercise, fresh air and beautiful scenery.

STAVECO, which stands for *Stabilimento Veicoli da Combattimento*, essentially the Establishment of Combat Vehicles, is located just south of the historic centre, nestled in between the bustling city and the open hillside. Approximately 650 metres from west to east, and just over 500 metres from north to south at its longest point, and 200 metres at its shortest, it is located in a prime area, sitting between the hills to its immediate south, and the city, just north of the site. Three churches border STAVECO and its adjoining Carabinieri (Italian police) station, with the Convento della SS. Annunziata beside the Carabinieri to its west, and the Chiesa della Misericordia to its east, while the Chiesa di San Michele in Bosco sits on a hill to its south, looking down on the site. Beside the church to its east, STAVECO is in close proximity to Giardini Margherita, Margherita Park. One of the few designated park spaces right beside the centre of the city, it is a popular destination for running, walking and relaxing.



Figure 5.9 STAVECO area south of the historic centre, Bologna. Site plan; Beni Ministero della Difesa, 2011.

Used for the production of military munitions beginning in the 1880's- 1890's, STAVECO was a largely industrial site with many large open structures and office buildings. With one area by the ring road open as a parking lot, and a portion beyond the lot used as a tennis club for military officials, along with a small café, the majority of it now lies vacant and locked after approximately 113 years of use (Appendix 1). The Carabinieri station abutting STAVECO is, for the most part, still in use today.

Having the potential to create a direct connection to the hills beyond the site, this parcel of land, has, for many years, been the subject of various studies, by students and city planners and architects alike. In a recent citywide plan, the Urban Center, a program run by the city to present information and create dialogue for the future plans of the city, proposed seven "cities" that Bologna would try to encapsulate. Among them was a "city of the hills," incorporating STAVECO and its potential to connect the city with the adjoining hillside. Within it, they also identified STAVECO as a location for car parking.

The STAVECO area lies dormant among the inhabited parking lots and adjoining Carabinieri station. Mostly blocked off to the public, it is a space that is not widely known to the people of Bologna. With its past firmly rooted in the military history of the country, STAVECO's linear plan and boundaries exude order and a structured past of the manufacture of military munitions. With an abandoned grace, which only a ruin can attain, the buildings sigh and relax to the passage of time. The rules and regulations of the military impositions are gone and nature has crept into the buildings. Time has become a physical manifestation visible in the vines on the walls, the moss on the floor of the buildings, and the roofs that have caved. Though the paint has peeled, the site is colourful, if not more than before. The red walls still blaze, the sun illuminates the surrounding buildings, and the nature all around has an almost unnatural green glow.

The site has been left to fend for itself, or, has been given the opportunity to grow old and go back to nature, decompose. Heavily locked and not easy to penetrate, it is alone, or left alone, in this endeavour.



Figure 5.10 STAVECO site pictures. Amanda Shore, 2011.

It is mostly unknown to its neighbour to its immediate north, Bologna's historical centre, and many contrasts exist. Though a part of Bologna, STAVECO's high walls and barriers create a small, walled-in city to itself. The remains of the elongated linearity of the buildings and site are a stark contrast to the historical centre. The Bolognese community as a whole does not generally have a relationship with this land, other than their lack of such a relationship. In the hands of the military, the space served its primary purpose to the munitions workers and the soldiers within. Now that the purpose is fulfilled, STAVECO currently sits uninhabited by humans, fully alive with nature and creating a dialogue with time (Figure 5.10).

The grid-like streets within STAVECO emphasize its linear layout. Buildings vary in shape and size, some long, lean and tall, while others are smaller, one-storey rectangles. It is easy to guess which buildings were used as factories or offices. Porticos are found on some of the office-like buildings, and saw-tooth rooftops might indicate an industrial use. The network of buildings form a microcosmic system, at once independent from the rest of the city yet also isolated from it.

---

STAVECO sits between the two fundamental pieces of land that make up an important part of the city of Bologna. Seen as the meeting place between the city and its surrounding hills, two very important elements, the site can be described as being a hinge, a gateway or a connector (Figure 5.11). This site has the potential to facilitate a connection to the city and its fragmented southern hillside. With this in mind, it was necessary to consider both elements, when deciding on a program for the STAVECO area. Though the site is relatively unknown to the residents of Bologna, it is an interesting space with a distinct industrial style of building. It was not constructed to be the most beautiful or the most harmonious, but instead the site was organized according to function and facility. This purpose driven design is different than that of the

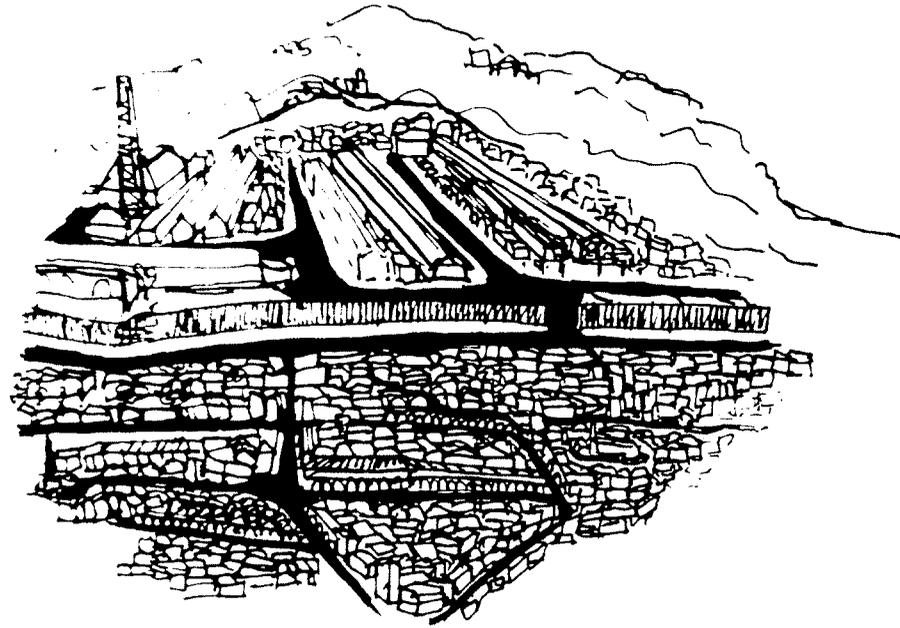


Figure 5.11 Drawing depicting STAVECO as the hinge between the city and the hills. Amanda Shore, 2011.

city centre and the hillside, and provides a new and distinct characteristic from which to draw and find common ground. Considering this as an asset of the site, it can facilitate a new and integrated approach that brings together these distinct entities, the city and the hills.

Many architects have explored the idea of craft at a small scale, such as in the design of furniture, and more particularly in the form of chairs. Whether for working out a particular process - later to be utilized in the construction or design of a building, as in the case of Gerrit Rietveld and his Red Blue Chair - or to help establish a particular design process, as seen in the works of Charles and Ray Eames, the scale of a chair allows for a manageably sized practicing ground before building a large scale architectural project.

In an effort to explore craft in a structure for Bologna, more specifically the STAVECO site, I decided to design a chair that would attempt to encapsulate what I hoped to be able to achieve in a subsequent architectural project. At the same time, I wanted to use the opportunity to explore the process of craft to help form the foundation to which I would approach the design of the site project. I looked to the Eameses process, and the parallels of Rietveld's chair to the Schroder house to inform my own process.

---

When designing a structure for the city of Bologna, it was important to establish how the building, and therefore how the chair, fits into its surrounding context. It became essential to try and encapsulate several of the defining characteristics of the

city and the site into my designs - in the smaller scale of the chair, and the larger scale of an institutional site. Where the architectural design was to be physically located, the military and industrial roots of the site, the materiality of the existing structures, and the physical linearity of the site's layout were identified of prime importance. The current situation of STAVECO, in its dilapidated state with nature reclaiming the site, also brought an interesting and important element to the design. When thinking about the city and its overarching desire to create a connection between the site, the city and the hills, the nature and character of the city became an important connection, or bridge, to unite the three independent entities. Bologna, characterized by a sense of an understated "cool", with its many eateries, cafes, small and intimate clothing and stamp collector's shops, for example, would be taken into account. The practical and sturdy nature of the city, the presence of the University and students having populated the city for centuries, combined with the resilience of the buildings also stood out as defining characteristics of the city.

The word, "chair," and what it can represent is also critical to considering a method of exploring the design of a structure or a building in a particular place. Chair is a variant from the early thirteenth century word *chaere*, from Old French *chaiere*, or its twelfth century Modern French *chaire*, which could be defined as pulpit, or throne.<sup>1</sup> This came from the Latin, *cathedra*, known as "seat." This seat, the cathedra, held much importance in the formation of cathedrals, where the throne of the bishop was held. The cathedral, with its name coming from the word *cathedra*, was actually built up around the central object of the throne.

Whether a geographical location or a metaphorical reference, the meaning behind the words chair, seat, sit (or sitting) emphasizes a particular idea of place, and its associated importance. These words have become associated with that of authority and power. To "chair" a meeting, is to preside over it, to oversee it, as a "chairman" of a board oversees a board of members. To "sit" on a committee, is to have a place, or take part in, a committee. When discussing cities or homes, for example, they may "sit" in a

---

<sup>1</sup> Oxford Dictionaries, *Situate*. February 2011, < <http://oxforddictionaries.com/definition/chair> >

valley, or on a hill. This describes where they are placed, or situated, which in Latin, *situat-* comes from the verb *situare* meaning “place”, from Latin *situs*, “site.”<sup>2</sup> From this, it can be extrapolated that a site and a seat, and further, a chair and its associated actions/meanings (as discussed above), can have a direct relationship to one another, emphasizing the connection between a place and a seat. These ideas are further emphasized when a chair, the seat, is used as a tool to help express ideas of craft in a building or city, the place. A chair, just like a building or a structure is also inhabited, and, therefore, helps to further illustrate the connection between the two distinct entities.

As mentioned above, designing a chair for Bologna requires a consideration of the characteristics of the site and the city. The definitions and various associations with, and applications of, the word chair also play an important role in this. With all this in mind, a model was created based on the characteristics of the site and city listed above (Figure 6.1).

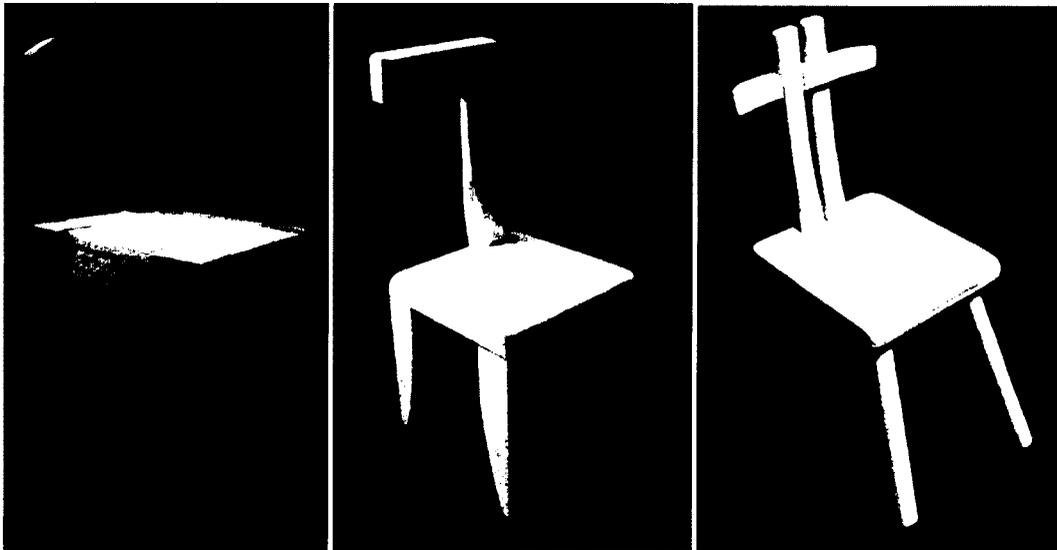


Figure 6.1 Chair model One, Amanda Shore, 2011.

Figure 6.2 Chair model Two, Amanda Shore, 2011.

Figure 6.3 Chair model Three, Amanda Shore, 2011.

---

<sup>2</sup> Oxford Dictionaries, *Situate*. February 2011, <<http://oxforddictionaries.com/definition/situate>>

It was driven by the emotion and intuition inspired from the characteristics rather than guided by standards and rules. It was a first attempt which would set the tone and orient my further design path, launching a process of crafting, modifying, and exploring shapes, forms and ideas. Each subsequent model explored means of refining these elements while also experimenting with differing representations, yet maintaining similar, if not the same, ideas (Figure 6.2, 6.3). Four related, but distinct, models were created. The fourth and most recent iteration was chosen to be part of the present thesis, taking the process to a new path of refinement for this particular design (Figure 6.4). Reference to “iteration” rather than “final” model is deliberate, as the creation of various iterations of the designs can be an ongoing process, always evolving, not ever necessarily reaching a finite conclusion, as was the case for many of the Eameses projects. This one, to date, contains some, if not many, of the characteristics and the feelings from the first, second and third design, yet each successive model helped prompt something new- either evident physically in the design, or metaphorically in the meaning behind the design. This therefore is not a set process, rather it is one guided by a series of decisions, each influencing what will, or can, result. The chair design



Figure 6.4 Chair Model Four, Amanda Shore, 2011.

Figure 6.5 Chair Model Four construction drawings, Amanda Shore, 2011.

represented in the thesis, therefore, is one of the possible routes that can be taken when approaching a design for the STAVECO site.

This chair represents the relationship that the city of Bologna has with its surrounding area, while at the same time illustrates the essence of the city, with its classic yet slightly different character, and its unassuming presence. The STAVECO site is also present in the linearity and hidden complexity of the several joints, representing a play between, and cooperation with, the past and present uses of the site. Taken further, the sometimes overt, sometimes implied joints suggest the fine balance that is needed when considering how the site may become a part of the city, where some direct and other less obvious connections may be made with the existing city fabric. The desire to express the age of the chair through time resulted in the choice of wood as a building material. Through use and abuse, the wood will gain in character and patina. Over time, it might be patched and repaired, parts replaced or restored, surfaces sanded or painted to give a sense of renewal. All the while, the core will remain and tell the story of the passing of time and usage.

This chair, constructed of wood, is made up of several elements put together with particular joining methods (Figure 6.5). Each back leg is a part of the back of the chair, creating a fluid, sweeping movement from the bottom to the top of the chair. An L-shape is formed as the front legs connect with the seat supports of the chair. The back/back legs form one main element, while the seat supports/front legs form the other. The seat and back rest are two separate pieces meant look as if they have just been placed on the seat and inserted in the middle of the back supports, respectively. There is a play between the hidden joinery, with some parts more obvious than others. The front element visibly rests on a notched part of the back element, resulting in a relationship where each depends on the other: one to hold up the sitter, the other to provide the support for the person to be able to sit. This becomes an important connection, not only in the aesthetic and symbolic nature of the chair, but also in its structural integrity. This joint, though elegant, must be strong enough to hold the weight of the sitter. The seat, however, looks as though it rests at ease on the seat

supports. This might be slightly deceiving as it too is joined to the rest of the chair, albeit less obviously. The backrest seems to slide in between the two back pieces and rests casually in its place. This, like the seat, might also be slightly deceiving, as it needs to be joined carefully for it to rest as desired.

In an attempt to fully contemplate the intricacies of creating a chair for the city, I soon understood that it would be important to not only go through the process of the evolution of the design as outlined above, but go one step further, as the architect developers that are chronicled do. Not in the actual construction of a building as in their case, but in the construction of the design for my chair. This process would put me head on with engaging in the principles of the architect craftsman, allowing me to wallow in error, for example, and perhaps create something that mirrors the thought, evolution and intention of this craft process.

Not having built a chair before, the learning curve required was great. Learning the basics became of fundamental importance, as their impact would be felt throughout the building of the chair. Namely, the leveling and planing of the wood, requiring precision and exact right angles, is of utmost importance as it is the base for which all subsequent angles and dimensions are then measured. If this is off, all measurements will be off as well. After this, creating various joints for the chair required a combination of precision and common sense. When a tenon is not the exact shape to fit into the mortise, as is likely the case, general common sense and good observation skills are required to remedy the situation. Trial and error come into play and background knowledge, and knowledge in other areas can help to fix a problem. After completing a task for the first time, each successive attempt became a little easier, being able to use intuition to help guide the process. Knowing the steps required added a greater significance to each step, making myself more aware of how it would affect the final result, making the whole process, if not easier, then more predictable and understandable. With the completion of this chair, and such other future chairs, I can see how my intuition will increase, and my ability and desire to experiment will only be heightened, allowing myself to further create and evolve (Appendix 2).

Once the design of the chair had been laid out, the next step began to look at the chair as a foundation, or inspiration, on how to proceed with the design and program for STAVECO. Even though I was moving from a small scale to a large one, it was still important to consider the elements and characteristics that were used to create the design of the chair.

Having the belief that a site of STAVECO's size should not be developed by one person or group, rather, like the process of craft itself, the programs should come about through a progression, or evolution of the site. With this in mind, I decided only to begin the process of site regeneration, proposing a first program that could act as a generator for future projects and designs. The general public of Bologna has not had access to the site, and therefore has had little opportunity to explore the possibilities of it. Because of this, it became important to choose a program that would occupy only a relatively small portion of the site, allowing the citizens to get acquainted with the specific area and slowly fan out to the rest of the site, exploring its potential for future programming.

STAVECO is a site with a lot of possibilities, partly because it is a large space and unoccupied. This creates many possibilities in which to imagine and create. I began with a series of drawings, attempting to create a link with the old, run-down buildings I saw and my ideas about the accompanying chair (Figure 6.6). Other drawings attempted to abstract the image I saw of the city with that of the site and the hills (Figure 6.7), while some collages addressed the notion of the site as a threshold, and gateway, between the city and the hills (Appendix 3.1 - 3.3). What stuck out was the attempt to bring these elements, the city, site and hills together, to capitalize on this feeling of threshold, making it a point of reference between the two distinct entities (Appendix 4). After evaluating what I thought would be of benefit for the city, the generation of a list of programs began to take shape, occupying different areas of the site. The linking theme

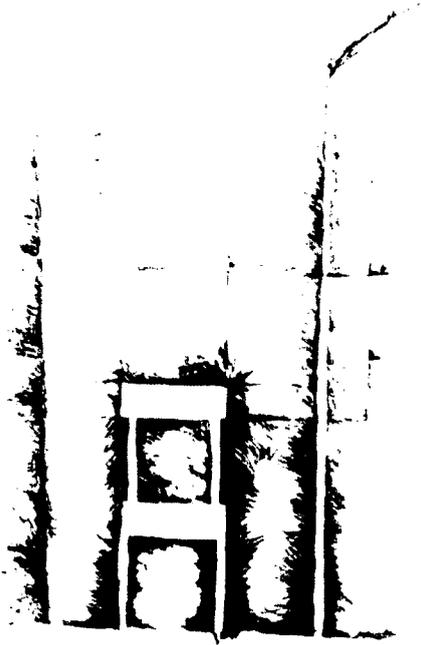


Figure 6.6 Drawing experimentation of relationship between chair and building, Amanda Shore, 2011.

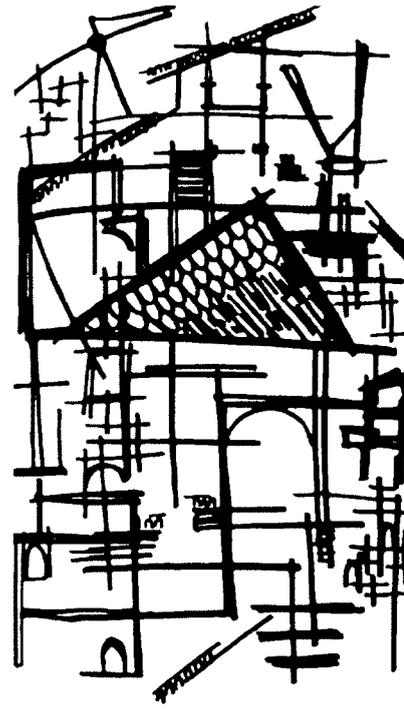


Figure 6.7 Drawing representing the fusing of site, city and hills. Amanda Shore, 2011.

between these ideas was something culturally/arts oriented, highlighting the city's emphasis and acceptance of its many art festivals and events throughout the city, as well as its, seemingly opposing, functional nature of the city. This resulted in the decision to place a parking structure/ performance venue through an existing shell of a building at the northwest corner of the site, and where the current, surface parking lot is presently located, using it as a generator for future programs.

It is my intention that, as residents become acquainted with it, the STAVECO site will grow over time. It is with particular thought, therefore, to place the programmed spaces in the northwest corner of the site, bordering the Carabinieri property, and in close proximity of the *Viale*. This area is currently used as a surface parking lot. By redeveloping in this particular location, the daily use of the parking area, and the proximity to the *Viale* will provide immediate exposure of the redeveloping site to inhabitants and help draw people further into the site (Appendix 5).

The choice to design a parking structure reflects the city's needs for parking and the ample space the site provides make this possible. Though the site already offers parking, a dedicated parking structure, rather than scattered cars in and amongst the shells of old buildings, organize the parking into one area, leaving room for other functions to emerge as the site functions evolve. As there is a dearth of parking in the city, along with driving restrictions within the city centre, many Bolognese have need for parking facilities. This is especially true when they are coming to the centre from the outskirts of the city. This site, with improved parking facilities could eventually become a hub of activity, and a destination, for people either entering or leaving the city, further emphasizing the notion of the threshold.

The parking structure and its interior would act as a performance space, where the structure itself would facilitate and encourage informal arts and culture performances, or, more programmed events. The addition of the performance space acts as an iteration on the traditional parking structure, while also helping to foster the urban cultural scene in Bologna. After experimenting with many designs, and various forms, with double spirals, single spirals, ramps and existing buildings (Figure 6.8), I

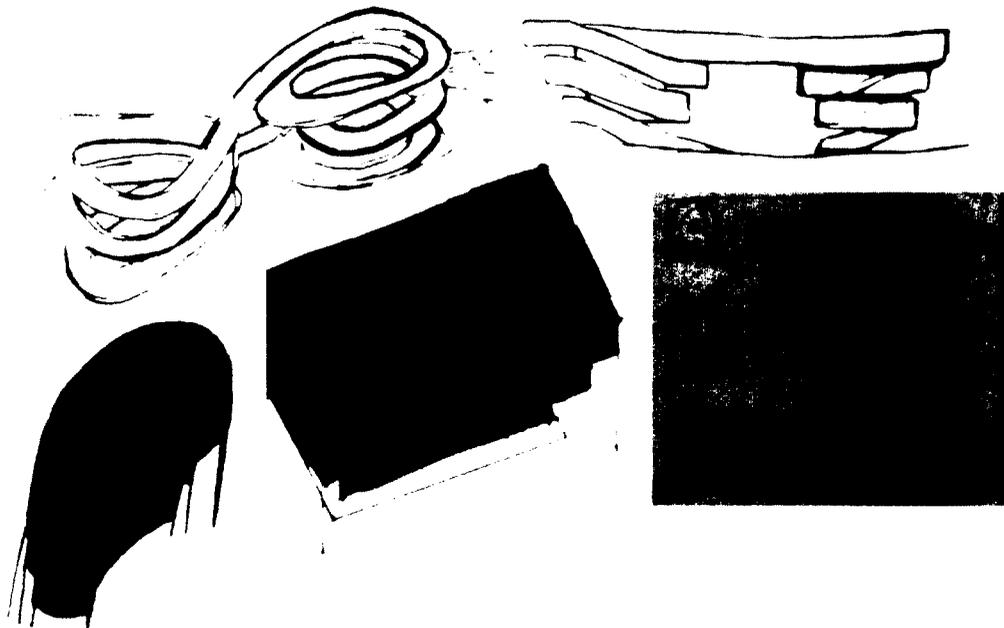


Figure 6.8 Initial sketches for parking structure. Amanda Shore, 2011.



Figure 6.9 Narrowing in on a design, sketches. Amanda Shore, 2011.

decided upon a rectangular, three-level parking facility design, which gains slightly in area with each successive floor (Figure 6.9) (Appendix 6.1 – 6.3). Though flat on the exterior, the interior steps out with each successive floor, emulating balcony theatre seating, around an open space set for performances. This facilitates spectacle all around, creating a play between performer and spectator. People can look down on the performance below from their seats lining the perimeter of the interior, watch other spectators across them, and become an active player in the spectacle in the act of parking a car.

As the parking structure is intended to be a generator for future interventions, the next structure proposed is an accompanying food market/ open space (Figure 6.10). It is next to the parking structure, almost completely covering the downward exit spiral of the parking facility. This idea evolved from the notion that if people were coming into



Figure 6.10 Sketches for market beside parking/ theatre structure. Amanda Shore, 2011.

the site, from either the outside or inside of the city centre, they might be interested in having other services available to them as well. This begins to prolong the period of time spent in the STAVECO area, allowing people to become more familiar with the space, slowly building up a community. Currently, food stands exist along the busy *Viale*, close to the STAVECO site. These stalls could have the option to move into such a space, protecting them from the elements and speeding cars along the street.

The market space is covered yet it is an open, non-insulated space. There is spiraled ramp, clad in perforated metal, which could be used for cultural and artistic projections. It has an airy, open market feel, and acts as a contrasting element to its programmed, neighbouring parking facility. After exploring various design possibilities, a continuous loosely spiraling ramp was chosen to direct a steady flow of people through the facility and around a vertical green wall, cutting through the centre of the space, adding greenery and direction to the flow of people (Appendix 7.1 – 7.7). As the ramp ascends to the area that would be of second floor height, an option appears to continue up the ramp and around the market space, or, into a second floor café. The café, which was previously located on the site which is now the parking facility/ performance space, would be relocated here. As the only insulated space, it could serve as a resting place for tired shoppers, or a place to go after watching a performance next door (Appendix 8). If not entering the café, entrants to the market would be to go up and along the ramp

before descending on the other side of the vertical green wall. All along the ramp, stalls selling various goods, arts and produce would populate the periphery of the open space (Appendix 9).

In order to visually connect the parking facility/ performance space with the market, a nod to the market was created by reflecting the market's curved shape on one side of the interior performance courtyard of the parking facility/ performance space. This helps to establish a visual language for the site. The curved side retains the ability to park either small vehicles or bicycles, and creates a break from the otherwise geometric form (Appendix 10.1 – 10.2).

A series of drawings were created to examine the essence of the space. Some quick sketches, others more detailed, it became an exercise to examine and contemplate how the space would function as a space (Appendix 11.1 – 11.2), and within its context (Appendix 12.1 – 12.5). These drawings allowed myself to become more intimate with the space I was creating, allowing a deeper understanding into how these places could function alongside one another and within their existing environments.

Both programs, along with the chair, aim to represent craft and craft at the urban scale, through site and city characteristic considerations, and the subsequent representations. Each project uses these considerations to delve into and refine a process and way of thinking that add texture and context to the designs. Taking cues from the surrounding urban fabric, the parking garage/ performance space and the adjoining market sets the stage to how design and development can proceed and evolve over time.

## Conclusion

Through a detailed analysis of Sennett's book, *The Craftsman*, several characteristics emerged as pivotal to defining craft in architecture. For this thesis, craft is defined as a process that encompasses, either abstractly or concretely: domain shift, trial and error, resistance and ambiguity, complexity, and the use of tools. It is an iterative process, building and growing off what exists, and using it as a jumping off point to create something new within a given context. The architect-craftsman utilizes this process from working at the level of a building detail to the urban scale.

In order to characterize the architect-craftsman, I discussed Charles and Ray Eames, Gerrit Rietveld, as well as some contemporary architect-developers, examining craft in the production of their work. These characteristics, as well as studying the way in which these architects and designers embodied craft and its process, offered ideas to design a well-crafted space for Bologna and its inhabitants. To test this understanding of craft as an iterative process, a project was developed for the STAVECO district of Bologna, Italy.

As discussed above, five characteristics help to define craft and how, when seen through the lens of architecture, it can be applied at the urban scale. These five characteristics are:

1. *Domain shift* - the application of one area of knowledge to another one, creating something new in the process.<sup>1</sup> When viewed architecturally, this can be interpreted as applying knowledge, either architectural or not, to the architectural process.

2. *Trial and error*— refers to wallowing in error as crucial to the iterative process for coming up with new ideas and solutions.<sup>2</sup> Failing something opens up the path for trying something else in a new way. Architecturally, this can refer to trying new techniques and processes and not merely deferring to convention.

3. *Resistance and ambiguity*— refers to the idea of working with resistance rather than against it, while ambiguity refers to the idea of not giving away everything right at the outset.<sup>3</sup> Design is an exploration in which a person encounters and discovers in their own way, creating a personal interpretation and relationship with the design and enriching the overall experience.

4. *Complexity*— creates an intimate experience and interpretation of a design, as it calls on a person to engage in their surroundings.<sup>4</sup> In addition, complexity feeds the architectural imagination.

5. *Use of tools*— the “all-in-one” tool has room for creativity and exploration as it allows for many ways of doing or fixing something.<sup>5</sup> The “fit-for-purpose” tool, on the other hand, has only one purpose and can limit the experimentation and exploration that can come from such a tool. When translated to the realm of architecture, this can refer to not relying on only one process or technique to explore design opportunities. Rather, using a variety of tools in unconventional ways fosters creativity. Computer programs, used in conjunction with hand drawings, for example, help convey ideas in a variety of ways, expanding the understanding and possibilities of a design. What separates the architect from the architect-craftsman is the way the architect-craftsman creates a play between these five characteristics.

---

<sup>1</sup> Richard Sennett, *The Craftsman*, (Yale University Press: New Haven and London, 2008), 127

<sup>2</sup> Richard Sennett, *The Craftsman*, (Yale University Press: New Haven and London, 2008), 160

<sup>3</sup> Richard Sennett, *The Craftsman*, (Yale University Press: New Haven and London, 2008), 226

<sup>4</sup> Richard Sennett, *The Craftsman*, (Yale University Press: New Haven and London, 2008), 225

<sup>5</sup> Richard Sennett, *The Craftsman*, (Yale University Press: New Haven and London, 2008), 200

In conjunction with these defining characteristics, and explored further in the *Crafting Definitions* chapter, is the understanding of the community and unique characteristics the architect-craftsman is working in, the depth and application of knowledge in and out of the field, the drive for education and relevancy, the exploration of craft in various forms and scales, along with the mindset to learn and grow from each experience encountered. These characteristics must be utilized and explored on a continual basis, informing and enhancing future designs through constant application of these ideas. This creates a body of work that then resonates with the community in which the design is located.

Charles and Ray Eames were able to illustrate the emphasis on, and their dedication to, the craft process, as seen in the chapter, *Master Craftsmen*. Whether through the design of their toys, exhibitions, chairs or architecture, each project helped to refine their process of craft and would be of benefit for each project they encountered, including the design and building of their home. Over many years and even more projects, the Eameses conveyed the importance of trial and error and domain shifts. Trial and error would lead them to new techniques or ways of doing things, while domain shifts were of benefit when applying one way of doing or creating something to something else completely new. Though the results may have varied, their craft process is what kept their dedication and commitment at the forefront of every project.

Gerrit Rietveld, also further explored in *Master Craftsmen*, created a direct connection to the craft process by using his Red Blue chair to help inform how he would design the Schroder House, in conjunction with Truus Schroder. Rietveld, being a furniture maker by trade, used his skills and understanding of this *métier* and applied it to his architecture.<sup>6</sup> He and Schroder also took their thoughts and ideas on the De Stijl movement and applied them to the design of the house, forming a domain shift. Using ideas from De Stijl along with the ideas, process and design of the Red Blue chair, he created a direct connection between the chair and the design and building of the house

---

<sup>6</sup> Paul Overy, Lenneke Buller, Frank den Oudsten, Bertus Mulder, trans. from Dutch, *The Rietveld Schroder House*, (De Haan/Unieboek B.V.: The Netherlands, 1988), 33

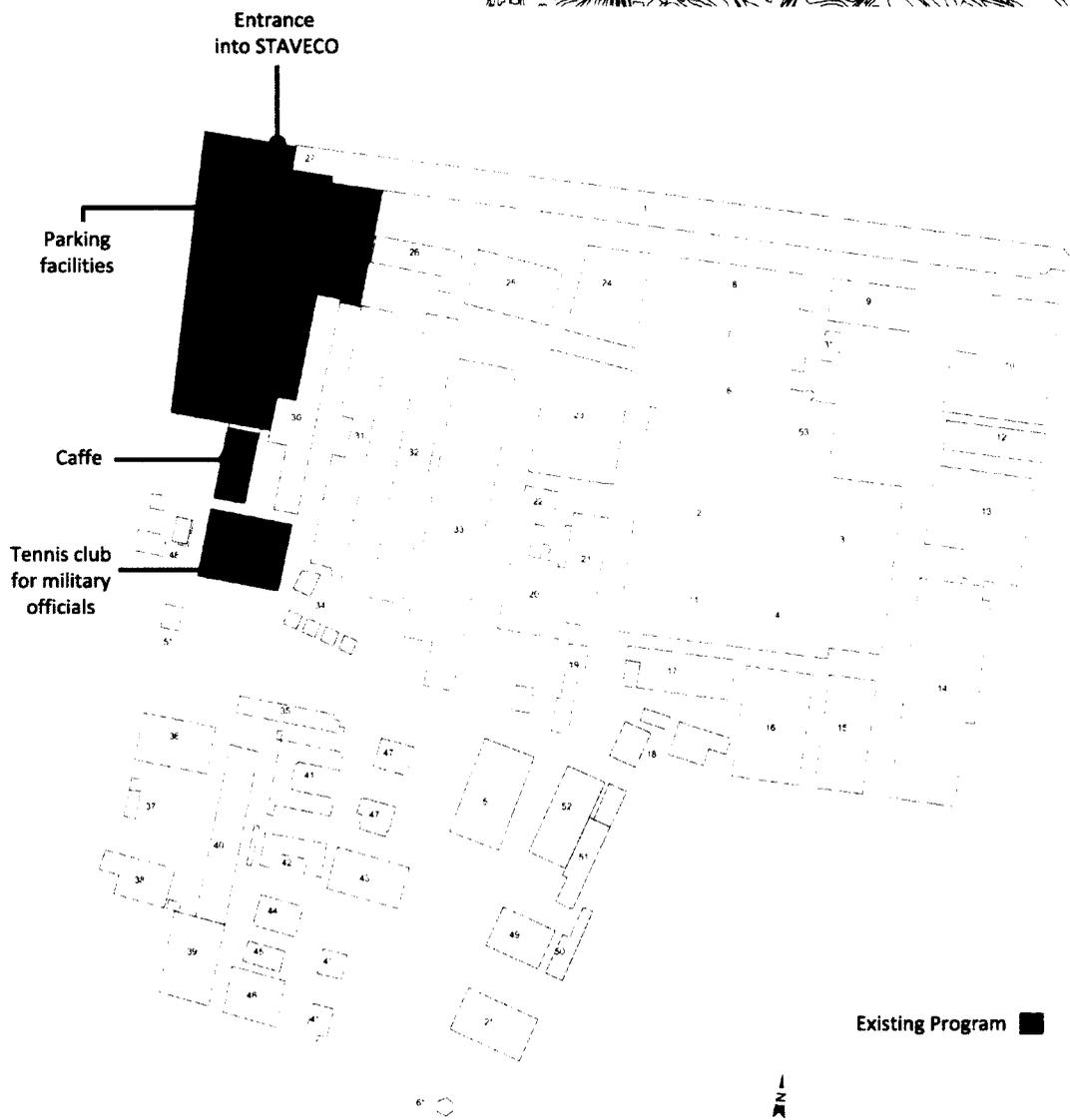
for Schroder. This illustrates the direct connection that the craft process of building the chair can have on the craft process of designing and building the house.

The architect developers, discussed in the chapter, *Contemporary Architect Craftsmen*, are able to extend the notion of craft beyond the design phase as they not only design but build as well. They put much store in process and trial and error. They have a greater flexibility not only to learn from mistakes but also to explore and experiment, creating new design and living possibilities that might otherwise be difficult to do in other non- architect developer situations. These architects represent a new way of approaching the traditional architectural design model. Though not widely practiced, it can create a unique understanding and relationship with the site, building and existing context, and, as a result, extends the notion of craft at the urban scale to another level.

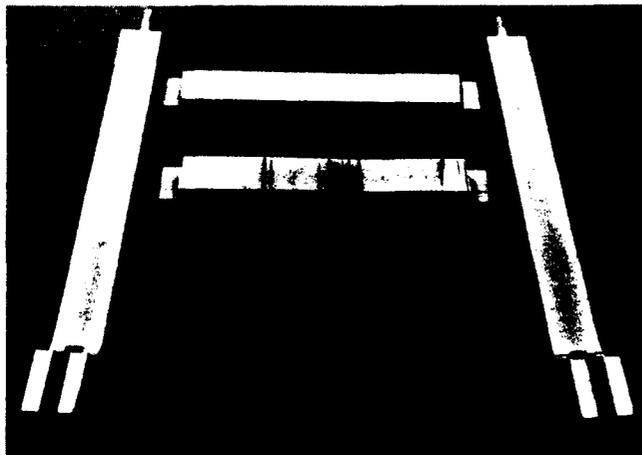
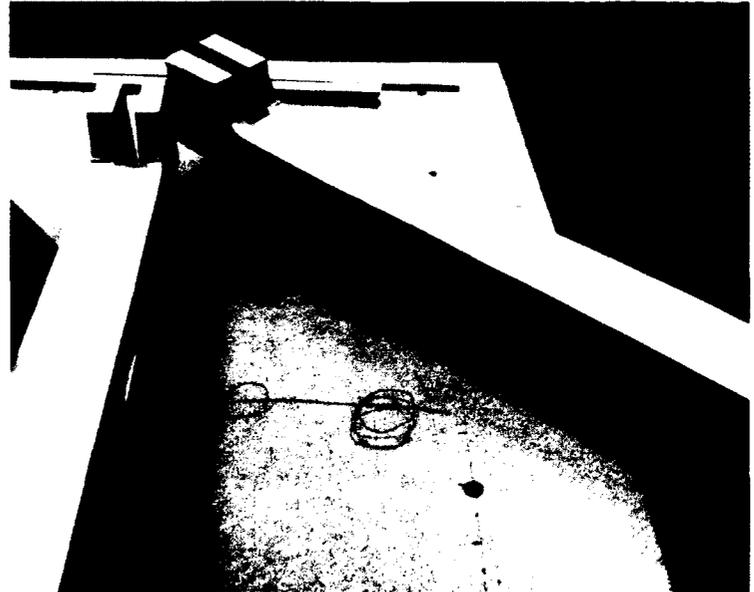
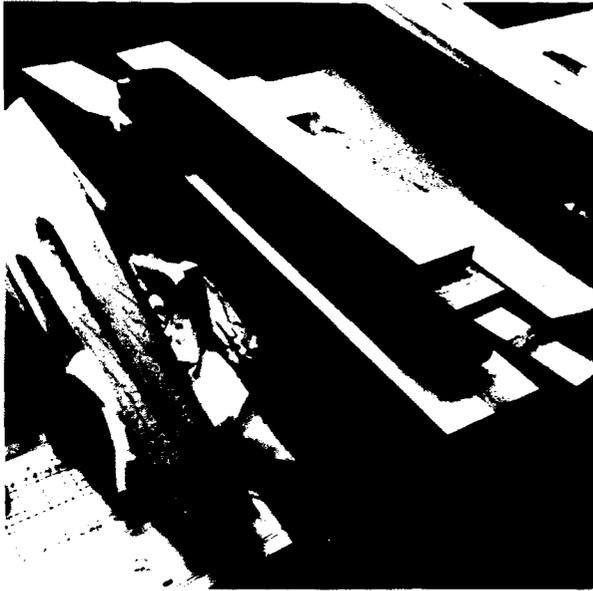
It is with all these elements in mind that the approach and design emerged for the STAVECO area in Bologna, Italy. In a city with so much history, culture and dense urban fabric, it was important for my design to acknowledge qualities specific to the site and the community. With this, there was an attempt to embody the elements of craft and the craft process discussed throughout the research and exploration. Domain shift, trial and error, resistance and ambiguity, complexity and use of tools, became barometers in gauging how to frame the enquiry in order create craft at the urban scale. By further considering and taking account of my surroundings (the city of Bologna and its environs), considering the context and needs of the citizens, creating parallels with other processes of craft (the design and build of the chair for Bologna), there was an attempt to embody the characteristics of the architect craftsman by creating the resulting chair, parking lot/performance space and the accompanying market for Bologna.

Going through and refining the process of craft and playing with ideas and explorations helps set the stage for further, and potentially larger, iterations in the future. The design and build of the chair for Bologna set a design on a track that built upon ideas and thoughts of Bologna. The exploration and exercise helped identify these elements, test them out, and translate them into something tangible on larger scale.

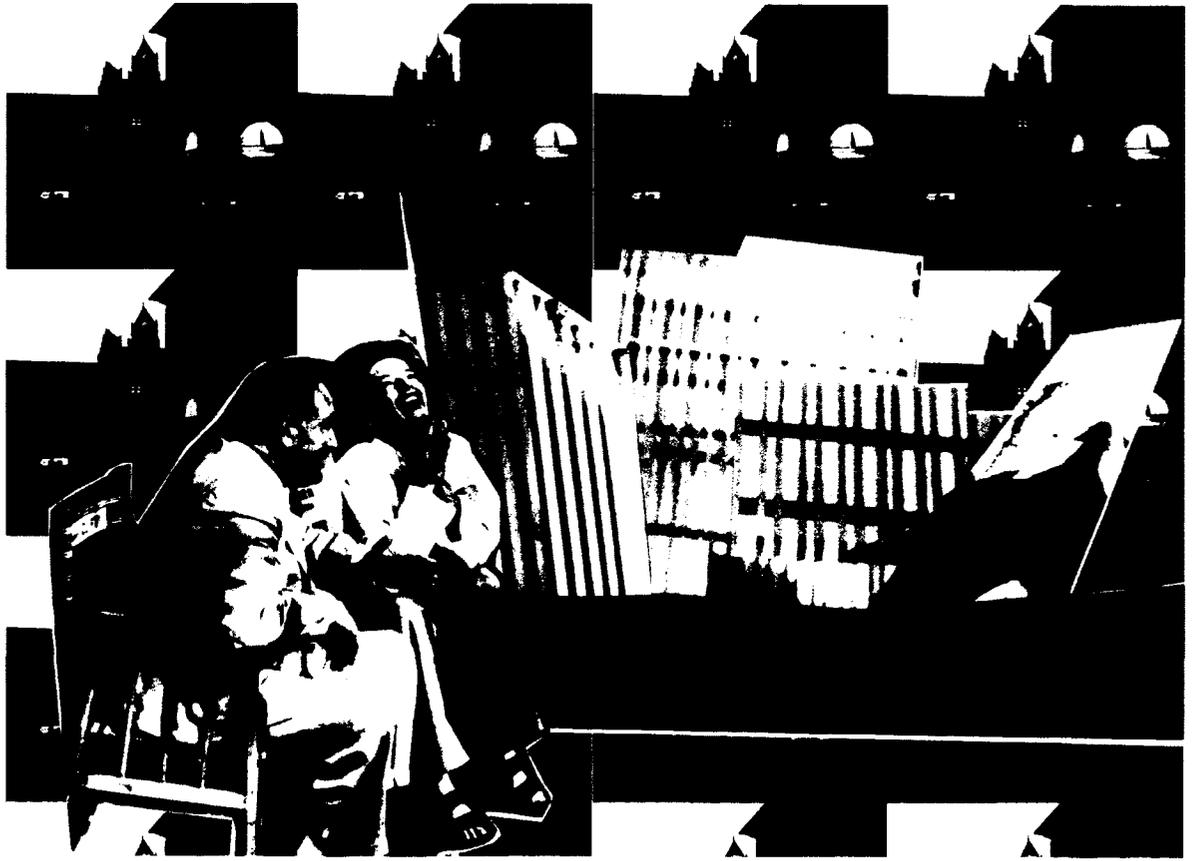
Each time this is done, the process of craft is refined and taken further, helping each successive project.



Appendix 1  
 STAVECO site plan  
 and existing program



Appendix 2  
Chair process pictures



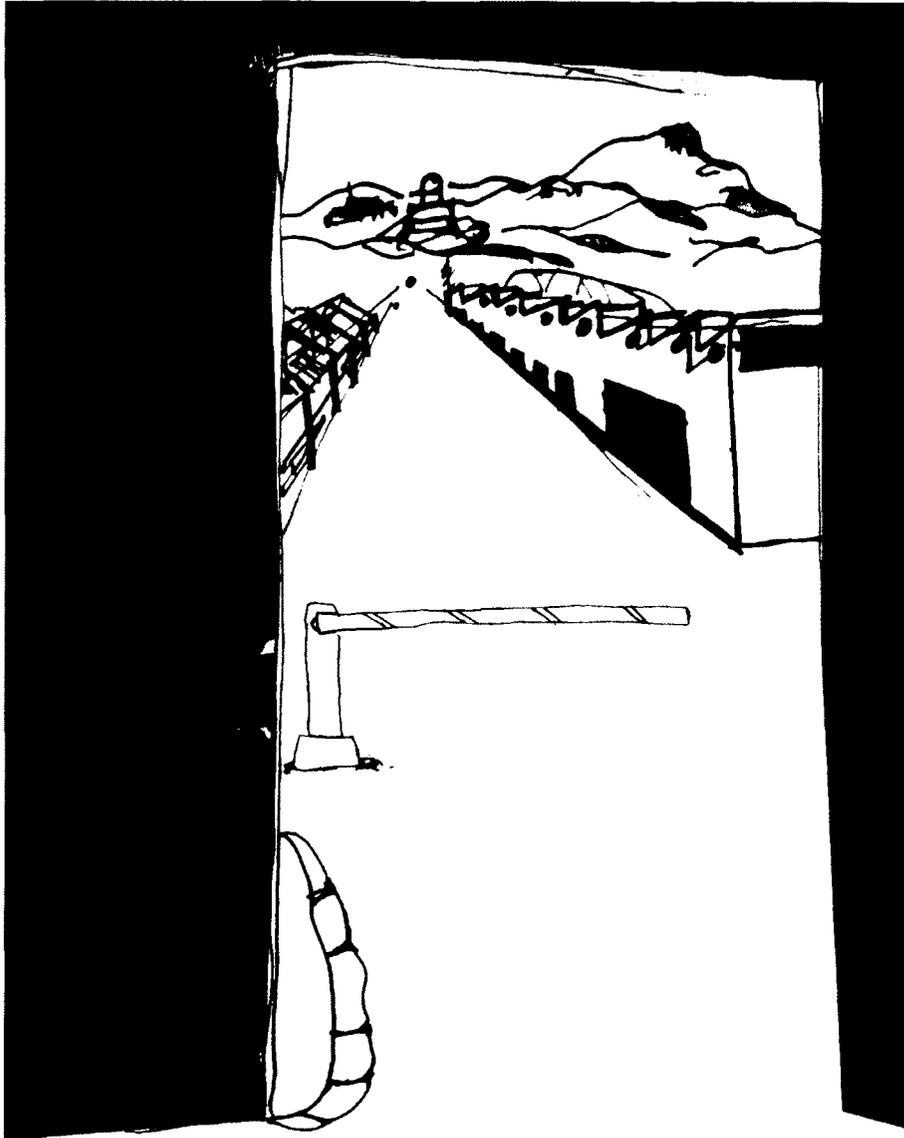
Appendix 3.1  
Collages emphasizing the site  
as a threshold, or gateway  
between the city and the hills.



Appendix 3.2  
Collage emphasizing the site  
as a threshold, or gateway  
between the city and the hills -  
View from San Michele in Bosco



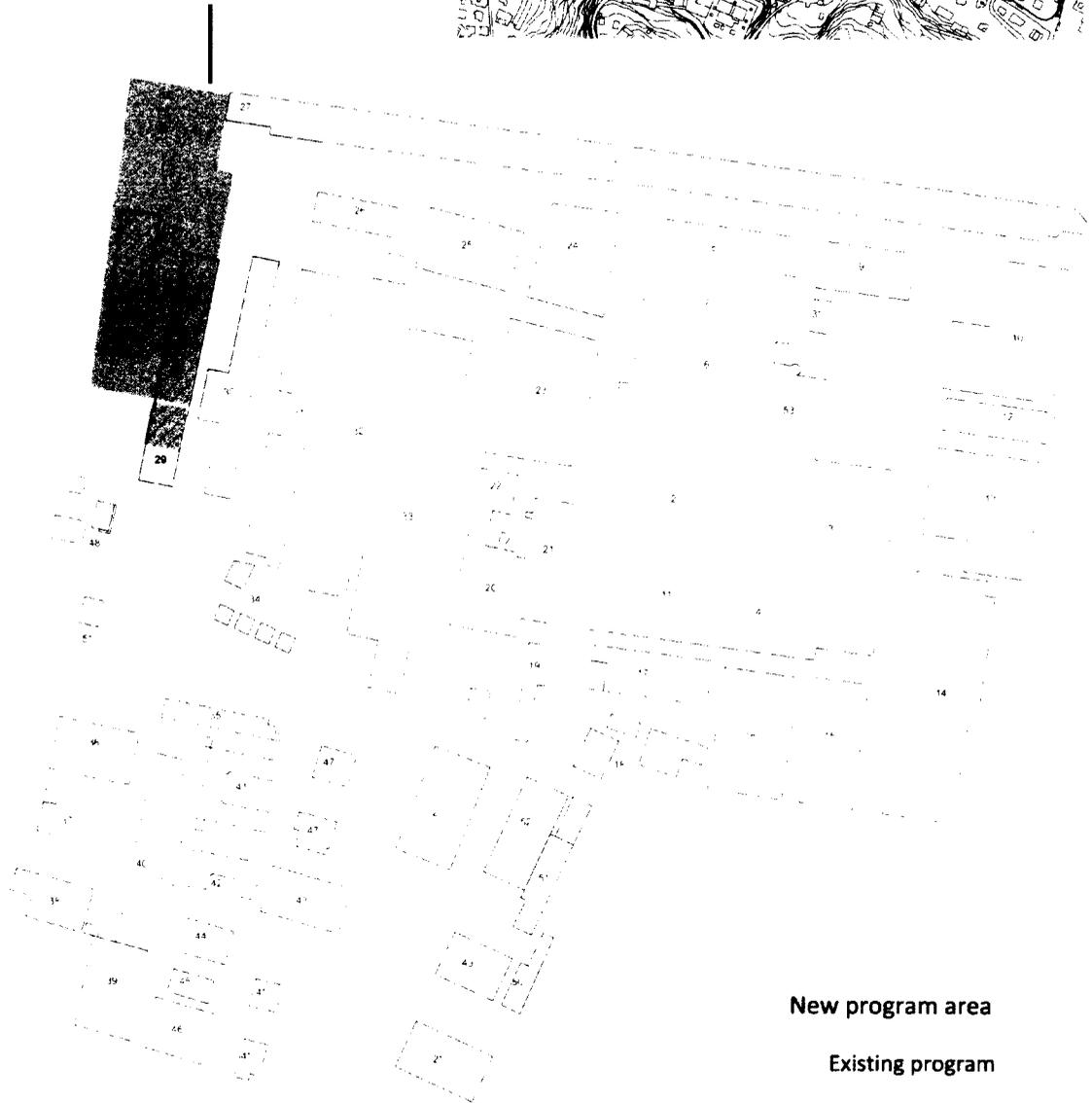
Appendix 3.3  
Collages emphasizing the site  
as a threshold, or gateway  
between the city and the hills.



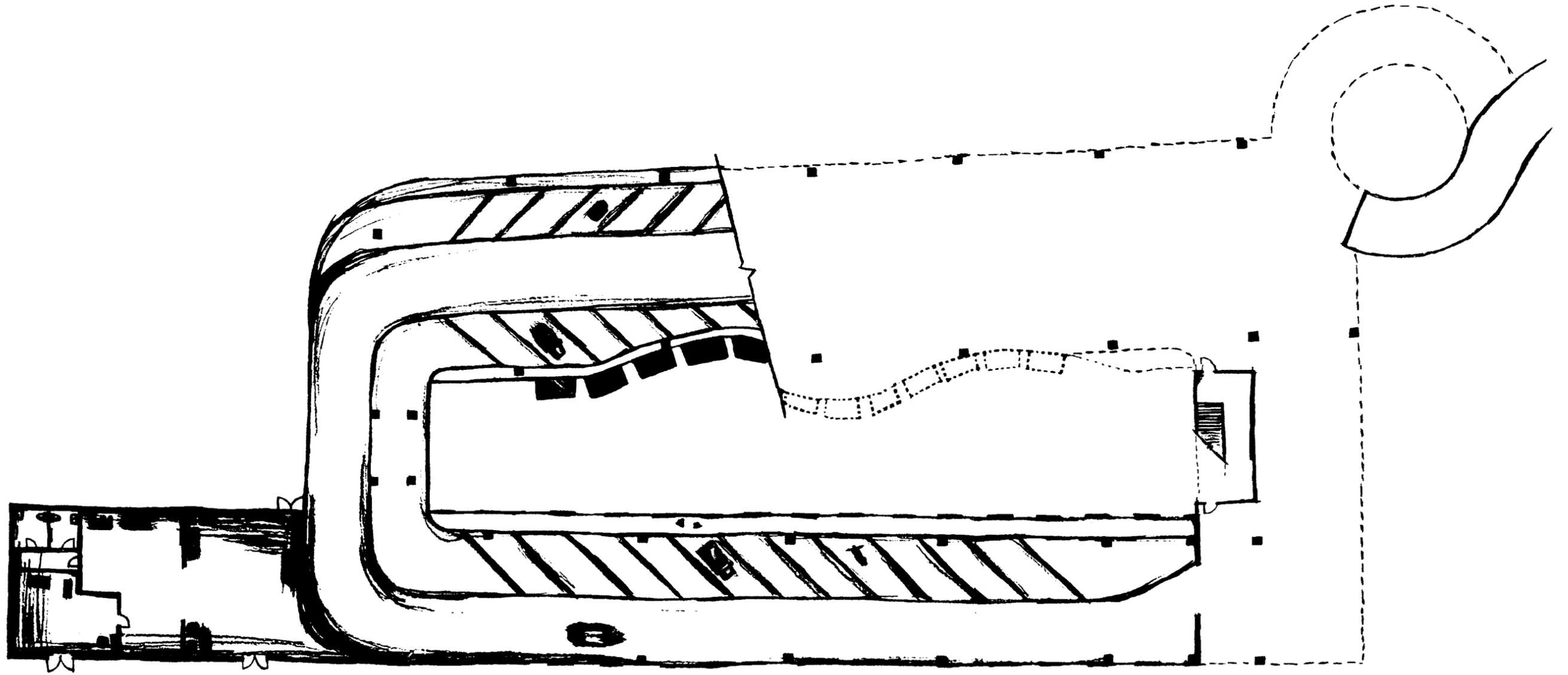
Appendix 4  
Drawing illustrating threshold  
as a way to activate the site.



Entrance  
into STAVECO

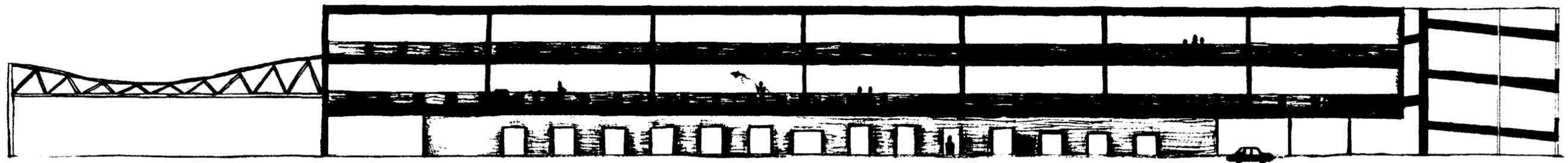


Appendix 5  
Existing and proposed  
program for STAVECO  
site.



Appendix 6.1  
Parking Lot/ Performance  
Space Plan

5m

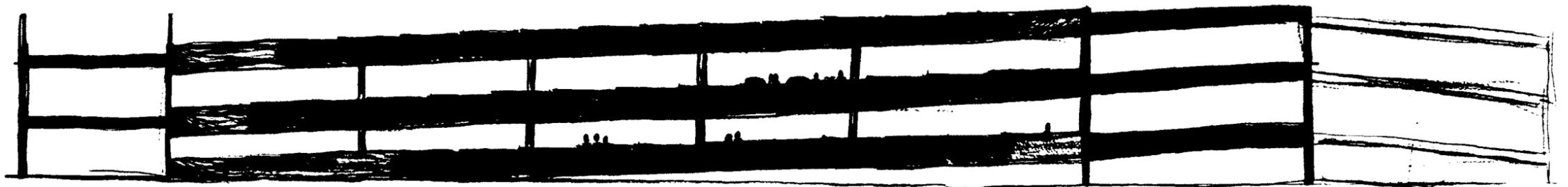


Appendix 6.2  
Parking Lot/ Performance  
Space Section

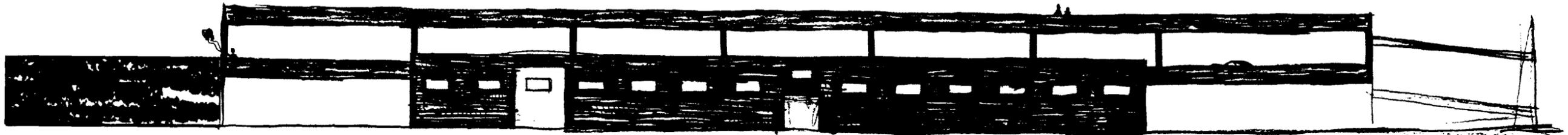
5m



Interior - East



Interior - West

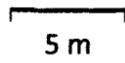


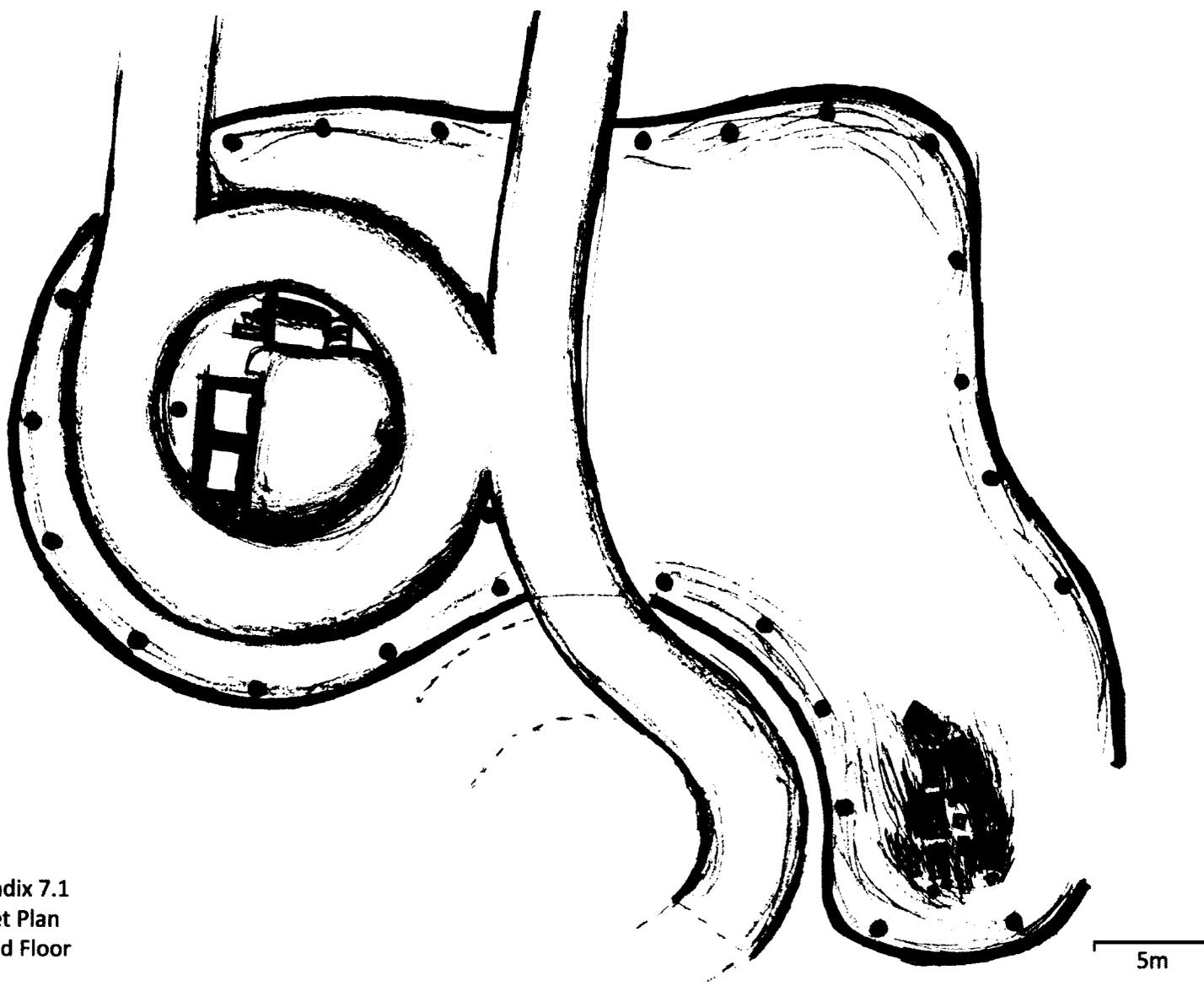
Exterior - East



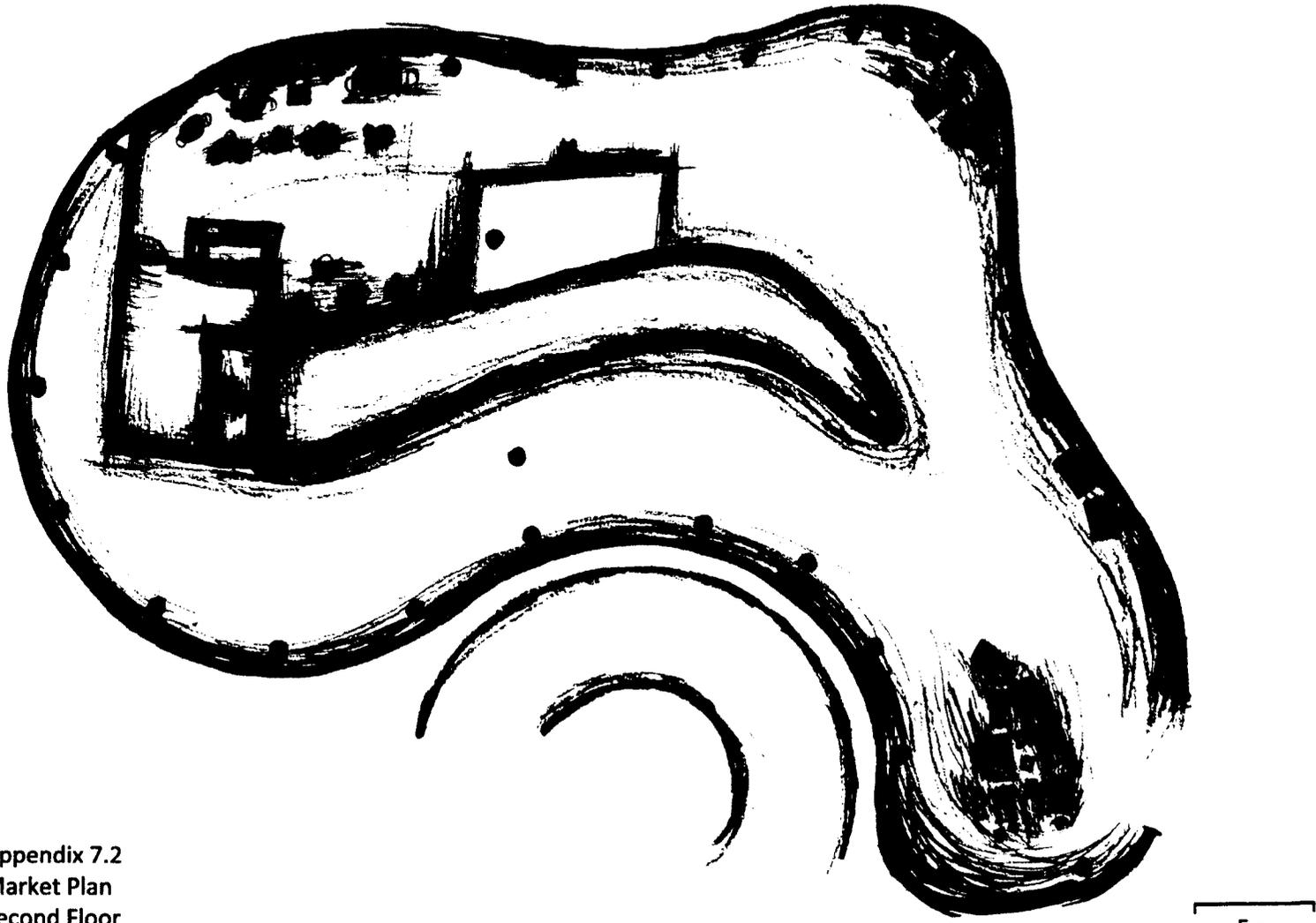
Exterior - West

Appendix 6.3  
Parking Lot/ Performance  
Space Elevation



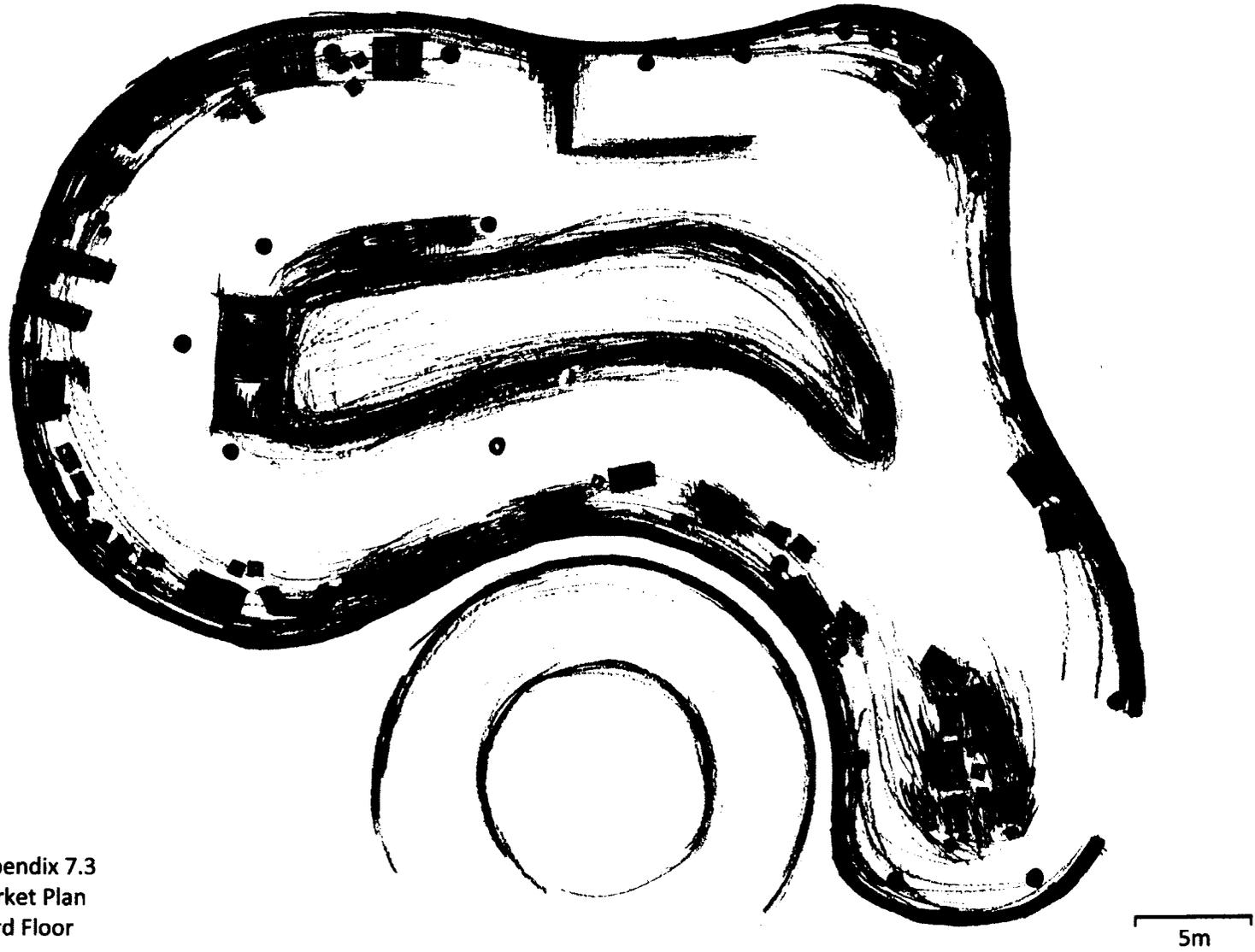


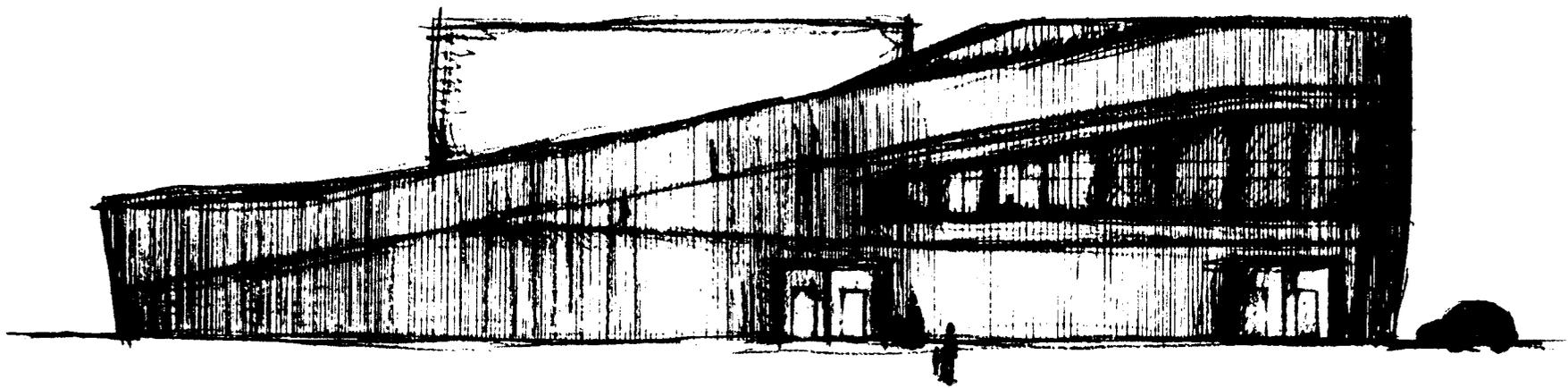
Appendix 7.2  
Market Plan  
Second Floor



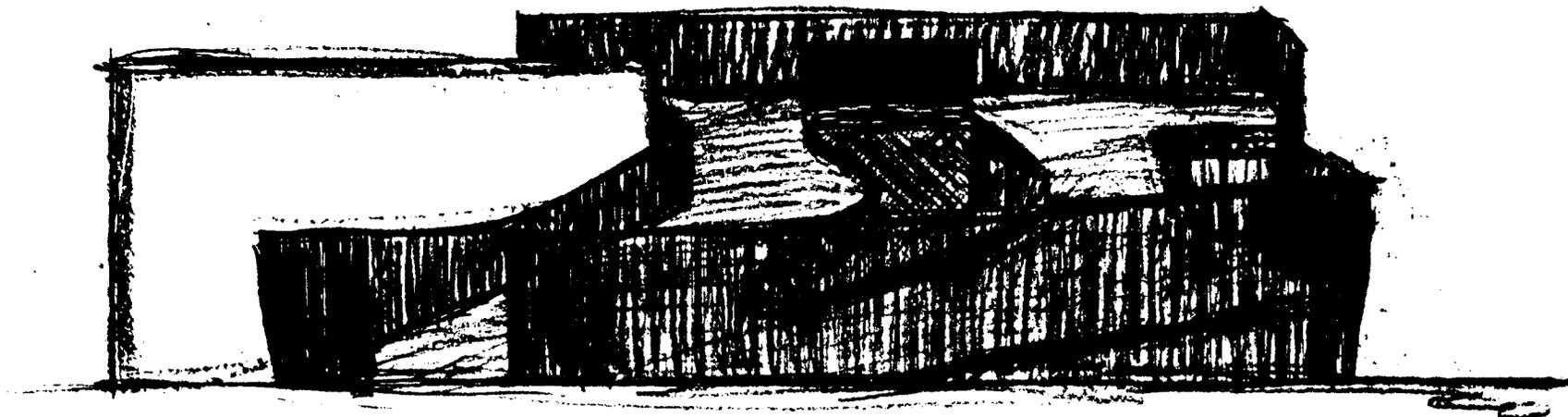
5m

Appendix 7.3  
Market Plan  
Third Floor

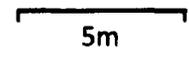




Appendix 7.4  
Market - North Elevation



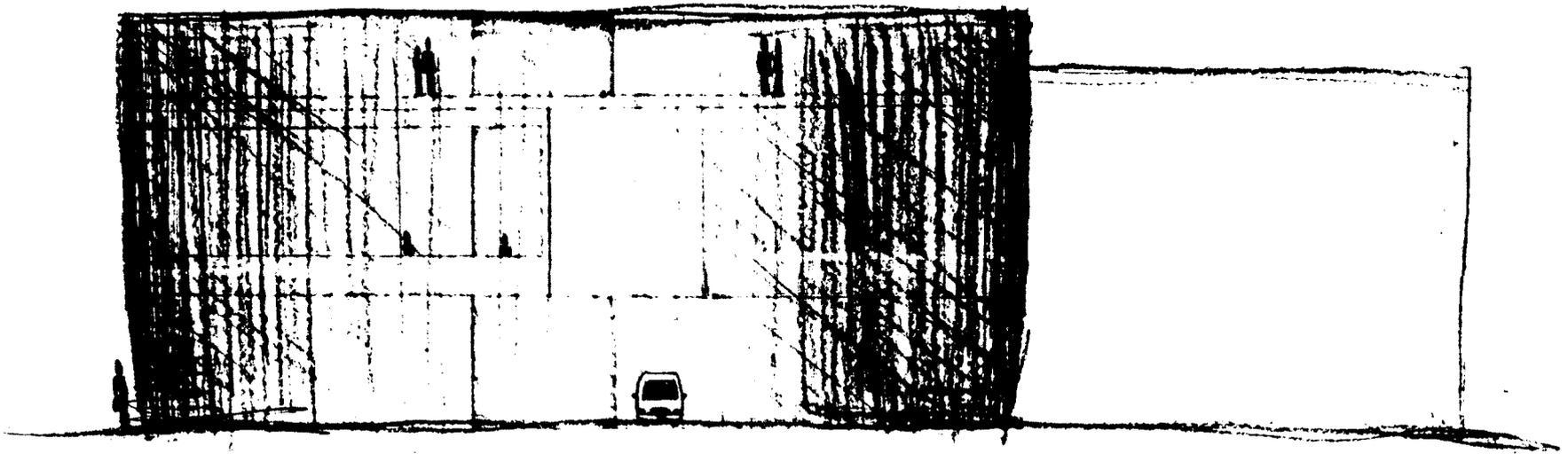
Appendix 7.5  
Market - East Elevation





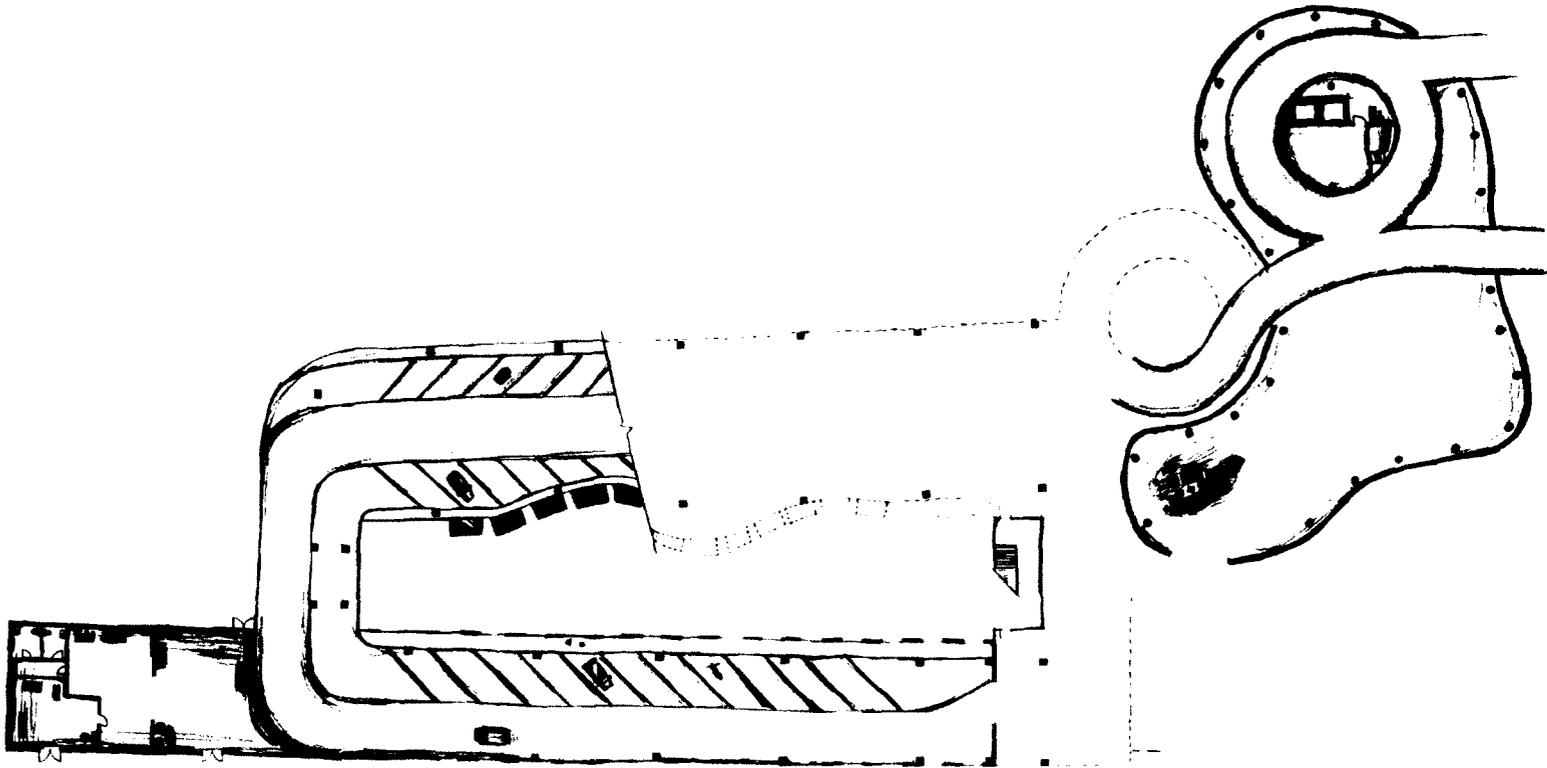
Appendix 7.6  
Market - South Elevation

5m

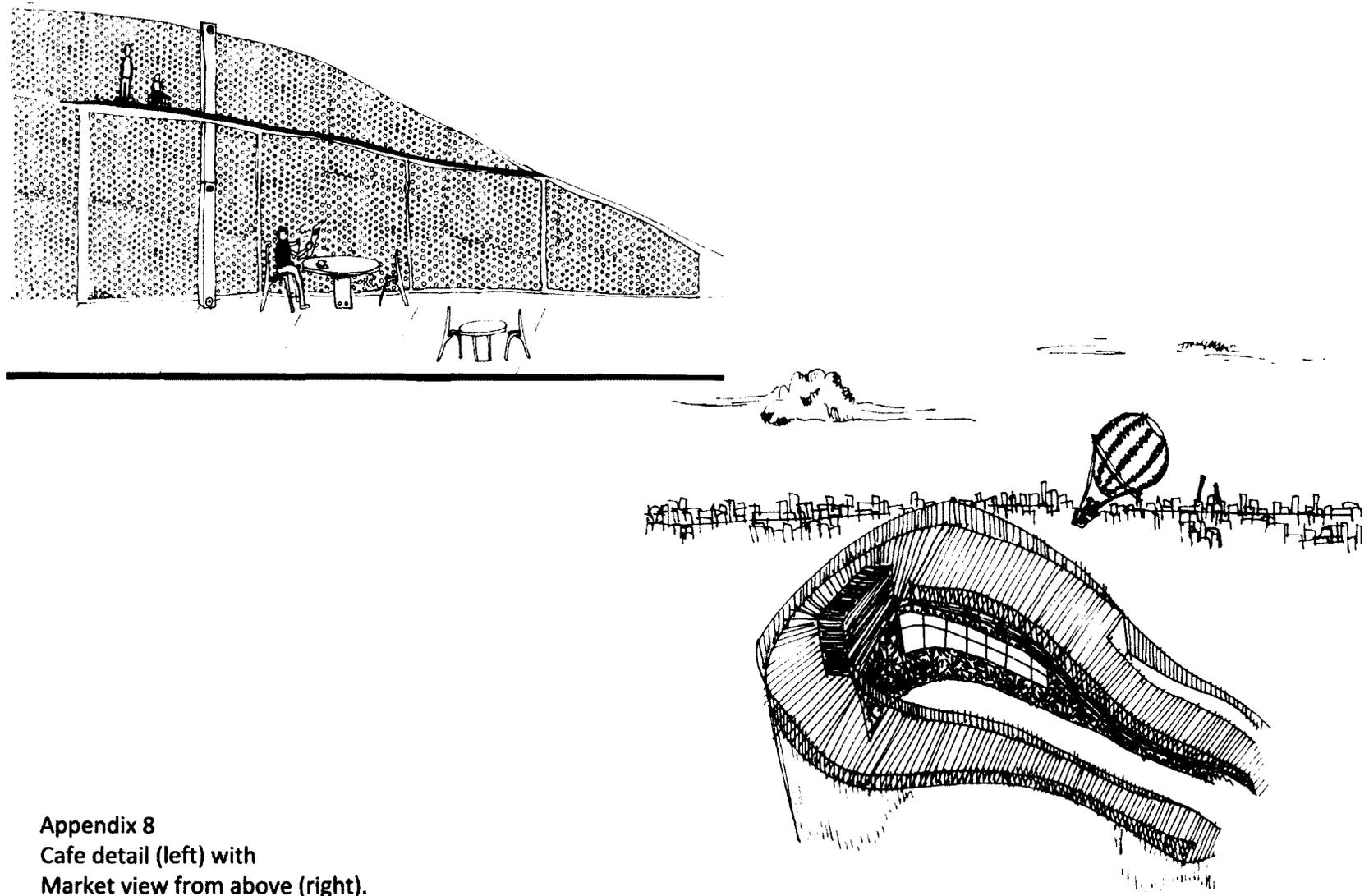


Appendix 7.7  
Market - West Elevation

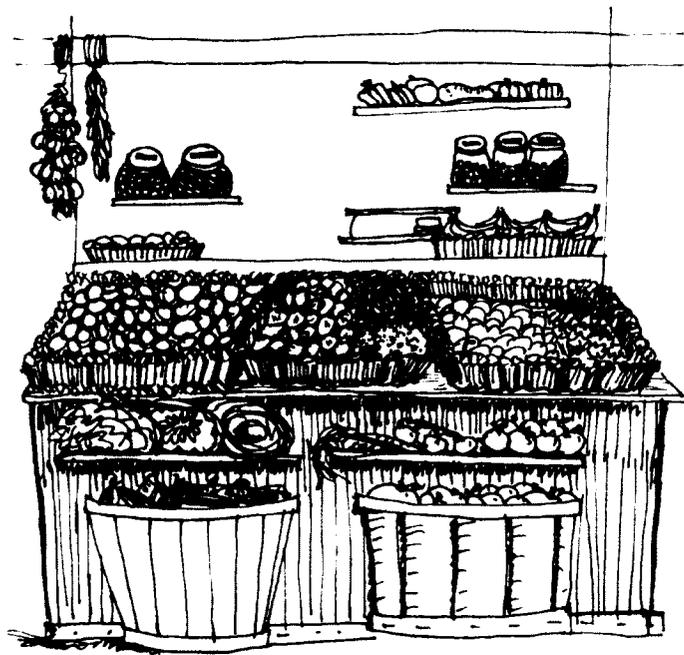
5m



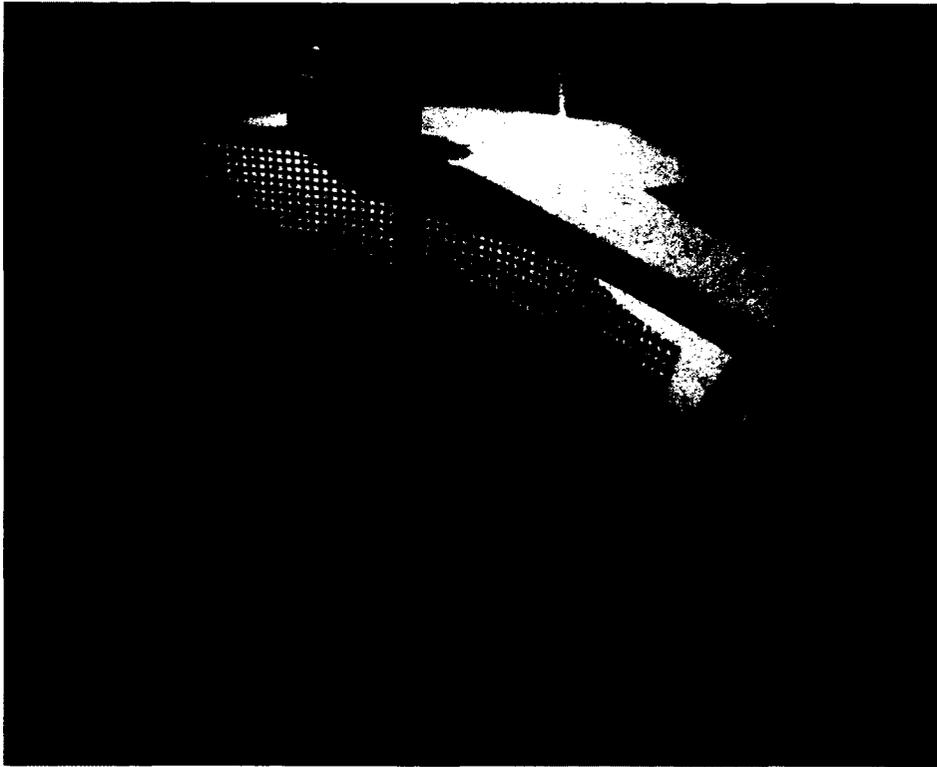
Appendix 7.7a  
Parking Structure Performance space plan -  
Ground/ First floor incorporating existing building.  
Market space encroaching on unused and dilapidated  
Carabinieri building.



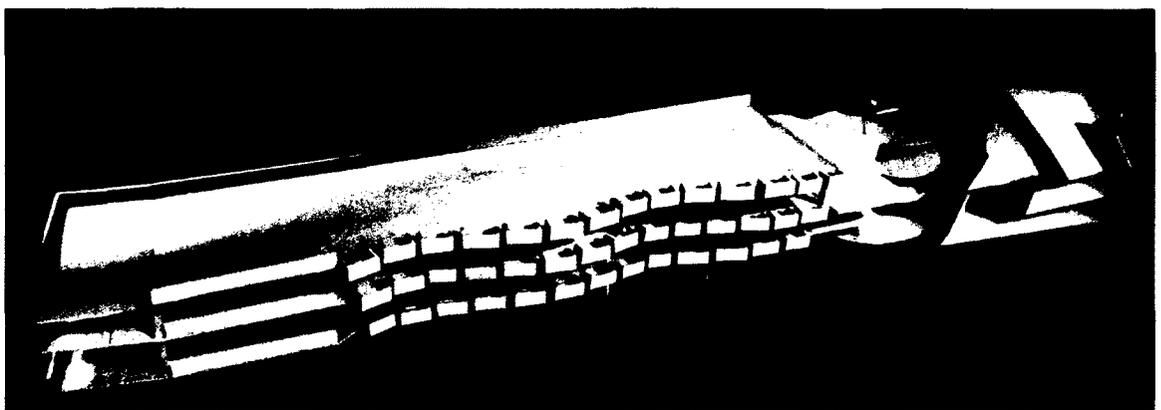
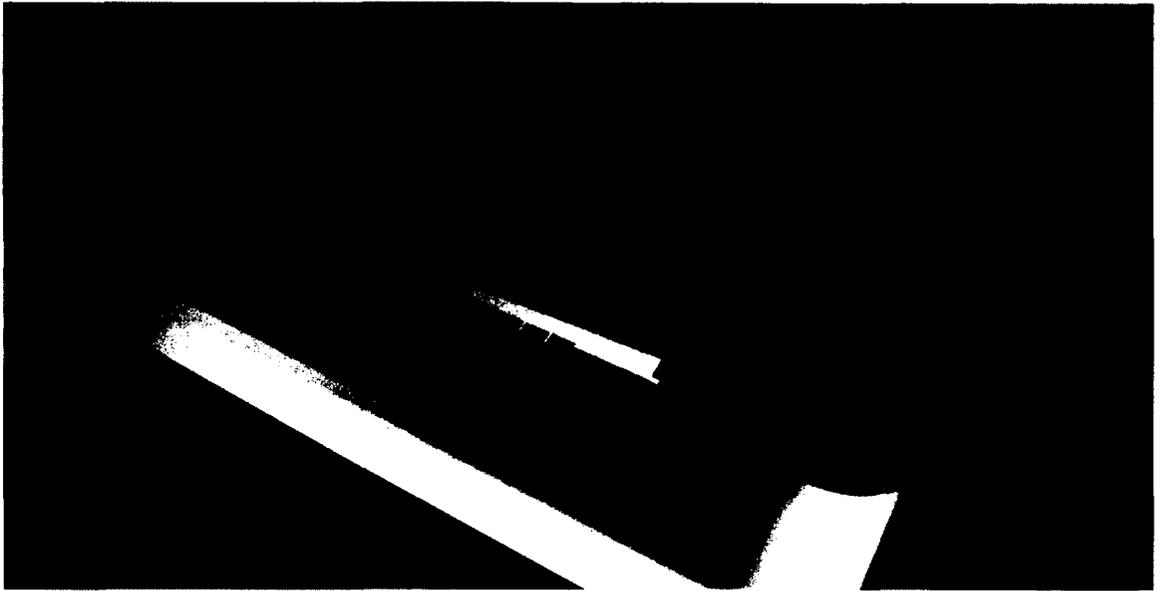
Appendix 8  
Cafe detail (left) with  
Market view from above (right).



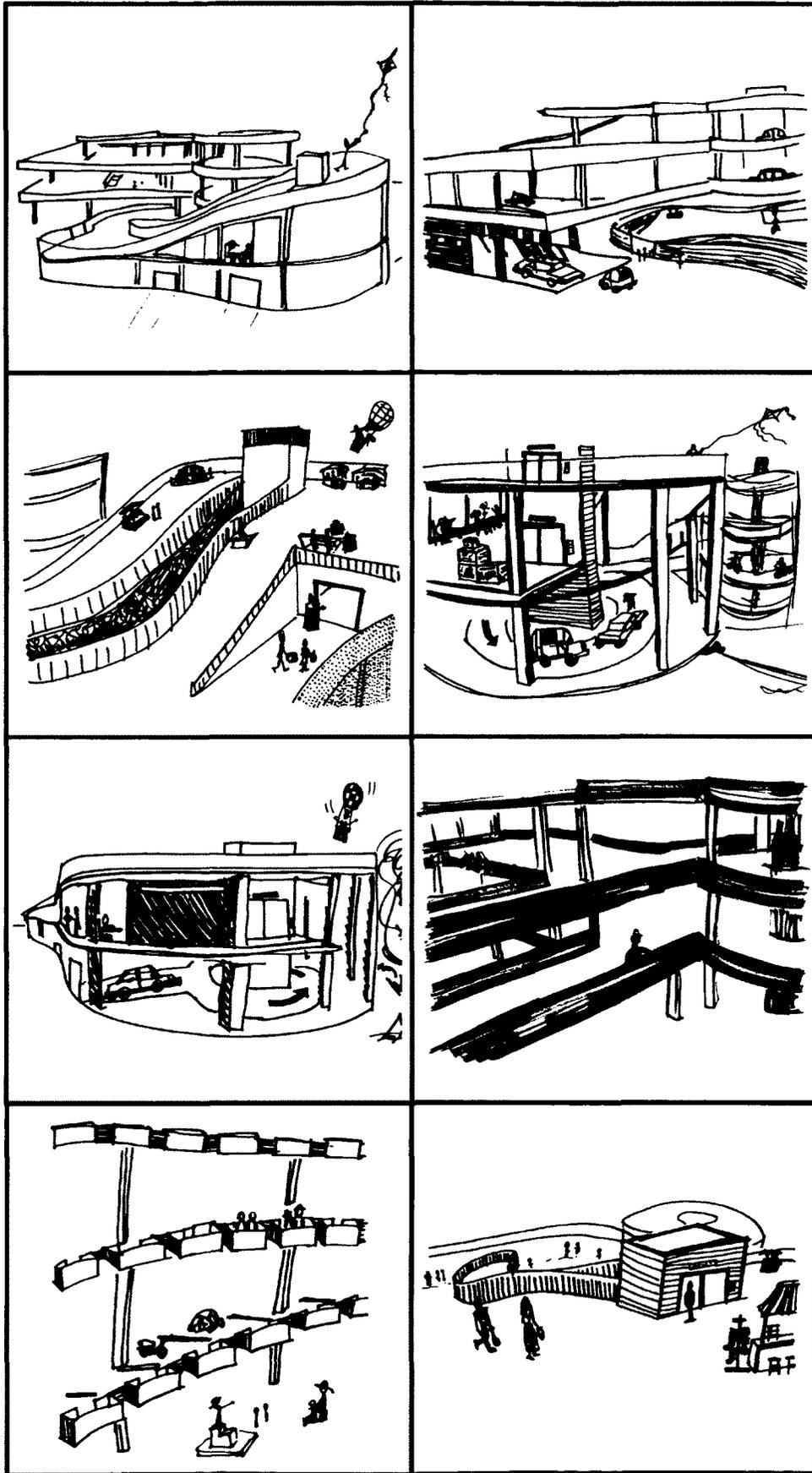
Appendix 9  
Detail of market  
booths



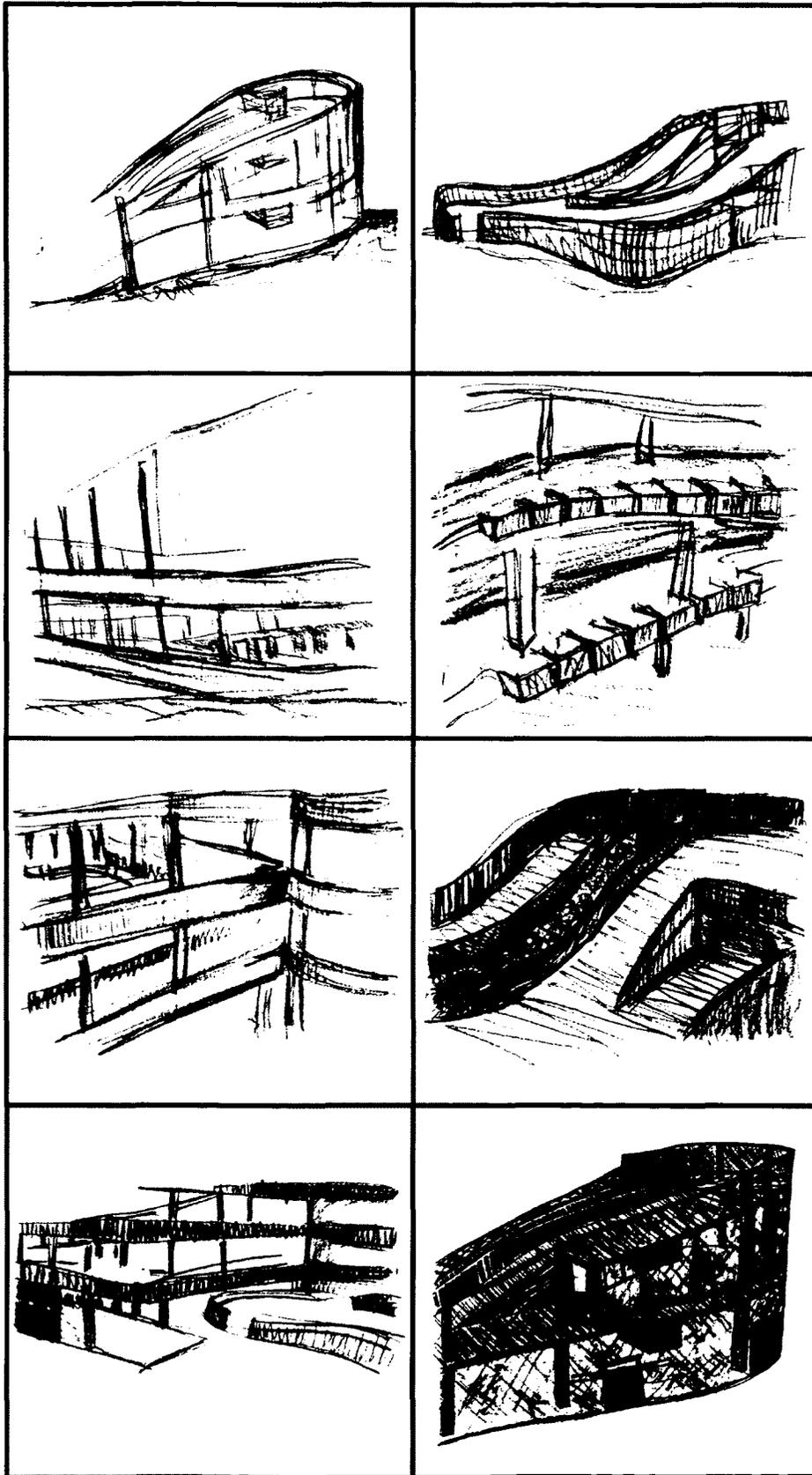
Appendix 10.1  
Sectional Market Model



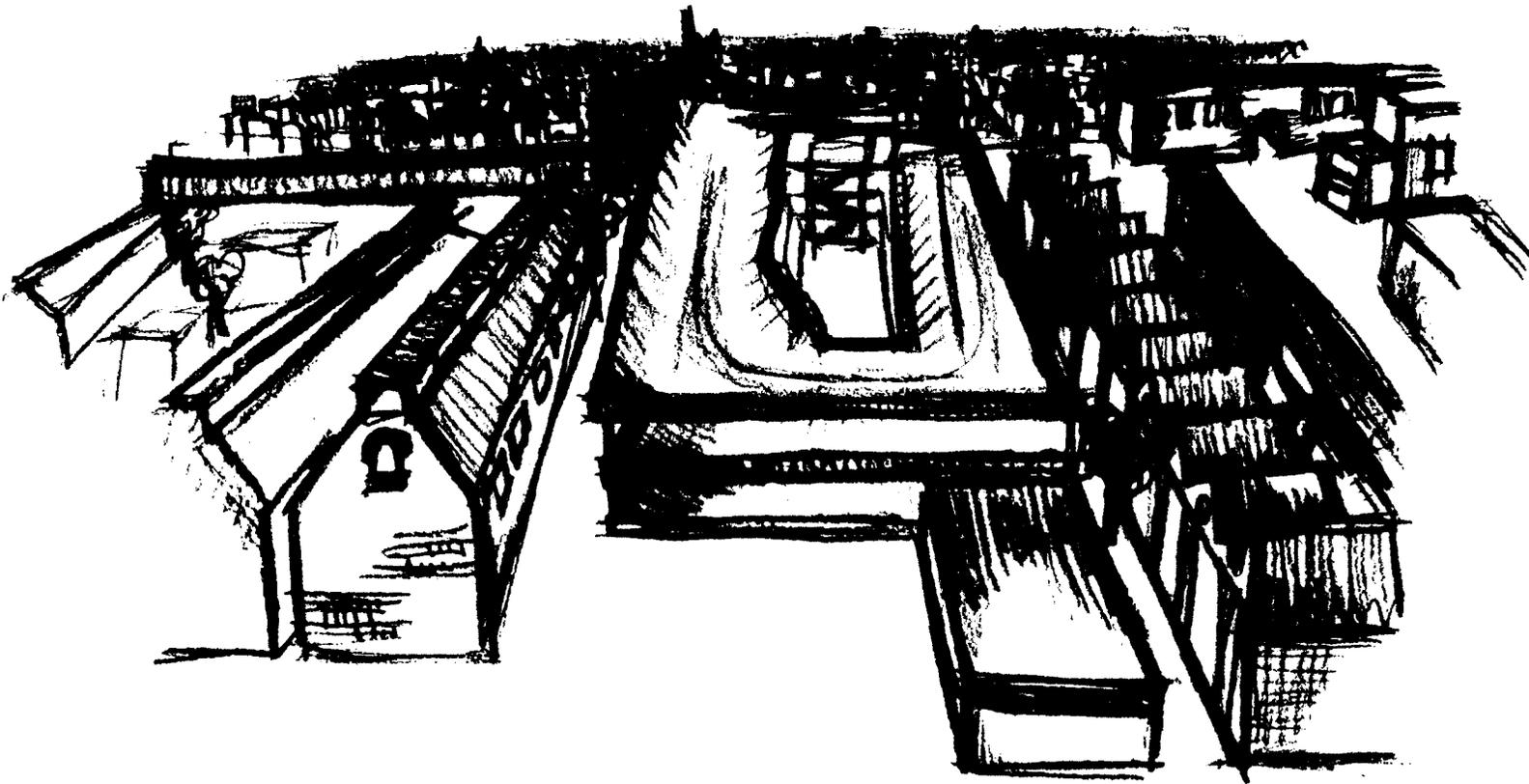
Appendix 10.2  
Cardboard models and  
basswood sectional models expressing curves



Appendix 11.1 - Black and white drawings

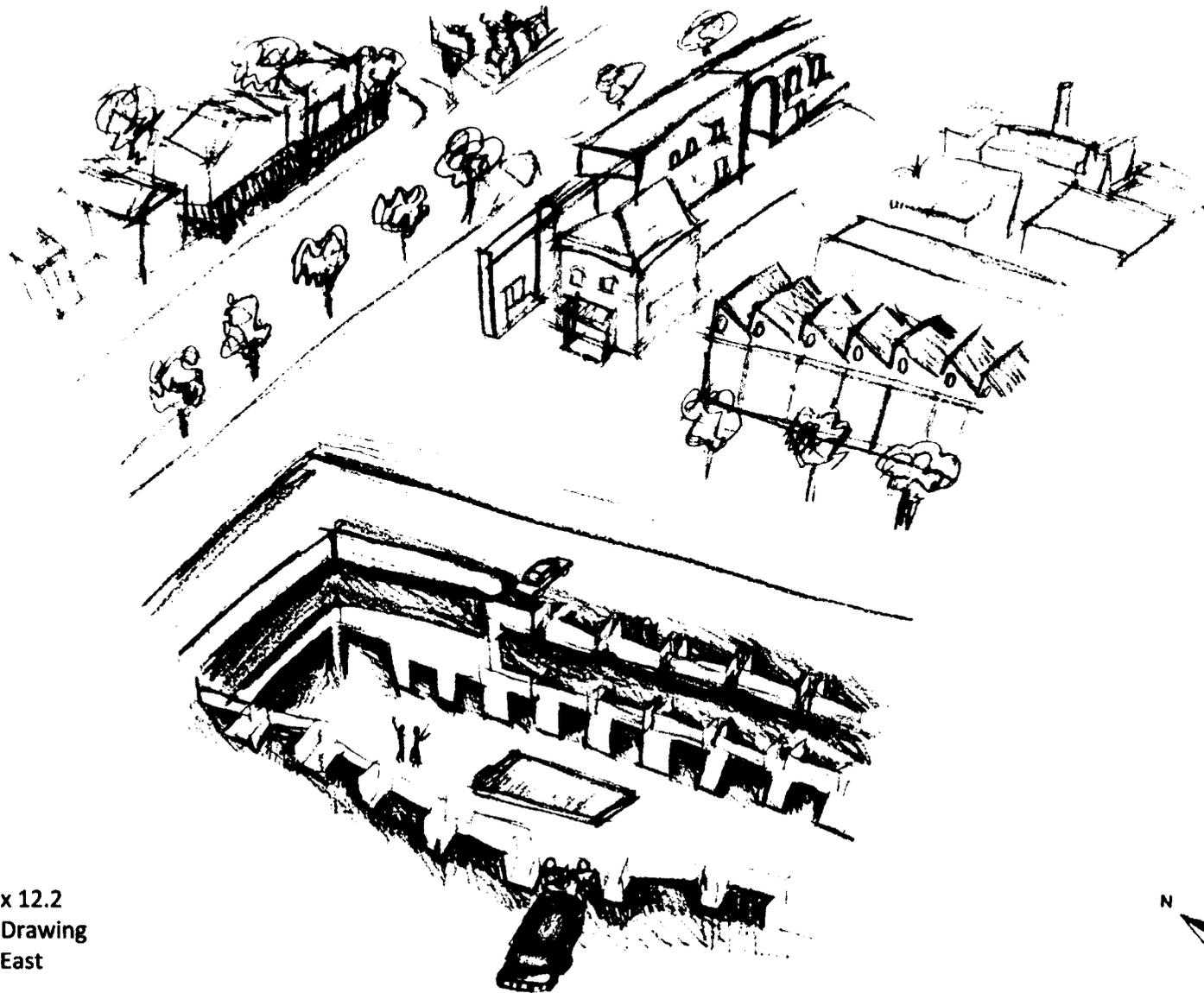


Appendix 11.2- Colour drawings

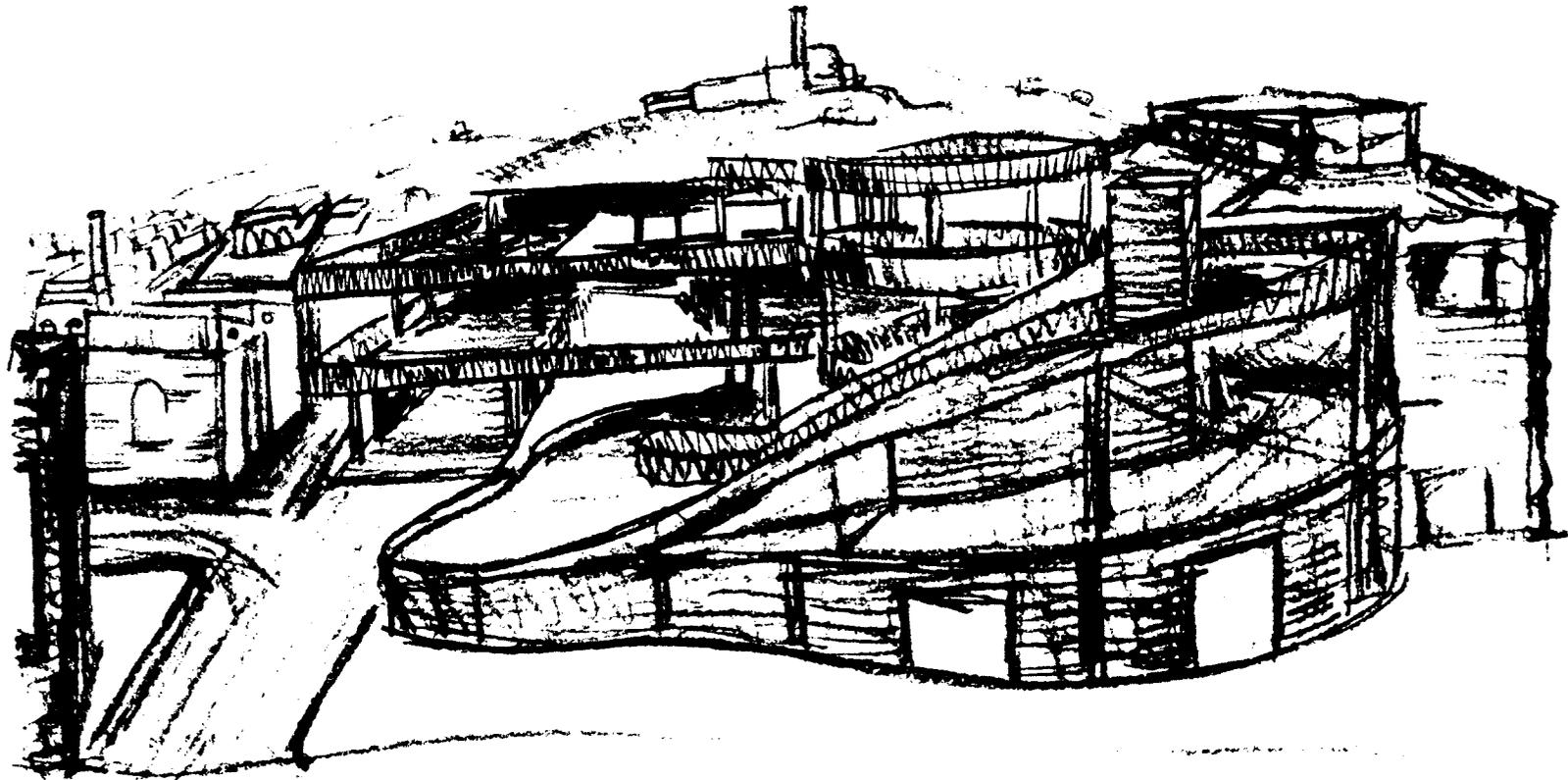


Appendix 12.1  
Context Drawing  
Looking North



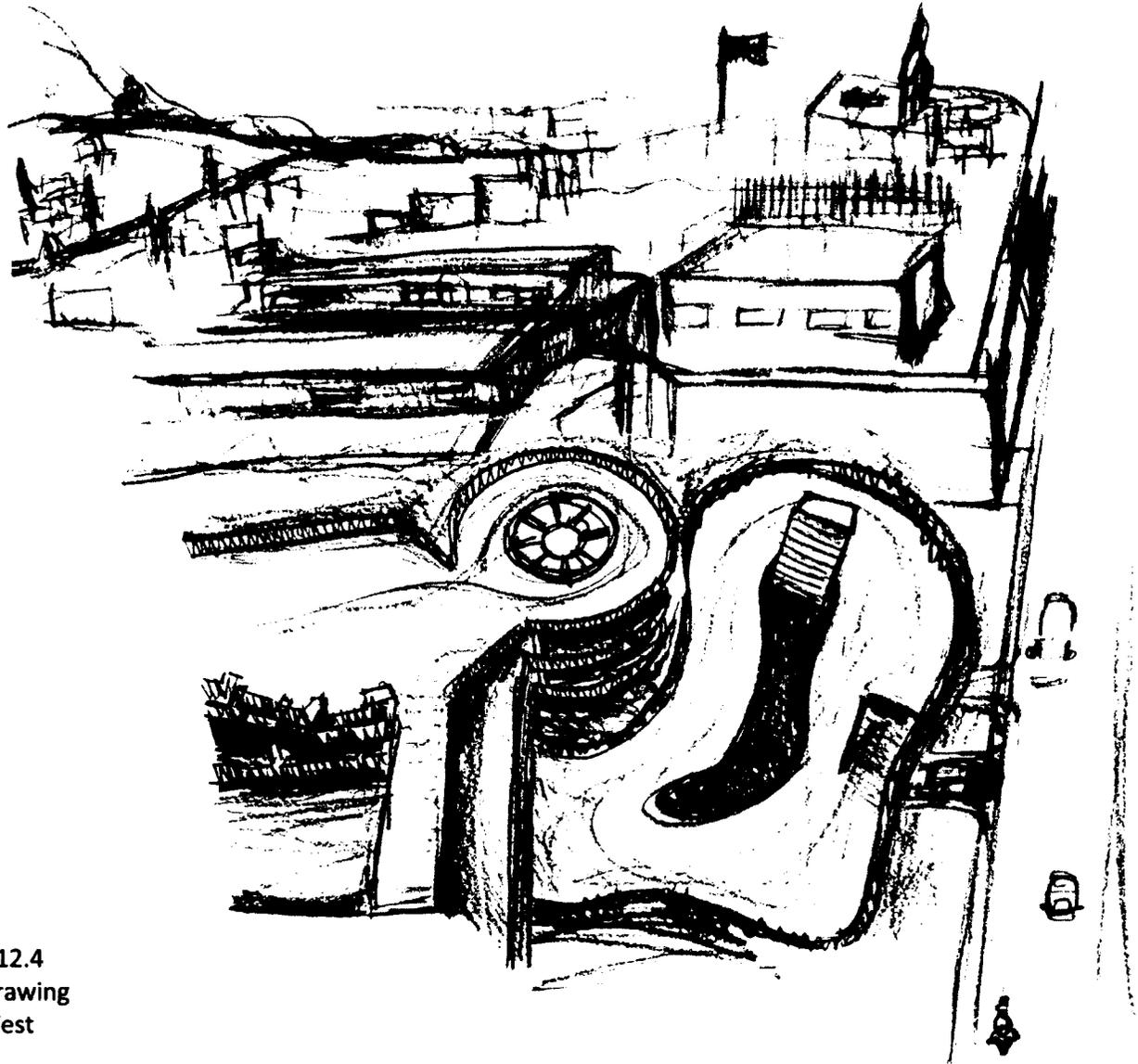


Appendix 12.2  
Context Drawing  
Looking East

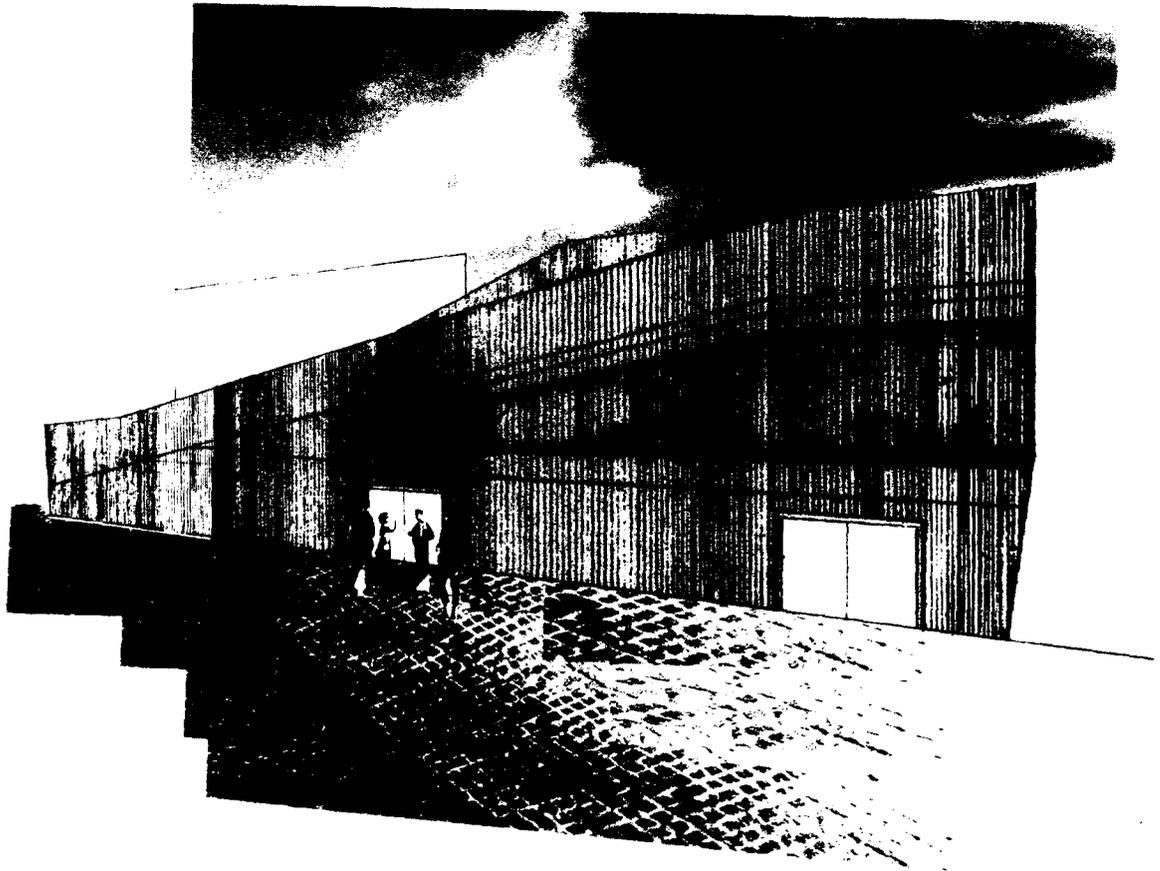


Appendix 12.3  
Context Drawing  
Looking South





Appendix 12.4  
Context Drawing  
Looking West



Appendix 12.5  
Context Collages

- Academic Structures, Univeristà di Bologna, n.d. Web. July 10, 2011.  
<<http://www.eng.unibo.it/PortaleEn/University/University+Structures/Academic+Structures/default.htm>>
- Our History, Univeristà di Bologna, n.d. Web. July 10, 2011.  
<<http://www.eng.unibo.it/PortaleEn/University/Our+History/default.htm>>
- Arte e cultura: Maggiore Square, Iperbole: la rete civica di bologna. n.d. July 10, 2011.<<http://informa.comune.bologna.it/iperbole/cultura/articoli/8576/offset/0/id/8950>>
- Bisset, Alex. ed., *The Canadian Oxford Paperback Dictionary*, Canada: Oxford University Press, 2000. Print.
- Breadtruck Films, Shorts. *Design+Build+Sustain*. Web. July 2011.  
<<http://breadtruckfilms.com/films/>>
- Demetrios, Eames. *An Eames Primer*, New York: Universe Publishing, 2001. Print.
- Fitoussi, Brigitte. *Eames: Furniture 1941-1978*. Trans. Uniontrad. New York: Assouline, 2003. Print.
- Jonathan Segal Architect, *K lofts*. Web. August 2011,  
<<http://www.jonathansegalarchitect.com/segalfiles/klofts.html>>
- Kirkham, Pat. *Charles and Ray Eames: Designers of the Twentieth Century*, Cambridge: MIT Press, 1995. Print.
- Kolleeny, Jane F. *The Union*, *Architectural Record*, 2008, Web. May 2011.<[http://archrecord.construction.com/projects/bts/archives/MultiFamHousing/08\\_TheUnion/default.asp](http://archrecord.construction.com/projects/bts/archives/MultiFamHousing/08_TheUnion/default.asp)>
- Kuper, Marijke and Ida van Zijl, *Gerrit Th. Rietveld: 1888-1964, The complete works*, Belgium: Central Museum Utrecht, 1992. Print.

- Lloyd Russell, *R3 Triangle Building*. Web. August 2011. <[http://www.lloyd-russell.com/projects/index.php?plD=r3\\_triangle](http://www.lloyd-russell.com/projects/index.php?plD=r3_triangle)>
- Lubell, Sam. *The Producers: San Diego architects lay hands on development*, The Architect's Newspaper, May 28, 2008, Web. May 2011. <<http://archpaper.com/news/articles.asp?id=1759>>
- Miller, Naomi. *Renaissance Bologna: A Study in Architectural Form and Content*. New York: Peter Lang Publishing, 1989. Print.
- Morlan, Kinsee. *The Fearless Four*. San Diego City Beat. Wed. July 11, 2007. Web. May 2011. <<http://www.sdcitybeat.com/sandiego/article-2796-the-fearless-four.html>>
- Murphy, Diana, ed., *The Work of Charles and Ray Eames: A Legacy of Invention*, New York: Harry N. Abrams, 1997. Print.
- Overy, Paul, Lenneke Buller, Frank den Oudsten, Bertus Mulder, trans. from Dutch, *The Rietveld Schroder House*, The Netherlands: De Haan/Unieboek B.V., 1988. Print.
- Overy, Paul. *Rietveld Furniture and the Schroder House*, exhibition catalogue, 20 October 1990-29 September 1991, London: South Bank Centre, 1990, Print.
- Oxford Dictionaries, *Situate*. February 2011, Web. <<http://oxforddictionaries.com/definition/situate>>
- Oxford Dictionaries, *Situate*. February 2011, Web. <<http://oxforddictionaries.com/definition/chair>>
- Sennett, Richard. *The Craftsman*, New Haven and London: Yale University Press, 2008. Print.

