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TITLE: **Re-Center, Re-Inforce, Re-veal:  
Speculations into a Hybrid Urban Fabric**

PRESENTED BY: **Matthew Prouty**

ACCEPTED BY:

Julie Ju-Youn Kim  
Assoc. Professor, Masters Studio Instructor

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Date

Stephen J. LaGrassa  
Assoc. Dean, Director Masters Program  
School of Architecture

5/5/06

Date

APPROVAL:

Stephen Vogel  
Dean, School of Architecture

5/05/06

Date



# Re-Center, Re-Inforce, Re-Veal: Speculations into a Hybrid Urban Fabric

Matthew S. Prouty

Masters of Architecture

The University of Detroit Mercy School of Architecture

AR 510 & AR 520

Associate Professor Julie Ju-Youn Kim

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# Thesis Abstract:

We live in an increasingly abstract, controlled and regulated world that uses systems of control that separate buildings through uses. This separation creates holes in the urban fabric of the built environment. This control creates a “path” or road to nowhere, filled with no places. This causes a perceptible loss of the importance center and ones being in the world. The city is a complex amalgamation of layers that must be engaged by the investigation of perceived connections and disconnections. What is desired is a revealing of a city fabric that is a hybrid state or “synthesis”.



# Thesis Summary:

I am proposing a center of high tech industry based upon co-operative ideas based upon and synthesized with the spirit of the site and local landscape. The center should help in the facilitation of the transfer of technology between co-operative entities at a local, regional, national, and, Global level. It will be a new post-industrial center of innovation and technology development that focuses and clusters, skill-intensive manufacturing and service industry capabilities. The technical space shall be integrated within a specialized district that is clustered along with industrial manufacturing, commercial, and service options focusing on advanced technologies, intensive R & D activities and the development of innovative companies of all kinds. These options will allow for unique opportunities for cross-pollination of use and space that will allow for the speculation and the revealing of a new hybrid city fabric.

Centers as defined by Christian Norberg Schultz carries a double meaning one that seeks to establish a relationship between the building and the landscape and another relationship that brings the landscape closer to man. When a place that is orientated around natural centers is engaged as a location the architecture must gesture or mirror the quality and character the already exists.

Center will be sought to be re-inforced, re-engaged, re-vealed through the diversity of the speculated built environment. The project will be site specific with respect to specific landscape and its spirit ( top of hill, edge of water, and bottom of a basin or ravine) The relationship between the street the center and the city is a relationship that should construct a local genius which allows for man to identify, orientate, meet, gather, and dwell.

We live in an increasingly abstract controlled and regulated world that uses systems of control that separate buildings through uses. This separation creates holes in the urban fabric of the built environment. This control creates a "path" or road to nowhere that's filled with no places. This causes a perceptible loss of the importance center and ones being in the world. The city is a complex amalgamation of layers that must be engaged by investigation of perceived connections and disconnections. What is desired is a revealing of a city fabric that is a hybrid state "synthesis".



# Thesis Paper:

“We are not suffering from too much machinery but from too little.”

HENRIK VAN LOON

What is the relevance of center in the Post Industrial age? Do centers actually exist in America or do we outright lack them within the built context of our experienced world? I believe that people whom dwell in the urban condition are better served by a system based upon clustering of nodes and uses that are allowed to carry different and specific meanings through scope and scale versus a system / city organized, based and designed to control around a singular centralized location. In contrast to one specific center, representative of a single homogenous mono-culture, the decentralized city is best served by proposed transitional hybrid centers that allow for a more distinct and diverse mixed use. These places are more aptly positioned to consider multiple views that inform upon cultural, social, political and economic scales which allows the historical and traditional relationships that the city and the individual have with the city to be transcended.

Phenomenological centers as defined by Christian Norberg Schultz carry a double meaning one that seeks to establish a relationship between the building and the landscape and another relationship that brings the landscape closer to man. A center is also a location a location where a “comprehensible lived world of “things” takes place or where.” the life of many take place”. Architecture must also gesture or mirror the quality and character the already exists within the local and general “identity or spirit of place.” This is easy to understand when dealing with a pristine piece of land or the beginnings of a settlement. This is not the environment or condition that most architects, planners, and designers practice in today. Post-industrial conditions have left us with scarred landscapes that if not properly re-integrated in the urban topography do more harm than help.

This proposes an interesting question what do we do with a site that is completely or almost devoid of it original natural condition? I am not speaking about adaptive reuse strategies but about hidden complexities that exist within the post-industrial fabric of a city. Rajchman points to Peter Eisenmen’s use of en-folding with his Rebstock Park project in that he, “ indexed the complexities that were contained in the site that the modern movement had been unable to address.” What do we do with a place that had been written over not just once or twice but has been the subject of multiple sometimes simultaneous re-writings of its fabric, Over time this continual rewriting obscures and creates a type of scar tissue lying over the site. Has this rewriting been done out of an act of violence or out of an act of caring?

I can now propose that the condition of the post industrial city is not suffering from too much technology but from too little. I believe that through the application of technology society can begin to transcend the alienation of static, linear ordered systems and return to an existence focused upon a more individual and authentic center. Through a re-integration of site/ landscape, I seek to transcend the traditional relationships that the city, the built environment, and the individual have come to commonly accept or ignore. This proposal for a new hybrid urban center will seek to integrate man with a more authentic place, space, existence within a new interpretation of the global technological landscape than simply applying solutions from cities of the past. Thereby, allowing for increased opportunities for gathering amongst places and people that are traditionally segregated.



The traditional urban center, as historically defined, is not a definable or usable construct in the post industrial landscape or in the American city. Malcolm McClure identified that the television had become a surrogate center within the structure of the American family home in the 1950's. It can be debated that here in America we never had true traditional city centers like the ones constructed throughout Europe. For example, the Greek Agora, The Roman Forum or baths, the medieval cathedral square have been transcended in post-industrial society satellites and computers. With the departure of the industrial, modern and post-modern ages we can now begin to speculate upon what changes to city fabric. In terms of the post industrial community, it cannot exist without economy. This rapid decentralization of economy is written in the fabric of the site. The effects of rapid change in the local, regional, and global economic climates of the 20th century accommodated the decentralization of the city based in production and exchange.

In today's lived world if traditional city centers have been transcended by technology then what of the city? As long as people need to live amongst one another we will continue to live to a large part as city dwellers, So if center's do not have a place in the next American city what about the future of our cities? Paul Virilio speaks, "to the city perhaps no longer occupying a geographical position that no longer corresponds to the old divisions of city, country or center and periphery and that due in a large part to post-industrial economies the localization and axially of the urban layout faded long ago." This observation I believe backs up a major point in regards to city planning and the re-inforcement of center. The subsequent place that is created, should no longer be approached with the tools or systems of control of the past but should embrace the possibilities of the future. Christian Norberg Schultz points to the concept of "recovery of place", or respecting the "genius loci or spirit of place." We should not copy the old but we should determine the identity of place and interpret it in new ways.

Virilio, maintains a that a new complexity exist, within post-industrial urban space, and that from now on any urban architecture must deal with these complexities that deal with the advent of a "technological space-time." These complexities were uncovered by Eisenman through his use of "Folding" in Rebstock Park that allows, "for a construction of a sense of space and time within the urban landscape than that of the revolutionary tabula rasa of the modern movement, it is through the concept of enfolding the site that Eisenman was seeking to uncover something that was obscured or written over or forgotten. Eisenman is trying to uncover the experience of the givens found hiding within a sight not wishing to erase, cover or ignore them thus further alienating one from place.

The definition of phenomenology provided by Christian Norberg-Schulz, "is the return to things as opposed to abstraction and mental constructs." It is these very abstractions based upon antiquated systems of control, whether hierarchal or practical, founded in economics or politics that lead to the conditions and sense of placelessness that we find in cities today which counters ones ability to "authentically dwell". "Authentic dwelling" is achieved with the creation of place within the fourfold. "Authentic place occurs from man's gathering within the fourfold." Norberg Schultz. Gathering is based upon natural places that are bounded by the landscape of ground, horizon, and sky. Man then comes to an understanding about landscape and natural place and informs, complements, or symbolizes nature. Through this understanding of natural place, man constructs enclosure, floor, ceiling, and wall. This is the man-made enclosure that mimics the natural landscape boundaries, which allows man the basis for an "authentic dwelling".



“Man acts as though he were the shaper and master of language, while in fact language remains the master of men. Perhaps it is before all else man’s subversion of this relationship of dominance that drives his nature into alienation.” HEIDEGGER

In terms of modern development including the suburbs and the decentralization of many urban cities in America, man has behaved as if he is a master of natural place. His opposition in the world is one that is embedded in nature. Therefore, man cannot create an artificial natural place because he is a part of nature but one can attempt to repair the wrong that has already happened through care. If man continues to subjugate nature he therefore is only further alienating himself from himself. Man uses his understanding of a given natural environment as a basis of orientating himself or knowing where one is in the world. If man has no basis in his language and natural place how will he be able to orientate himself with in the world? “Language confirms man’s analysis of place.” [ Heidegger] Perhaps, this has lead to the feeling of placelessness that much of our built environment consists of today.

In order to create place, an integration of natural and man-made elements that distinguishes each place from another must be achieved. If man is able to “subjugate” natural place then alien landscapes will replace natural place similar to the postindustrial condition . All man is succeeding in doing is destroying the diversity and the uniqueness of place and replacing it with a homogeneous facsimile of what people believe constitutes places without a true understanding. “Placelessness describes both an environment without significance in places, replacing diversity with uniformity and experiential order with conceptual order, at its most profound it consist of a pervasive and perhaps irreversible alienation from places as the homes of men.(143) RELPH

Norberg-Schulz does allow for the possibilities for man to inform upon the landscape. It is possible for man to construct man-made place not based completely on a natural basis. This concept reaffirms the need for man to evolve in a phenomenological direction. This would allow for new complex relationships to be discovered instead of trying to recreate past existing relationships of place into the city’s fabric. Douglas Kelbaugh, provides a quote from John Summerson that was stated in 1947 that I feel is extremely relevant to this concept of man informing upon natural place. It is “One of those aging ideas that get encrusted around past creative achievements and clog the proper working of the imagination of changing times.” (168) Kelbaugh This reinforces the need for man’s continued evolutions and advancement towards a more authentic dwelling.

The fabric that is the basis of natural place is the topography of the earth. “Place is then created when we create architecture.” (Norberg-Schulz) What constitutes place or placelessness is what is of interest here in regards to errors made in the marginalization and alienation of natural place during the construction. Norberg-Schulz states, “Man’s most fundamental need is to experience his existence as meaningful.” Through man’s understanding of his environment he is then able to make place, but only if man has the proper structure or relationships and meaning that allows for orientation connected to it. If man fails to have a concrete understanding of these phenomenon then his meaning and structure is suspect and a creation of placelessness instead of place is made.



Norberg-Schulz refers to a town that will ultimately please us is a combination of distinct character and that a majority of buildings relate to the earth and the sky in a like manner. This characteristic and presence in the four-fold or being is the basis for human identification or orientation. This ultimately is what Schulz calls the "Genius Loci". Not only must the "Genius Loci" represent a way of man's being on earth it must also represent the relationship that is created between the man-made and the natural. In there exists an innumerable amount of challenges regarding nature place. By not capturing the uniqueness of a given site and placing abstract systems upon it, we negate the basis for any further experimentation or a revealing of unknown complex relationships. This also lends itself to the failure of an establishment of a "local genius" or a local spirit.

The concepts of the path, center, and goal, in the planning of the new urbanist community of Celebration, Florida fails to create a sense of meaning or the establishment of a loci genius. Center in general is where a comprehensive world of "things" takes place or where the life of many take place. Centers are located by intersections. Man uses paths, which lead to goals or centers, which help orientate him in a given known or unknown environment. This environment is the world that exists between the earth and the sky. It is in this world that mortals dwell. Schulz uses an example of a common European town or city in the fact that each town's specific path structure centers upon a local genius. By allowing for the center to be read as local it allows for man to see his settlement as meaningful. For example, in ancient Greece the local genius was surrounded around the agora or public market, in ancient Rome around the Forum the public stadium, in medieval times the center was focused upon the public market and the community that existed within and around the cathedral squares. "Places are a fusion of human and natural order and they are significant centers or our immediate experiences of the world."(8) RELPH

To live in an environment, which has to be endured or ignored rather than enjoyed, is to be diminished as a human being. (145) E. Relph

Chermayeff and Alexander have also stated about the decline of meaningful place that allows for gathering and the opportunities for people to share life experiences. They state that, " extinct are the intimate, the special, the strange experiences of the great cities of the past." where this gathering and meeting were made possible through a series of non ordered paths, centers, and goals. Now the city fabric is an abstraction based upon non experiential factors that prevent us from a more authentic dwelling.

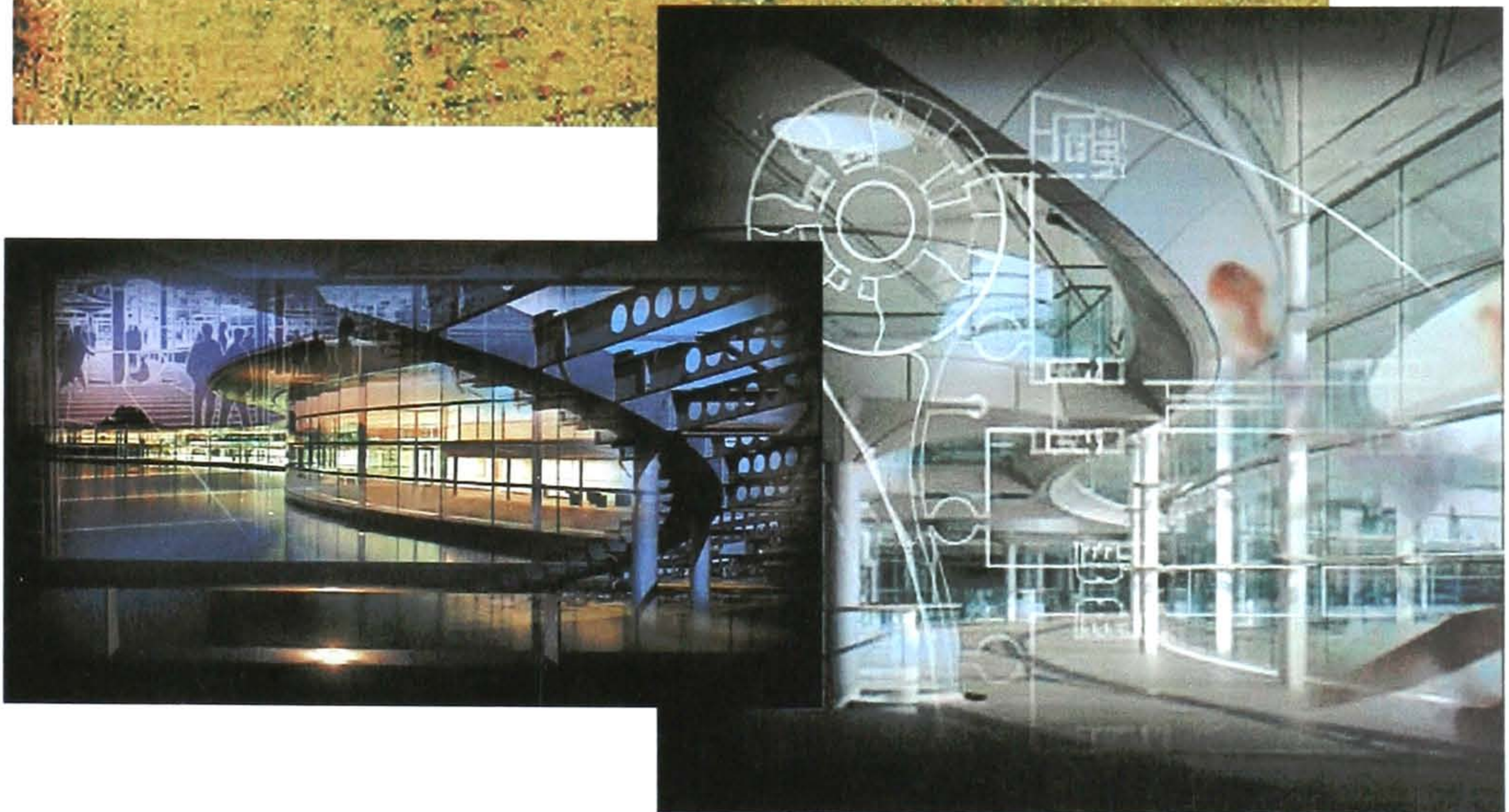
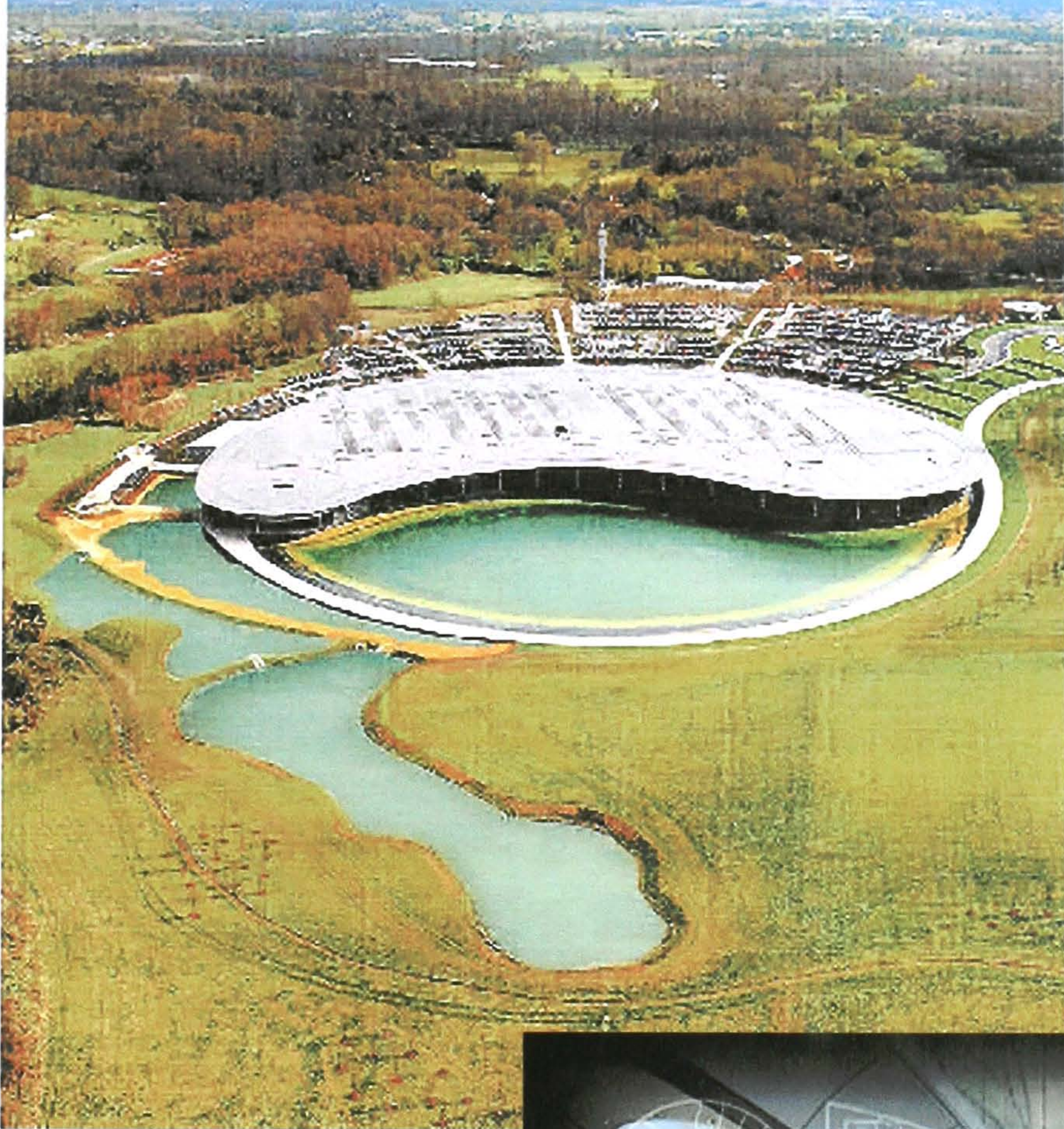
I argue that the reinforcement of center in one location within the post industrial condition is not the optimum solution. Instead an "open structure" should be fostered that allows for the clustering of nodes that are better conditioned to be able to inform upon the individual and society within the system of decentralization on a global scale and allowed to be based upon site specifics and not regulated by systems of control. This is accentuated by an unbalanced district that seeks the hybridization of a new urban space integrated with local and specific landscape and site that will allow for a more free flow towards growth and decay? The open structure should be reinforced to allow for gathering of lived experience and allow for individual and/or group identity and orientation to more authentically exist. In this way whether one chooses to live or work in the community, they should be more perceptually informed about the hidden complexities, the river and the city that presences itself beyond?



## Precedents:



McLaren Technology Centre  
Surrey, U.K.  
Built 2004  
Architect: Foster and Associates  
Total Square Footage: 678,000 sq.ft.





## TECHNOLOGY CENTRE

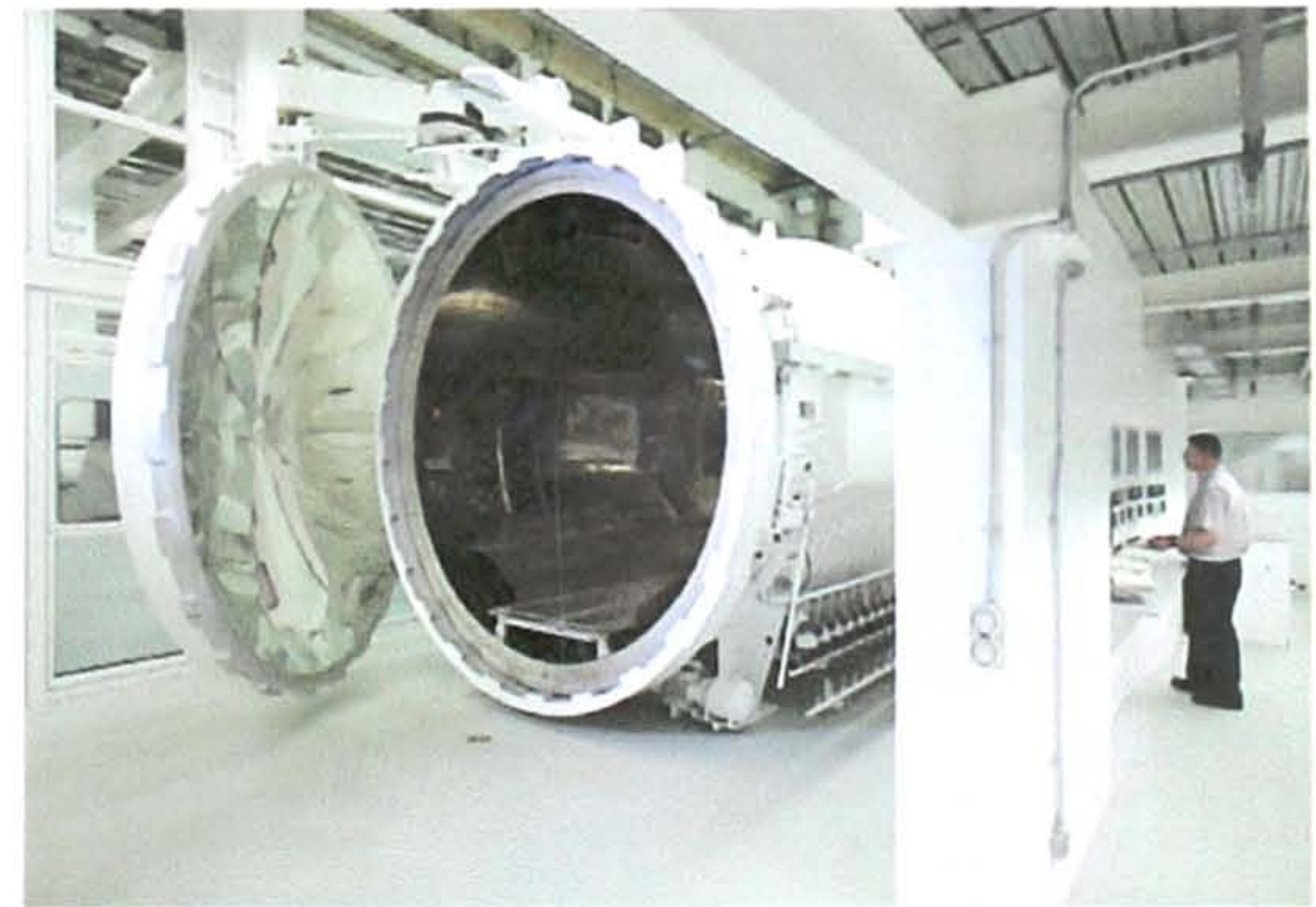
The McLaren Technology Centre is located on a 50 hectare site located approximately three kilometers north of Woking town centre, Surrey, UK. The building's 613,000 square feet of office space is home to the majority of the McLaren group's 900 employees. The building is environmentally friendly, with natural light used wherever possible and energy recycled throughout the site. Footprint of the building is 328 feet by 656 feet, and it's 36 feet high. In plan it is circular, to incorporate the formal part of the lake which is set within a full circle the building is low and flat. The main body of the building is broken into 60 feet wide 'fingers' with 20 foot wide strips between them, which Foster calls the 'streets'. These allow daylight into the interior of the building and give everyone working inside an awareness of the outside. They also form part of the ventilation system of the building. The design seeks to integrate administration and people working in areas like light assembly on the upper level, directly under the roof.

### Interior Space Quality

Foster seeks to highlight cutting edge technological, innovation and a philosophy that emphasized the value of teamwork that puts people first in the design integration. The McLaren Technology Centre needed to cater for each individual among a total staff of nearly 1000, in a building where each of the open-plan office areas is around 328 feet long. The basic office layout separates the staff in each department into a series of four-person pods, but how did one go about keeping that vital element of individuality? "Obviously, you can't design 1000 individual work stations," explains Colin. "What we decided to do was to give each pod and each person their own visual statement, in the form of colorful artwork incorporated into the laminated glass panels that run at eye level around the facing partition of each pod. Much of the furniture was designed to reflect and blend in with both the look of the building itself, as well as the landscape outside. Where the VIP client dining room looks out over the lake and the waterfall, the perimeter of the large oval dining table consists of hand-made glass in which bubbles create the effect of running water.



Electronics / Technology Lab Divided into 4 work station per unit/pod



High Tech Testing Chamber





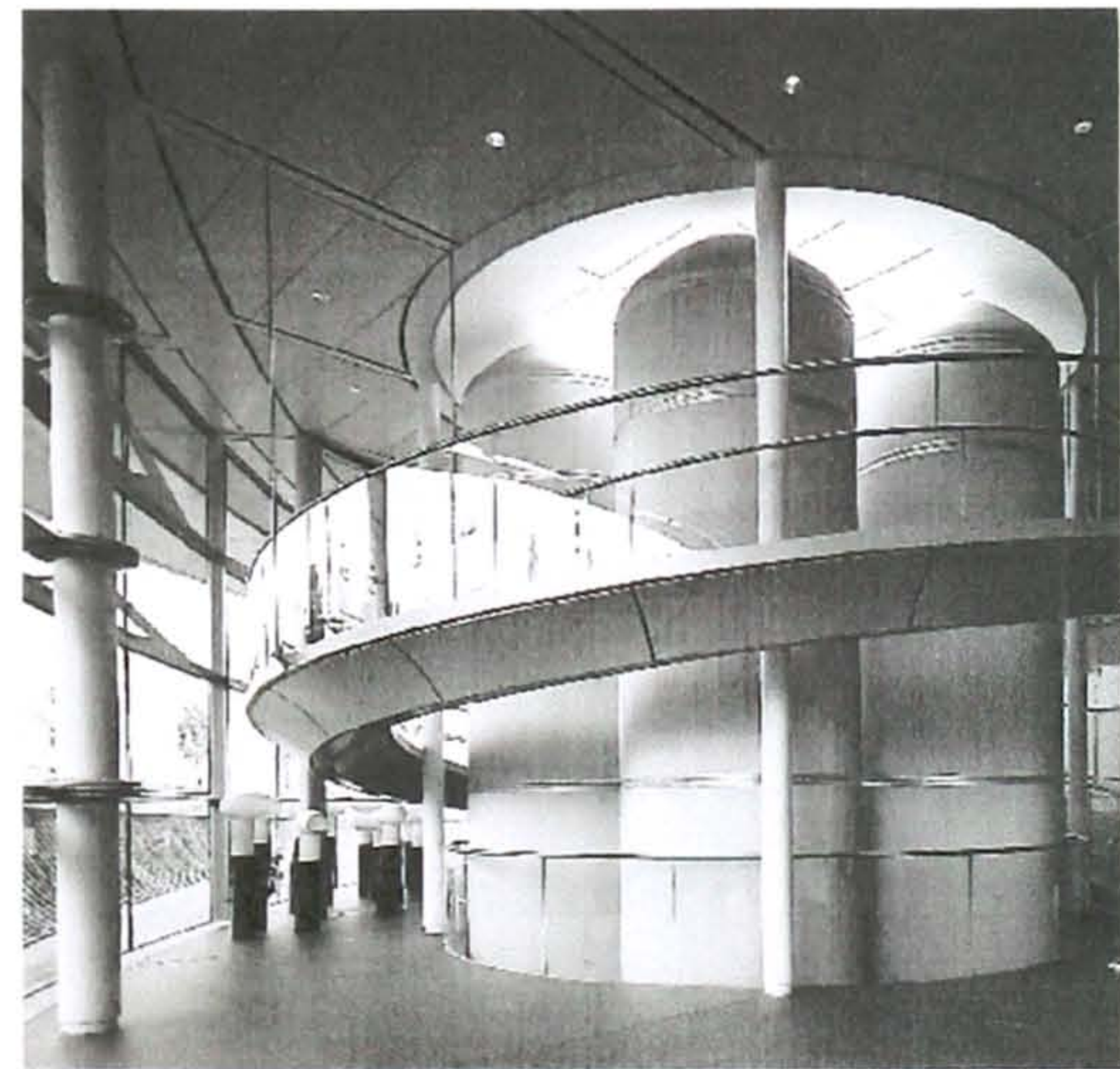
## AWARDS AND ARCHITECTURE

"The McLaren Technology Centre is a model for new technological optimism and a showcase of industrial architecture for the 21st century," said McLaren Group Chairman and CEO, Ron Dennis. The facility, designed by Foster and Partners, has received much critical acclaim and has subsequently has been awarded a number of architectural accolades.

RIBA (the Royal Institute of British Architects) presented the facility with a RIBA award, an honour given to buildings that have high architectural standards and make a substantial contribution to their local environment. In 2005 over 500 buildings in the United Kingdom and the rest of the European Union were visited as part of the judging, and as a result, the facility becomes a candidate for the short list of the prestigious RIBA Stirling Prize, which is announced in the Autumn.

The facility has been praised by judges for its innovation in design, and was described by Lord St John of Fawsley, Chairman of the Royal Fine Art Commission Trust as; "the most beautiful industrial building in the country," upon bestowing the facility the honour of the Trust's building of the year.

Architect Foster and Partners have also received awards for their role in the creation of the facility, among which is the 'Best Automotive Architecture' award which was collected at the 20th Festival Automobile International in France.





The building's 613,000 square feet of office space is home to the majority of the McLaren group's 900 employees, in an area large enough to hold nine Boeing 747 jumbo jets.



Footprint of the building is 328 feet by 656 feet, and it's 36 feet high. In plan it is circular, to incorporate the formal part of the lake which is set within a full circle the building is low and flat.

Parking add. 1,000 trees

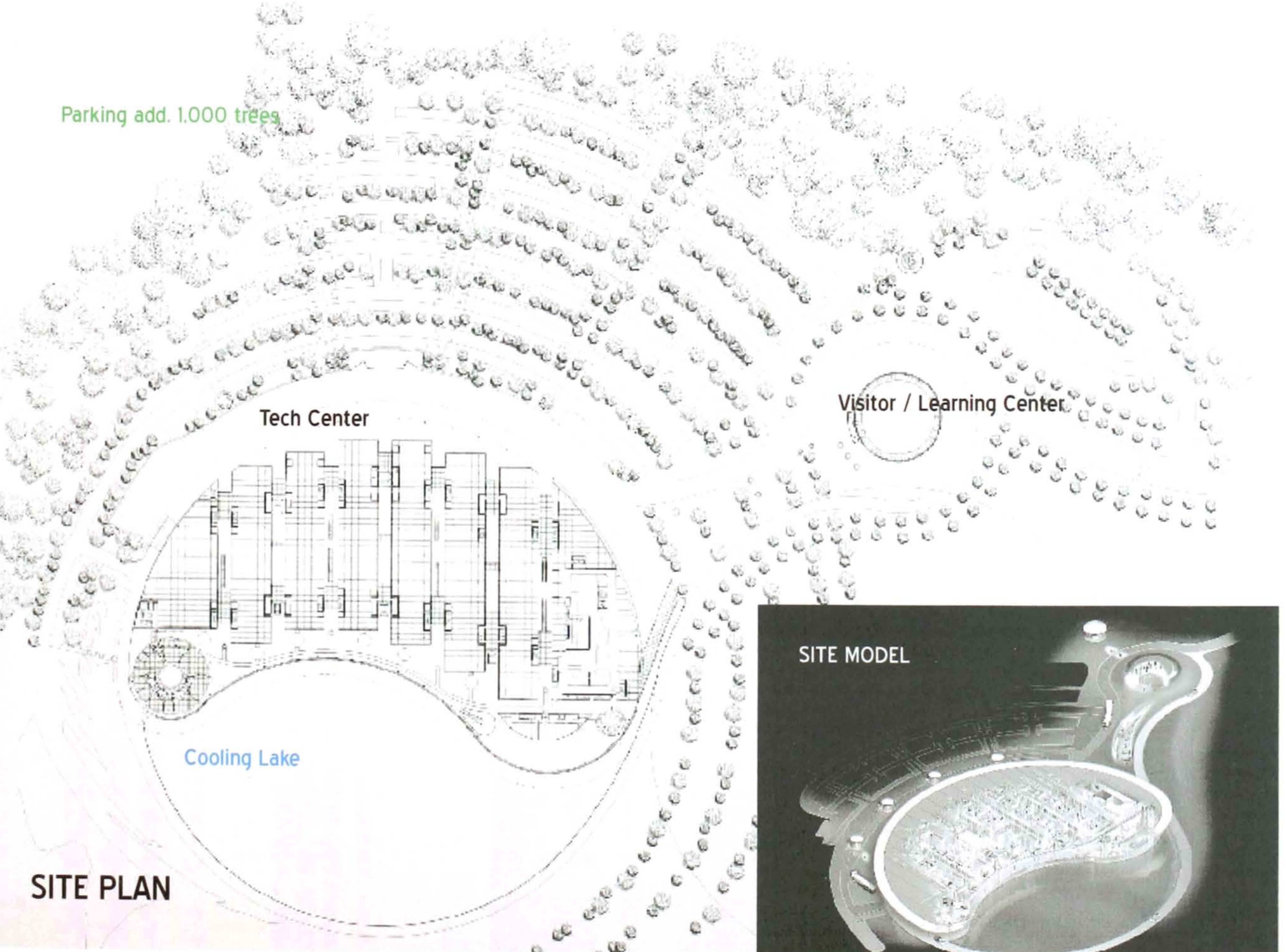
Tech Center

Visitor / Learning Center

Cooling Lake

SITE PLAN

SITE MODEL

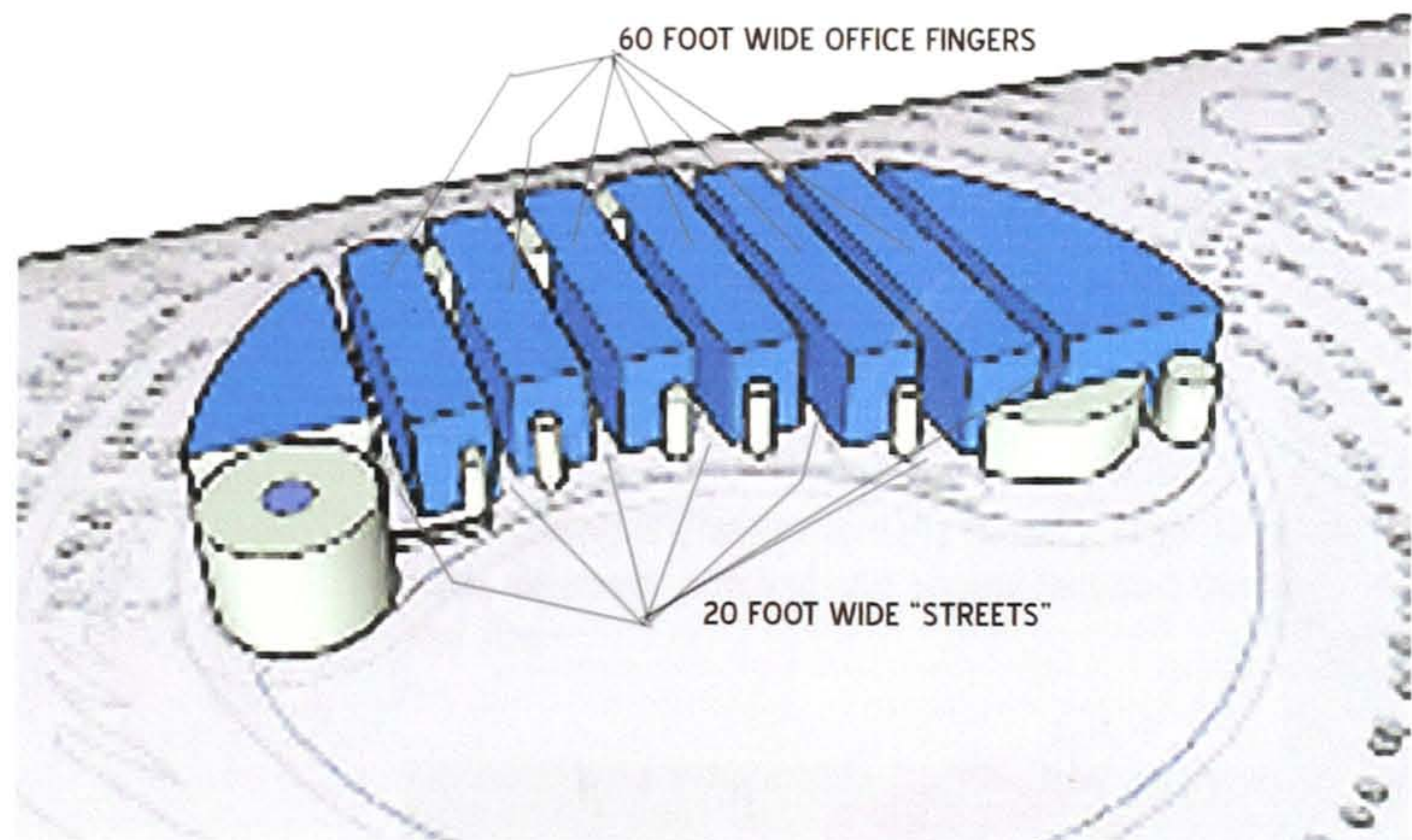




The shape / typologies of LAN (Local Area Networks) are either physical or logical. The physical orientation of this building can be compared to a Tree Typology: in which all devices are clustered in separate pods that are all connected to a central cable at intervals called the bus or the backbone.

LAN Typologies: are usually confined to a single building or a group of building, multiple networks can be connected to create a larger network called a WAN ( Wide Area Network)

The tech center is arranged in a type of modified Tree typology . Where pods or work areas are clustered and are located off of a main "street" or corridor that services the whole building.



Project Program:

Site Area 50 ha

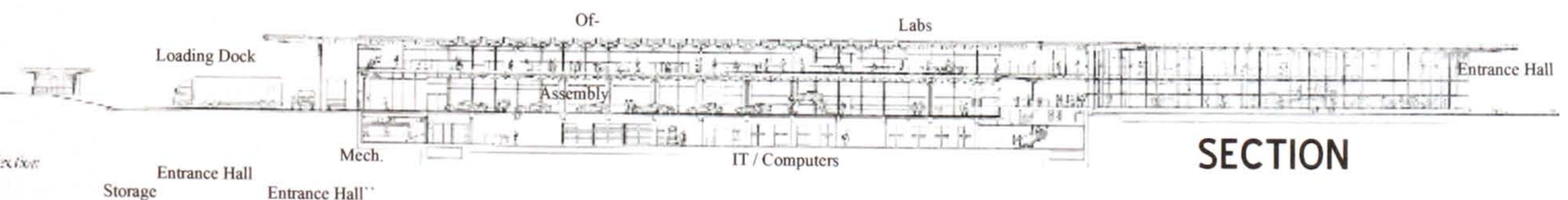
McLaren Technology Center

Total Floor Area: 678,000 sq.ft.

Total Office Space : 613,000 sq.ft.

Visitor and Learning Center : 65,000 sq.ft.

Total over 3 floors : 678,000 sq.ft.





Statement:

The Building environment and site is very similar to the metro airport site that I have selected. Close location to transportation infrastructure. This facility embodies high technology, not only in the envelope but also in the way that it deals with site/landscape and environmental technology integration into the buildings systems.

The integration and collaboration between McLaren and smaller innovative partners is a symbolic relationship with both being able to benefit for each other. With McLaren this small companies receive access to technology that would be unattainable in the global market for operation their size. McLaren provides access to this technology.

Manufacturing floor is created with flexibility in mind able to change quickly to accommodate flexible manufacturing.

The building is environmentally friendly, with natural light used wherever possible and energy recycled throughout the site.

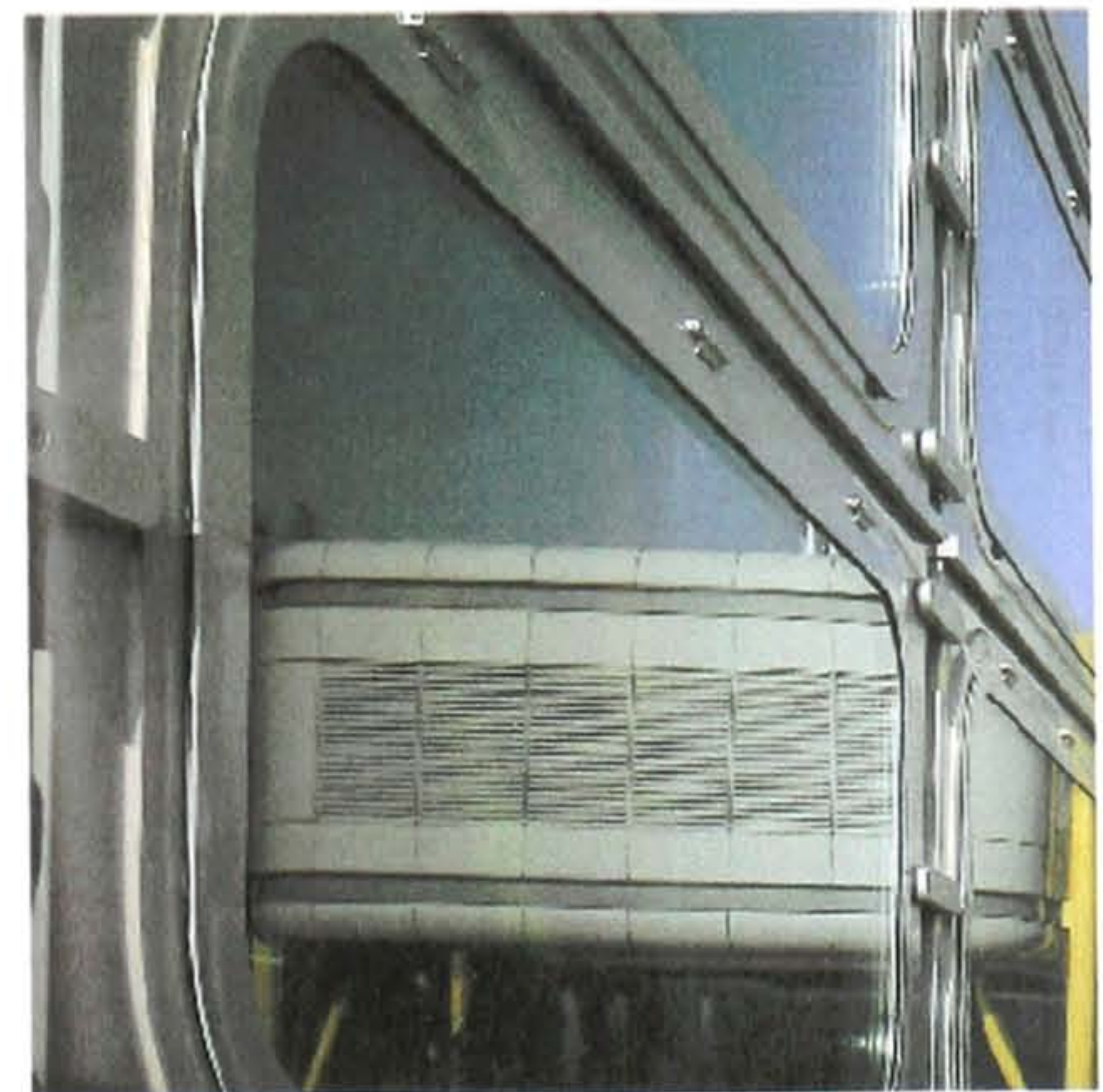
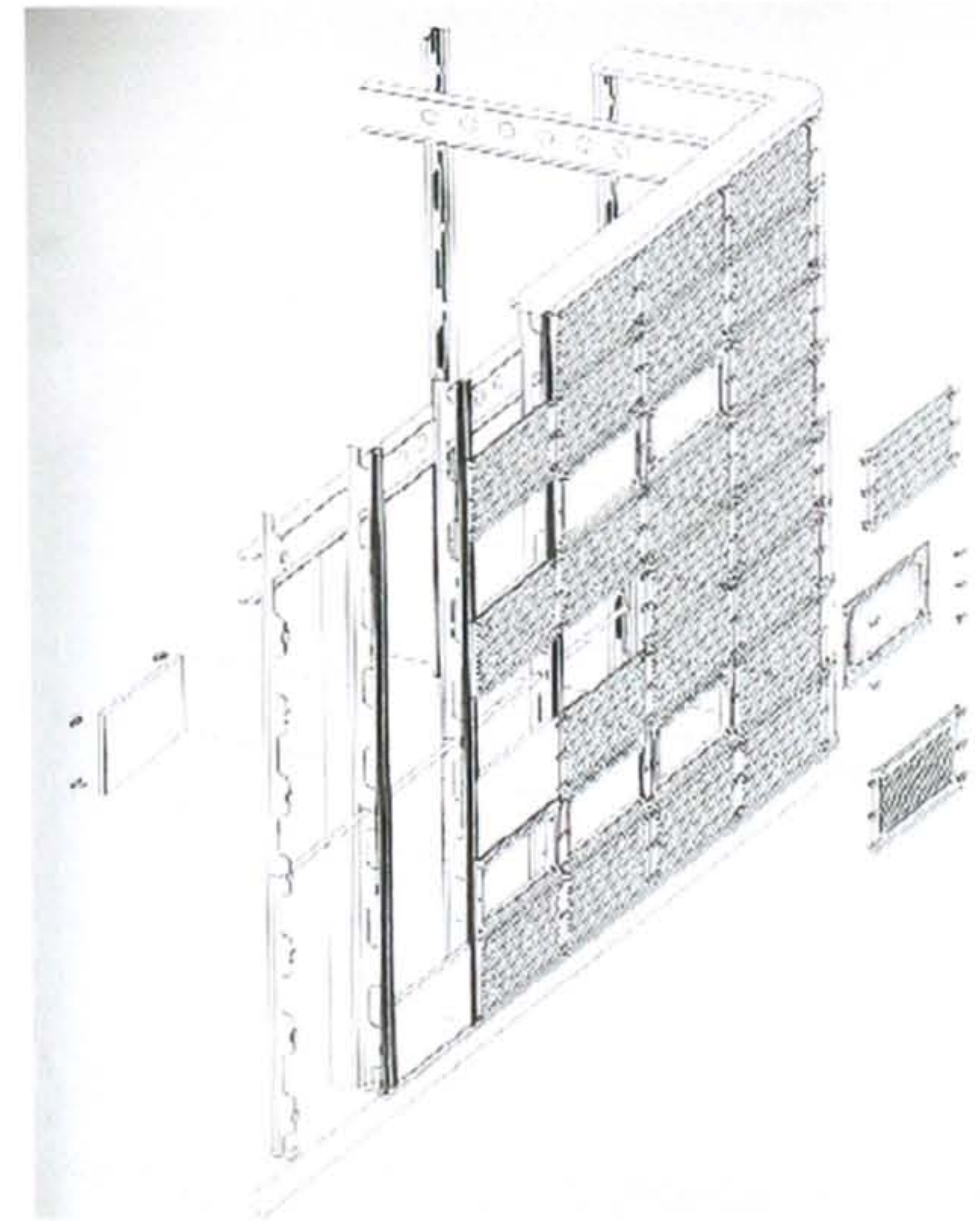




Title: Igu  
Headquarters  
and Factory  
Construction: 1992  
Location: Cologne, Germany  
Architect: Nicholas Grimshaw &  
Partners  
Sq. Ft: 2,100 sq meters

The building and factory complex is also sited in a decentralized location removed from the traditional center of Cologne located by the autobahn and the airport. All functions of this injected molded plastic's company are provided for in one location. The facility was also designed to accommodate further expansion in the future. The different programs of the company are synthesized into one comprehensive and cohesive space that allows for maximum flexibility. The integrated and inventive roof lights allow for natural light and ventilation. The Igu company factory embodies the non-traditional, non-hierarchical management structure. The company is divided into different teams all carrying the same equivalent status. The non traditional structure of management is represented in the buildings "up to the minute totally flexible manufacturing plant where anything could happen anywhere."

Project negatives:  
Although the building seeking a slightly iconic identity I feel that it is a bit restrained. A decentralized location could have allowed for more invention /innovation of how the manufacturing processes and the other disciplines could have been integrated. Even though the building appears to be on the technological side it still it fails to take into considerations any new green technologies or building materials. I feel a decentralized campus at this time of my research would best fit my ideals compared to an all under one roof solution.





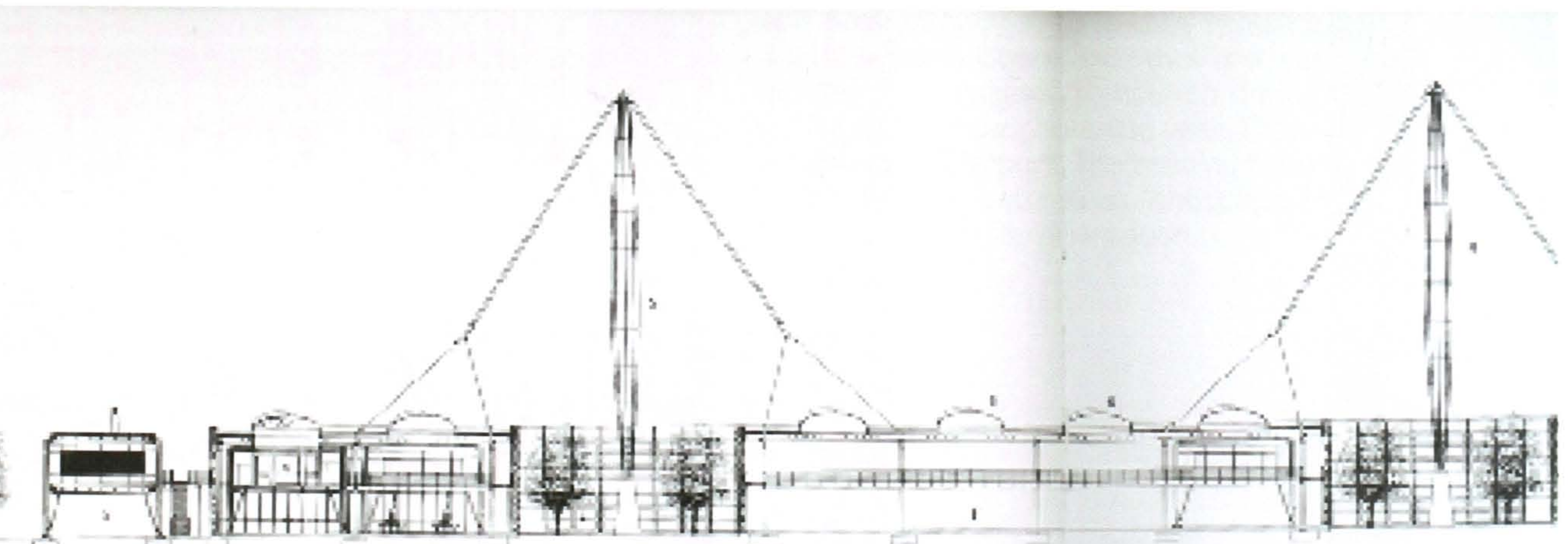
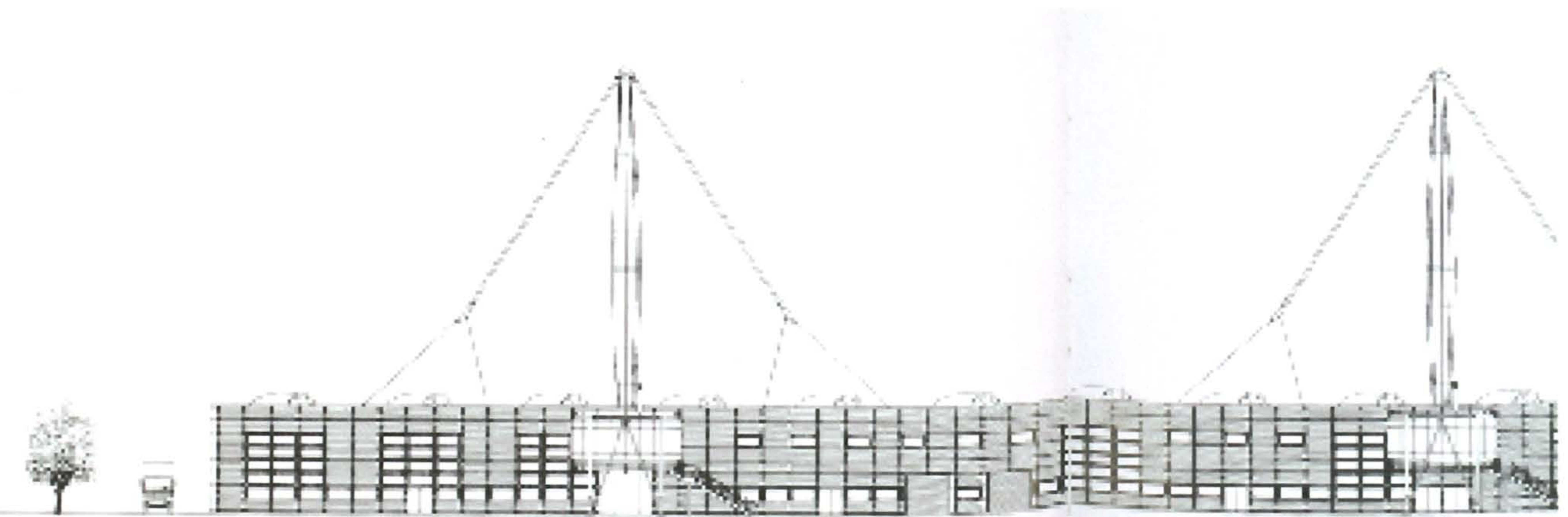
**Critique:**

**Project strengths:**

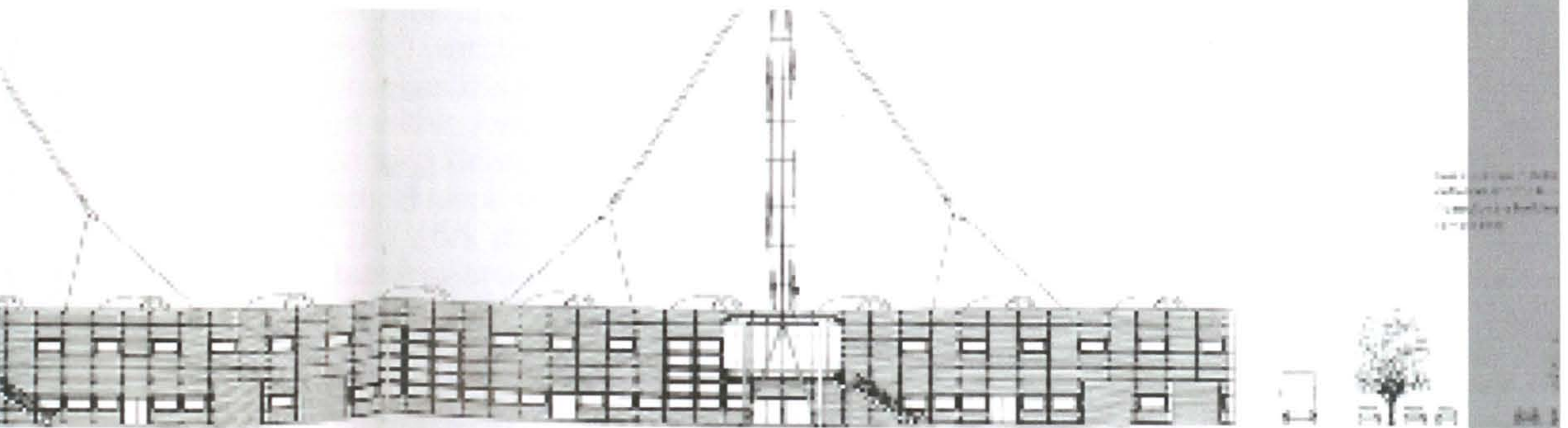
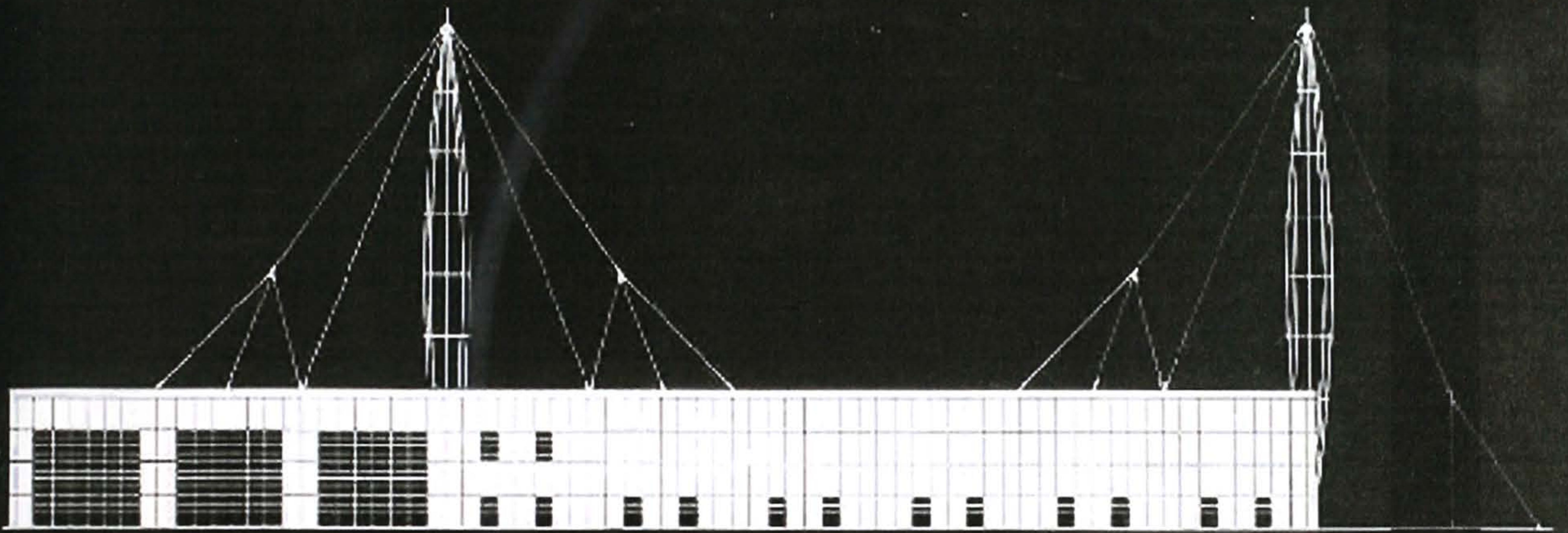
The project's strength resides in the fact that it is a high tech manufacturing plant located in a decentralized industrial / commerce zone. Grimshaw's innovative use of pre-fabricated panels create an economical and simple system for ease of construction. The SE of the 90 degree oculus that each covers one quarter of each structural bay all for abundant natural light and ventilation. The structural bay system allows for maximum internal flexibility that allows for rapid change in the internal factory layouts. The system can be built in phases allowing for staggered construction allowing for growth when the company is ready to grow.



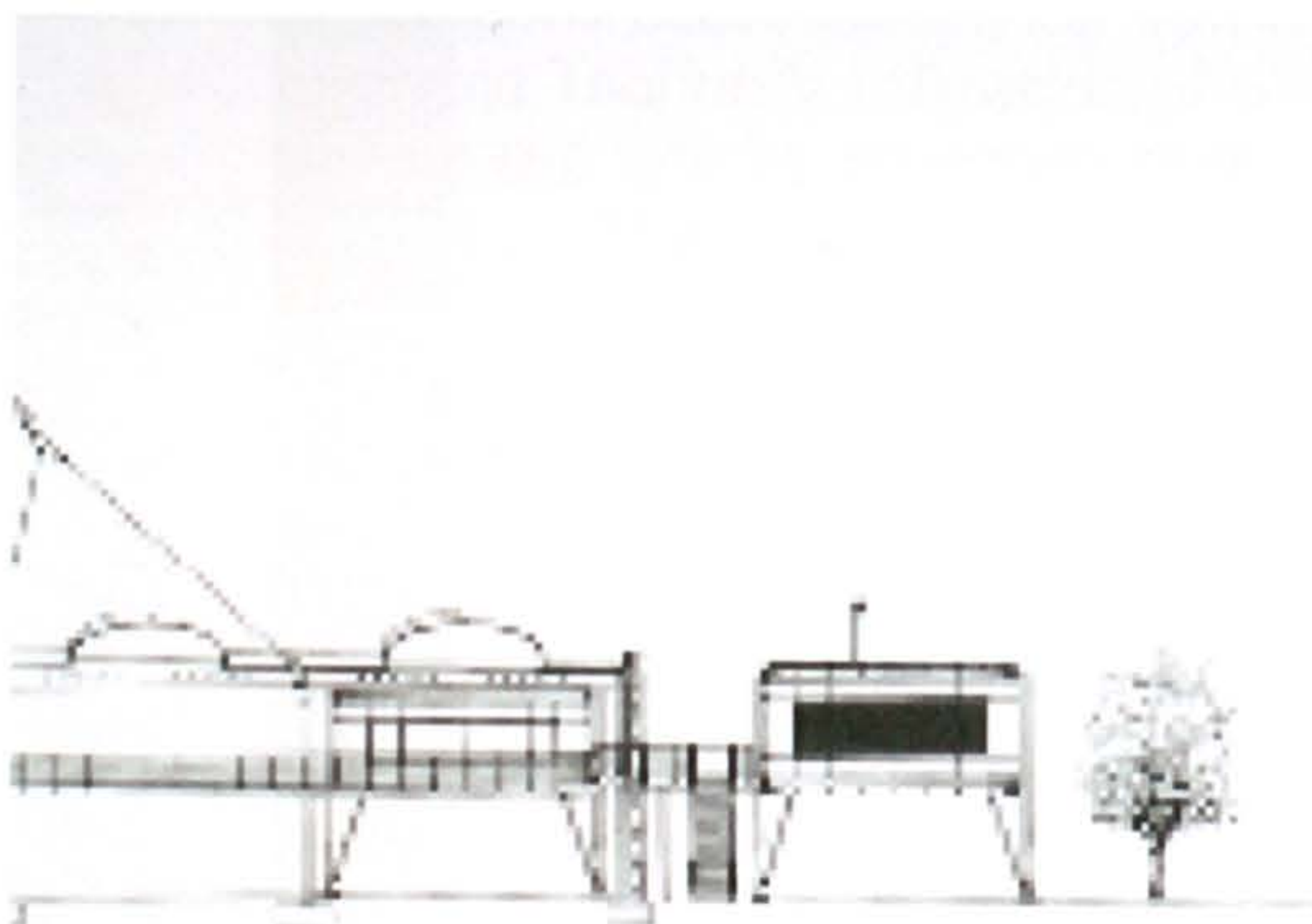
Interior of the factory space looking towards one of the courtyards and roof domes.







All functions of the company are contained within one space, office, support space is provided for in single bay pods that are movable and hook directly in to flexible ventilation and power system. Courtyards that are within the building are designed to flourish during different seasons throughout the year. Close to the autobahn and airport. The building figures as a landmark in a featureless landscape allowing for it to be used for orientation.



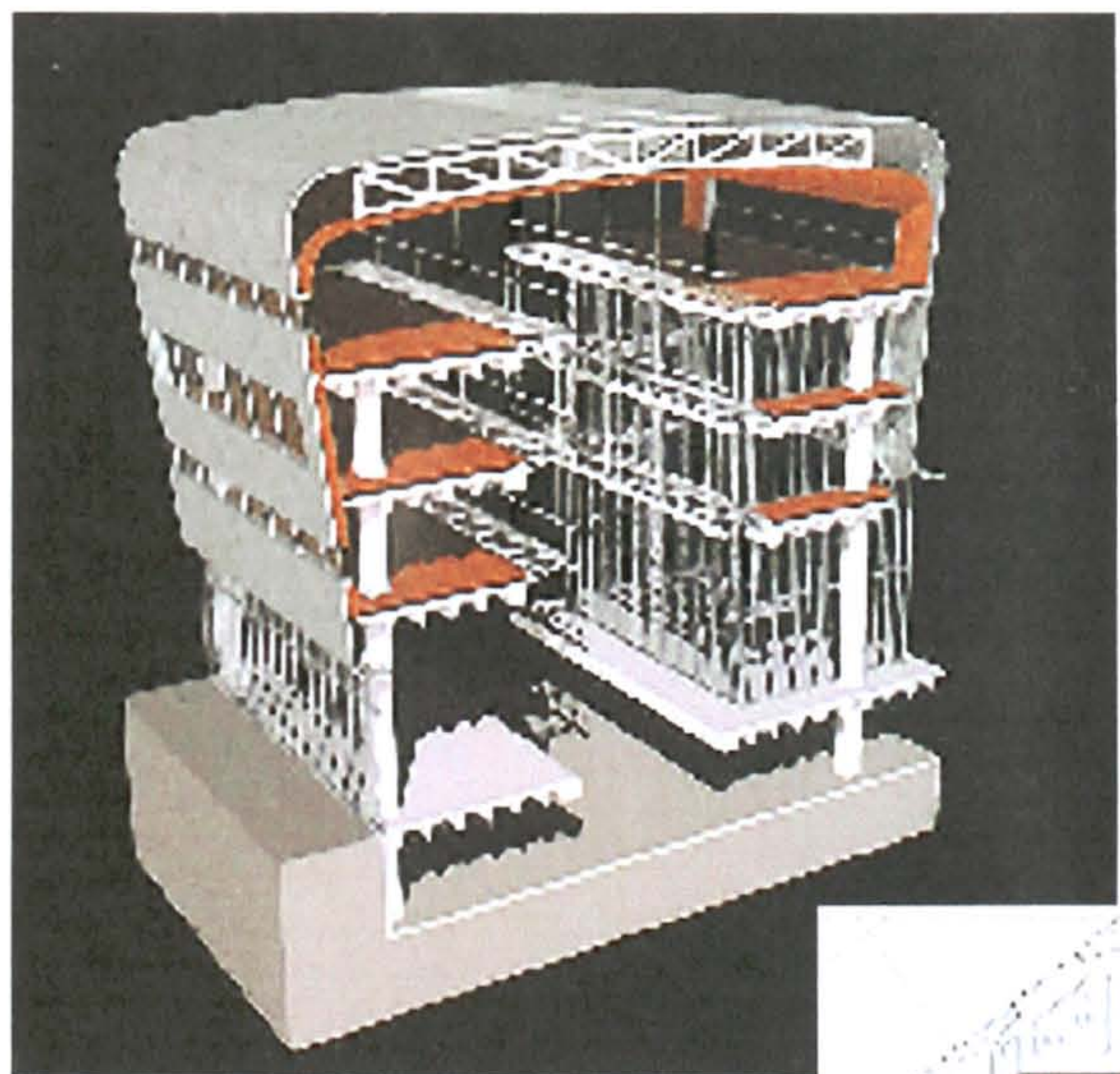


Title: Vacheron Constantin Headquarters and Watch Factory  
Construction: 2004  
Location: Plan-les-Ouates, Geneva, Switzerland  
Architect: Bernard Tschumi Architects  
Sq. Ft: 142,000 sq.ft = 47,000 sq.ft factory ,  
85,000 sq.ft = Other

The building and factory complex is sited in a decentralized location removed from the traditional center of Geneva. All functions of the company are provided from in one location. Facilities and space are provided for management, marketing, and manufacturing under one roof. The facility was also designed to, "encourage interaction and communication amongst employees." All employees use the same corridors to move through the facility. The factory has been designed with the future in mind allowing for further expansion in the future of from 80 watchmakers to 250. The building also invokes the spirit of the product that is crafted within (watches). The building provides for parking located under the building following a natural slope that was preexisting in at the site. The work stations are located in a one story building around courtyards that allow for maximum daylight. The manufacturing floor is a clean space, containing air locks, and dressing rooms which are program requirements for high tech manufacturing.

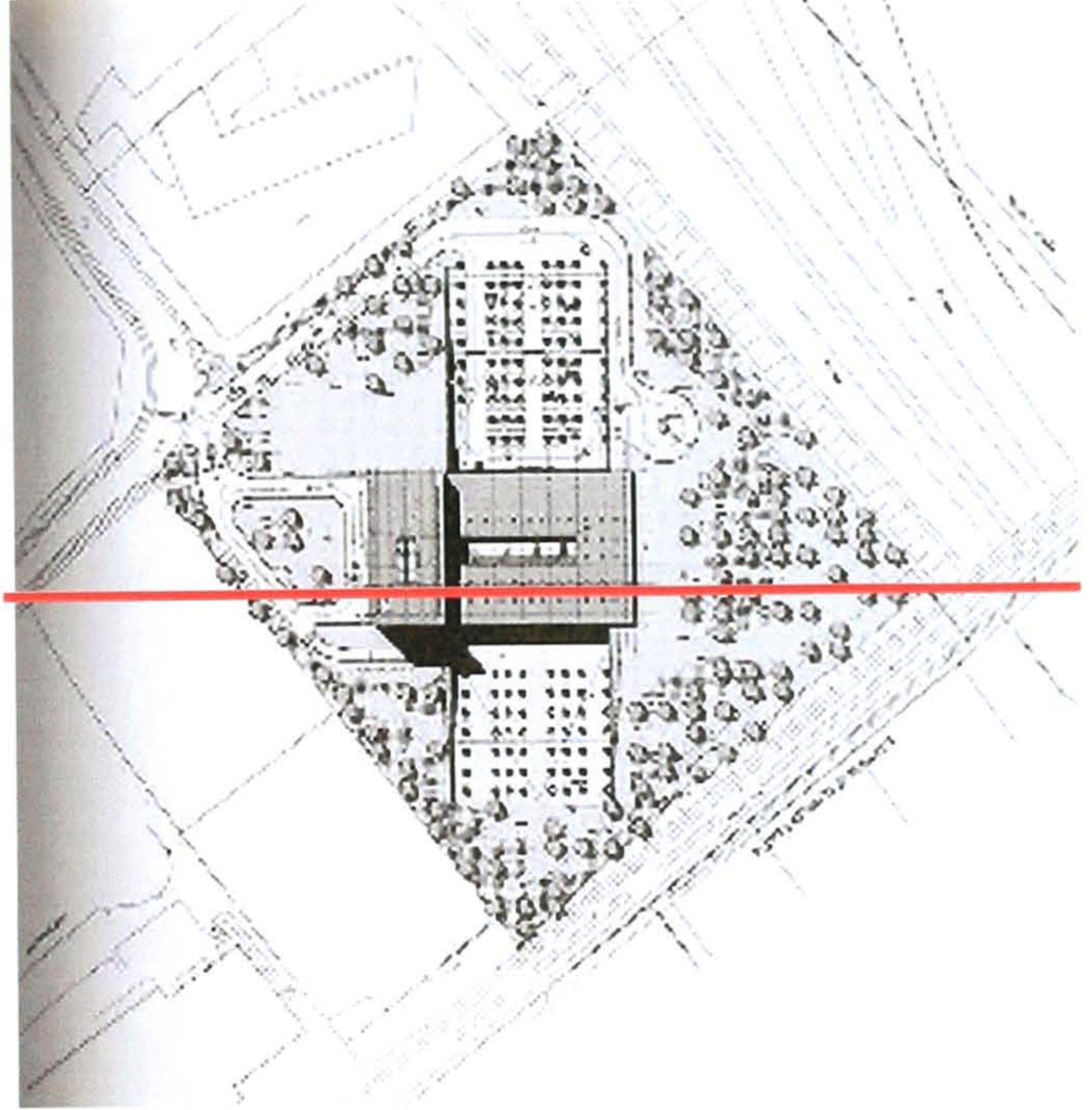
#### Critique:

The project strengths resides in the fact that it is a high tech manufacturing plant located in a decentralized industrial/commerce zone. Bernard Tschumi's utilization of a natural feature in the site to accommodate the parking of cars is of high interest. The fact that the architect is able to use natural landscape to his advantage instead of eliminating it then trying to recreate it is a positive. A more authentic experience is created between natures, man, and the built environment all while remaining highly technically based.

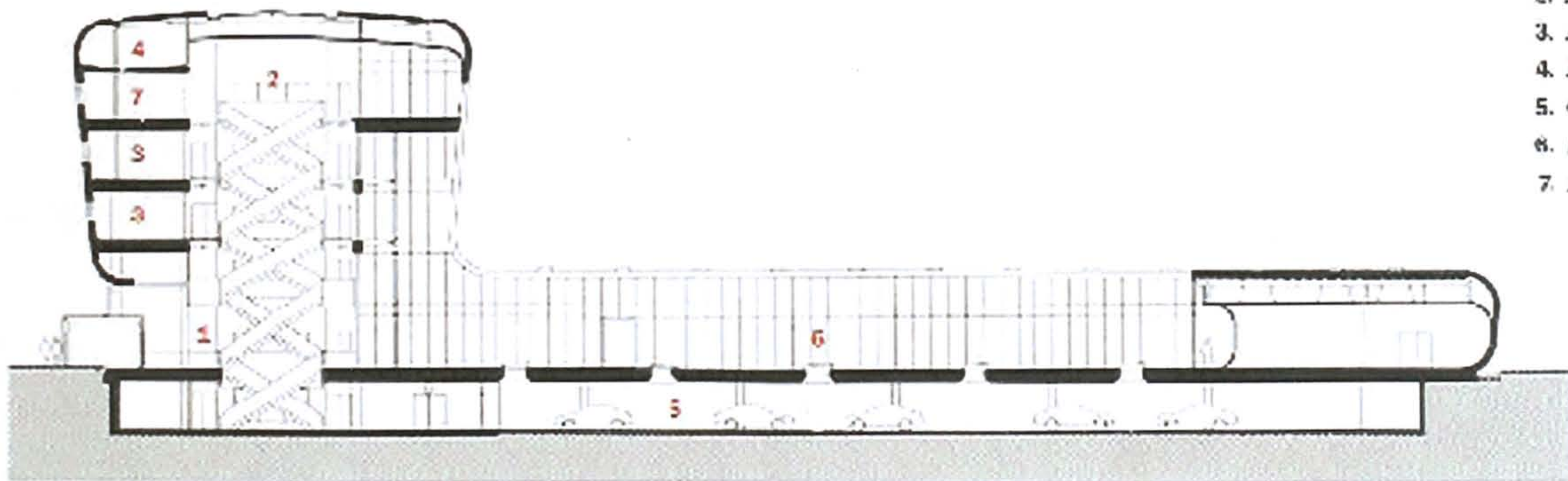




## Site Plan



## Sections



1. Entrance lobby
2. Atrium
3. Administrative offices
4. Mechanical space
5. Covered parking
6. Indoor court
7. Stitches

SECTION A-A

0 20 FT.  
6 m





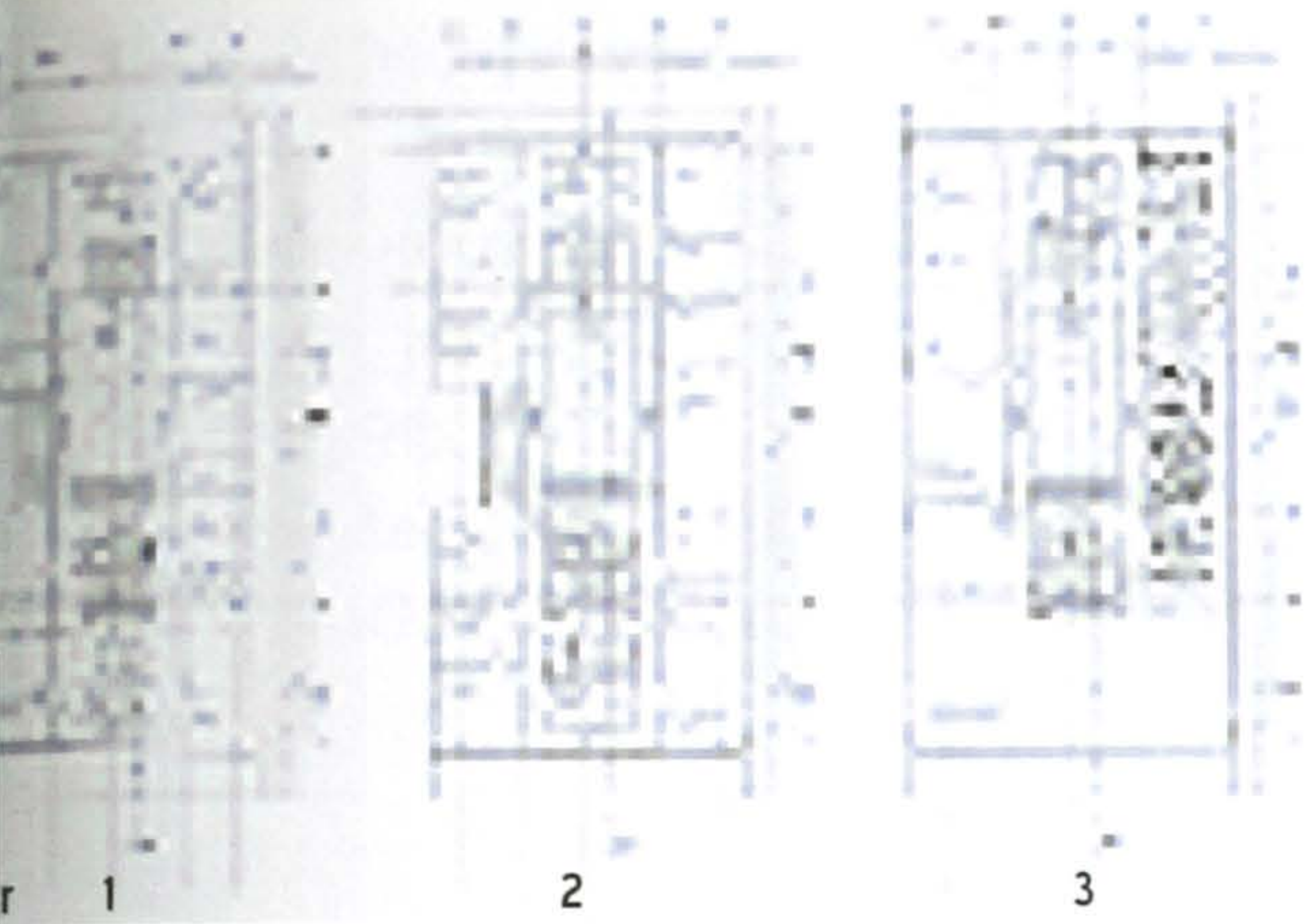
Innovative use of structure creates a uniquely naturally lighted space extenuated by the use of glass panel's screen by a series of different perforated metal panels on the exterior. The use of wood on the inside of the building allows for the edge to be taken off of an industrial / manufacturing building. This allows for the workers to enjoy the same atmospheric quality that the management hierarchy usually only experiences.



American cherry wood  
as the upper surface  
the interior, offset  
the bluish tones of  
the glass stairs, walk-







**Project negatives:**

Although the building seeking a slightly iconic identity I feel that it is a bit restrained. A decentralized location could have allowed for more invention / innovation of how the manufacturing processes and the other disciplines could have been integrated compared to segregated. Even though the building appears to be on the technological side it still it fails to take into considerations any new green technologies or building materials. I feel a decentralized campus at this time of my research would best fit my ideals compared to an all under one roof solution.



- 1. Shop
- 2. Office
- 3. Lab
- 4. Storage
- 5. Factory
- 6. Warehouse
- 7. Office
- 8. Reception
- 9. Lab
- 10. Production
- 11. Office





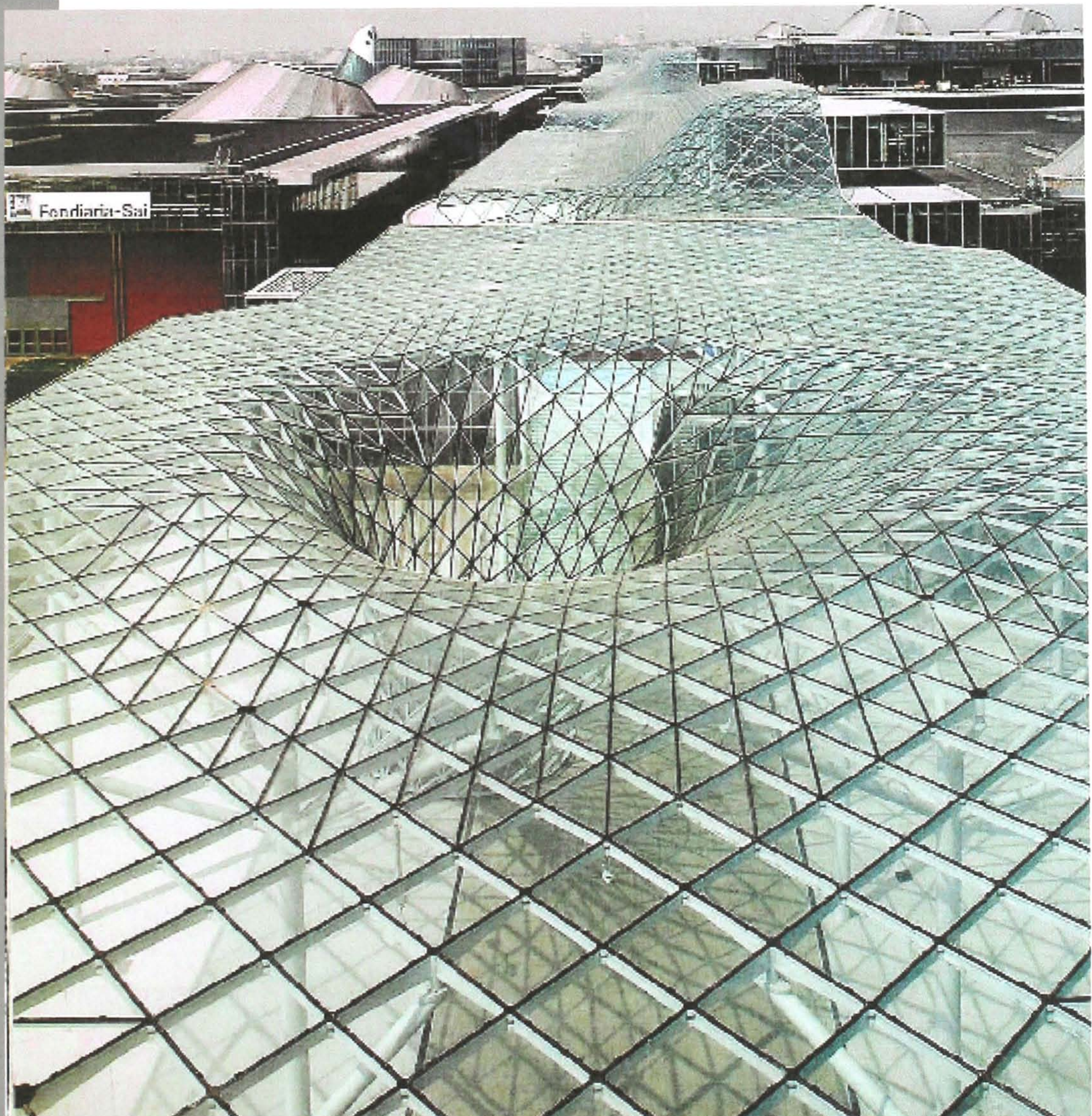
Fiera di Milano

Milan, Italy

Built 2005

Architect: Studio Fukas

Total Square Footage: 2.1 million sq.ft.

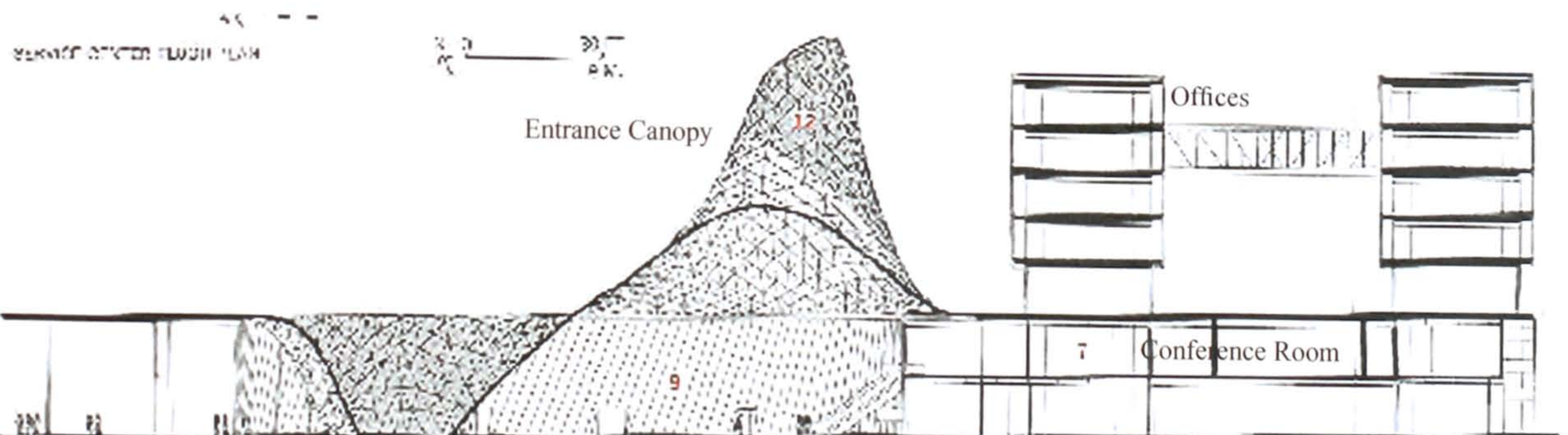




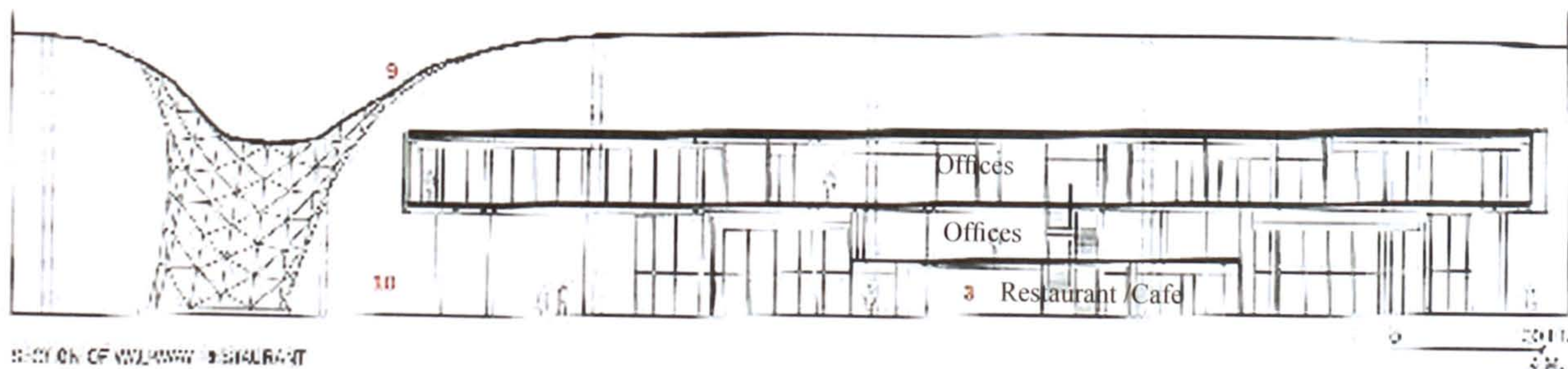


The Milan Trade Fair site is over a mile long exhibition that was designed by Massimiliano Fuksas. The total project covers 2.1 million square feet and over 20,000 parking spaces are provided. Included within the program are 24 restaurants and meeting/gathering spaces.

Scope and Scale: Fuksas counters the massive space by creating a strong central axis that the building orientates to. The canopy acts as the backbone that unifies all of the dissimilar space together thus providing opportunities of breaking down scale.

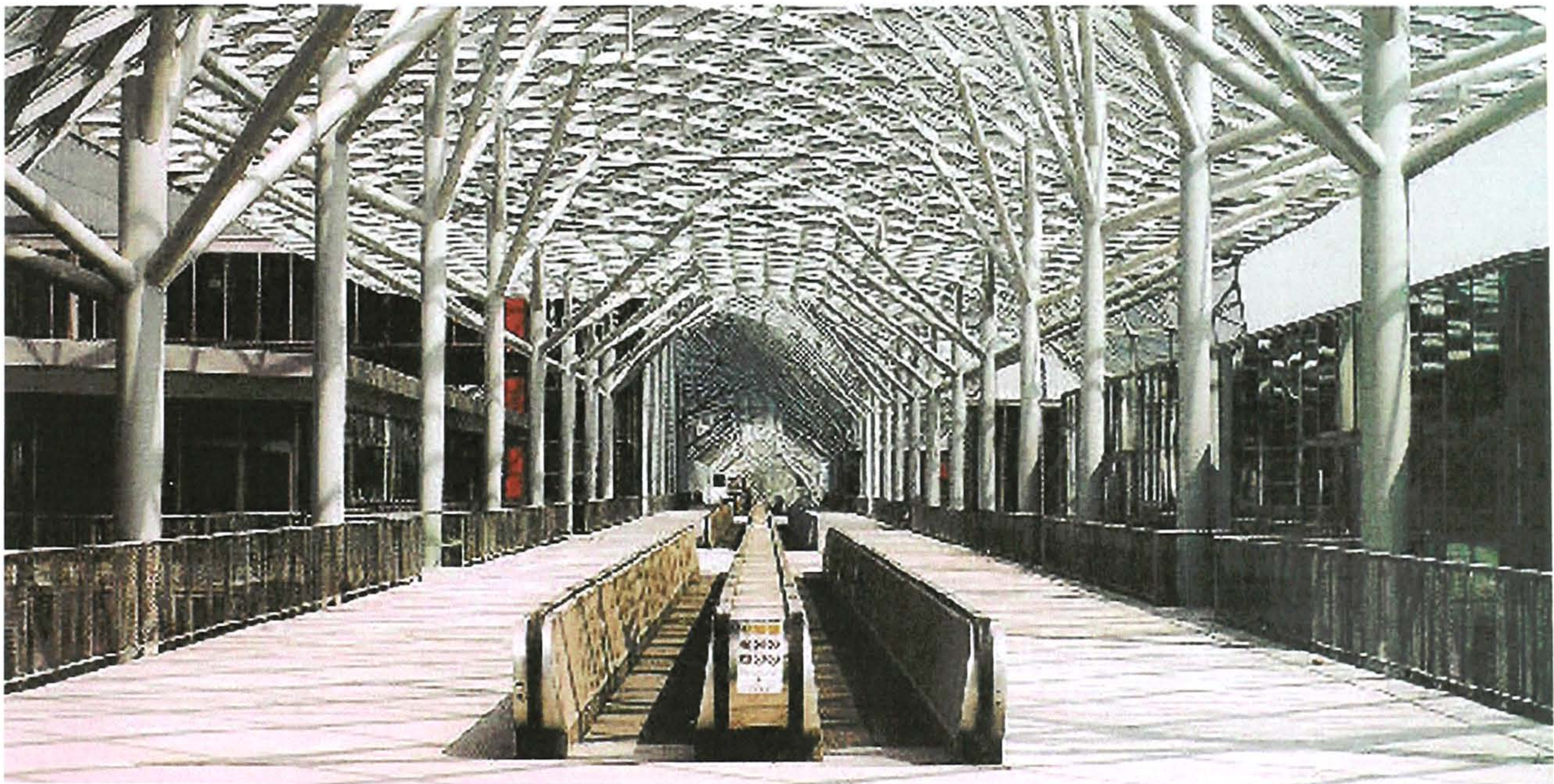


SECTION OF CENTER STUDIO 4-4



SECTION OF WILSON'S RESTAURANT





Located along the backbone / canopy also include the buildings that house the complex's varied and different functional and programmatic uses. The use of rigid building typologies that present the use or function contained for each specific building type.

There are four types of buildings:

8 Exhibition Halls  
coded

: Rectangular Boxes that are color

Central Service Center  
Restaurants and Cafes, Meeting  
structures, Metal Blobs

: Glass and Steel Structure Cone

: Steel- Trussed Glass struc-

Offices

: Simple Glass and Steel Boxes



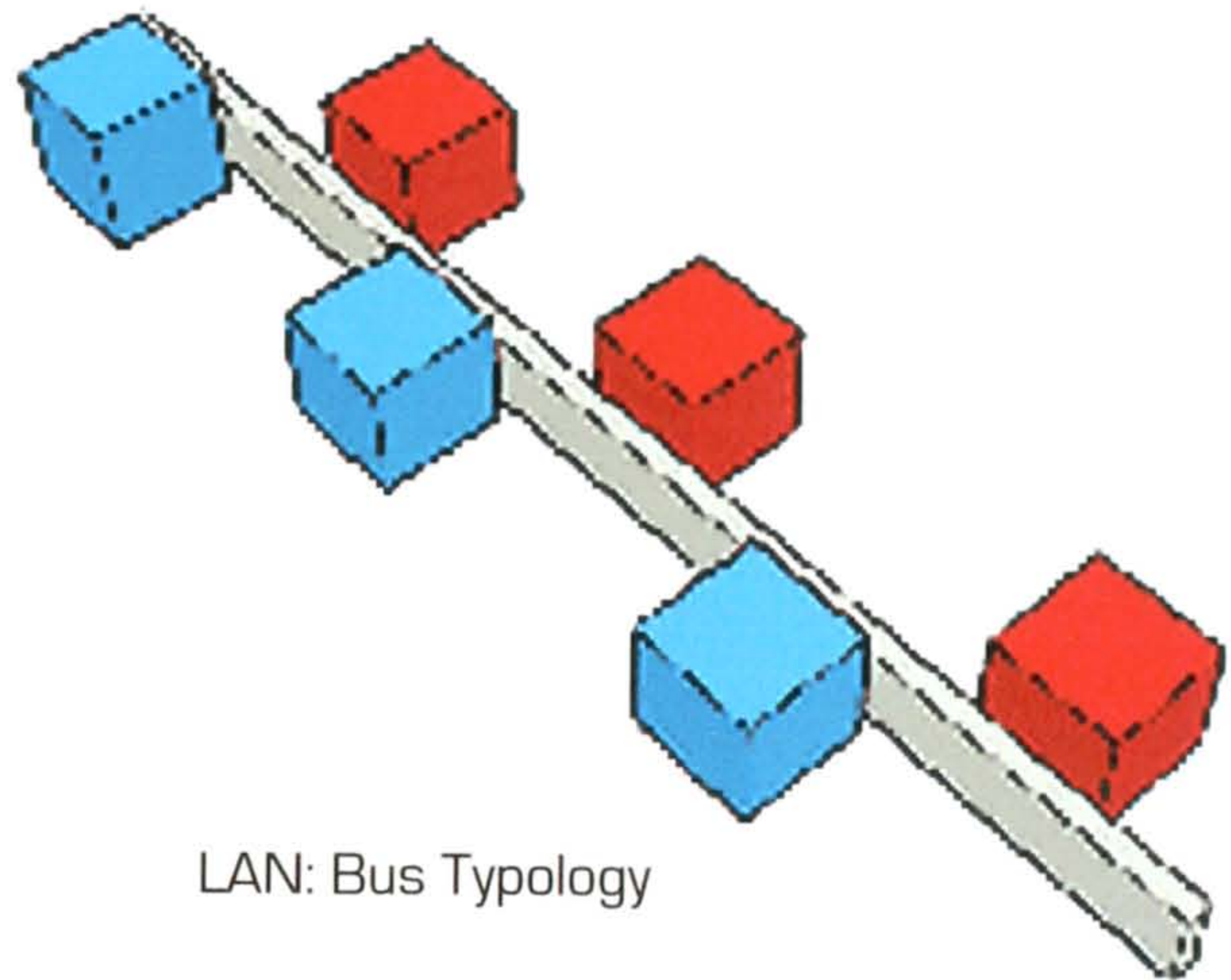


The shape / typologies of LAN (Local Area Networks) are either physical or logical. The physical orientation of this building can be compared to a Bus Typology, in which all devices are connected to a central cable called the bus or the backbone.

LAN Typologies: are usually confined to a single building or a group of building, multiple networks can be connected to create a larger network called a WAN (Wide Area Network)

- |                    |                     |
|--------------------|---------------------|
| 1. Exhibition hall | 7. Conference room  |
| 2. Meeting space   | 8. Auditorium       |
| 3. Restaurant      | 9. Technical center |
| 4. Office          | 10. Library         |
| 5. Service center  | 11. Walkway         |
| 6. Entrance hall   | 12. Entrance cone   |





LAN: Bus Typology



SHIMIZU CENTER FLOOR PLAN

10 FT.  
3/4"

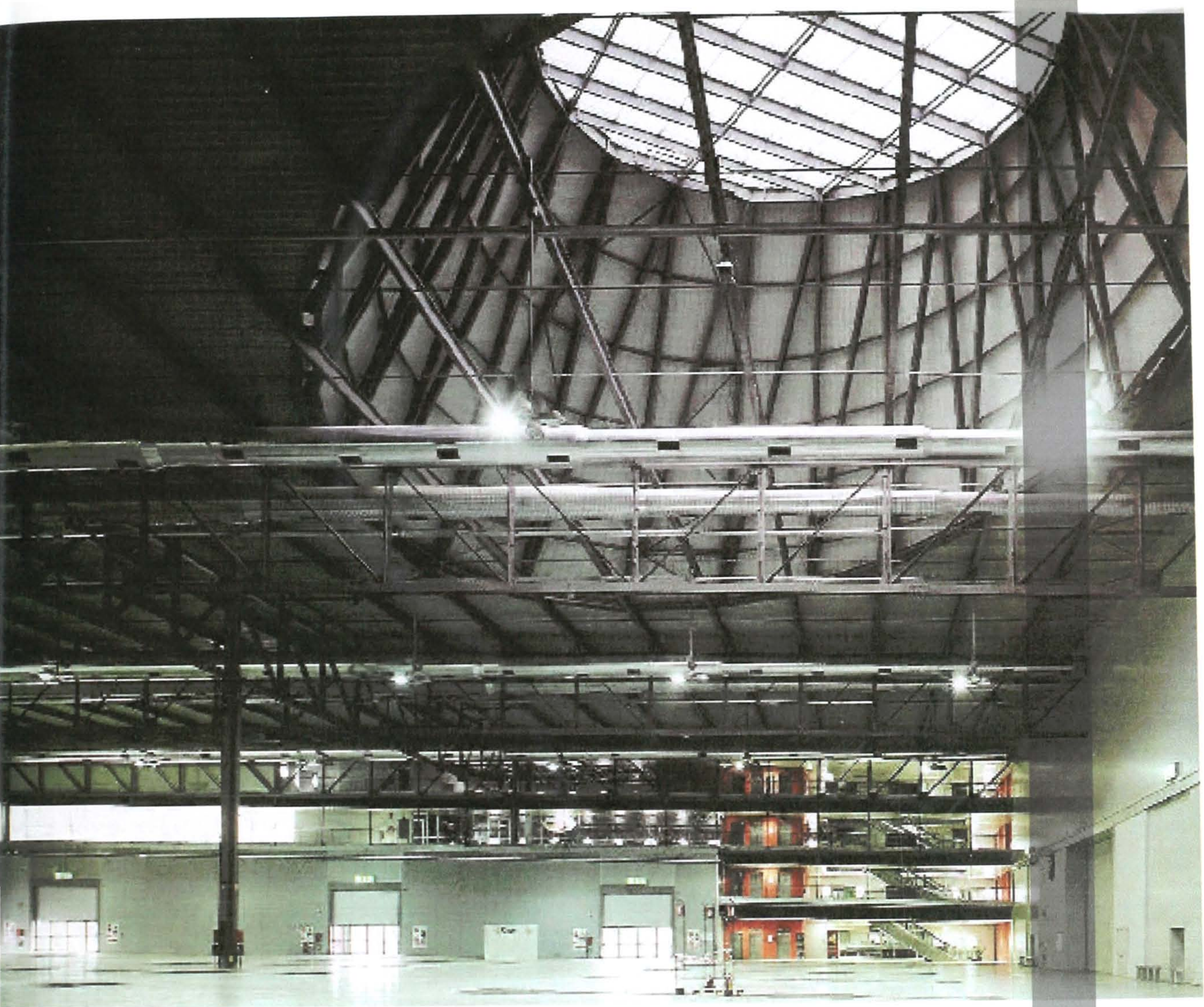
- |                    |                     |
|--------------------|---------------------|
| 1. Exhibition hall | 7. Conference room  |
| 2. Meeting space   | 8. Auditorium       |
| 3. Restaurant      | 9. Technical center |
| 4. Office          | 10. Gallery         |
| 5. Service center  | 11. Walkway         |
| 6. Entrance hall   | 12. Entrance cone   |





Twenty small Restaurants and Cafes line the main canopy corridor located below office floors adjacent to the halls (view down corridor)





Main Convention Space:

Large Halls:

530 feet x 730 feet  
= 38,000 sq.ft. per hall  
x(8)halls@ 38,000

Total: 304,000 sq.ft.



Tectonic Precedent :





"The library was conceived as a continuation of the topography and pushes itself in wedge-like form beneath the surface of the ground. A 40-metre-high truncated concrete cone forms a striking contrast to the gently moulded landscape. The cone is supported on six V-shape pairs of raking columns and houses a four-storey reading space, which is naturally lighted from above via a central void. On its eastern edge, the curved roof is supported by slender, raking steel struts; to the west, it flows into the natural topography of the site."

## Delft University of Technology Library

Design: 1993 - 1995

Built: 1996 - 1998

Architect: Mecanoo architecten b.v.



“The vast lawn is lifted on one edge like a sheet of paper and shapes the roof of the new library. A roof that can be walked upon. The grass roof of the library is freely accessible for walking and lounging, creating a new amenity for the whole campus.

It is supported by slender steel columns in a huge hall enclosed with canted, fully glazed walls. The base of the slope to the west is marked by a broad flight of steps leading up to a recessed entrance. A huge cone pierces the green expanse, articulated by a 1500 mm wide necklace of glazing in the plane of the roof. Supported on splayed steel columns, the cone houses four levels of traditional study spaces connected by a helical stair. Within the cone, a central void provides day-light from a glazed roof to the internal reading spaces. The apex of the cone is formed by an open frame. Extending forty metres above grade and floodlit at night, the cone acts as a beacon on the campus day and night.”



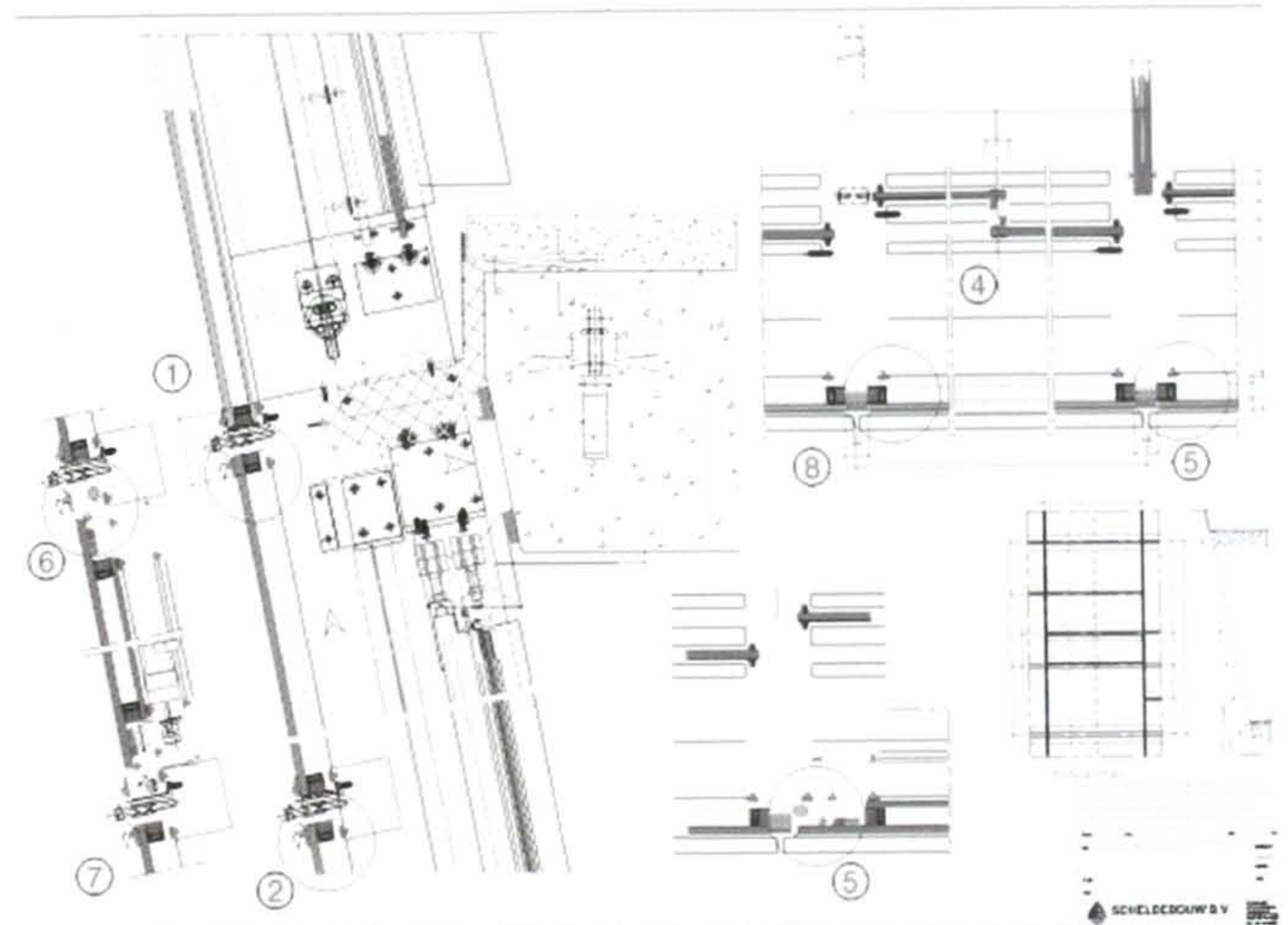


“The density of the mass of the planted roof has significant insulating properties, so that the interior of the building is less susceptible to changes in temperature. In addition, the mass provides excellent soundproofing, and gradual evaporation of rainwater held by the vegetation provides natural cooling in the summer. To avoid disfiguring the roof landscape with mechanical cooling units, and also for ecological reasons, cold storage - the capacity to store cold or heat in ground water - is used. For this building, the storage is in a layer of sand at a depth of 45 to 70 metres below grade. The sand is sealed off above and below by an impenetrable layer of clay. Two tubes stand vertically in the sand 60 metres apart. In winter relatively warm ground water is pumped up through one tube, used to temper the building until it cools, and then pumped back into the other tube. In summer the water takes the opposite route, with the relatively cold ground water being used to cool the building.”

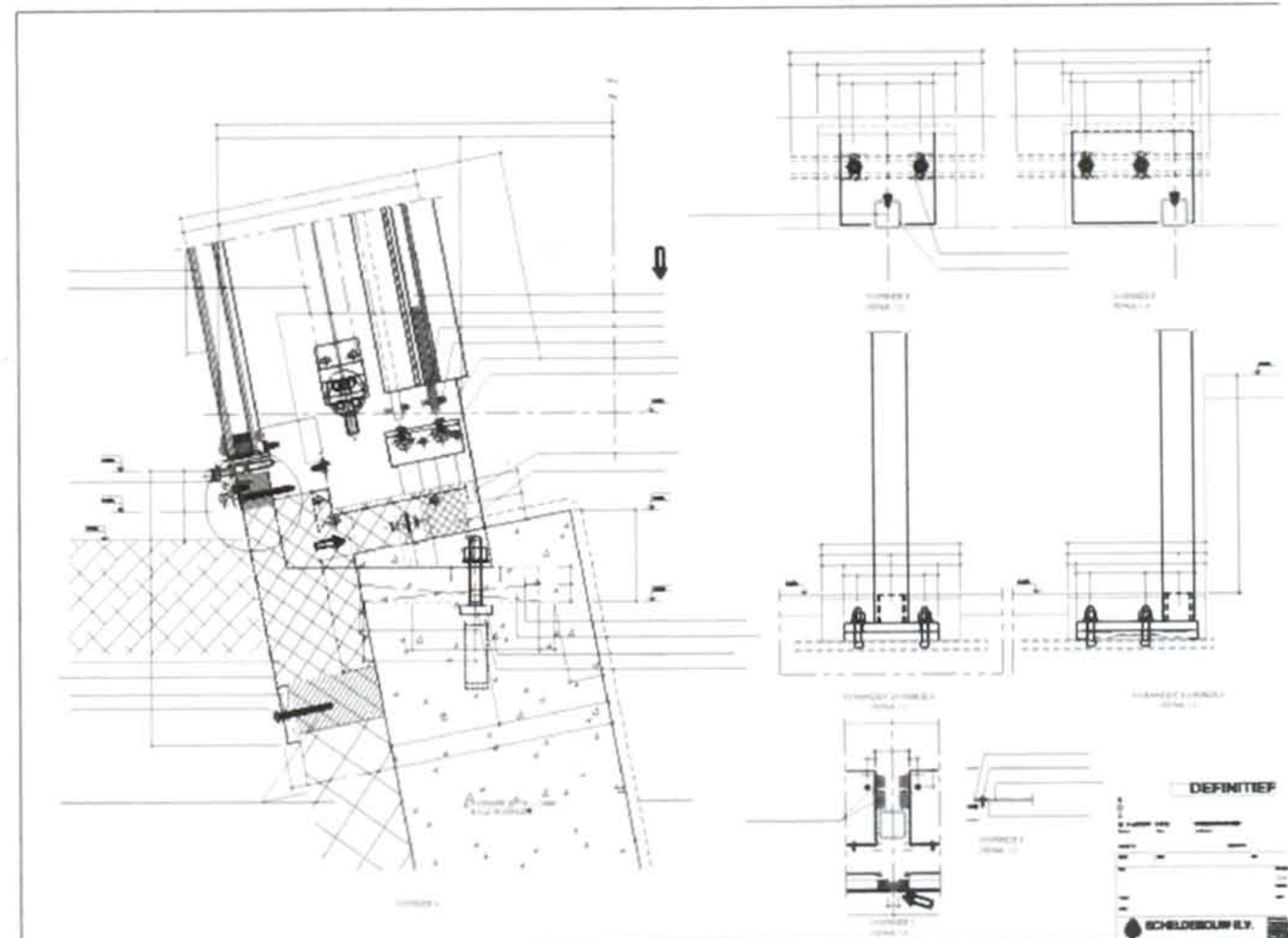
“The glazed facades also play a critical role in the environmental strategy of the building. These facades consist of an outer double glazed unit, a 140 mm wide ventilated air cavity with solar shading, and a sliding inner leaf of toughened glass. Air is supplied into the cavity at floor level and sucked out at high level on each floor. Opening windows incorporated in the facade are small so as to disrupt the flow of air within the cavity as little as possible.”

“The relatively large area of the reinforced concrete roof with its great storage mass ensures a pleasant indoor climate. In summer, the library is naturally cooled by the evaporation of rainwater in the vegetation layer. To avoid service structures on the roof and for ecological reasons, too, groundwater in an aquifer reservoir at a depth of 45-70 m below ground level is used to warm the building in winter and cool it in summer. ”

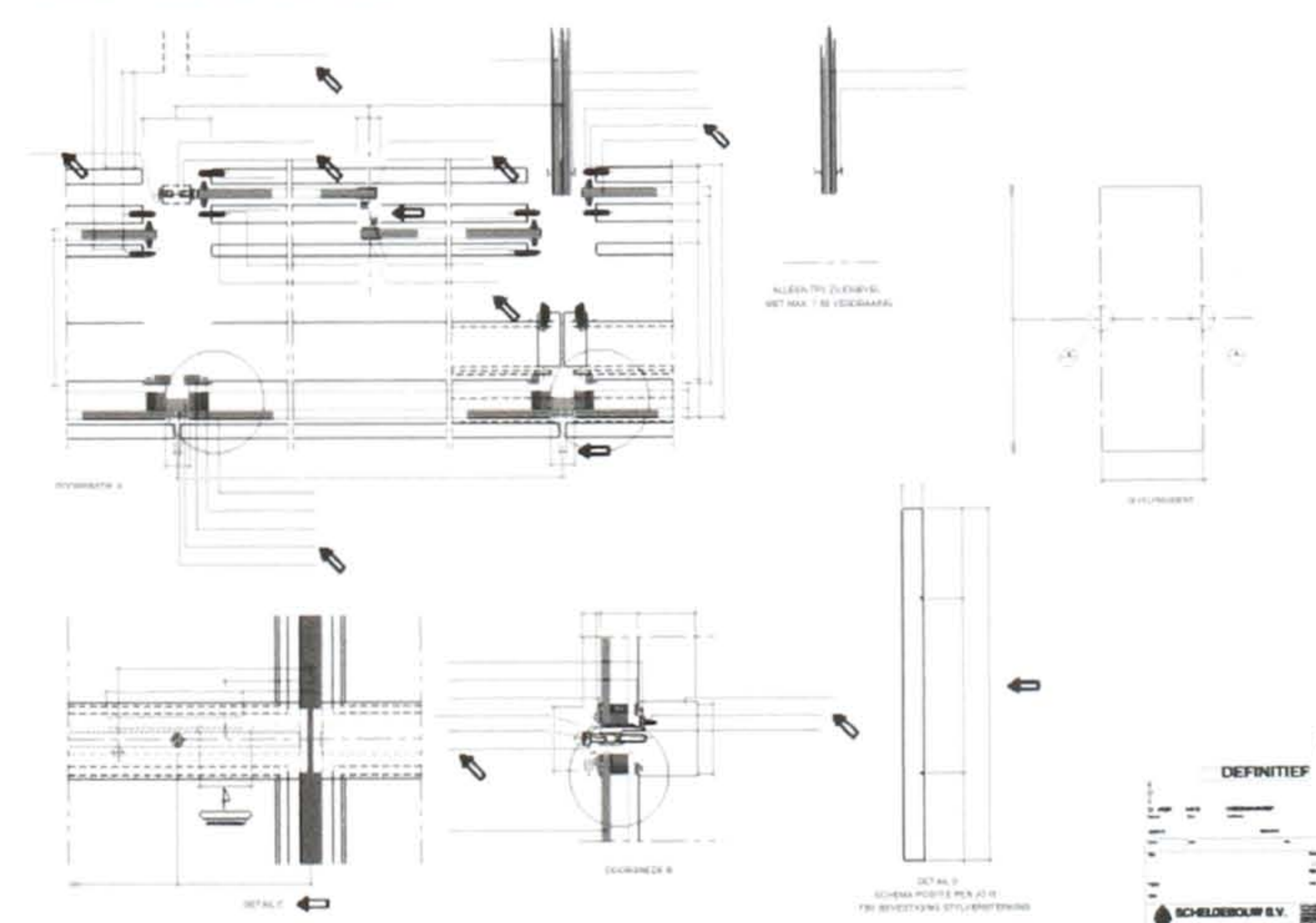
Active Wall Detail



Base Connection Detail



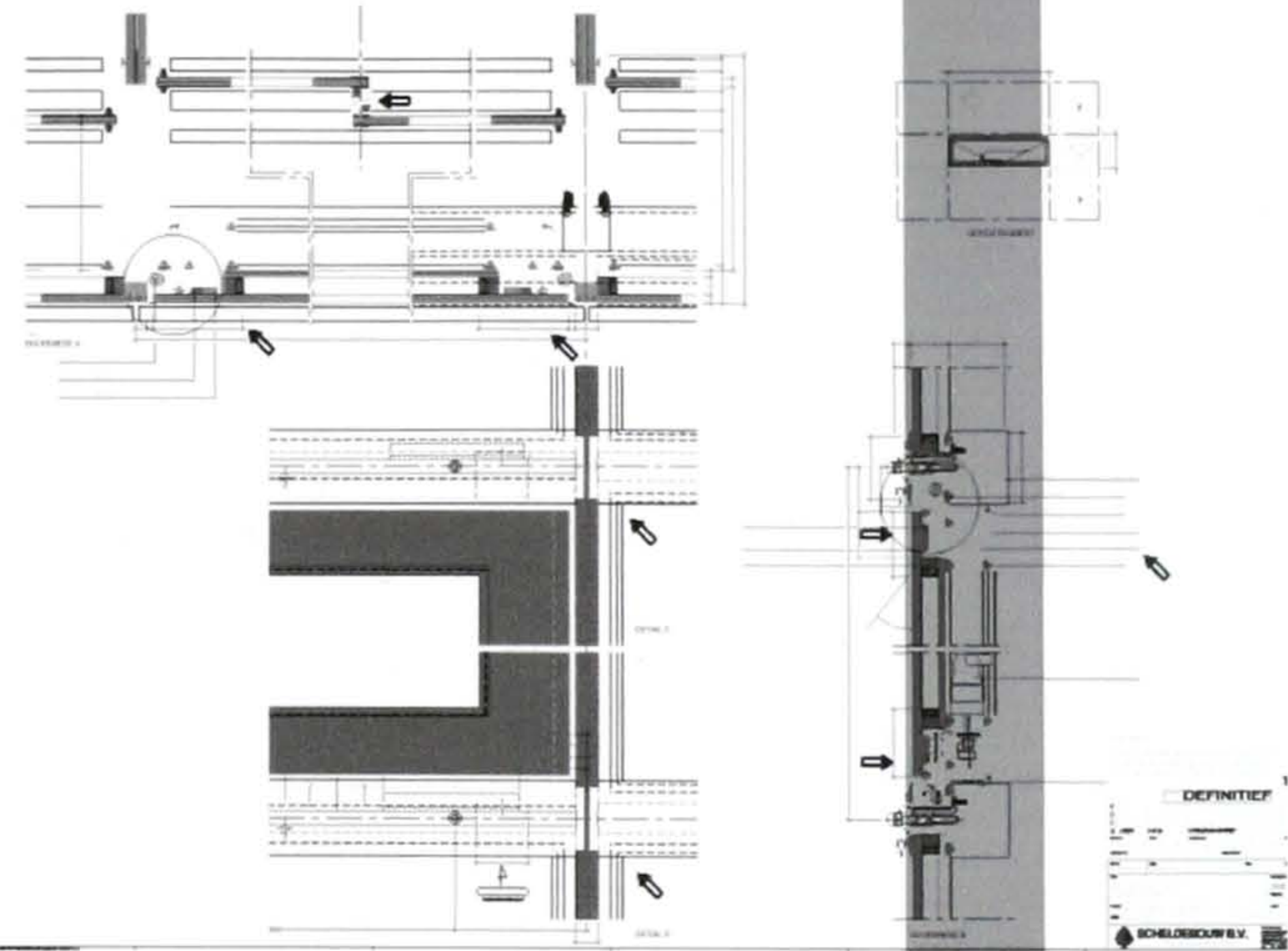
Main Wall Detail



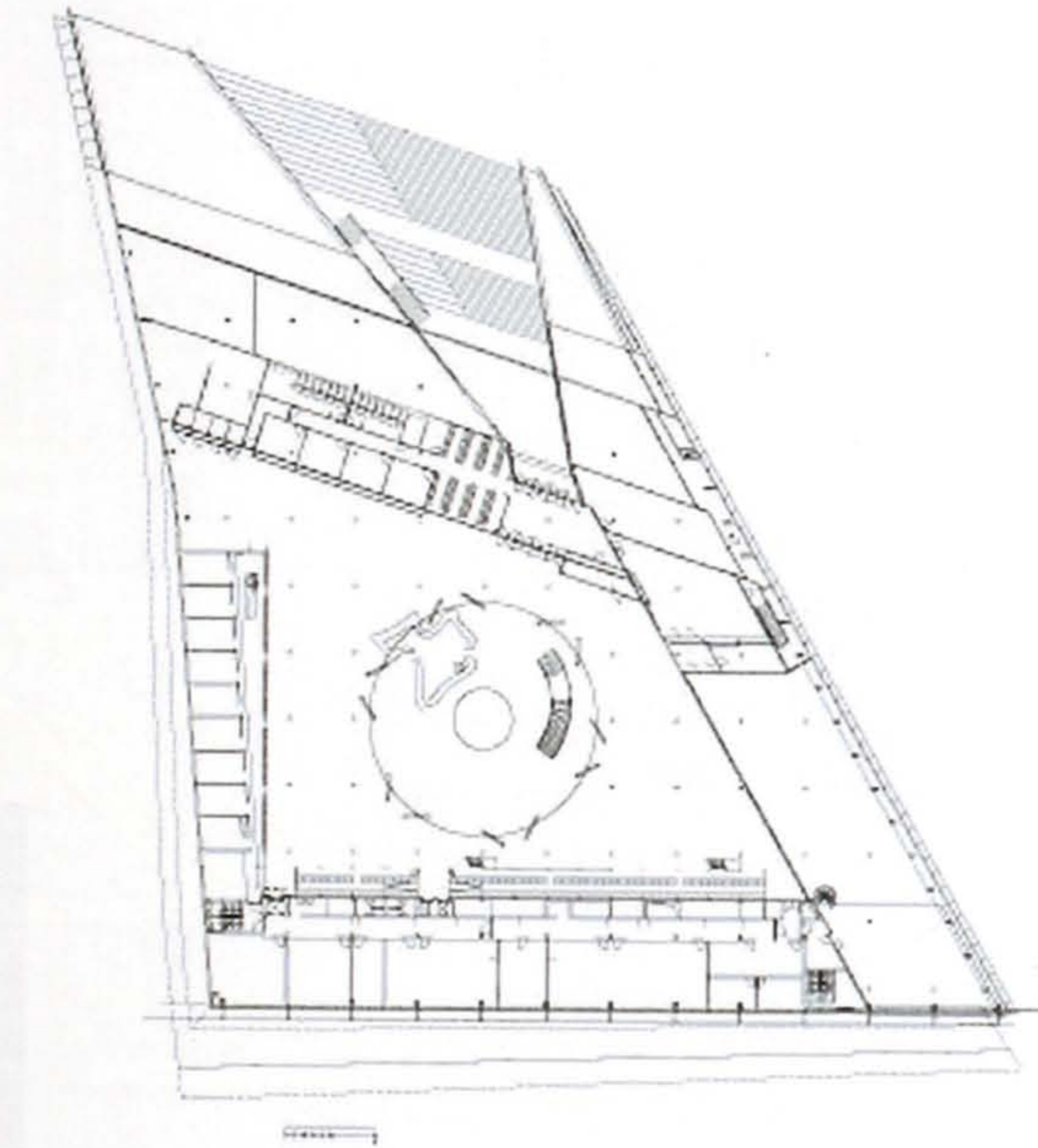


"As a result of the natural insulation of the reservoir, the water retains virtually the same temperature over the period of the annual cycle. The double-façade construction, with different angles of slope, also supports the natural conditioning of the indoor climate. Air enters the intermediate space at the base and is removed at ceiling level."

Sash Detail

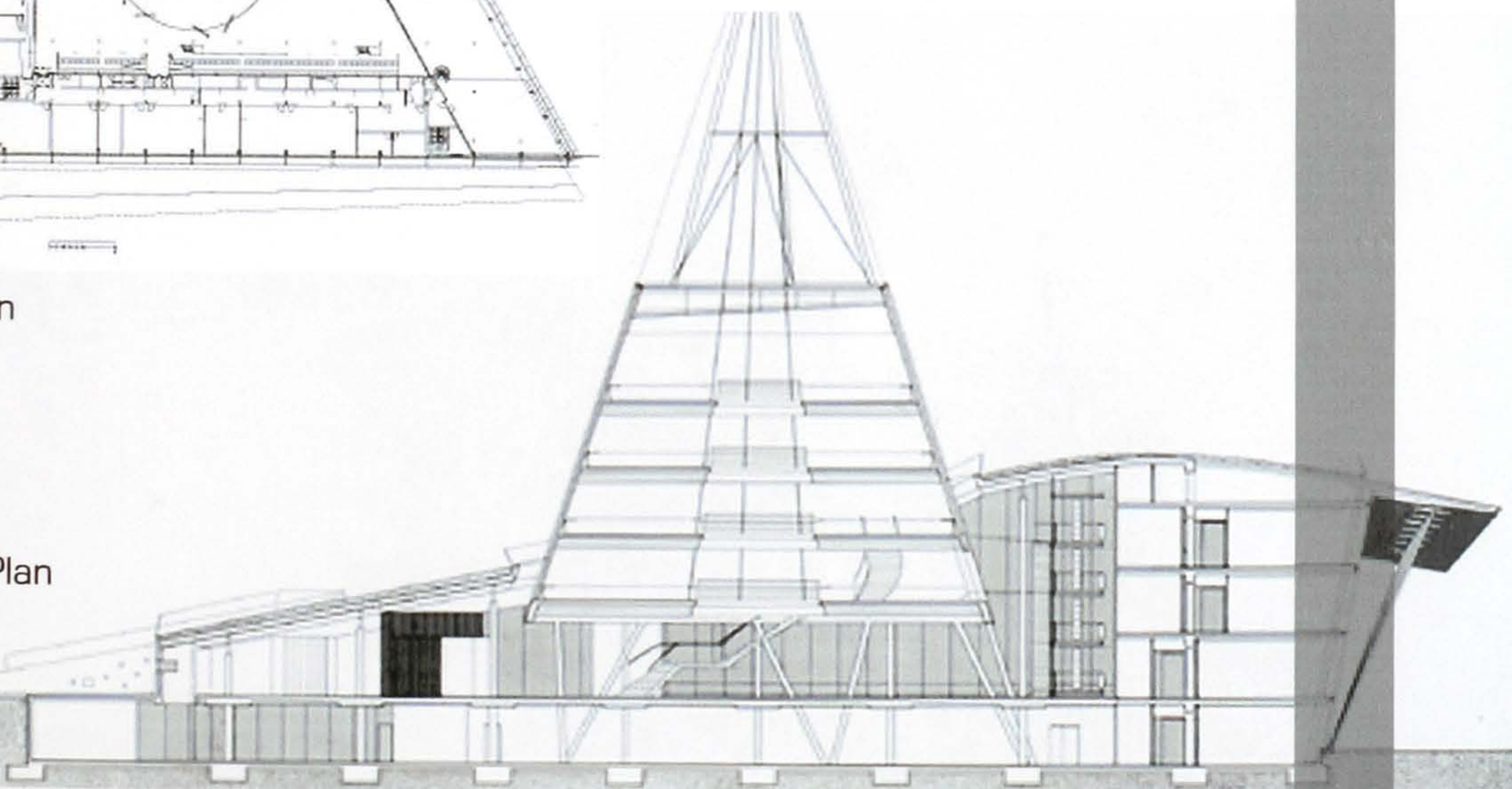


Slab Connection Detail



Floor Plan

Section Plan





# Site Analysis: Goose Island, Chicago Ill.



33



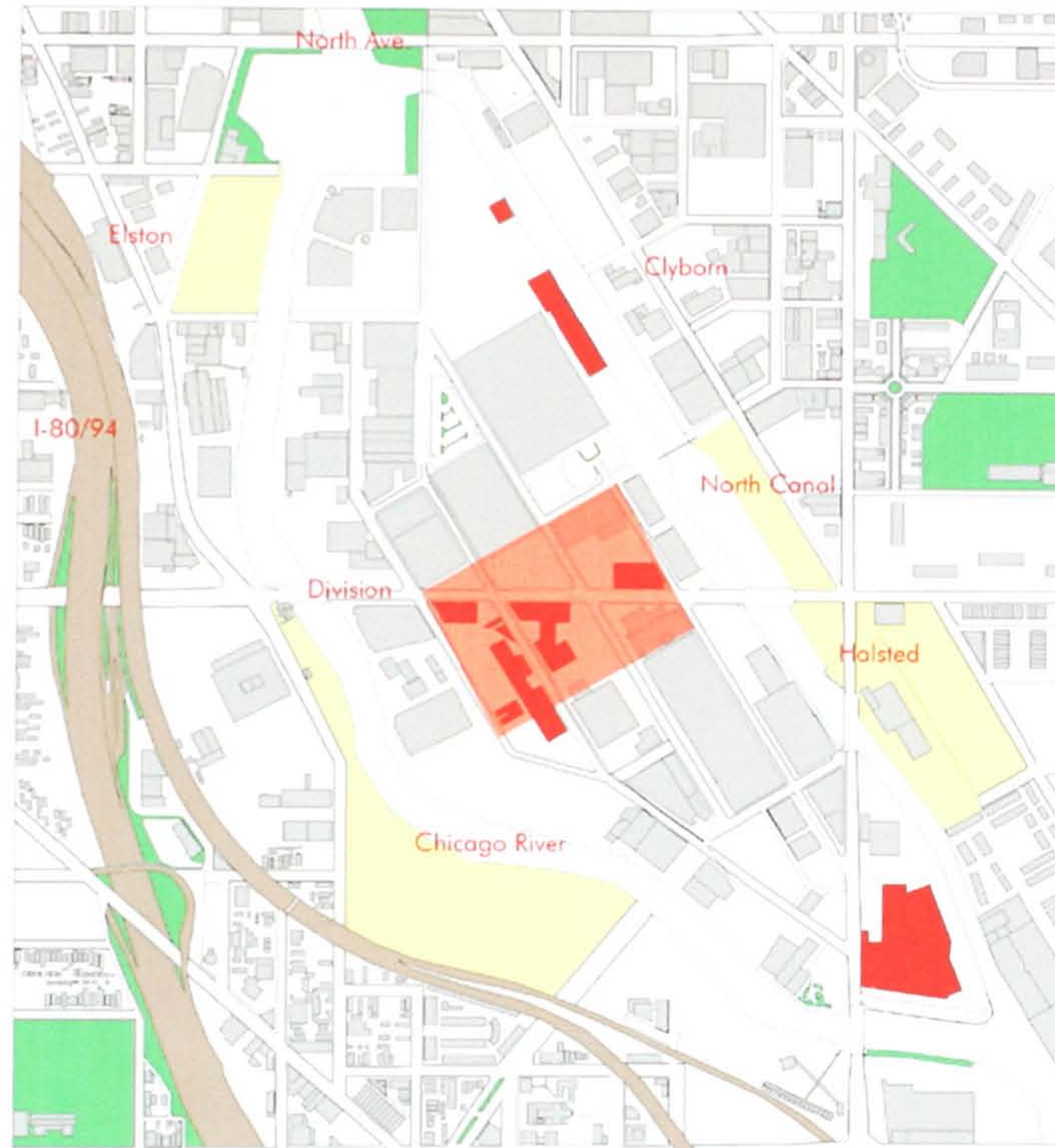
Goose Island is located in Chicago Illinois at the North Branch of the Chicago River, Bounded by North Ave and Chicago Ave.. Division Street cuts straight through the center

**Historical Uses:**

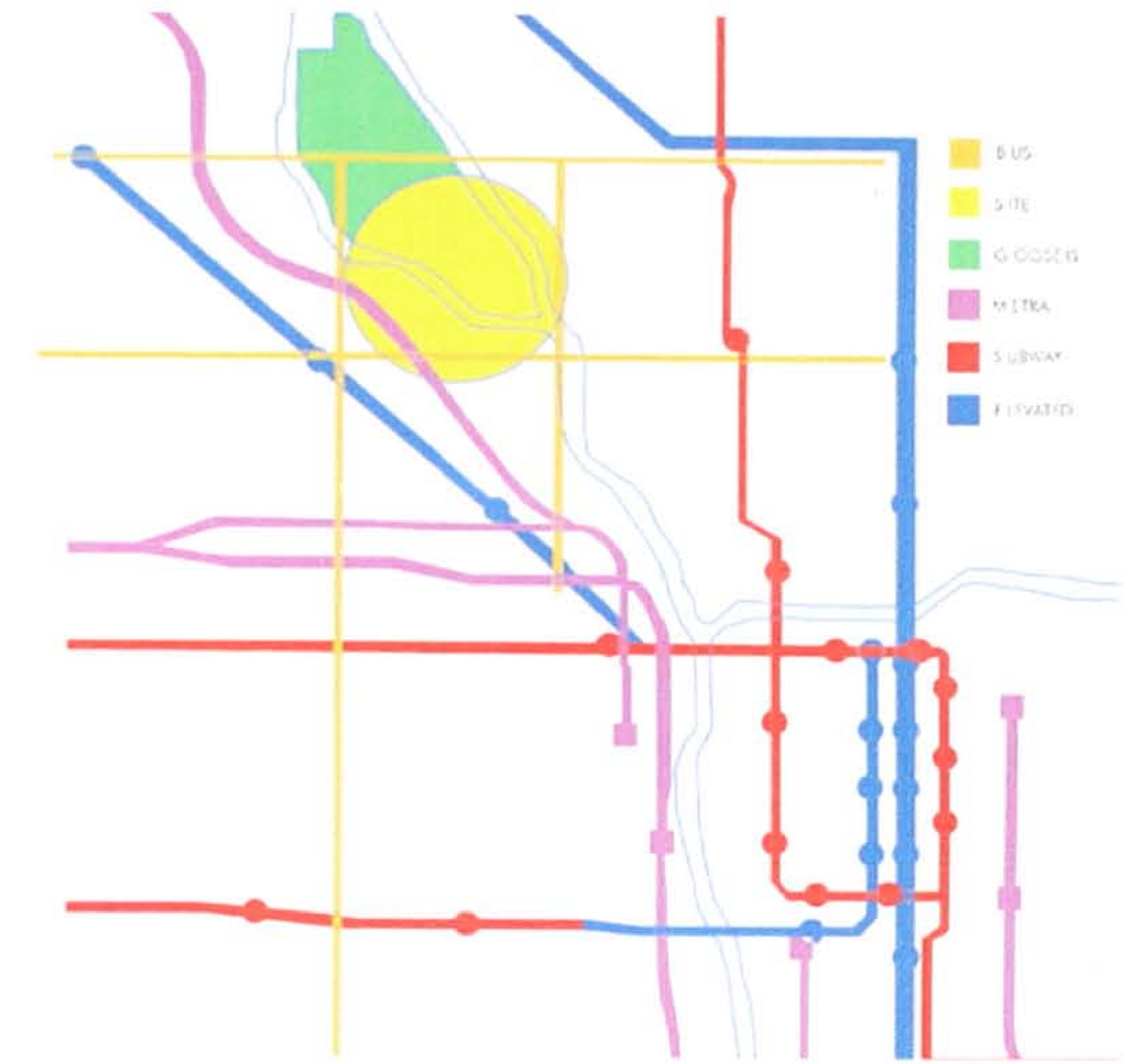
- 1st Irish ghetto in Chicago
- Brick Manufacturing
- Fuel Depot
- Breweries
- Railroads / Lumber Yards
- Manufacturing



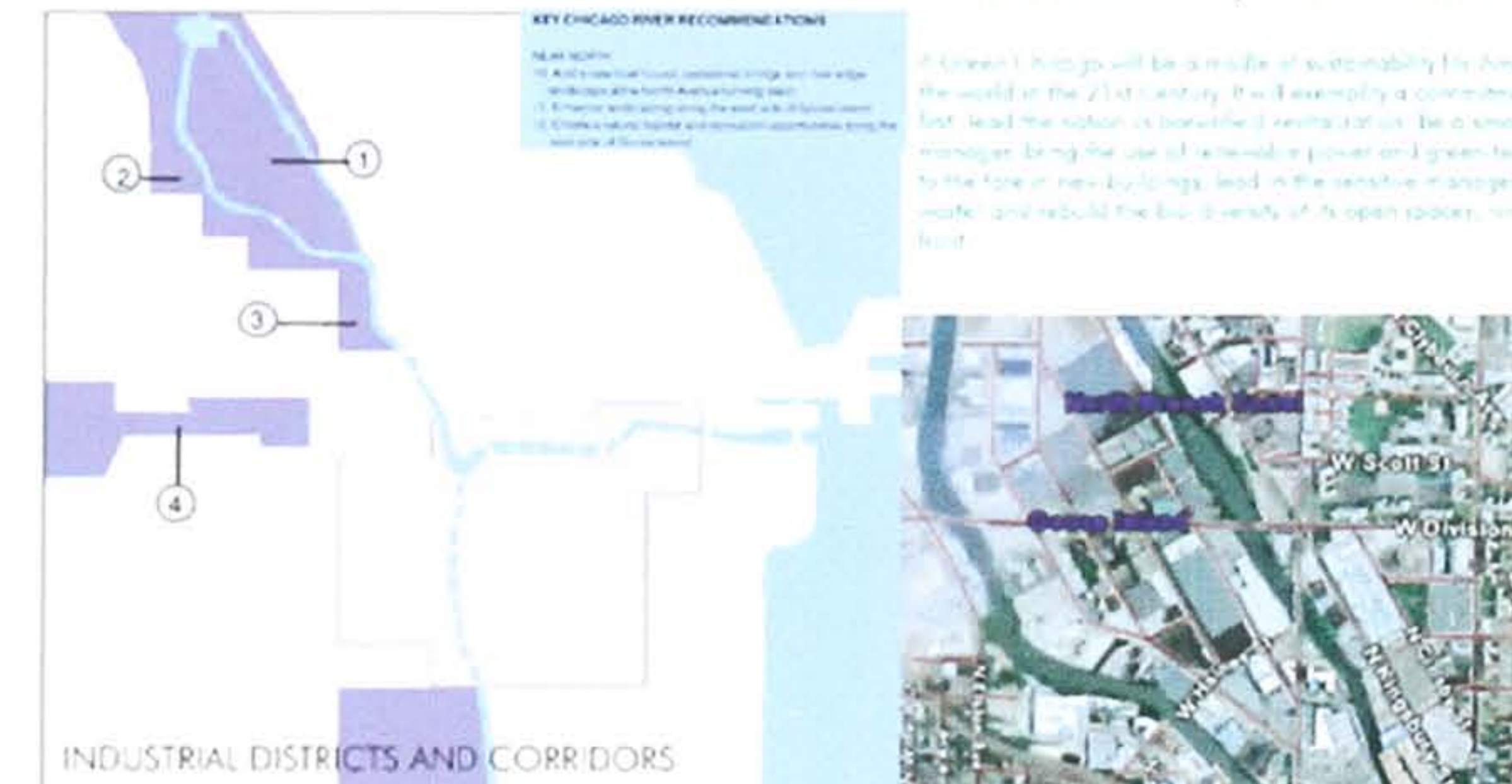
The most polluted point in the Chicago river is located at the point of the Island where the North canal meets the River



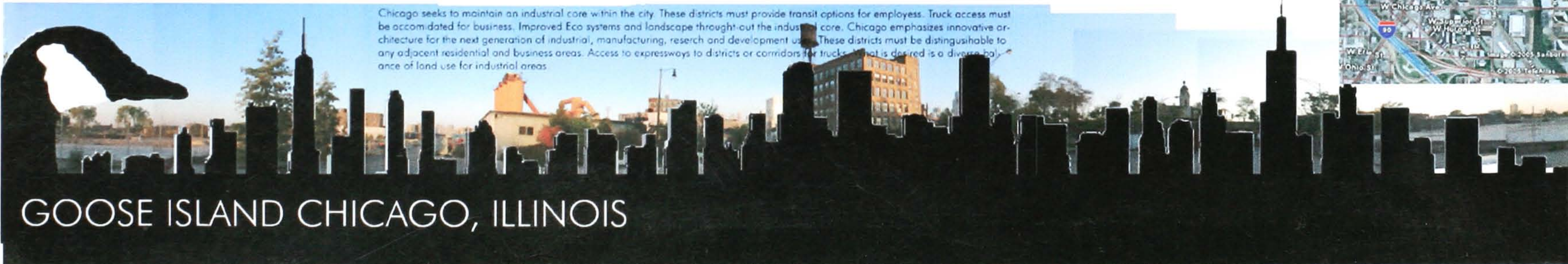
The total area of Goose Island 16 acres / 6.5 million square feet



"Green Chicago" "The Greenest City in the United St



Chicago seeks to maintain an industrial core within the city. These districts must provide transit options for employees. Truck access must be accommodated for business. Improved Eco systems and landscape throughout the industrial core. Chicago emphasizes innovative architecture for the next generation of industrial, manufacturing, research and development use. These districts must be distinguishable to any adjacent residential and business areas. Access to expressways to districts or corridors for trucks. What is desired is a diverse balance of land use for industrial areas.



GOOSE ISLAND CHICAGO, ILLINOIS



Alternative Sites Considered:

Initial Site Selections:

Akihibara District, Tokyo, Japan

Tech Town, Detroit, Michigan

South Access Road, Detroit Metro

Airport Romulus, Michigan



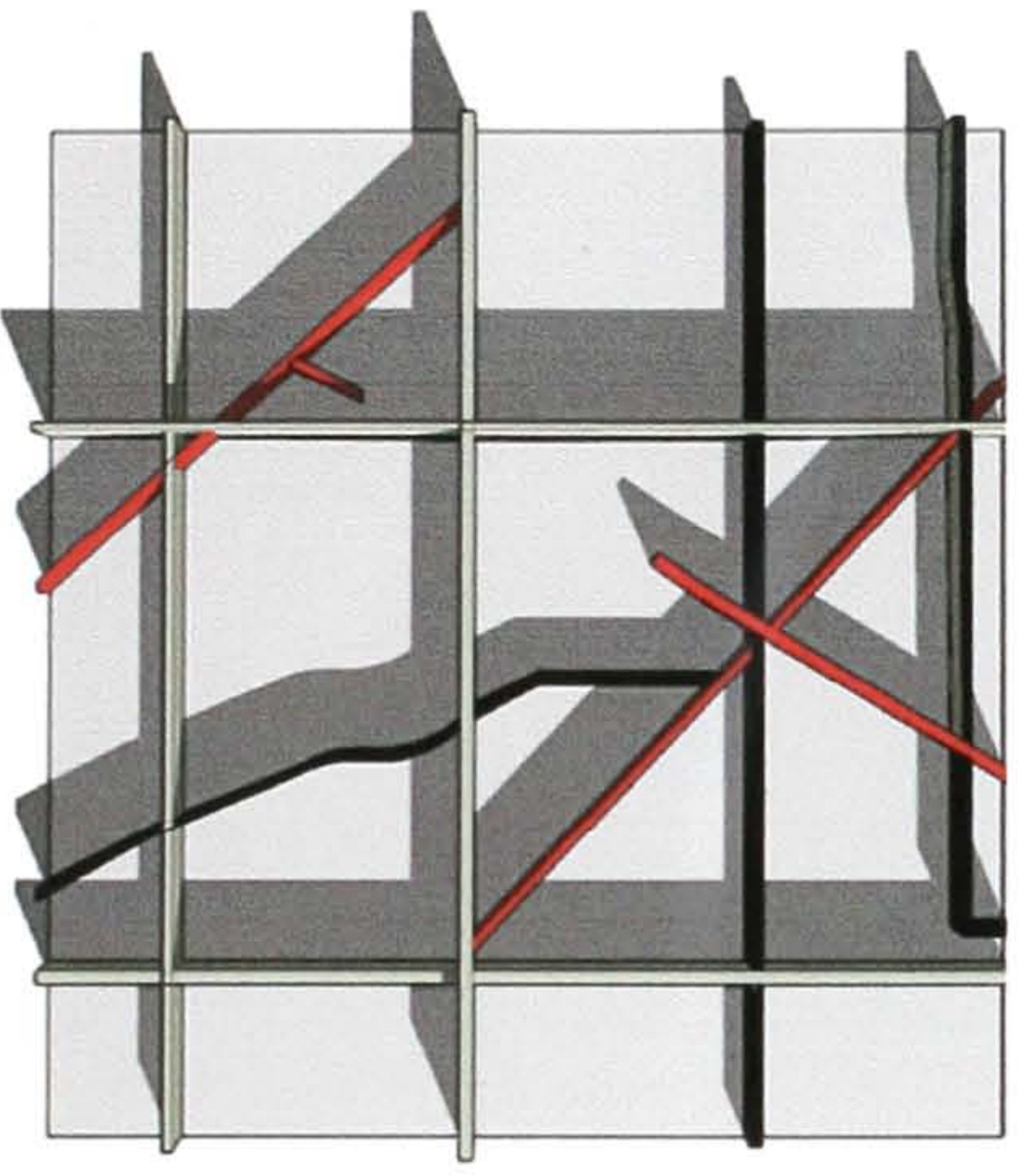
FIGURE GROUND



ORGANIC ELEMENTS



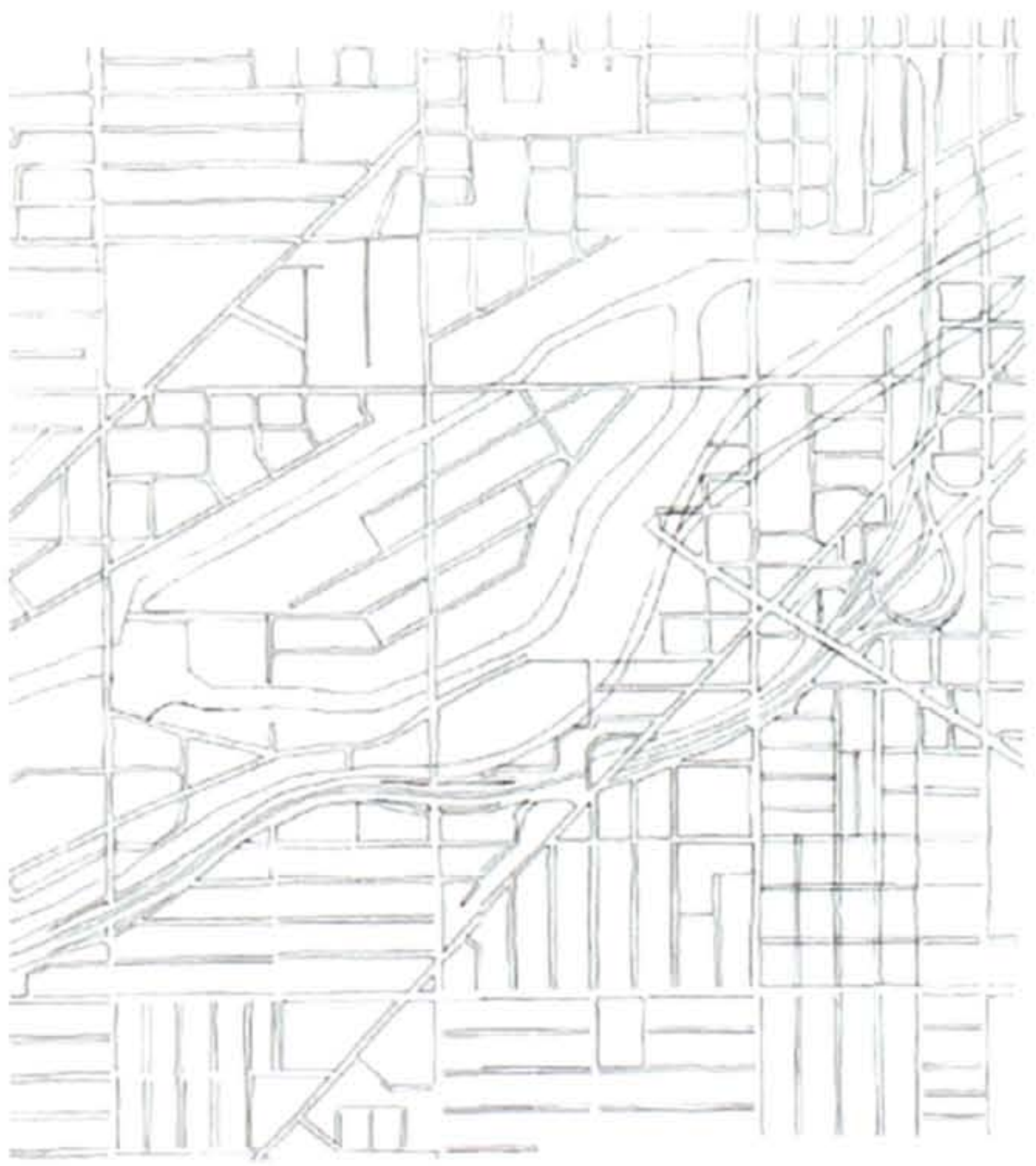
ORGANIC ELEMENTS



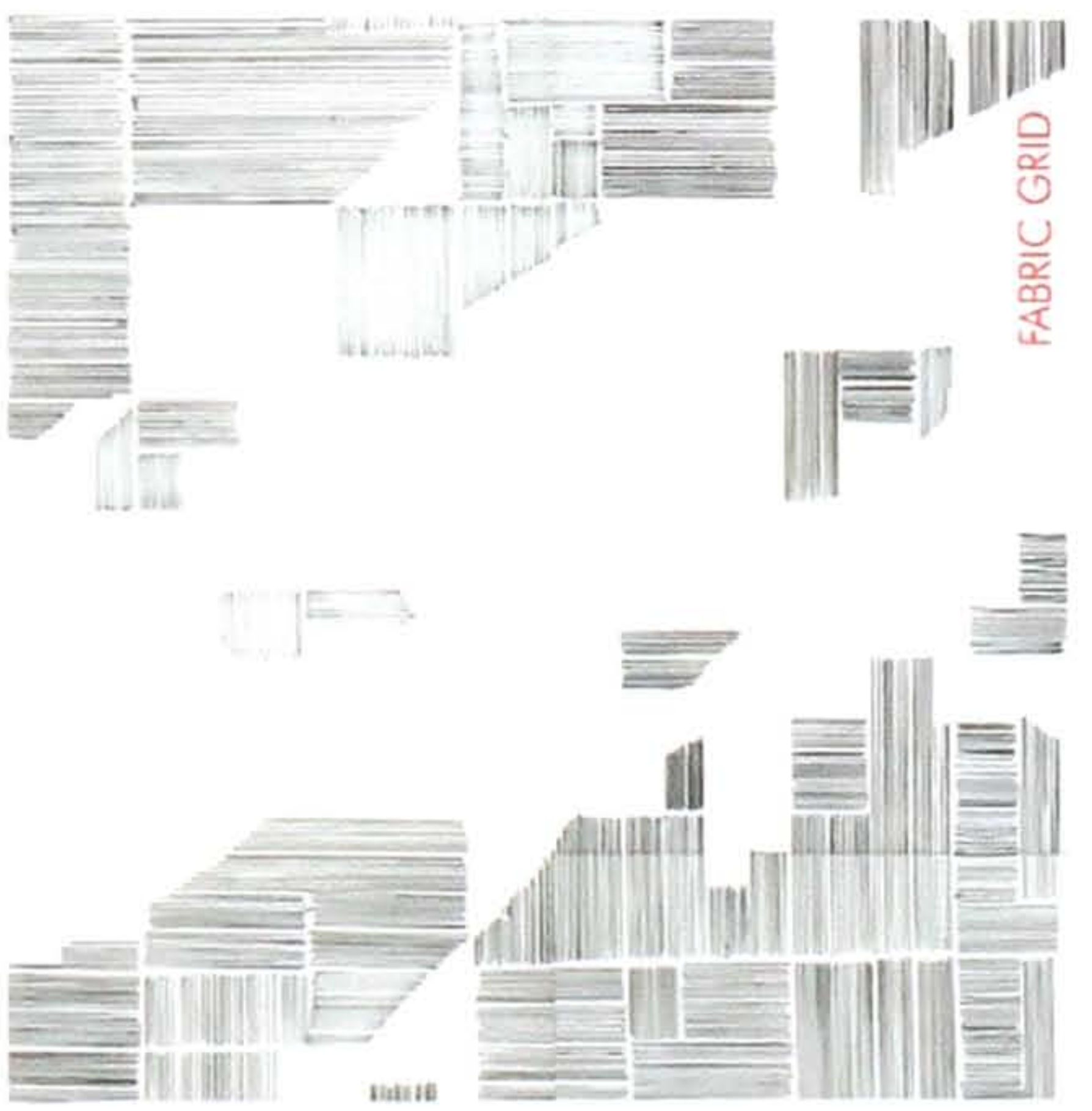
MAN MADE FABRIC



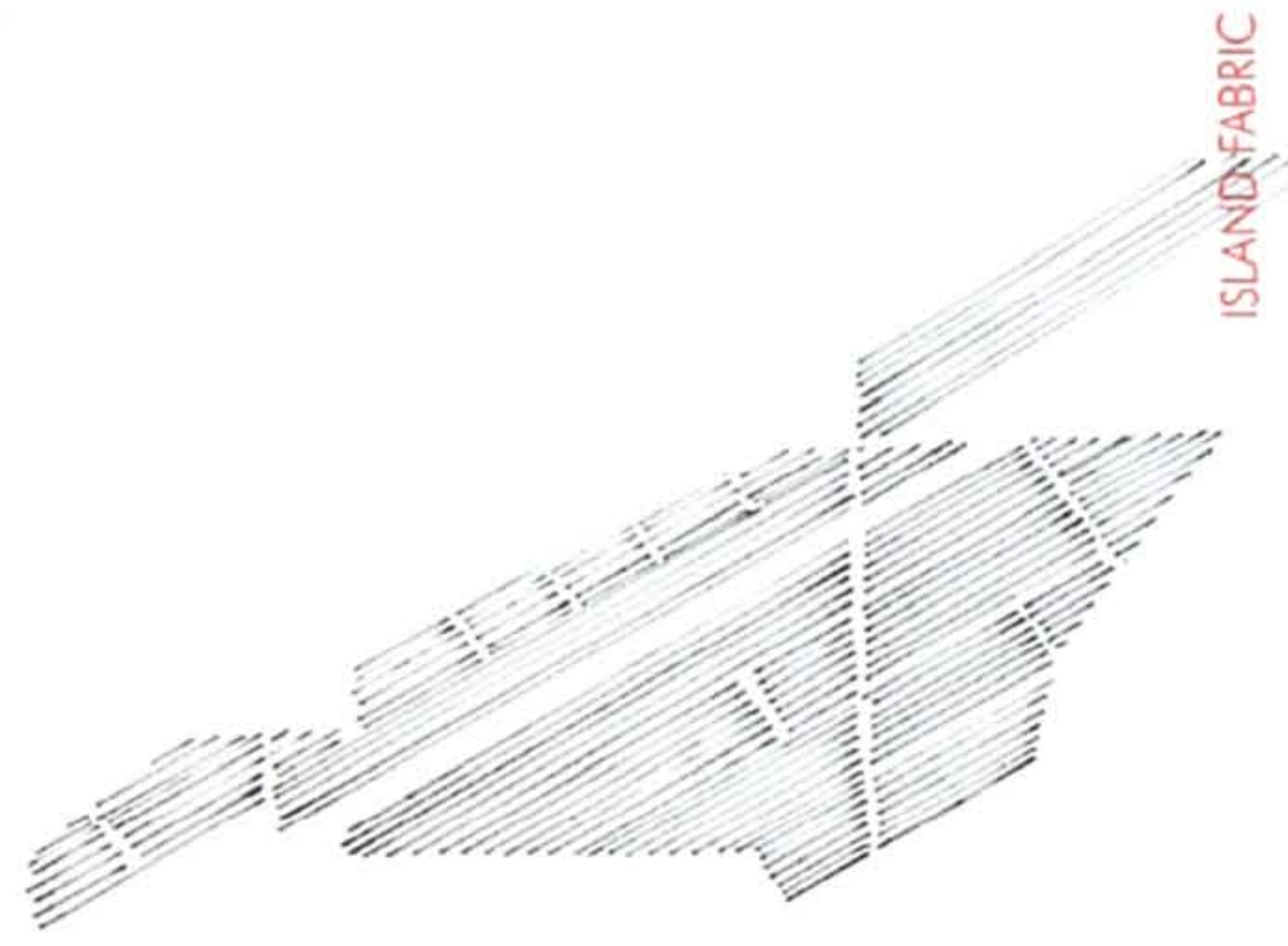
SITE FABRIC



HISTORIC FIGURE GROUND



FABRIC GRID



ISLAND FABRIC



# Goose Island: Overhead View

X = TO BE REMOVED



2004 Aerials  
 0 100 200 300 400 Feet  
 North Arrow 200 Feet





## Project Program :

### Quantitative Summary:

Project identification:

INNO-CENTER

Hybrid City Centers in Post Industrial Society: The City of Interaction, Innovation, Industry and Ideas

A proposal for a decentralized center of research, innovation, invention, interaction and industry based in co-operative ideas and spirit, synthesized with site and local landscape. The research / industrial / manufacturing space shall be integrated within the site held in a specialized district that is clustered along with Landscape / commercial / technological / service options that will allow for unique opportunities of cross-pollenization that will allow for the speculation and revealing of a new hybrid city fabric.



# (A) Research and Development: - Industrial / Academic Collaboration:

## **Tech House:**

- Research, Design / Development, Prototyping, high tech manufacturing facilities, @ 96,000 sq.ft
- Office Space Support @ 38,400 sq.ft
  
- Manufacturing / Industrial / Assembly @ 180,000 sq.ft.
- bathrooms 20x20 @ 400 sq.ft
- mens and women's locker rooms @ 400 sq.ft.

## **Tech House Central Service Core:**

- reception, Lobby, gallery @ 1,750 sq.ft
- conference rm. 28x50 @ 2,800 sq.ft
- meeting rm / beak-out rm.. 20x20 @ 3,200 sq.ft
- bathrooms 20x20 @ 400 sq.ft
- storage 10x20 @ 200 sq.ft
- electrical / mechanical @ 1,500 sq.ft
  
- Circulation @

## **- Central Co-operative Laboratories**

- club house @ 6,400 sq.ft.
- storage 10x20 @ 200 sq.ft
- locker room / bathrooms @ 3,600 sq.ft
- electrical / mechanical @ 375 sq.ft

- Biotech Laboratories (2) @ 7,500 sq.ft.
- Engineering Laboratories @ 7,500 sq.ft.
- Computer Laboratories @ 7,500 sq.ft.
- clean room 20x25 @ 500sq.ft

- Materials Laboratories @ 7,500 sq.ft.
- Nanotech Labs @ 7,500 sq.ft
- Dry/Wet Chemistry @ 7,500 sq.ft



**University Collaboration Park**

@ 24,000 sq.ft

(16) Research laboratories and design studios

**Venture / Business Incubator / Nurturing Facilities**

@ 2,850sq.ft

High Growth Technology Companies (Office Space)

- reception 10x20 @ 600 sq.ft
- office work space / room 10x20 @ 1,000 sq.ft
- bathrooms 20x20 @ 800 sq.ft
- storage 10x20 @ 1,600 sq.ft
- club house 15x20 @ 1,600sq.ft

**Total :**

**420,575 sq.ft**



# (B) Information Networks:

**IT Center** 100x120 @12,000 sq.ft  
- storage 10x20 @ 200 sq.ft

**Digital Work Shops** @18,000 sq.f

- large class room: @ 700 sq.ft @ 1,400 sq.ft  
- 70 people 20x 35

- small class room: @ 900 sq.ft

- 20 people 20x22.5 @ 2,700 sq.ft

**Learning Creation Center (2 story)** @18,000 sq.ft

- bathrooms 10x20 @ 400 sq.ft

- storage 10x10 @ 400 sq.ft

**Shared Human Resources and Information Exchange** @ 9,000 sq.ft

- (1) 45x200

- Presentation / Video Conference:

- 5 people 14x14.5 @ 205 sq.ft

- 22 people 14.5x 20 @ 220sq.ft

**Sub Total:** @ **63,425 sq.ft**



## (C) Gathering Space:

**Exhibition Area:** 50 x 130 @ 8,000 sq.ft  
- bathrooms 20 x 20 @ 400 sq.ft  
- storage 10 x 20 @ 200 sq.ft

**Auditorium:**  
- 250 people 60x100 @ 6,000 sq.ft  
- Storage 10x20 @ 200 sq.ft

**Showrooms Conference and Meeting Room:** @12,000 sq.ft  
- Smallest = 400 sq.ft 20x20  
- Largest = 1,400 sq.ft 28x50  
- Storage 10x10 @100 sq.ft

6 conference rooms with different sizes that can accommodate groups of people from 18 to 150.

**Convention Hall** (3 story space) 200x500 @ 100,000 sq.ft.  
**Showrooms** (1 story space) 60 x 200 @ 12,000 sq.ft  
- bathrooms 20x30 @ 600 sq.ft

**Sub Total:** @139,500 sq.ft



# (D) Services:

## Coffee Bar

- 20x40 @ 800 sq.ft

## Café

- 60x100 @ 6,000 sq.ft.

- bathroom 10x10 @ 100 sq.ft

## Cafeteria – Restaurant: inc. service 50x20

- bathrooms 20x20 @10,000 sq.ft

@ 400 sq.ft.

## Dining Room

- 250 people 25x100 @2,500 sq.ft

- bathrooms 20x20 @ 400 sq.ft

## Bar

20x55 @1,1000 sq.ft

- bathrooms (2) 10x10 @ 200 sq.ft

## Lounge space;

- capacity for 35 people 30x30 @ 910 sq.ft

- Connected to the bar

## Recreation Center

- gym @

- training / weight rm. @

- locker rm @

**Sub Total:**

**@ 22,420 sq.ft**



# (E) Landscape : Open Space:

Flexible Parking (?)

1,800 cars @ 360,000 sq.ft

Grounds: Landscaped area:  
Mediation / Reflection Space  
Transit/ Bus station  
Access to the river  
Pedestrian bridges



(A) Industrial / Academic Collaboration:	
Sub Total:	420,575 sq.ft.
(B) Information Networks:	
Sub Total:	63,425 sq.ft
(C) Gathering Space:	
Sub Total:	139,500 sq.ft
(D) Services:	
Sub Total:	22,420 sq.ft
(E) Landscape / Open Space:	
Parking	
Sub Total:	180,000 sq.ft
<b>Total Building Program Area:</b>	<b>825,920 sq.ft</b>

**Site 125 Total acres**

**Total square footage: 6.45 million square feet**



Space Details Sheets:



Space Name	Capacity	No. Units	NSF/unit	Total Net Area
Tech House : General Research and Development Laboratories		48	2,000 sq.ft	96,000 sq.ft

Purposes + Functions: Allows for the largest amount of net lab space available for contract or lease.

Activities: Scientific research covering multiple disciplines inc. (Bio) Chemical Engineering Aerospace Engineering, Applied Earth Sciences, Applied Mathematics , Applied Physics , Architecture, Civil Engineering ,Computer Science ,Electrical Engineering ,Life Science and Technology, Management of Technology ,Marine Technology, Materials Science ,Mechanical Engineering Nanoscience, Radiation Sciences, Sustainable Molecular Science & Technology Systems Engineering,

Relationships: Proximity to tech house office space,

Special Considerations: Secure Storage for hazardous or volatile materials or substances within lab space. Space provided for large equipment storage. Accommodate Natural and artificial lighting.

Equipment + Furnishings: Durable work top material, Writing surface or desk near window or integrated into lab unit. (can be mobile) Need for sufficient electrical receptacles in floor Shelving contained above work tops ( used for storage) Wall storage (cupboard) transparent glazed sliding doors for easy access and orientation, Laboratories sink unit, with connected rack supplement for wet instruments, Eye wash station, First aid kit, Filtered Exhaust fume, Incubator, dryer, refrigerator / freezer , sensor security technology

Behavioral Considerations: Flexibility will work for the individual as well as for the group

Space Name	Capacity	No. Units	NSF/unit	Total Net Area
Tech House : Office Space	48	800 sq.ft		38,400 sq.ft

Purposes + Functions: Interdisciplinary non Hierarchical organizational work structure that accommodates the needs for specialized or flexible uses

Activities: Non lab related research, Thinking space,

Relationships: Direct relationship to Tech House lab space

Special Considerations: Integrate natural day lighting and natural ventilation, tech enabled walls or flooring systems

Equipment + Furnishings: Modular and flexible office furniture, opportunities to have wall function as office furniture units, Sensor Security technology

Behavioral Considerations: Need to provide opportunities for quiet individual work / contemplation / reflection space



Space Name	Capacity	No. Units	NSF/unit	Total Net Area
Tech House : Conference Room	50	2	1,400 sq.ft	2,800 sq.ft

Purposes + Functions: Interdisciplinary non Hierarchy organizational work structure

Activities: Meetings, Multi-media conference, small seminars

Relationships: Direct relationship to Tech House lab space , - Adjacency positive to locate by auditorium

Special Considerations:

Equipment + Furnishings: Conference table w/ chairs National and International connections, Audio visual aids, Digital projector, retractable screen Computer network connection, integrated points with optical fiber, large screen plasma television, electric white board

Behavioral Considerations: Need to provide opportunities for quiet individual work / contemplation / reflection space

Space Name	Capacity	No. Units	NSF/unit	Total Net Area
Tech House : Meeting / Break Out		8	400 sq.ft	3,200 sq.ft

Purposes + Functions: Interdisciplinary non Hierarchy organizational work structure

Activities: Non lab related research, Thinking space, group use for break out sessions for uses of the showrooms, exhibition hall of conference and convention hall

Relationships: Direct relationship to Tech House lab space, convention hall and auditorium

Special Considerations: Integrate natural day lighting and natural ventilation

Equipment + Furnishings: Modular and flexible office furniture, opportunities to have wall function as office furniture units, Sensor Security technology

Behavioral Considerations: Need to provide opportunities for quiet individual work / contemplation / reflection space. Promotes co-operation between companies or research groups operating at the center by providing shared central services



Space Name	Capacity	No. Units	NSF/unit	Total Net Area
Tech Lodge Manufacturing / Assembly Facilities		1	180,000 sq.ft	180,000sq.ft

Purposes + Functions: flexible manufacturing floor space

Activities: Manufacturing / Assembly, Staging, Storage

Relationships: Must have direct access to roads (surface and service) Walls of area may integrate other uses example studio, office, research space, etc..

Special Considerations: 60 ft. min. clear ceiling space, maximize natural day lighting, green roof maximize span of structural member for largest possible clear span, Modular system support space inc. office, bathrooms, storage. provided. The edge between the natural and built environment should not be marginalized but should be integrated allowing for nature to have a greater influence on the inside of the built space versus the technological influencing or dominating or destroying natural place.

Equipment + Furnishings: Flexible or movable air lock space is of interest in order to accommodate the most flexible of spaces including all of the support space. Tech enabled flooring and wall systems will allow for reconfiguration of spaces is a requirement.

Behavioral Considerations:

Space Name	Capacity	No. Units	NSF/unit	Total Net Area
Tech House Reception		1	600 sq.ft	600 sq.ft

Purposes + Functions: Create entry threshold into the Tech House environment, Aid in way finding and orientation of the new or every day user.

Activities: Point of first interaction with user Information sharing, building security,

Relationships: Location at main entrance into tech house structure, must have connection or relationship with parking and the street.

Special Considerations: Security monitoring station to be out of the average line of sight, accommodation of the individual, group and pedestrian and a vehicle and the automobile must be accounted for.

Equipment + Furnishings: Reception and Security Desk, Digital Signage aiding in way finding and information dissemination Information Panel, creation of a digital walls orientated in a type of digital urban circus, concave may be integrated with topo

Behavioral Considerations: accommodate building security and reception within one space Flexibility will work for the individual as well as for the group



Space Name	Capacity	No. Units	NSF/unit	Total Net Area
------------	----------	-----------	----------	----------------

Tech House : Exhibition Space		1	8,000 sq.ft	8,000 sq.ft
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Purposes + Functions: Provides for an exciting venue for small to medium sized exhibition, receptions, social events, and product launches

Activities: Allow for exhibition to flow into exterior spaces,

Relationships: Direct relationship to reception and primary vertical and horizontal circulation , Access to street level via large overhead doors.

Special Considerations: Integrate natural day lighting and artificial lighting, possible inclusion of glass or translucent roof material , two story or greater space related to the first floor of building entrance, can have separate entrance though

Equipment + Furnishings: Innovate the way a floor can become a topography that becomes a usable surface for sitting and impromptu gathering

Behavioral Considerations: Must account for large groups of people

Space Name	Capacity	No. Units	NSF/unit	Total Net Area
------------	----------	-----------	----------	----------------

Tech House : Auditorium	250	1	6,000 sq.ft	6,000 sq.ft
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Purposes + Functions:

Activities: Lecture, product launch, LAN ring, High Tech Teatro

Relationships: Direct relationship to exhibition space secondary relationship to vertical circulation

Special Considerations: three story space, integrate view to the city beyond considered a plus

Equipment + Furnishings: Built in desk type seating, placed on terraced levels like rice patties

Behavioral Considerations: provide enough flexibility in arrangement to allow fro self ordering systems example large scale LAN Parties to use space after hour or on weekends



Space Name	Capacity	No. Units	NSF/unit	Total Net Area
Tech House : Showrooms		1	12,000 sq.ft	12,000 sq.ft

Purposes + Functions: Space that allows for the focusing on product installations, allowing manufacturers, and developers, of hardware, software, products, ideas to potential clients

Activities: Viewing, sales, purchasing, client interaction, marketing, entertaining

Relationships: Relation to Convention hall, and exhibition space high priority,

Special Considerations: may transition between one and two story space

Equipment + Furnishings: Flexible space that allows for clients to build in custom space to meet their requirements

Behavioral Considerations:

Space Name	Capacity	No. Units	NSF/unit	Total Net Area
Tech House : Convention Hall		1	100,000 sq.ft	100,000 sq.ft

Purposes + Functions: Large open space for large scale events

Activities: Convention events, industry shows,

Relationships: Direct relation to surface street or loading dock area

Special Considerations: Direct relationship to showrooms a priority, perhaps showrooms are located within the large void space with convention hall area. maximize clear spans for maximum flexibility , allow for landscape to or natural light to penetrate in innovative ways

Equipment + Furnishings: Large exterior/interior access doors Movable trash receptacles

Behavioral Considerations



Space Name	Capacity	No. Units	NSF/unit	Total Net Area
Tech House : Central Combi Lab		7	7,500 sq.ft	52,500 sq.ft

Purposes + Functions: Specialized central lab that act in support of multi discipline research, provide location for specialized or larger test equipment, location of technical or specialized information (library) specialized storage options for specific discipline

Activities: Specialized research and support centers Biotechnology, Engineering, Materials, Computer, Nanotechnology

Relationships: direct relationship to circulation (main) vertical or horizontal

Special Considerations: Specialized storage option for dark space, cool space, clean room space, maximise clear span for column less interior space

Equipment + Furnishings: Movable, flexible work stations within center of room, tech enabled floor

Behavioral Considerations

Space Name	Capacity	No. Units	NSF/unit	Total Net Area
Tech House : Combi Lab Locker Rooms		6	600 sq.ft	3,600 sq.ft

Purposes + Functions: storage of street clothes for lab techs that need to wear other

Activities: changing, shower, brief interaction

Relationships: direct relationship to combi labs and mech shaft for service

Special Considerations: inclusion of shower stall(s)

Equipment + Furnishings: lockers, benches, resilient materials

Behavioral Considerations: entry need to be shield normal line of sight to protect privacy



Space Name	Capacity	No. Units	NSF/unit	Total Net Area
Tech House : Club House		16	400 sq.ft	6,400 sq.ft
Purposes + Functions:				
Activities:				
Relationships:				
Special Considerations:				
Equipment + Furnishings:				
Behavioral Considerations				

Space Name	Capacity	No. Units	NSF/unit	Total Net Area
Tech House : Bathrooms		12	400 sq.ft	4,800 sq.ft
Purposes + Functions:				
Activities:				
Relationships: Located along major circulation corridors, and along verticle or horizontal service chases's or shafts				
Special Considerations: ADA compliant				
Equipment + Furnishings: W/C's , Wash Basin's, mirrors, stall partitions,				
Behavioral Considerations:				



Space Name	Capacity	No. Units	NSF/unit	Total Net Area
University Collaboration: Workshop / Design and Research Studios		16	1,500 sq.ft	24,000 sq.ft

Purposes + Functions: leaseable space that allows for start-up, academic, start up companies, are small business's that require small office floor space.

Activities:

Relationships:

Special Considerations: Studio/workshop area can be sub-divided into 375 sq. to 1250 sq.ft

Equipment + Furnishings: Tech enabled flooring that allows Sliding wall system that allows for flexible office configurations, Client brings own furnishings, equipment

Behavioral Considerations

Space Name	Capacity	No. Units	NSF/unit	Total Net Area
Venture Incubator Nurturing Facility Collaborative		1	2,850 sq.ft	2,850 sq.ft

Purposes + Functions: Serves as central service core for all entities that are part of the technology collaborative, Shared support staff, and office equipment

Activities: Office, space, File Storage, Central computer network hub

Relationships: Related to University Collaboration Design and Research Studios

Special Considerations: Facilities could be sub-divided to accommodate fragmentation of studio space, Tech enabled flooring that allows Sliding wall system that allows for flexible office configurations

Equipment + Furnishings: Office furniture, non traditional, module easy to move and reassemble, location of office pods that allow for privacy, Traditional office equipment, fax, copy, etc...,

Behavioral Considerations: allow for impromptu meeting between multi-discipline people



Space Name	Capacity	No. Units	NSF/unit	Total Net Area
University Collaboration: Work Rooms		5	200 sq.ft	1,000 sq.ft
Purposes + Functions: Small quite work space for semi-private work groups or individual time				
Activities: Assembly, Creation space, Rehearsal space,				
Relationships: Need to be weved into studio fabrric evenly to allow for equal access				
Special Considerations: Glass Walled partitioned space				
Equipment + Furnishings: one conference or large group table with chairs durable work top				
Behavioral Considerations				

Space Name	Capacity	No. Units	NSF/unit	Total Net Area
University Collaboration: Club House		4	400 sq.ft	1,600 sq.ft
Purposes + Functions: Serve as "silly space" decompression space that allows for interaction and meeting in a structured or semi structured space				
Activities: Fun and Games , meeting, gathering, interaction				
Relationships: Evenly dispersed throught sutdio space to allow equal access and aviod over-loading of one particullar house				
Special Considerations:				
Equipment + Furnishings: Game tables, (pool, table tennis, darts, suffleboard table, video games , etc., ) Comfortable pub like seating, and atmospehere				
Behavioral Considerations: Houses could be themed differently to appeal to different tyes of people, through color, lighting, furnishing types of activity, etc.,				



Space Name	Capacity	No. Units	NSF/unit	Total Net Area
University Collaboration: Bathrooms		4	400 sq.ft	1,600 sq.ft

Purposes + Functions:

Activities:

Relationships: Located along major circulation corridors, and along verticle or horizontal service chase's or shafts

Special Considerations: ADA compliant, Entrance must be sheilded from natural line of sight for privacy purposes

Equipment + Furnishings: W/C's , Wash Basin's, mirrors, stall partitions,

Behavioral Considerations

Space Name	Capacity	No. Units	NSF/unit	Total Net Area
University Collaboration Reception		1	600 sq.ft	600sq.ft

Purposes + Functions: Create entry threshold into the University Collaboration environment, Aid in way finding and orientation of the new or every day user.

Activities: Point of first interaction with user Information sharing, building security,

Relationships: Location at main entrance into structure, must have connection or relationship with parking and the street.

Special Considerations: Security monitoring station to be out of the average line of sight, accommodation of the individual, group and pedestrian and a vehicle and the automobile must be accounted for.

Equipment + Furnishings: Reception and Security Desk, Digital Signage aiding in way finding and information dissemination Information Panel, creation of a digital walls orientated in a type of digital urban circus, concave may be integrated with topo

Behavioral Considerations: accommodate building security and reception within one space Flexibility will work for the individual as well as for the group



Space Name	Capacity	No. Units	NSF/unit	Total Net Area
University Collaboration: Storage Rooms		8	200 sq.ft	1,600 sq.ft
Purposes + Functions: Non- volatile storage of equipment or materials				
Activities: non-inhabited space				
Relationships: located adjacent to circulation corridors				
Special Considerations:				
Equipment + Furnishings: Shelving and optional wash sink				
Behavioral Considerations				

Space Name	Capacity	No. Units	NSF/unit	Total Net Area
Information Network IT Center		1	12,000 sq.ft	12,000 sq.ft
Purposes + Functions: Central service and support core for entire tech center, Information hub, mail center, LAN network and wireless hub center,				
Activities: Daily operation of facilities computer network,				
Relationships: locate anywhere there is not high temp, vibrations, direct sunlight, radiation, radiowave interference, etc...				
Special Considerations: Must be air conditioned to offset internal heat gain from mainframe computer network				
Equipment + Furnishings: Main frame computer room, tech flooring				
Behavioral Considerations				



Space Name	Capacity	No. Units	NSF/unit	Total Net Area
Information Network Learning Creation Center		1	12,000 sq.ft	12,000 sq.ft

Purposes + Functions: Central space that serves as an outreach for the science and exploration that goes on at the center, mission to educate and inform people to what goes on at the center. Acts as a public face to a somewhat or considered private venture traditionally,

Activities: Paths of learnings created and focused on interaction, Based on innovation, invention and learning, Provide mini build as you go facility, with tech-lock up facility, Education, tours,

Relationships: Direct access to street with having to go through other program spaces

Special Considerations: 2 story space with loft areas creating smaller space within large volume

Equipment + Furnishings: Work benches, seating, storage lockers, small retail fronts, small rentable booths for individuals

Behavioral Considerations

Space Name	Capacity	No. Units	NSF/unit	Total Net Area
Information Network Digital Workshops		12	1,500 sq.ft	18,000 sq.ft

Purposes + Functions: Digital labs and workshops, provide large computer mainframe or power to individuals or entities that do not have access to

Activities: Individual, or working groups, or companies lease space that is tech enabled and climate controlled

Relationships: to Information network lobby

Special Considerations: Must be air conditions, avoid high glare placement / orientation of windows

Equipment + Furnishings: Computer desks and chairs, tech enabled floor, walls, wireless access, controlled lighting,

Behavioral Considerations



Space Name	Capacity	No. Units	NSF/unit	Total Net Area
Information Network Large Class Room		2	700 sq.ft	1,400 sq.ft

Purposes + Functions: Education, for individuals, groups corporate, etc., small seminars, workshops,

Activities: Large group learning sessions,

Relationships: Related to I/T and Learning Center, keep away for loud industrial area's if not must use sound insulation

Special Considerations:

Equipment + Furnishings: can floor become a desk, utilization of a new surface to be interpreted as a learning surface,

Behavioral Considerations: must be conducive to a learning environment, color, task lighting, orientated towards focus of lesson.

Space Name	Capacity	No. Units	NSF/unit	Total Net Area
Information Network Small Class Room		2	450 sq.ft	900 sq.ft

Purposes + Functions: Education, for individuals, groups corporate, etc., small seminars, workshops,

Activities: small group learning sessions

Relationships: Related to I/T and Learning Center, keep away for loud industrial area's if not must use sound insulation

Special Considerations:

Equipment + Furnishings: can floor become a desk, utilization of a new surface to be interpreted as a learning surface,

Behavioral Considerations: must be conducive to a learning environment, color, task lighting, orientated towards focus of lesson.



Space Name	Capacity	No. Units	NSF/unit	Total Net Area
Information Network: Bathrooms		3	400 sq.ft	1,200 sq.ft
Purposes + Functions:				
Activities:				
Relationships: Located along major circulation corridors, and along vertical or horizontal service chase's or shafts				
Special Considerations: ADA compliant, Entrance must be shielded from natural line of sight for privacy purposes				
Equipment + Furnishings: W/C's , Wash Basin's, mirrors, stall partitions,				
Behavioral Considerations				

Space Name	Capacity	No. Units	NSF/unit	Total Net Area
Information Network : Storage Rooms		2	200 sq.ft	400 sq.ft
Purposes + Functions: Non-volatile storage of equipment or materials , computer network hub,				
Activities: non-inhabited space				
Relationships: located adjacent to circulation corridors				
Special Considerations: Must be air conditioned				
Equipment + Furnishings: Shelving and optional wash sink				
Behavioral Considerations				



Space Name	Capacity	No. Units	NSF/unit	Total Net Area
Information Network H/R Info Hub		1	9,000 sq.ft	9,000 sq.ft

Purposes + Functions: Media wing of the center, Main Info hub, will act as office for information dissemination about center, Rental hub for new contacts, Shared central H/R resources for centers hiring and staffing

Activities:

Relationships: related to It center, Learning center, and main reception entry

Special Considerations:

Equipment + Furnishings:

Behavioral Considerations

Space Name	Capacity	No. Units	NSF/unit	Total Net Area
Service Cafe		1	6,000 sq.ft	6,000 sq.ft

Purposes + Functions:

Activities:

Relationships:

Special Considerations:

Equipment + Furnishings:

Behavioral Considerations



Space Name	Capacity	No. Units	NSF/unit	Total Net Area
Service Coffee Bar		2	800 sq.ft	1,600 sq.ft
Purposes + Functions:				
Activities:				
Relationships:				
Special Considerations:				
Equipment + Furnishings:				
Behavioral Considerations				

Space Name	Capacity	No. Units	NSF/unit	Total Net Area
Service Bar /lounge		1	2,000 sq.ft	2,000 sq.ft
Purposes + Functions: Provide				
Activities:				
Relationships:				
Special Considerations:				
Equipment + Furnishings:				
Behavioral Considerations				



Space Name	Capacity	No. Units	NSF/unit	Total Net Area
Service Rec Center		1	10,000 sq.ft	10,000 sq.ft

Purposes + Functions:

Activities:

Relationships:

Special Considerations:

Equipment + Furnishings:

Behavioral Considerations

Space Name	Capacity	No. Units	NSF/unit	Total Net Area
Parking		2	180,000 sq.ft	360,000 sq.ft

Purposes + Functions: 900 cars per Unit /Level

Activities: Daily parking of individual whom work or are transferring to pubic transit to the loop

Relationships: can be placed sub level parking space approx 10x19

Special Considerations: Proper egress provided for and ventilation , Bring as mush natural day light in during the day , accomidate proper number of ADA compliant parking space within compliant distance to elevators, provide comact spaces and closer spaces for Hybrid vehicles

Equipment + Furnishings: Exit stairwell, Elevators, properly lighted in the evening, Parking booth, Security entrance and survalience system

Behavioral Considerations



## Information Networks:

### IT Center:

Learning Creation Center (Do it yourself: Computer / tech floor): Space arranged in non hierarchical order that allows for random movement which provides a direct correlation to the different paths of interaction, innovation, invention and learning. Provides build as you go facilities, tech lock-up or storage needed with work space.

IT Center	100x120	@12,000 sq.ft
-	storage 10x20	@ 200 sq.ft
Digital Work Shops		@18,000 sq.f
	(12)units @ 1,500 sq.ft	
Large class room:	@ 700 sq.ft	
-70 people	20x 35	(2)units @ 1,400 sq.ft
Small class room:	@ 450 sq.ft	
- 20 people	20x22.5	(6)units @ 2,700 sq.ft
Learning Creation Center (2 story)		@12,000 sq.ft
-	bathrooms 10x20	@ 200 sq.ft
-	storage 10x10	@ 100 sq.ft
Sub Total:	27,000sq.ft	



**Gathering Space:**

Two story or greater space that encompasses the first floor on the central building, Opportunity to allow for additional exposition space by reclaiming or annexing exterior space

**Entry, Orientation and Information space:** Should aid in the way finding and orientation of the user. Entrances should be expressive to ensure ease of recognition and aid in initial way finding in a decentralized space. Accommodation of the individual, group, and the automobile should be addressed.

**-Information Panel (bloggers corner) Bloggers Corner:** Creation of digital walls orientated in a type of digital urban circus concave (modified hybrid breaking traditional urban typological form) with all digital walls screens address urban / natural space.

**Integrated Technology: Tech Gallery / Exhibition / showrooms:** Dynamic space that allows for the focus on installation of cutting edge tech technology, allows manufactures and developers of hardware, software to exhibit their products to potential clients. Installation art, a gallery that exhibits technological calm. A digital or virtual center.

Designed hall with a glass roof to add light and space into the building

**-Provides for an exciting venue for small to medium sized exhibitions, cocktail receptions and product launches.**

**-Two story or greater space that encompasses the first floor on the central building, Opportunity allow for additional exposition space by reclaiming or annexing exterior space**

Exhibition Area: 50 x 130	@ 6,500 sq.ft
- bathrooms 20 x 20	@ 400 sq.ft
- storage 10 x 20	@ 200 sq.ft

Auditorium: @ 6,000 sq.ft

250 people 60x100  
which can increase to 400  
through annex of meeting/ video conference rooms  
height of space occupies 1st, 2nd, 3rd level

- cloak room 5x10	@ 50 sq.ft
- Storage 10x20	@ 200 sq.ft

Video projector, Large Media Screen, computer projector and technology integration

Audio system: Loudspeakers, fixed or cordless microphones

Recording facility, control room

Telecommunication System

Connector, optical fiber, voice and data computer equipment, video and translation equipment.

Characteristics of auditorium seating ??????

LAN Ring/ High Tech Teatro: Open arena like central control creates an urban circle like (decentralized and transformed compared to traditional typologies) that can be transformed to accommodate the self ordering systems of communities like the LAN people.

Conference and Meeting Room: @1,200 sq.ft

Smallest = 20x20	@400sq.ft
Largest = 1,400 sq.ft 28x50	@1,400 sq.ft
- Storage 10x10	@100 sq.ft

-located on the first floor of the central building with access from lobby (adjacencies)

-Capacity for 100 people as a single room and two independent rooms each accommodating 50 people

-Furnishing, speaking system, technology integration

6 conference rooms with different sizes that can accommodate groups of people from 18 to 150.

For meeting, lecture, seminars, panel discussions and product demonstration as part of your exhibition

Well equipped and have innovative seating solutions, including lectern, microphone, electric white board, notebook computer, various projectors plus a large screen TV.

Convention Hall (3 story space) 200x500	@ 100,000 sq.ft.
Showrooms (1 story space) 60 x 200	@ 12,000 sq.ft
- bathrooms 20x30	@ 600 sq.ft

Subtotal: 127,150 sq.ft

CA



## Office Space:

That accommodates the needs for specialized or flexible uses that allowing for future growth. Space will express innovation and technology associated with products produced. Accommodation of flexible uses of the transient quality that is inherent of high technology, e-computers, blogger, graphic design, etc., Security / control points must be accommodated with design in mind with no off the shelf designs. Integrated technological systems in floors and walls (enable for high tech uses)

Office Space		@120,000 sq.ft
Inclusion of office space "grade A. 500 x240		
- sizes vary to accommodate different size requirements		
- bathrooms 20x20		@ 400 sq.ft
- cloak room 5x5		@ 25 sq.ft
Shared Human Resources and Information Exchange		@ 9,000 sq.ft
45x200 (1)		
Presentation / Video Conference:		
5 people 14x14.5		@ 205 sq.ft
22 people 14.5x 20		@ 220sq.ft
National and International connections, Audio visual aids, Digital projector, Computer network connection, integrated points with optical fiber		
- Adjacency positive to locate by auditorium		
Conference:		
10 people 10x10		@ 100 sq.ft
12 people 10x12		@ 120 sq.ft
28 people 14x20		@ 280 sq.ft
Board Room:		
Capacity of 16 people	16x25	@ 400 sq.ft
Additional elements: Hall, Restrooms, Clock room		
	Sub Total:	130,750 sq.ft



## Services:

Café: Access should be provided to accommodate both private and public interest. No hierarchy should be established between what is private and what is public in use.

Shops: Future inclusion of shopping to accommodate workers and visitors to site.

Flexible Parking (?) If needed space should be multidimensional to be utilized for other program requirements, expandable if possible to shrink to seasonal or product requirements or demands. If located on exterior perhaps dual use-age can be proposed natural structure around or covering to provide reclaimed landscape opportunities.

Coffee Bar 20x40	@ 800 sq.ft
Café 60x100	@ 6,000 sq.ft.
- bathroom 10x10	@ 100 sq.ft
Cafeteria - Restaurant: inc. service 50x200	@10,000 sq.ft
located close to ground floor of the central building	
- bathrooms 20x20	@ 400 sq.ft.
Dining Room 250 people 25x100	@ 2,500 sq.ft
-Natural lighting an advantage, provide for heating and air conditioning	
? Music	
- bathrooms 20x20	@ 400 sq.ft
Bar (Share) 20x55	@1,1000 sq.ft
- bathrooms (2) 10x10	@ 200 sq.ft
located in a basement area	
Provide for or located by heating air conditioning	
Lounge space; capacity for 35 people 30x30	@ 910 sq.ft
Connected to the bar	
-??? Provide for a Rec center Gym facility	
that is accessible to community	

Sub Total: 22,420 sq.f

66



Urban (private / public) element should seek to integrate with local topological fabric in attempt to transcend the perceived gap between landscape, man-made place and technology. Integration of green walls and other landscape interventions that allow for the softening of cold hard edges often created with the implementation of high technology in the built environment. Urban space will be prioritize and emphasized on the public element first before the private while reinforcing the character of recognizable definable place or places in a scarred landscape.

Grounds: Landscaped area:

Re-mediation / Reflection Space

Transit/ Bus station

Boat access / Marina

Access to the river

Pedestrian bridges

Flexible Parking (?) If needed space should be multidimensional to be utilized for other program requirements, expandable if possible to shrink to seasonal or product requirements or demands. If located on exterior perhaps dual use-age can be proposed natural structure around or covering to provide reclaimed landscape opportunities.

1,000 cars @ 350,000 sq.ft

Site Criteria:

Site Area Amount: 60.4 acres

Site should be of underdeveloped land located within a post-industrial location meaning that either the area is formerly industrial or never has been developed to its full potential due to underlying condition found in post-industrialism. Location should be located with major transportation infrastructure close by or already located upon existing site (freeway, airport, seaport, and/or rail). The opportunity to repair past transgressions on a scarred piece of land should be of a paramount importance. Would like to be able too engage the site in terms of topo / landscape in seeking attempts to integrate these conditions within design instead of subjugation ad relegation to non-significance.

Industrial / Academic Collaboration:

Sub Total: 231,450 sq.ft.

Information Networks:

Sub Total: 27,000 sq.ft

Gathering Space:

Sub Total: 127,150 sq.ft

Office Space:

Sub Total: 130,750 sq.ft

Services:

Sub Total: 22,420 sq.ft

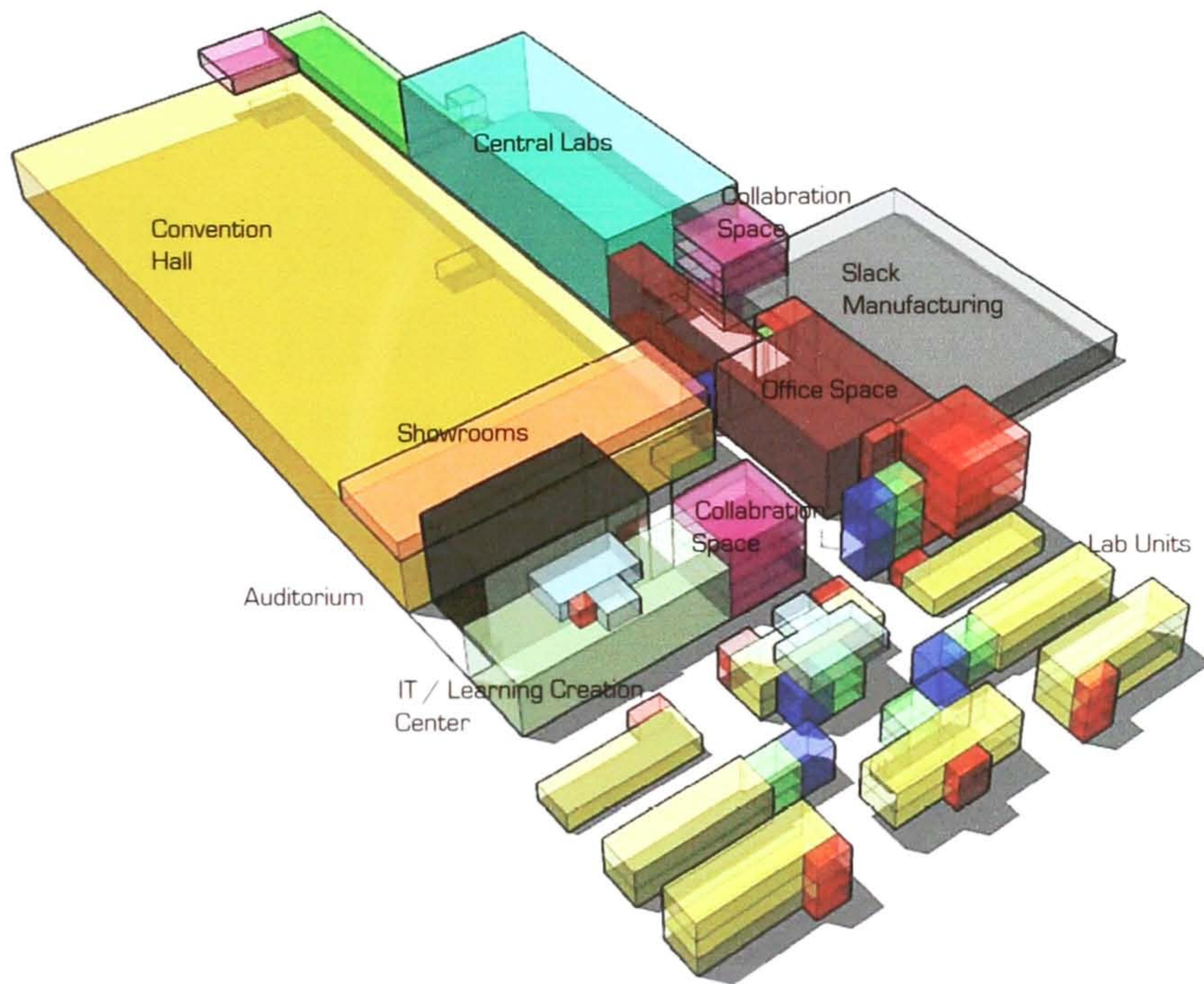
Total Building Program Area:

538,770 sq.ft

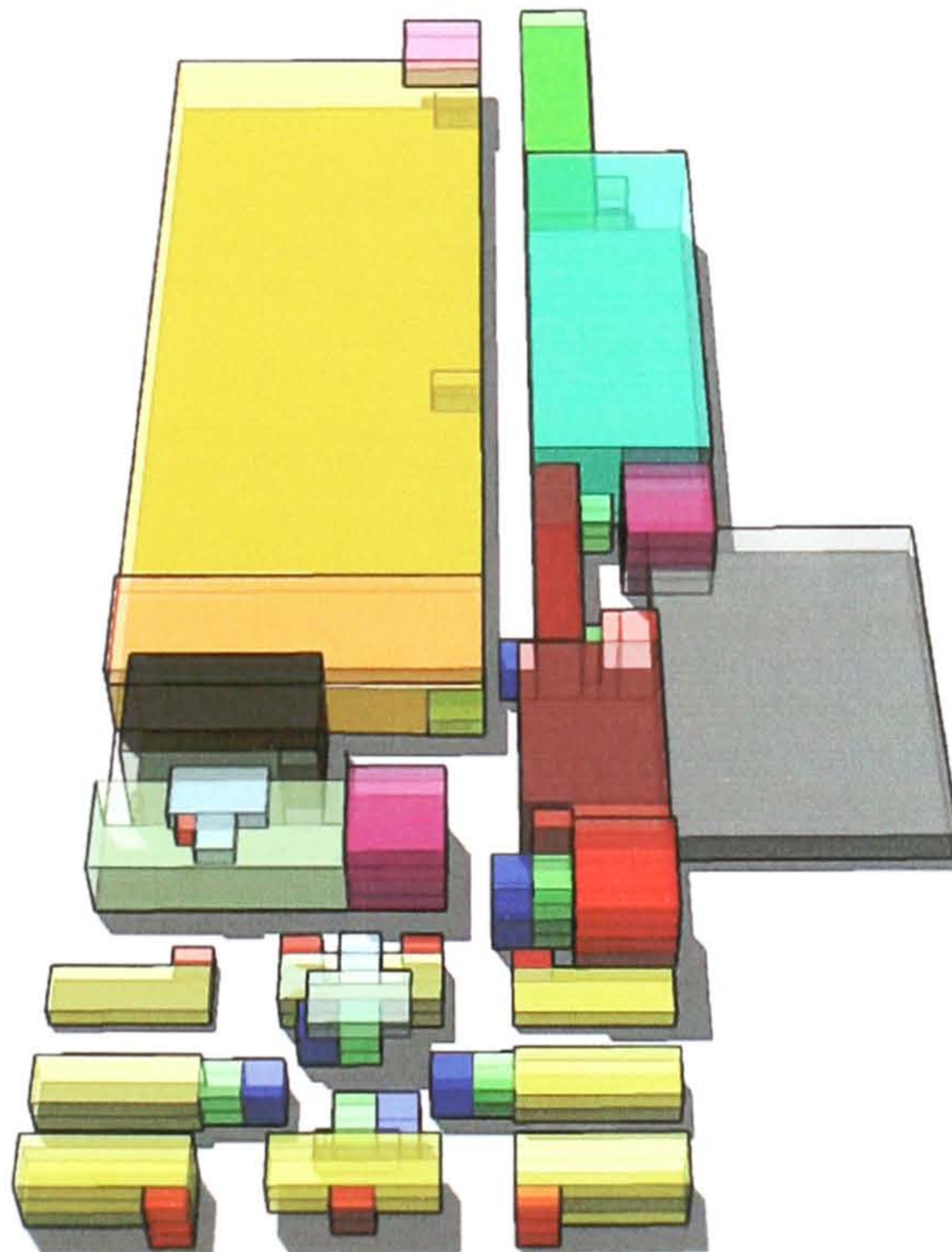
Site 60.4 acres

Total square footage: 2.42 million square feet



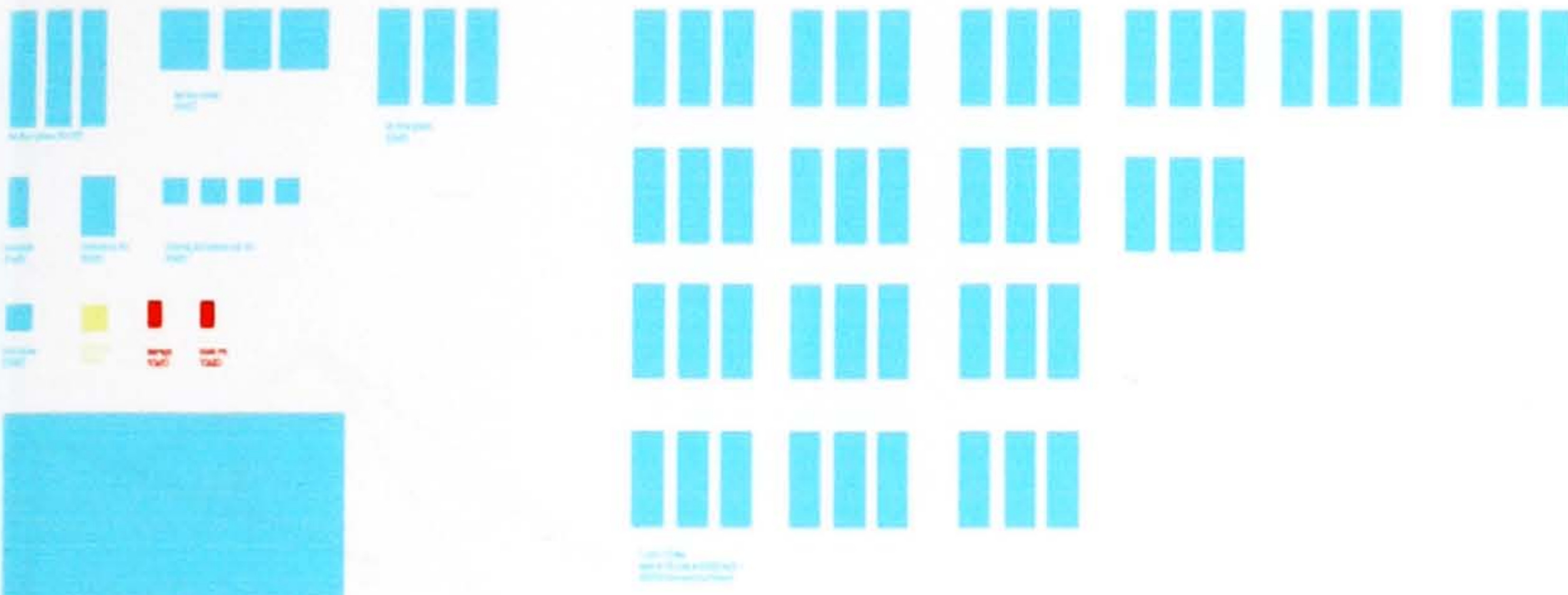


Program Massing Studies:





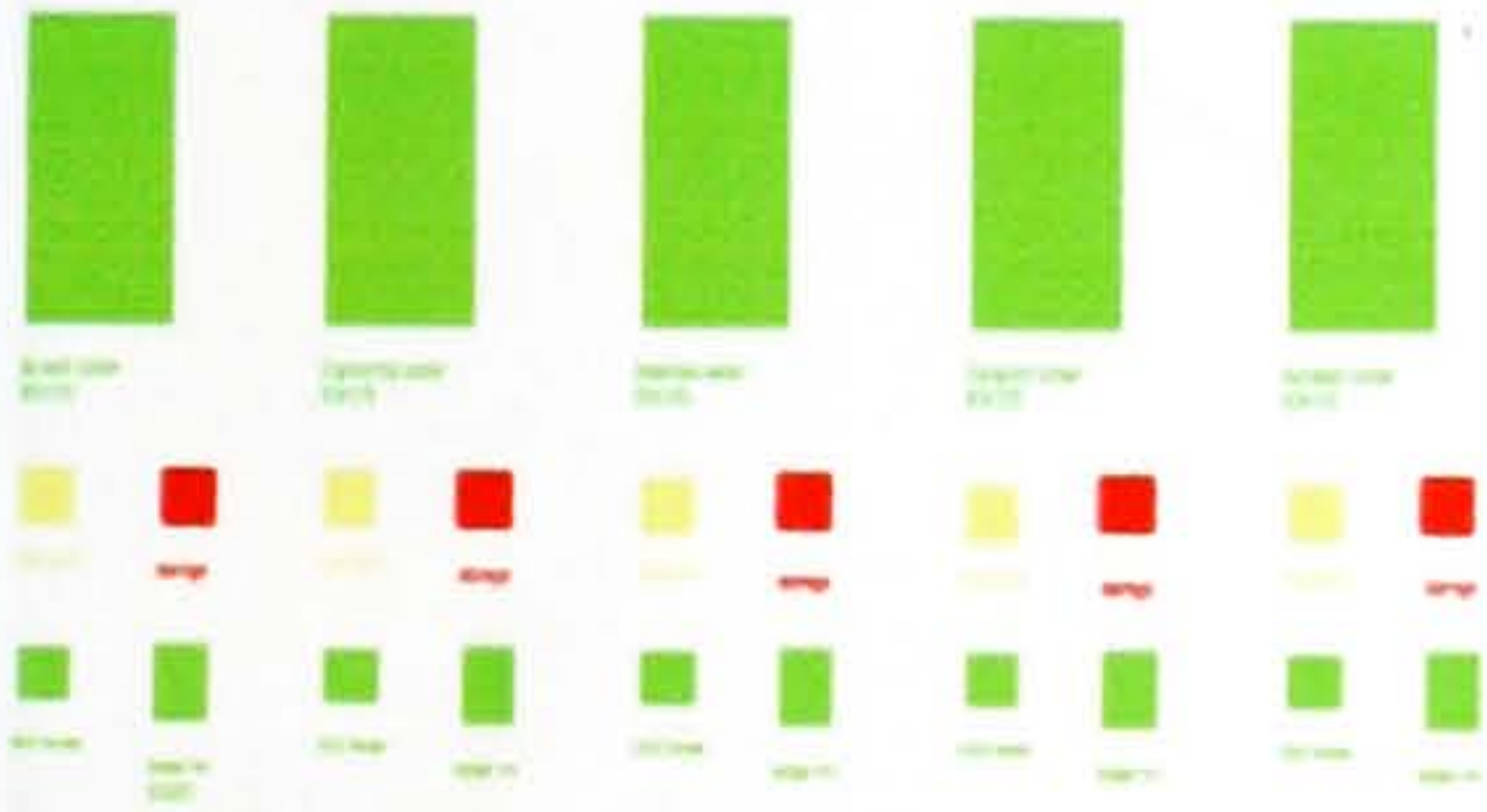
Web Usage



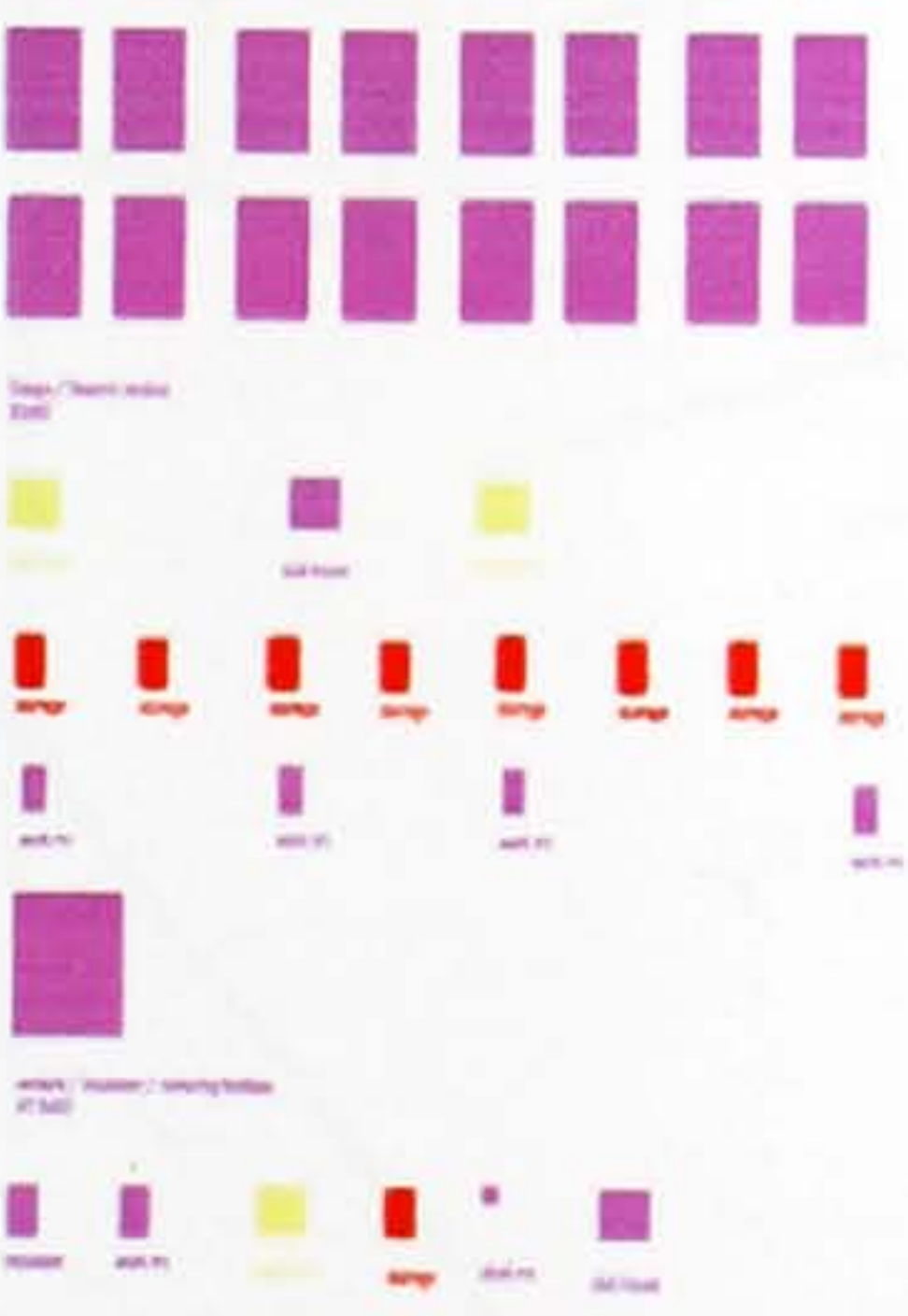
Services



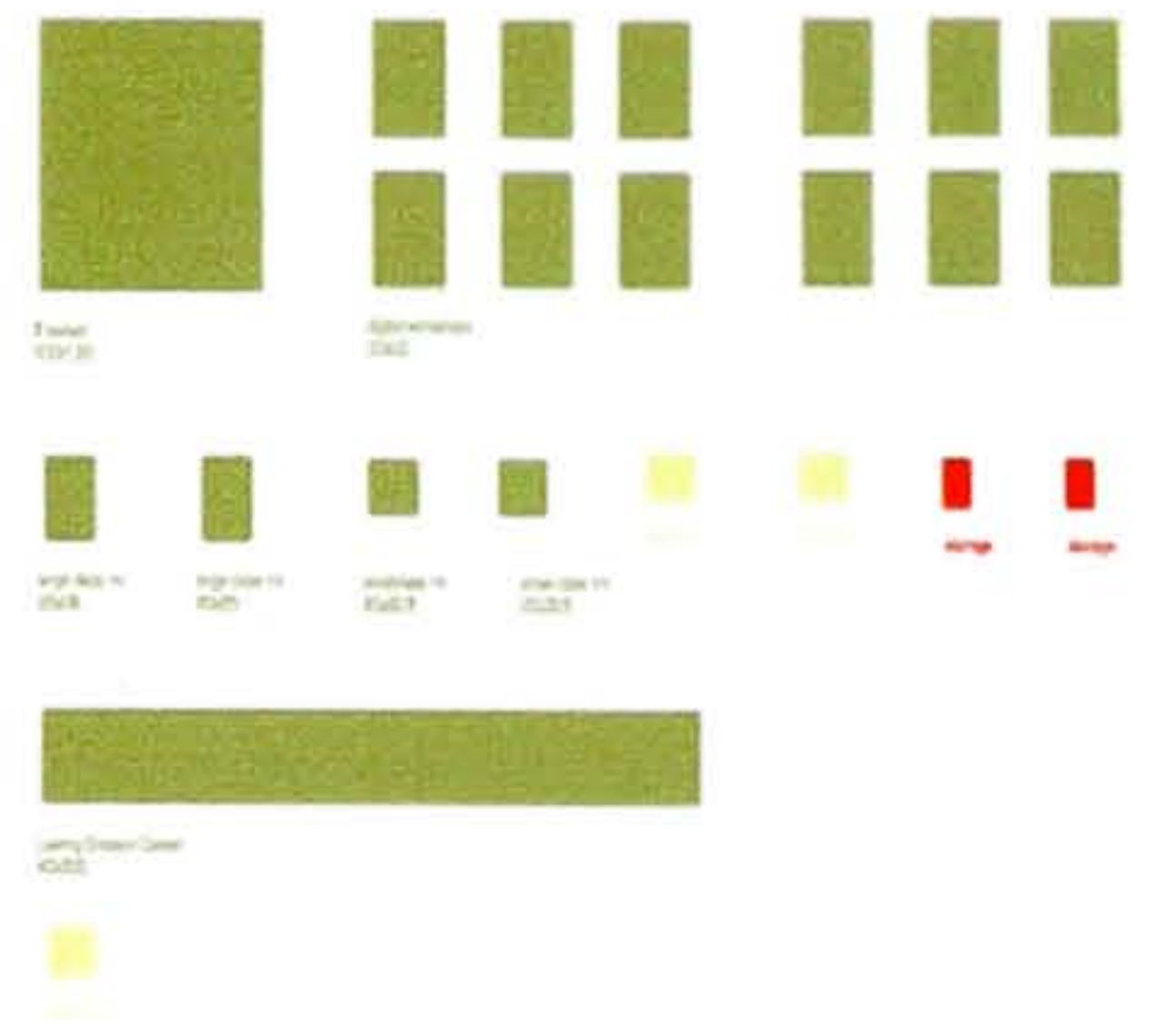
Top House



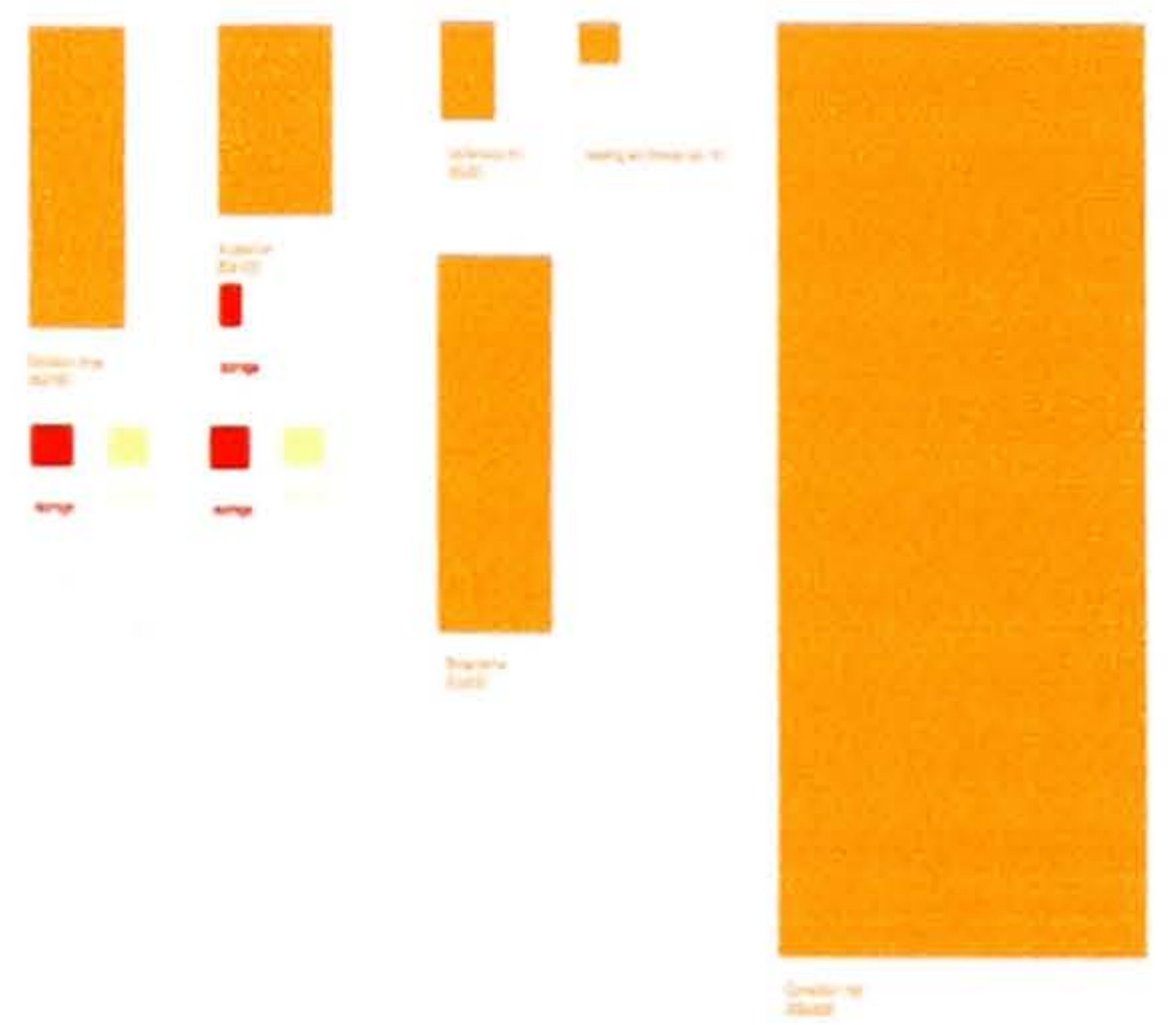
University Collaboration Park



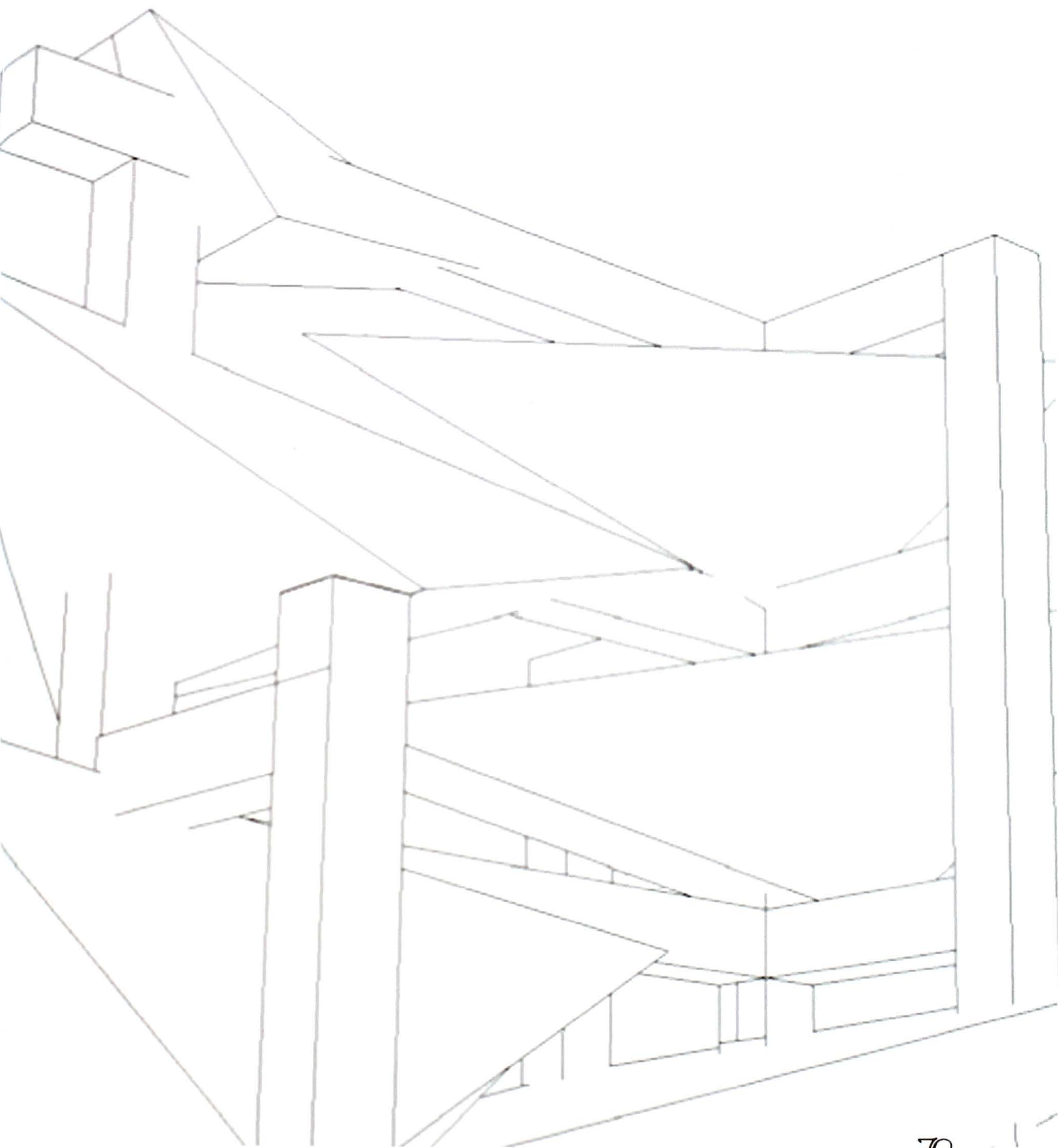
Information Network



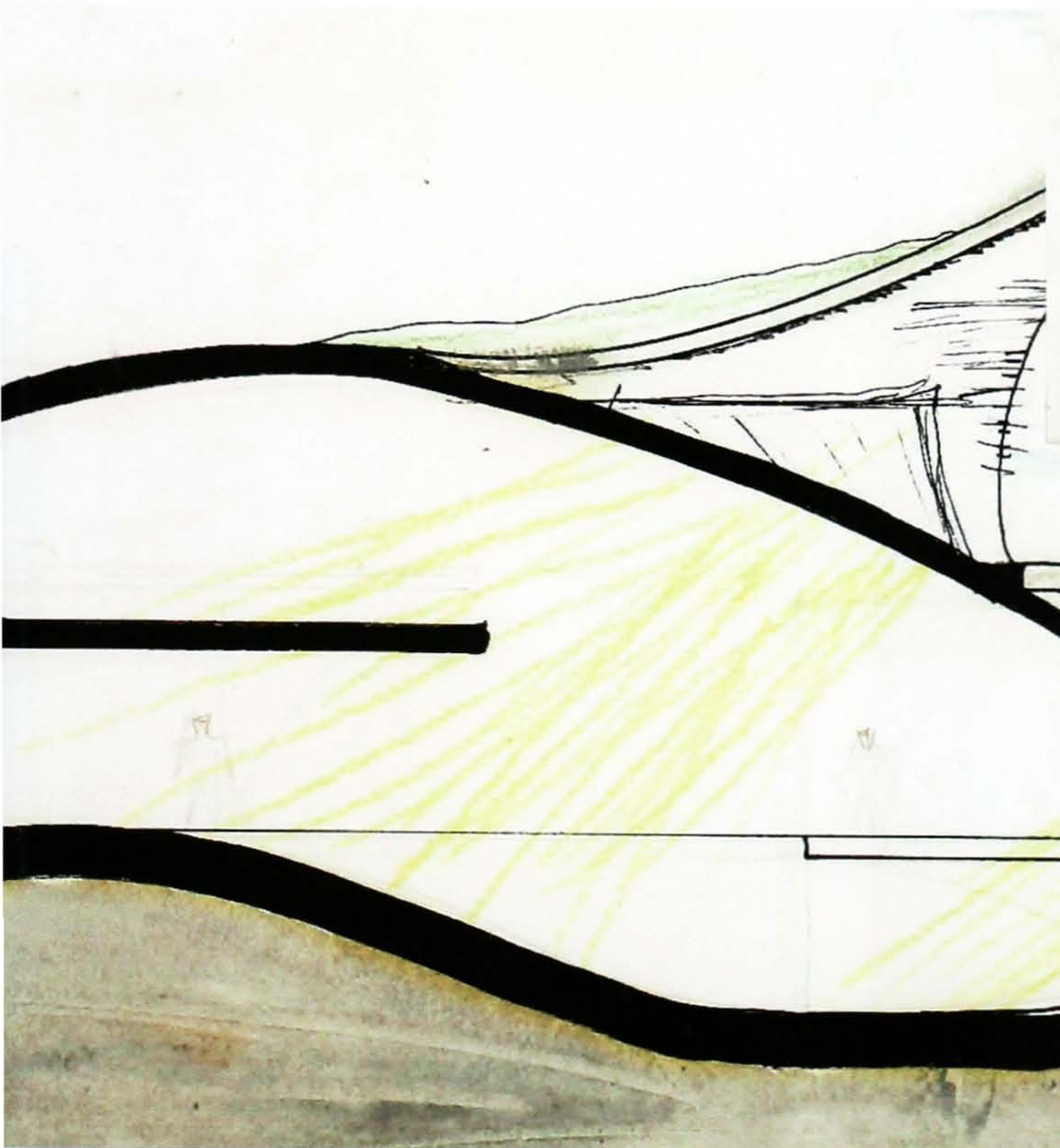
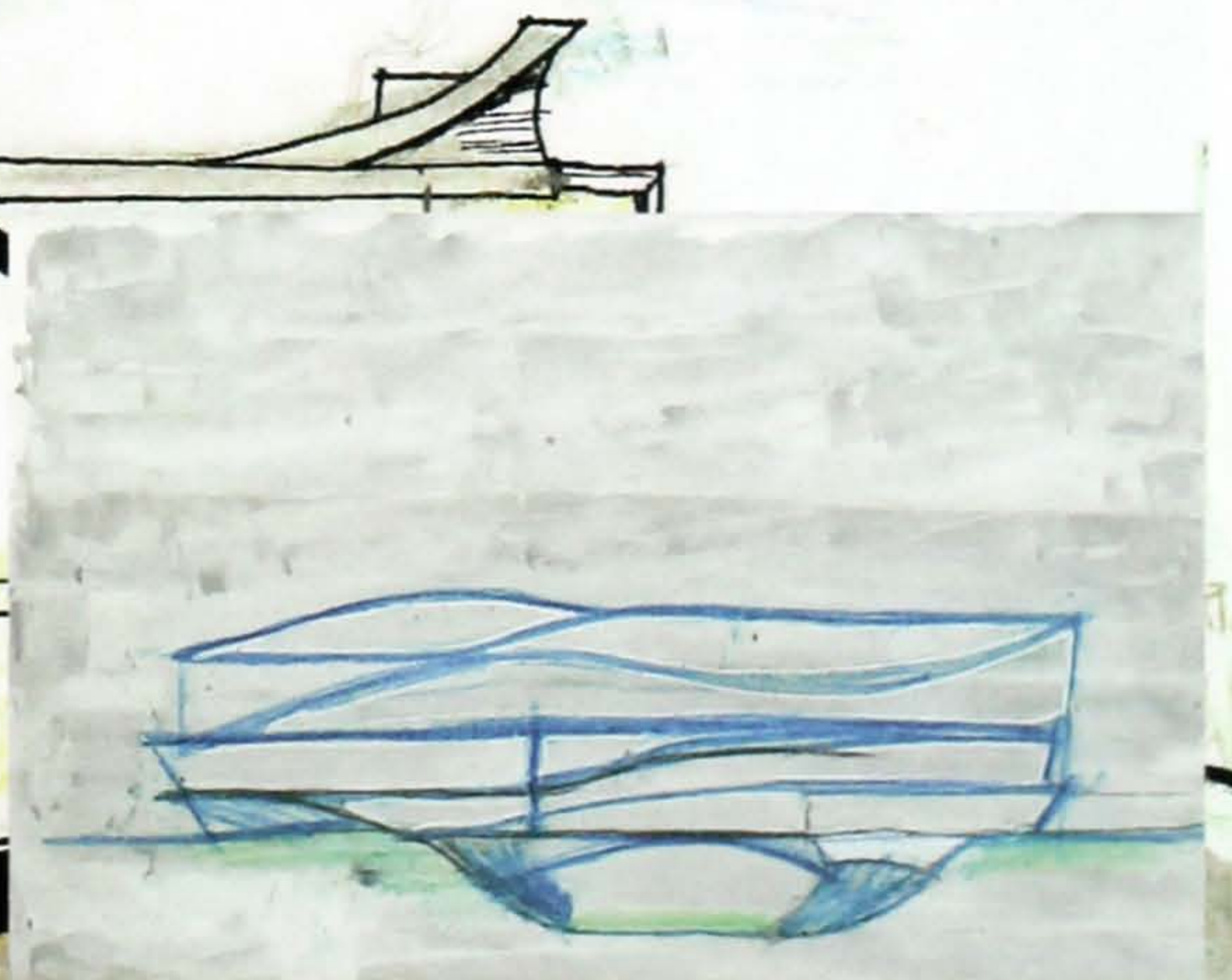
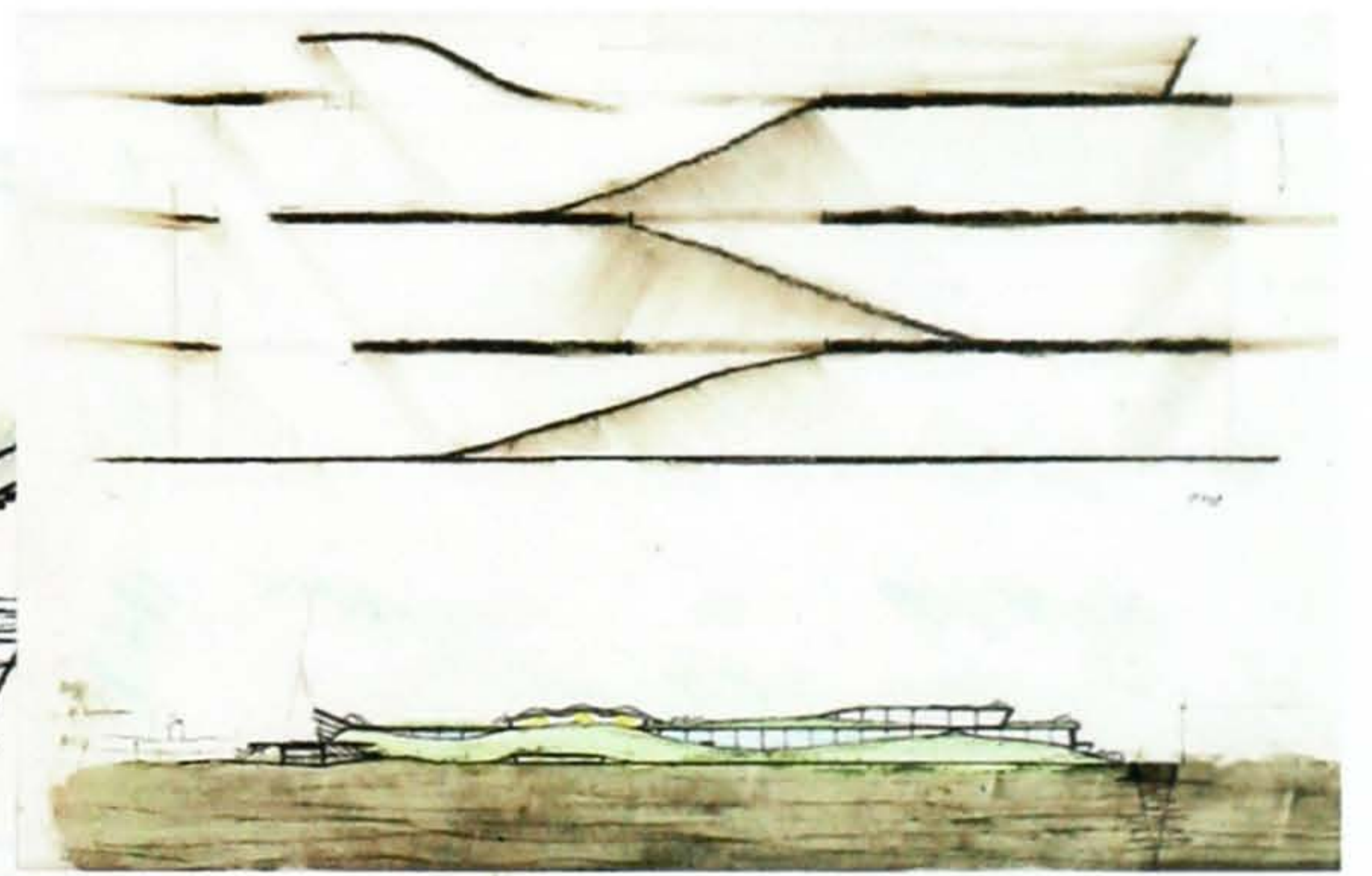
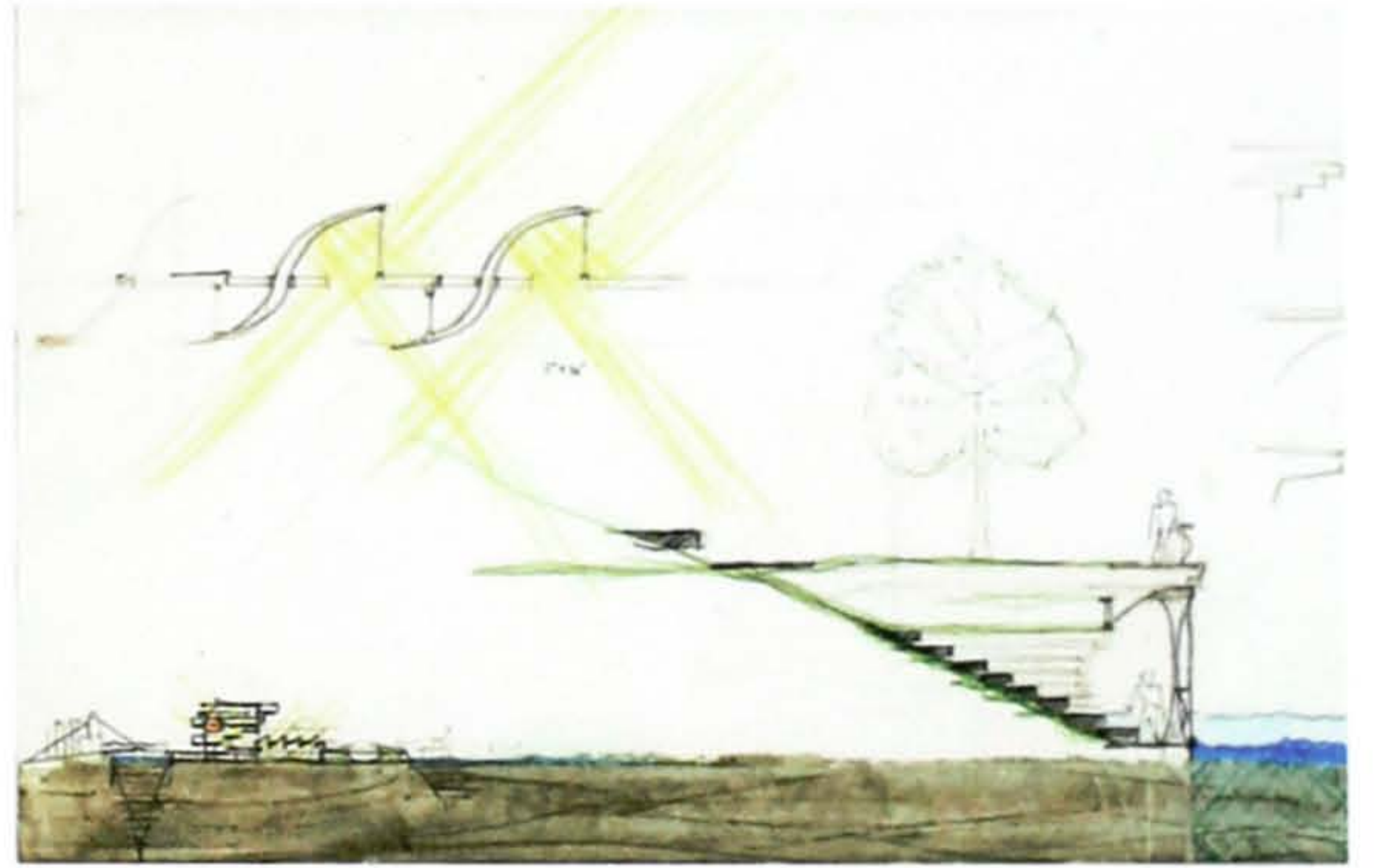
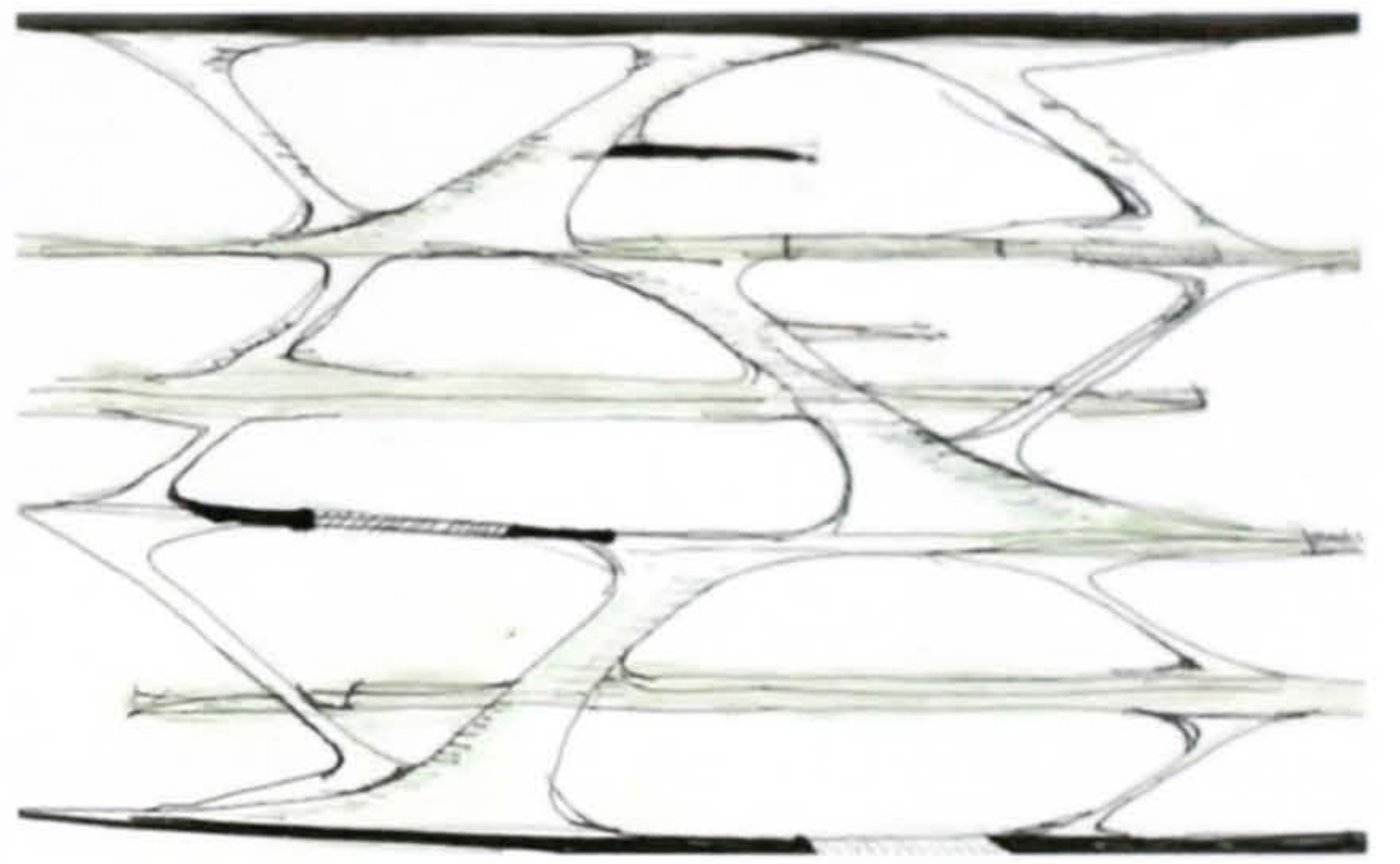
Generating Space







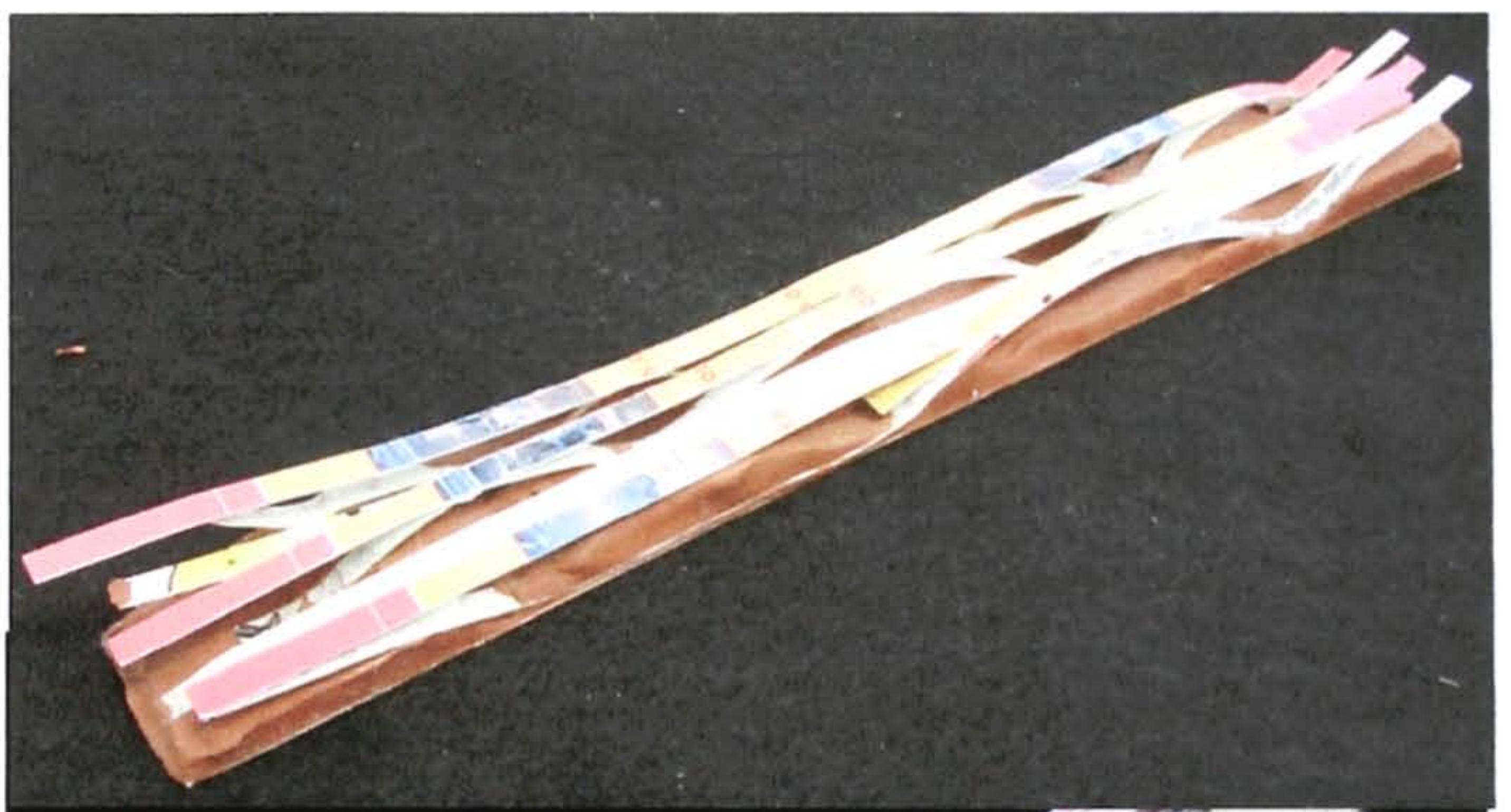






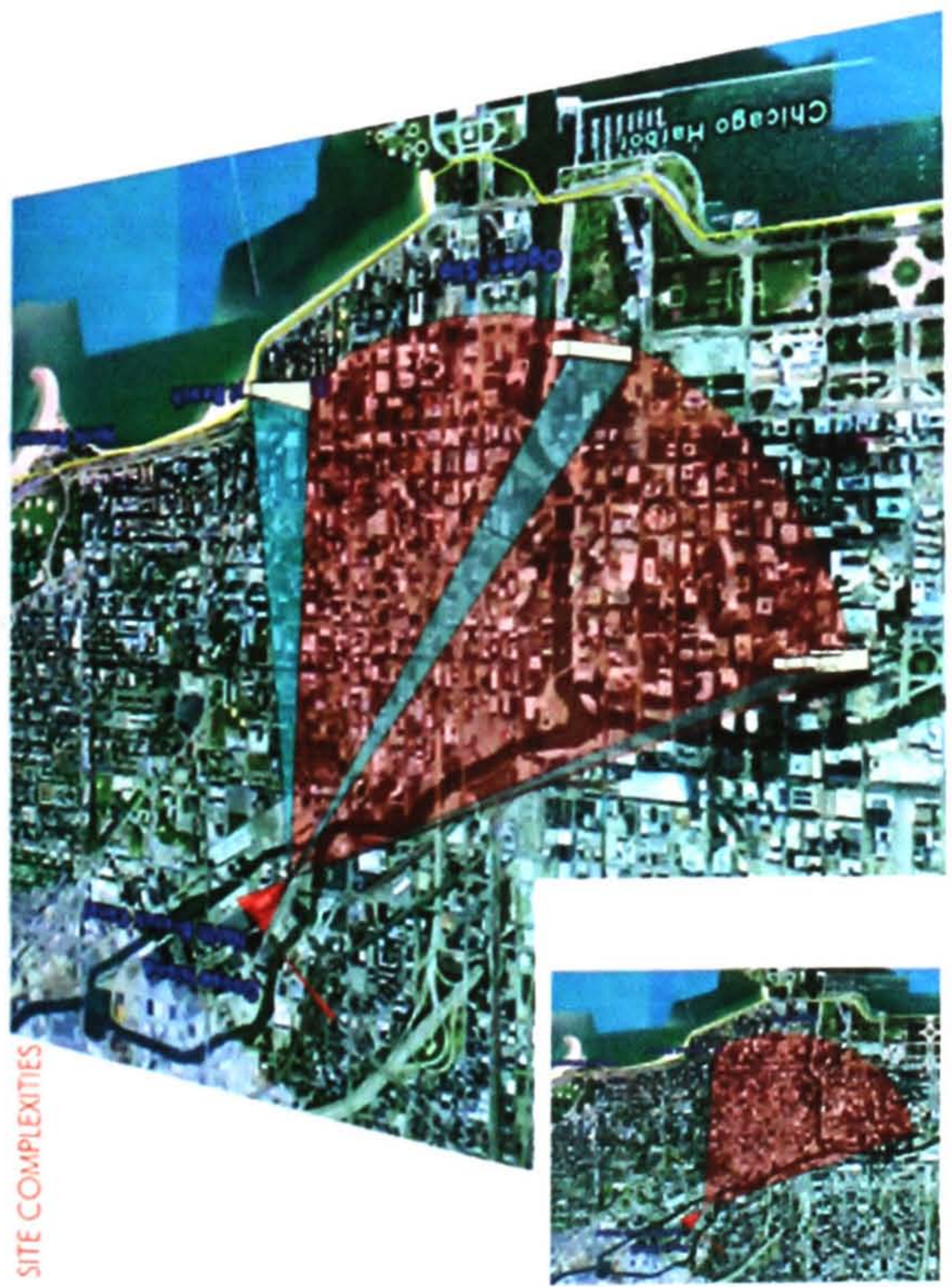
# Sketch Problem

Gestural Models

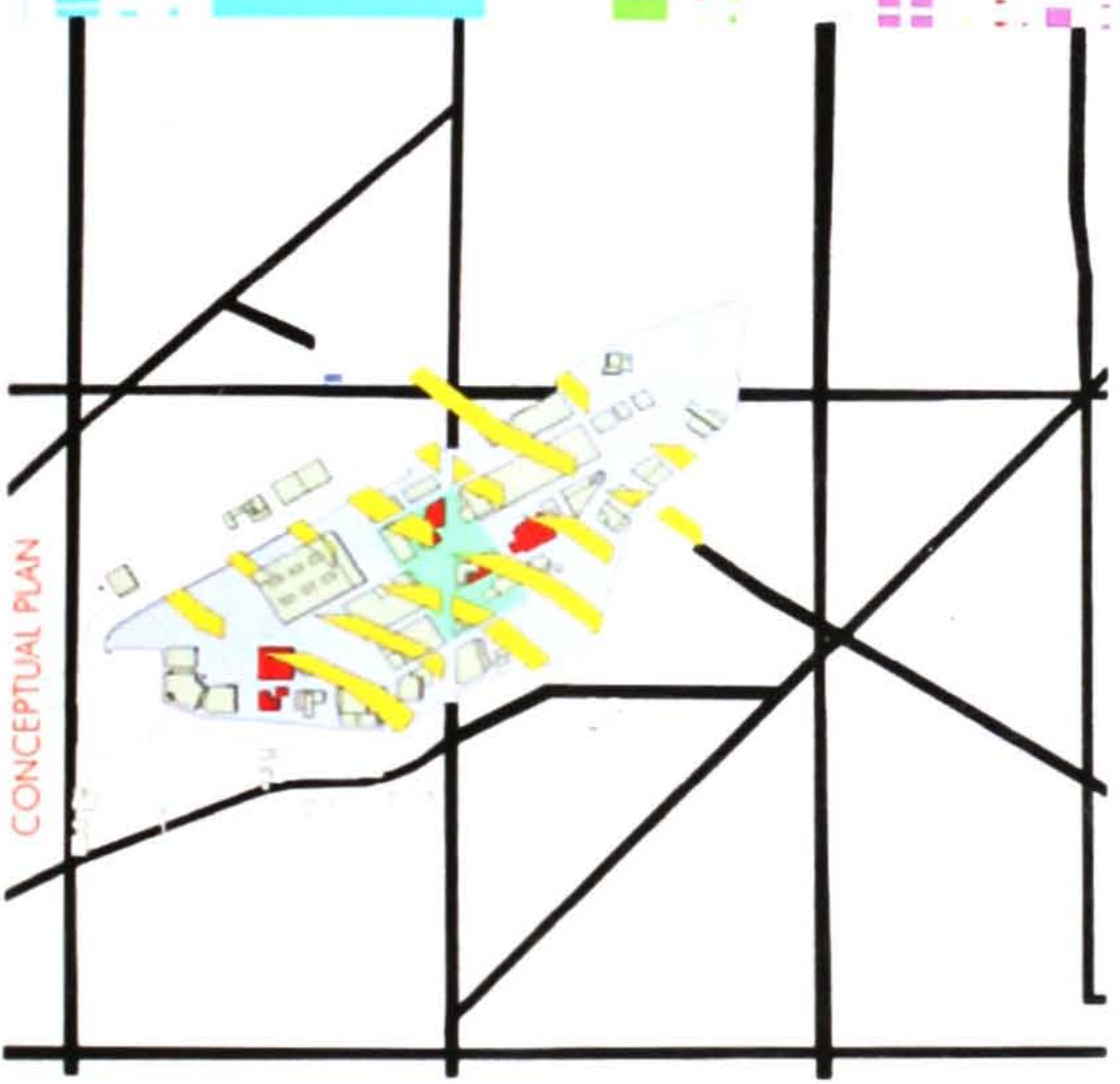




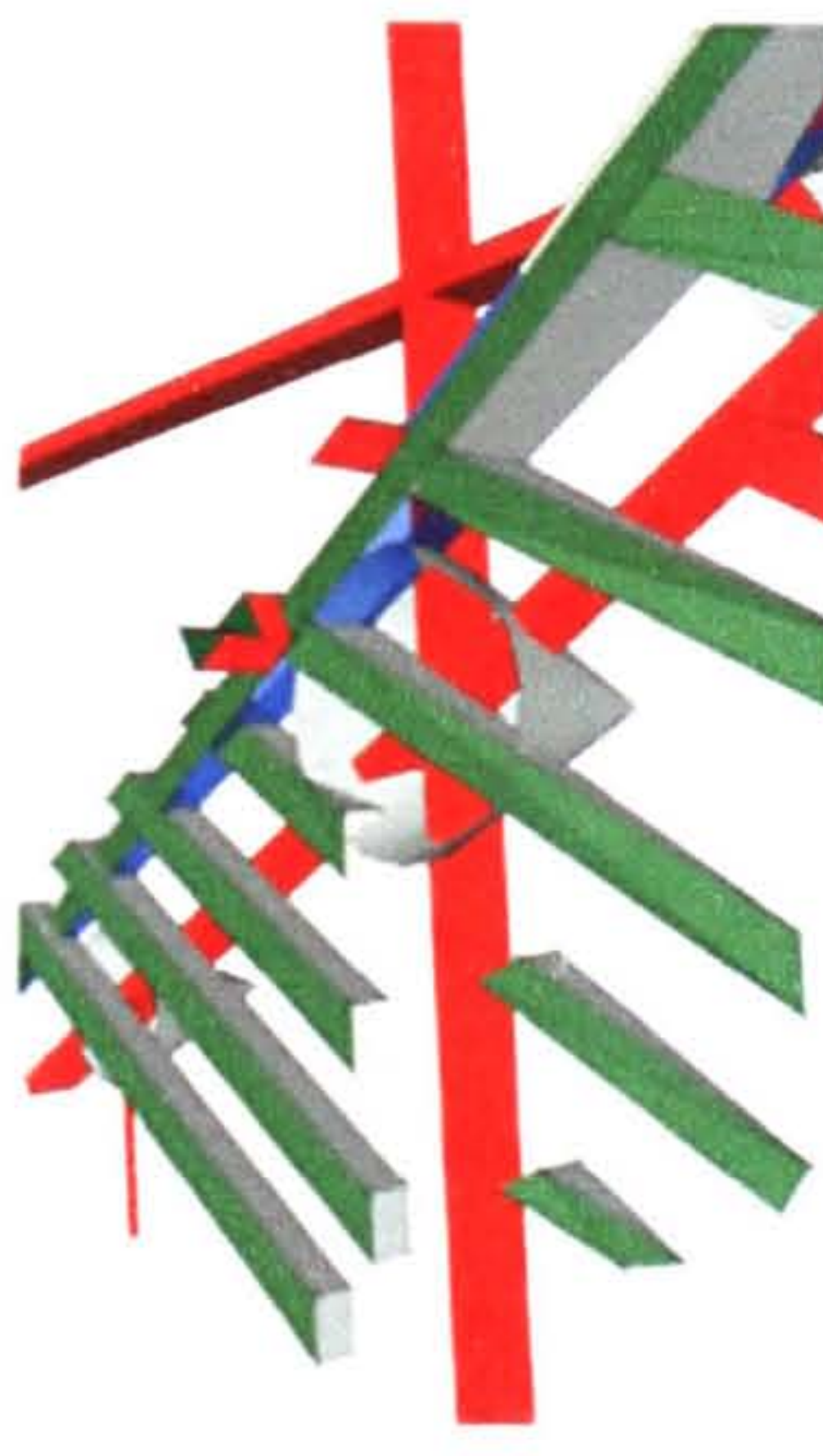
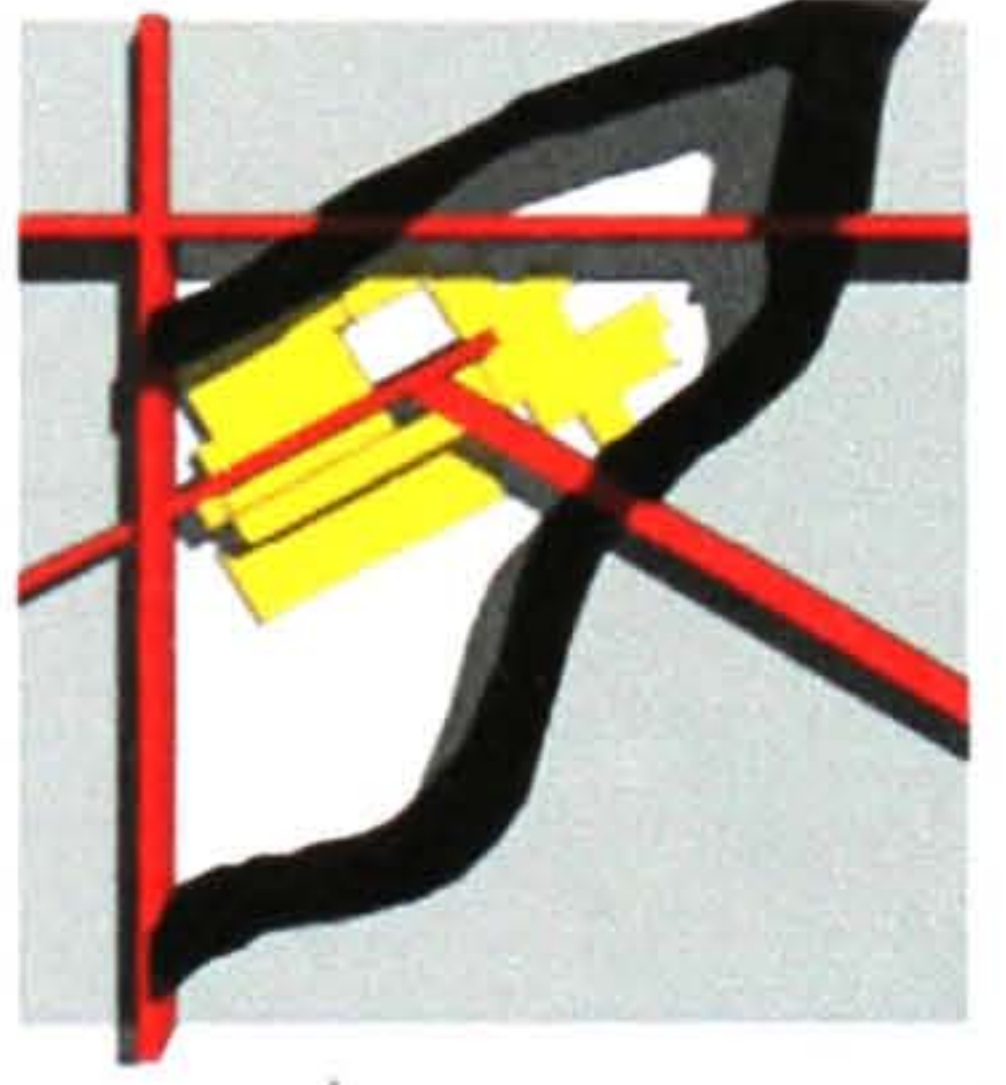
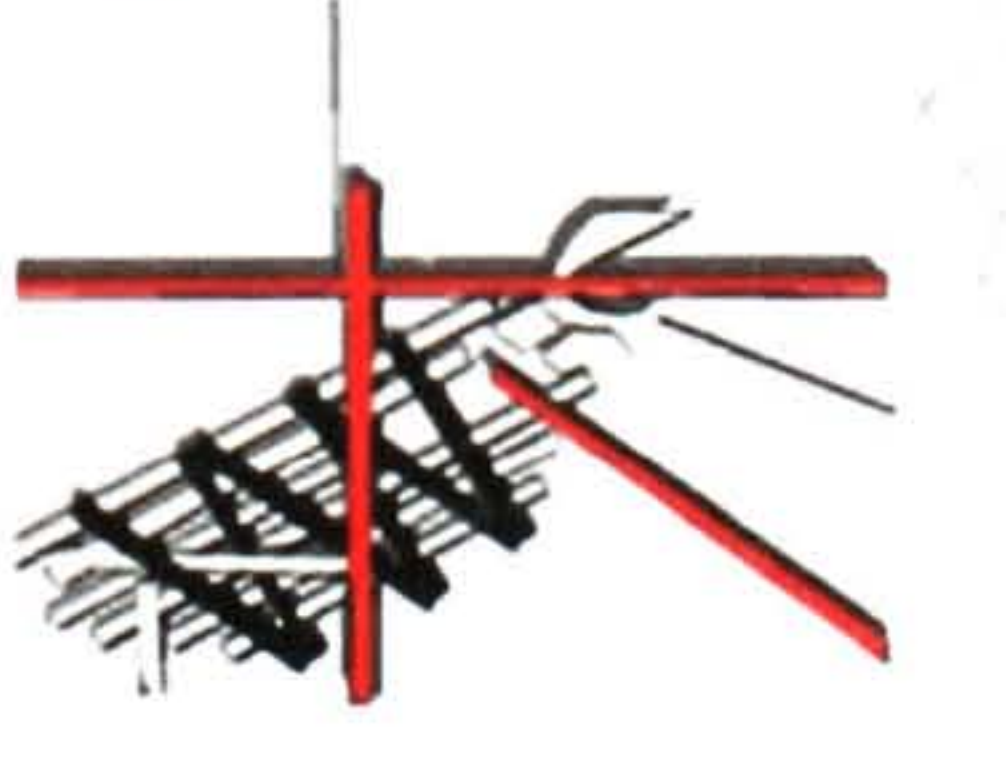
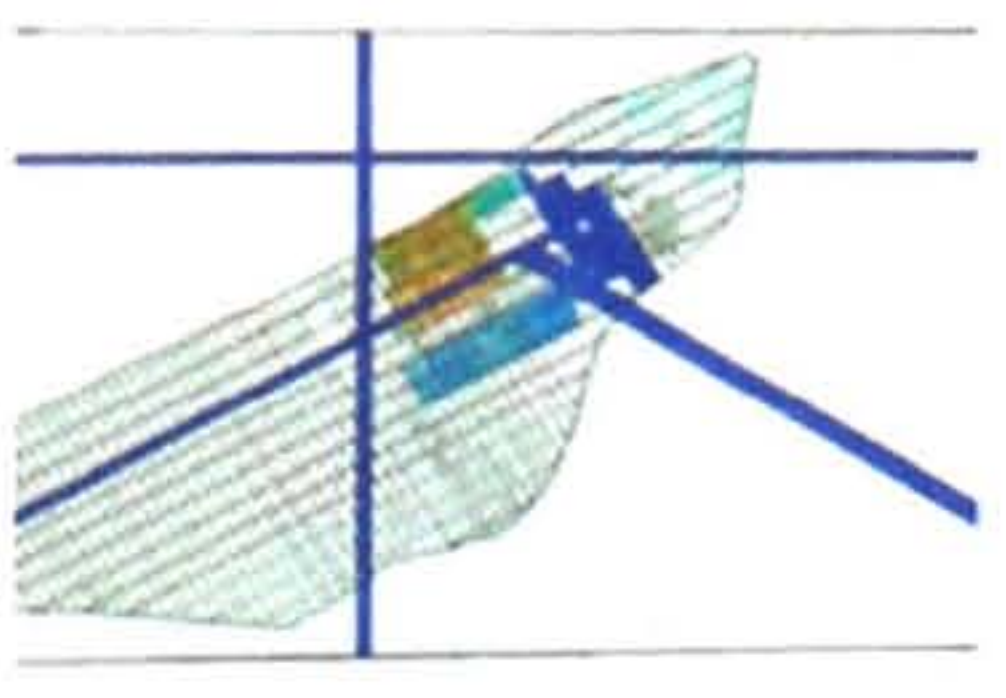
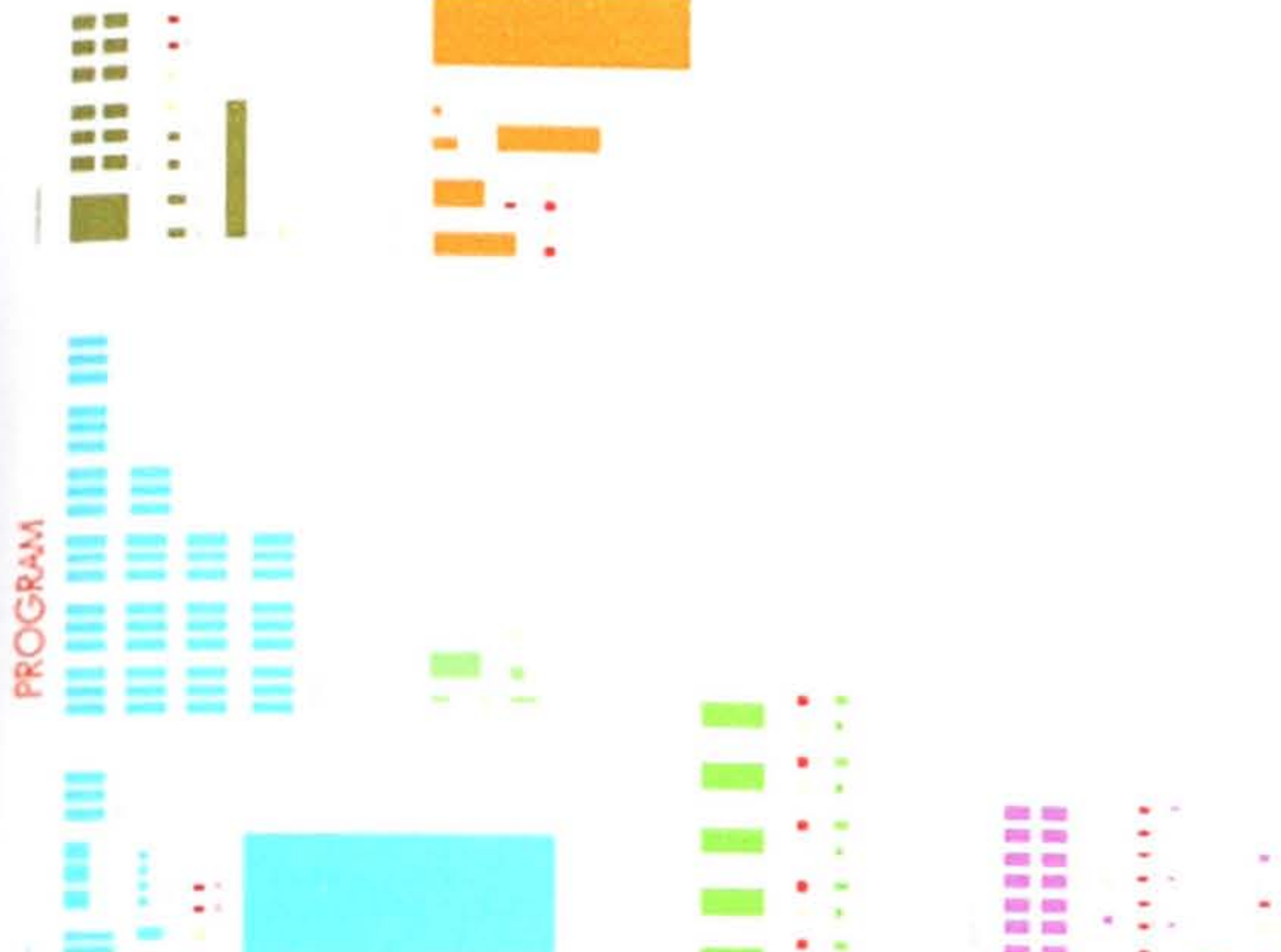
SITE COMPLEXITIES



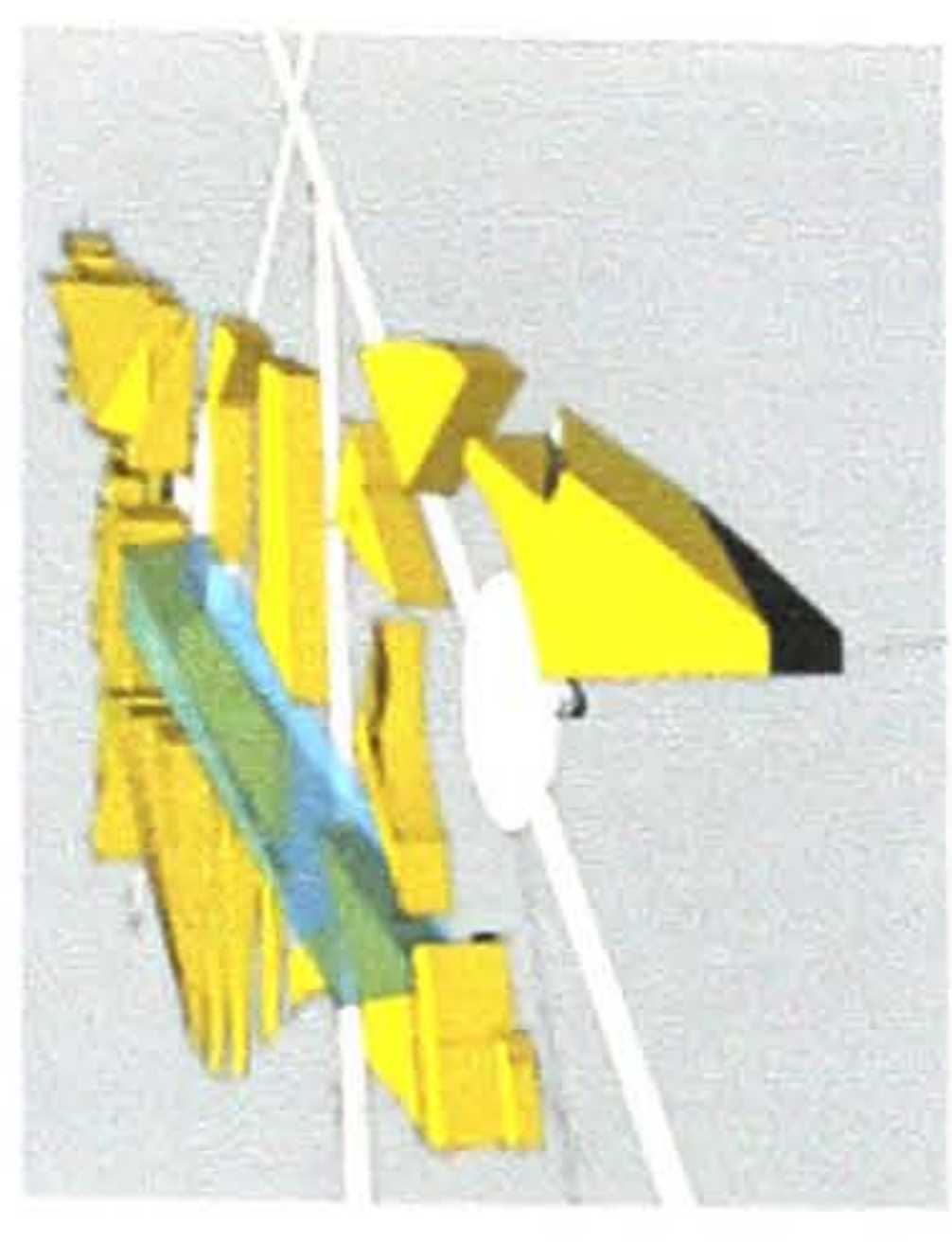
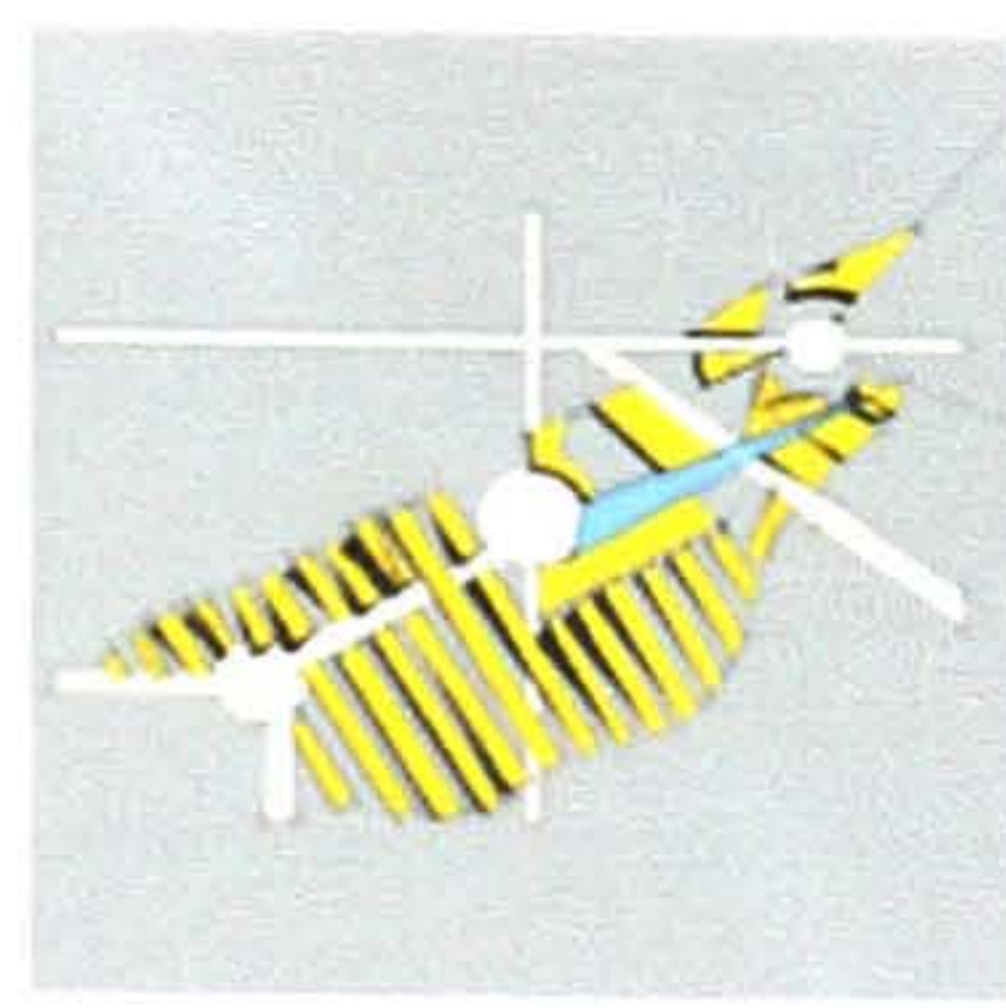
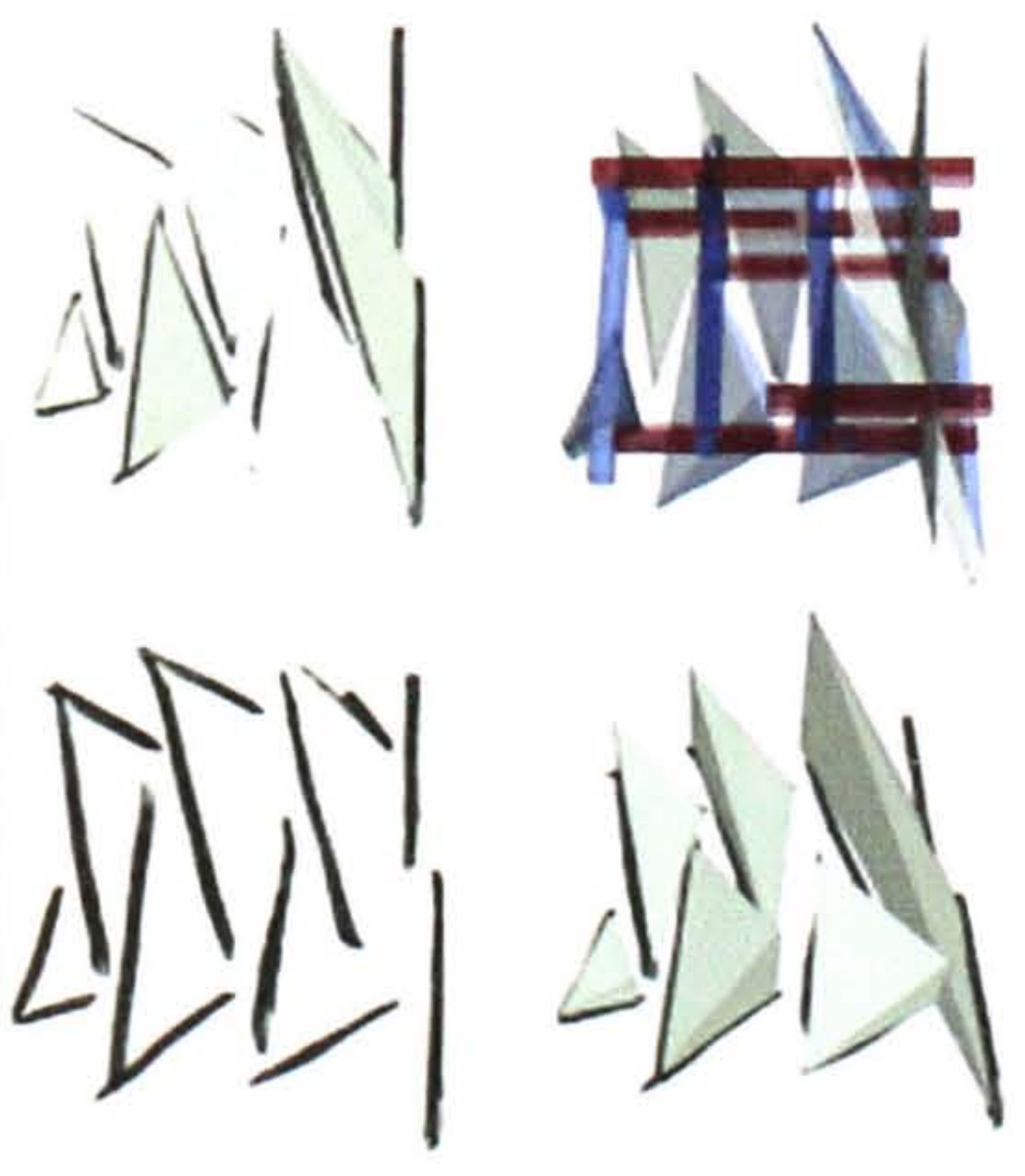
CONCEPTUAL PLAN



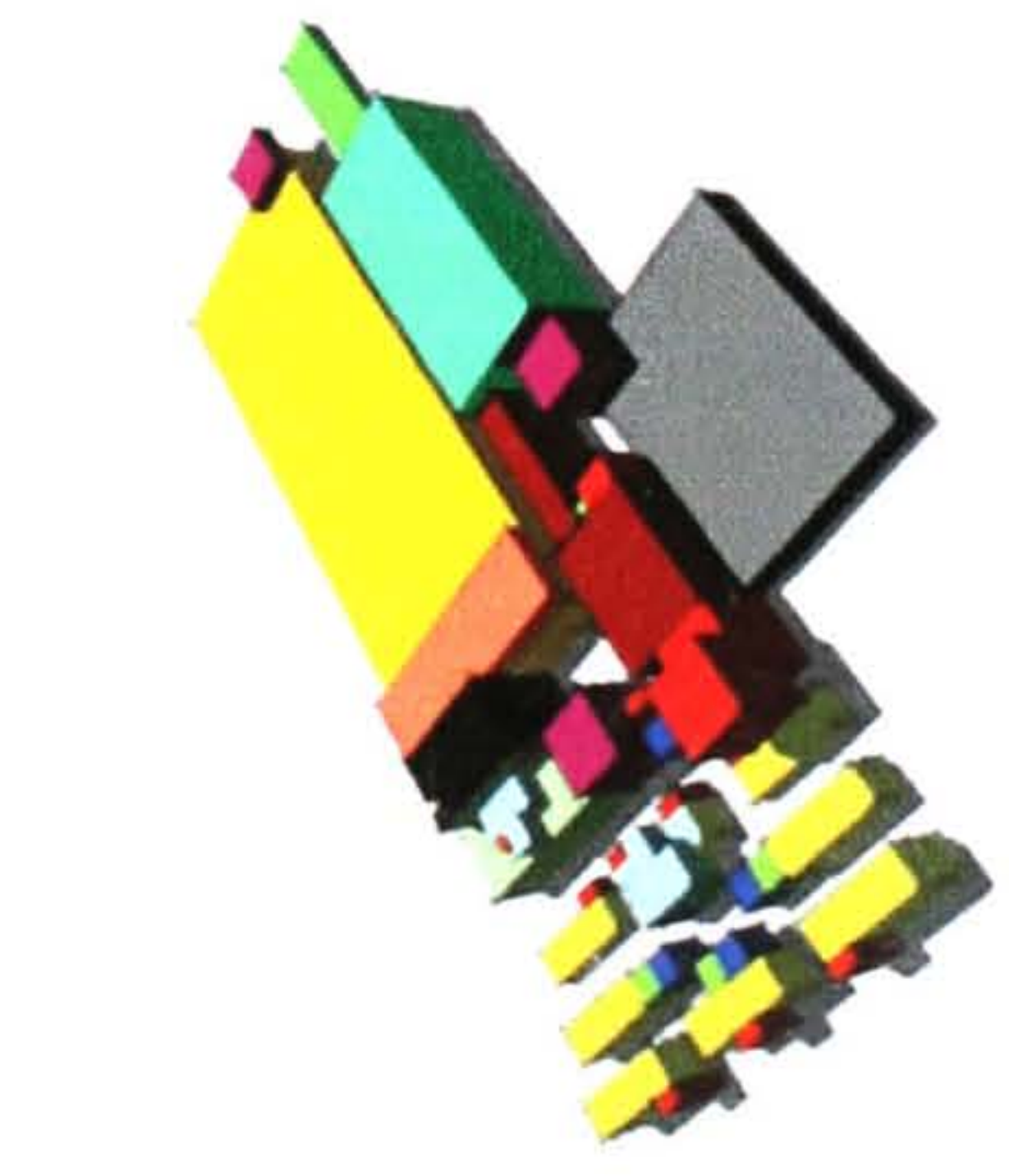
PROGRAM



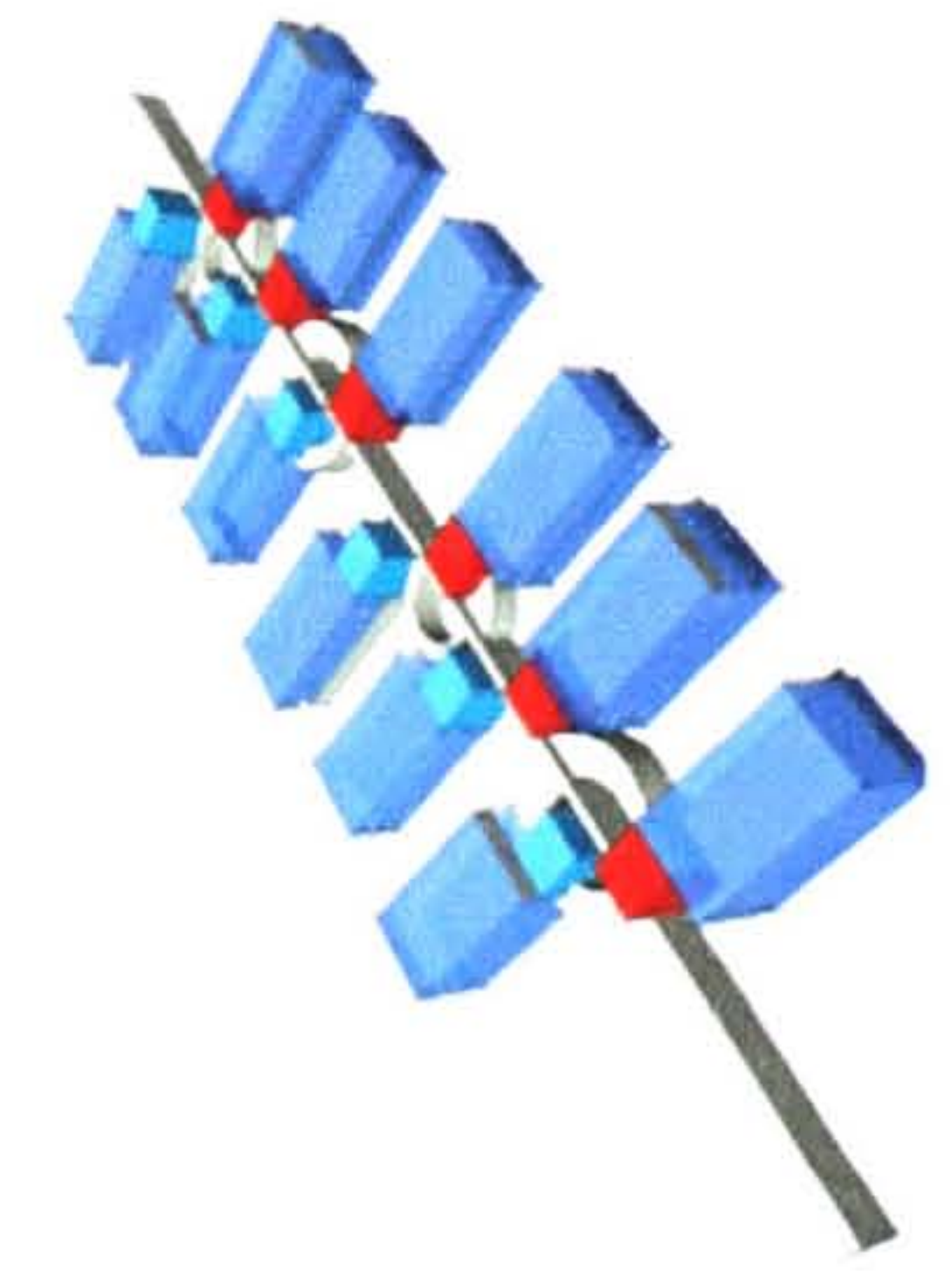
HORIZONTAL AND VERTICLE  
PEDISTRIAN AS THE VEHICLE



MIXING CHAMBER CONCEPT



PROGRAM MASSING MODEL



LAN BUS TYPOLOGY

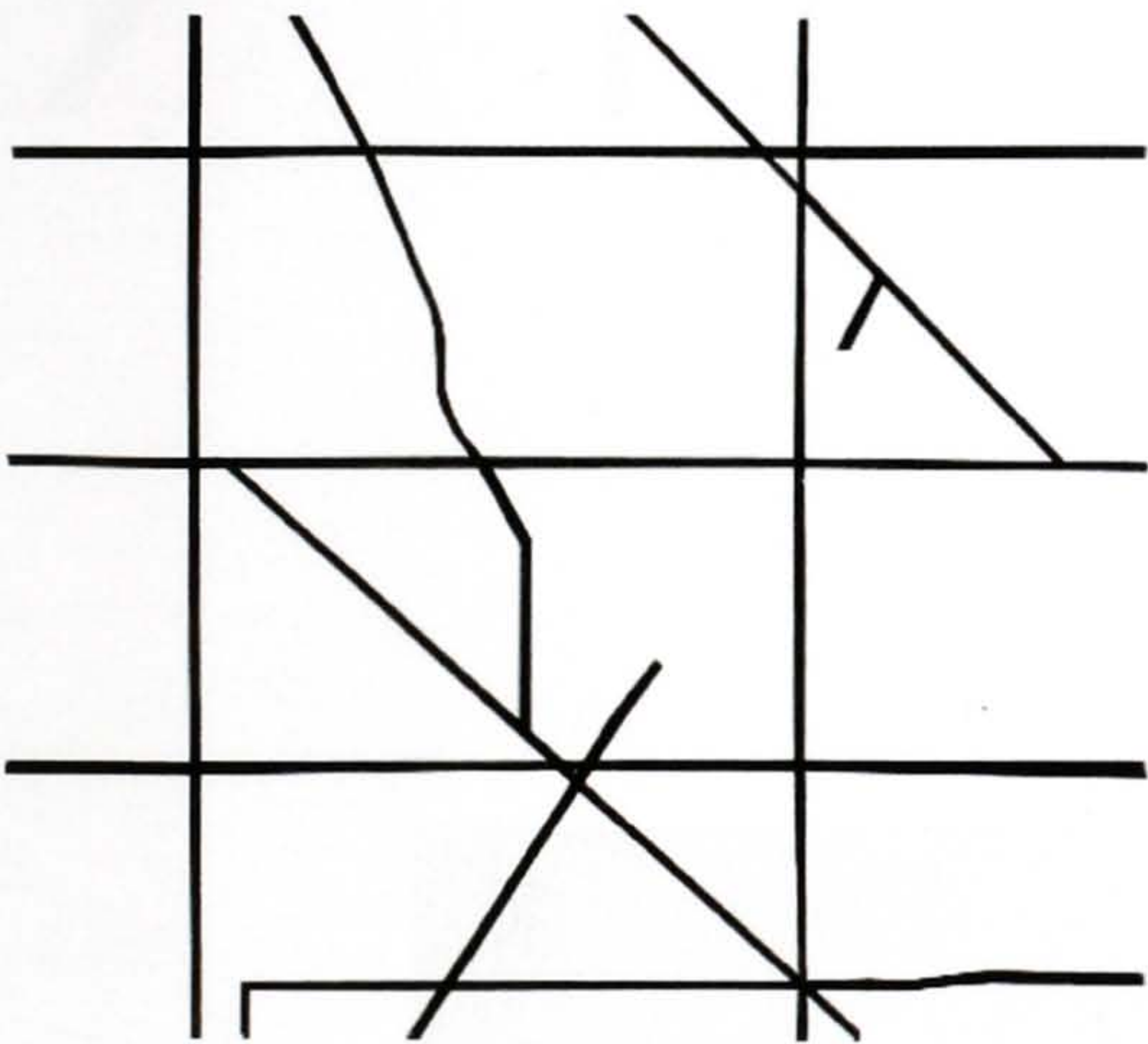




Site Fabric



Site Fabric



Road Fabric



Island Fabric

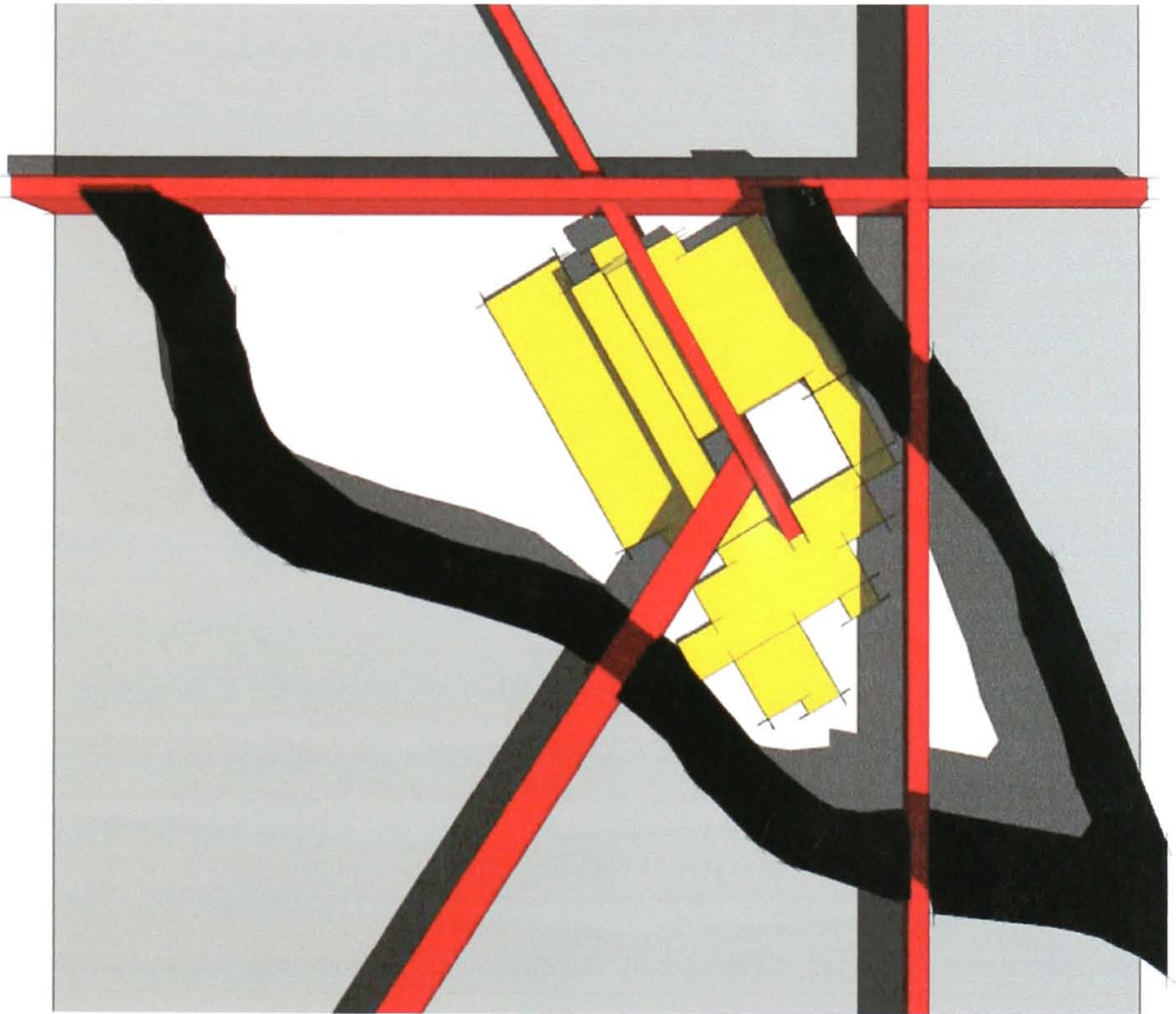
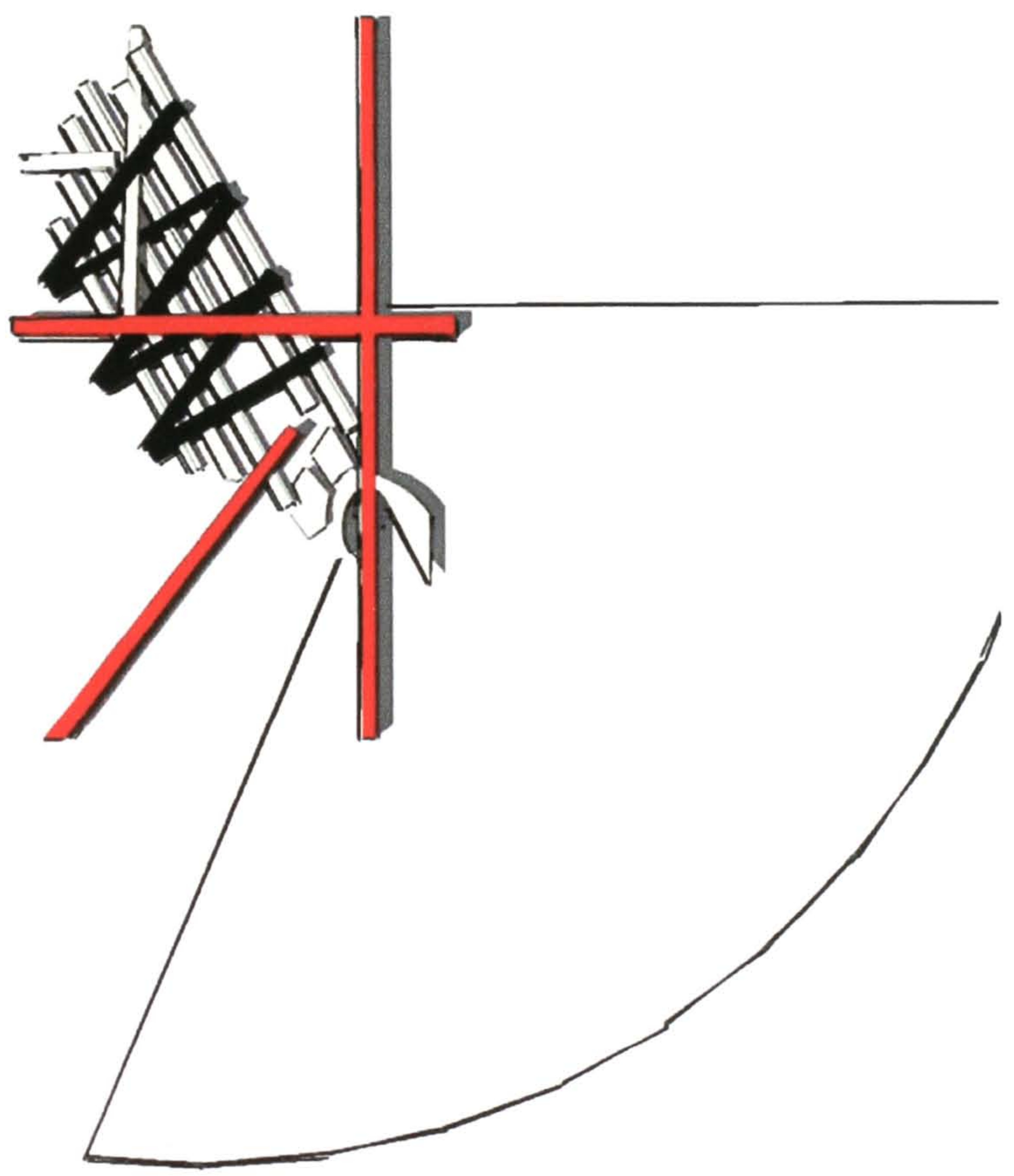
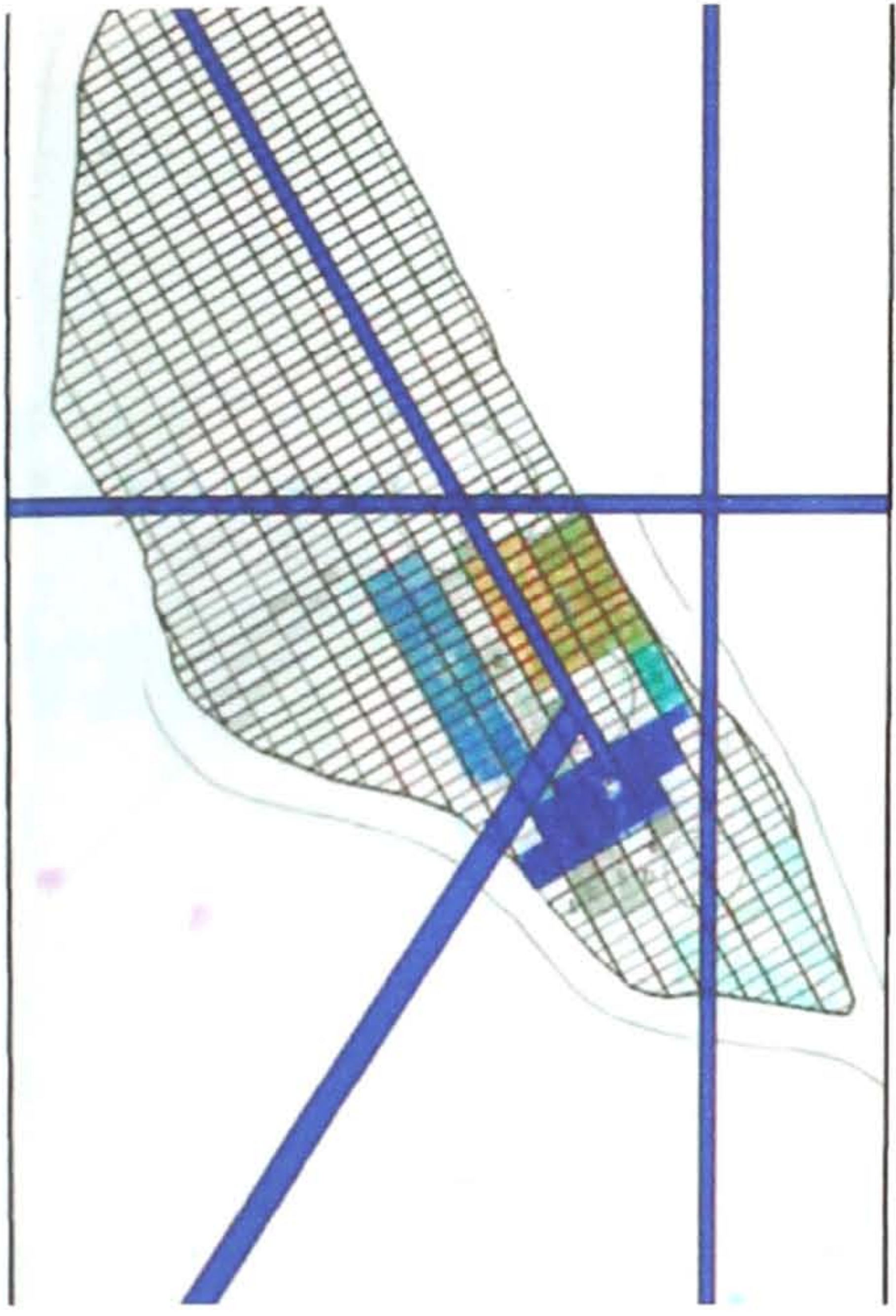


Man-made Fabric

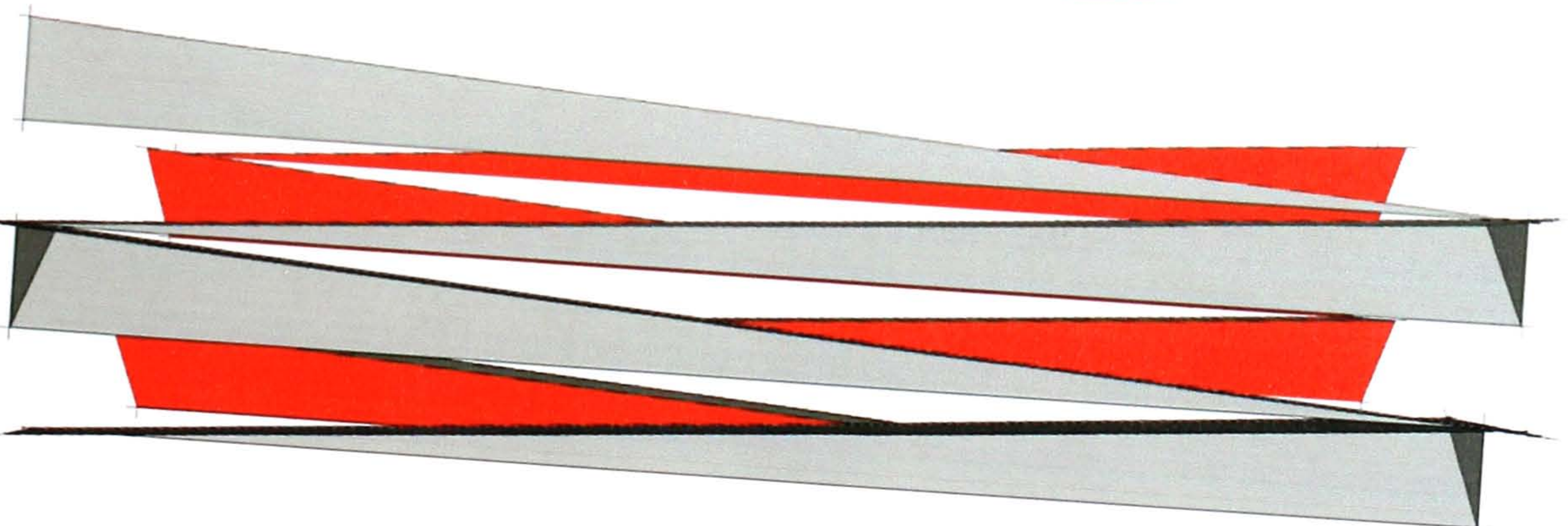
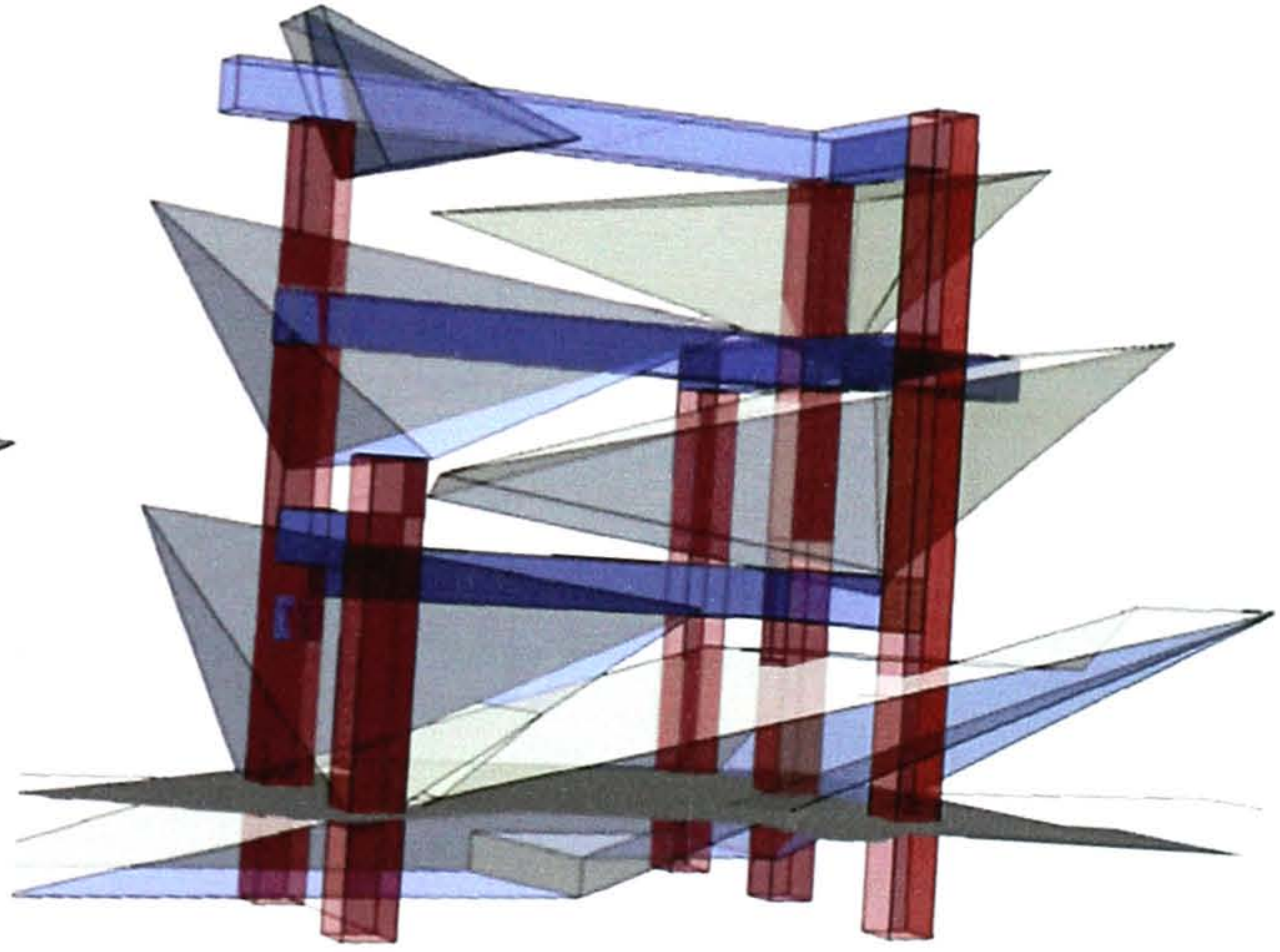
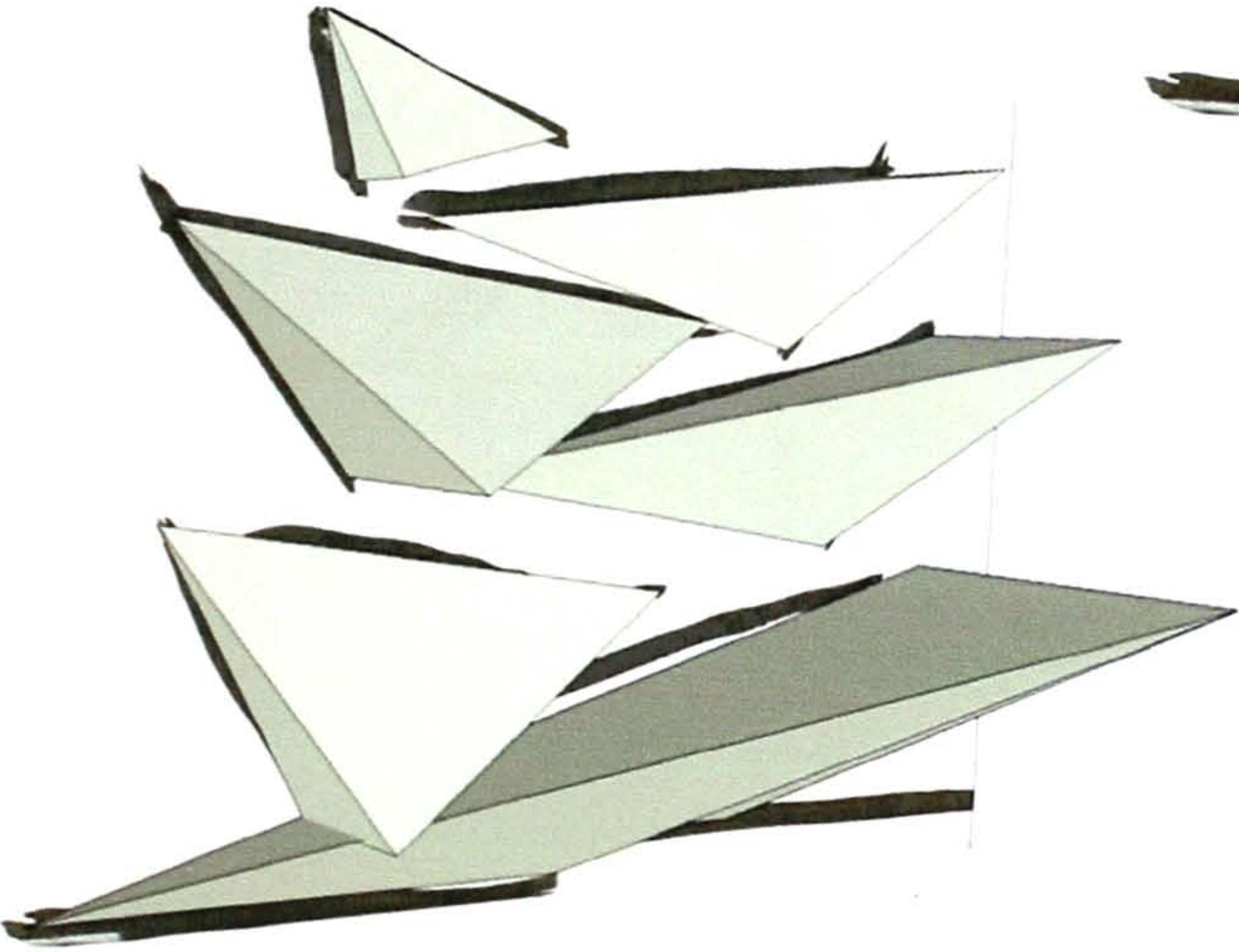


Organic Fabric



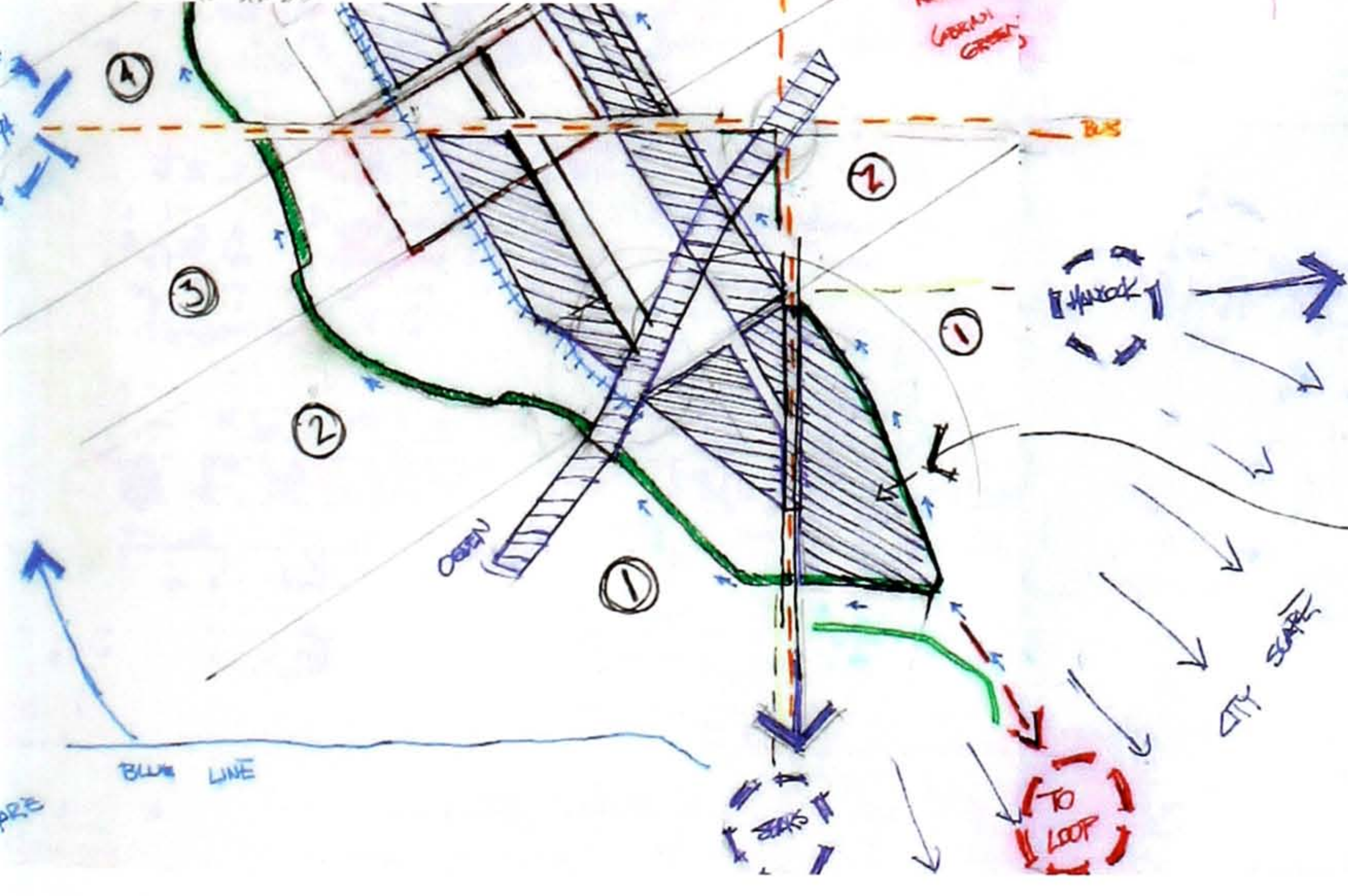
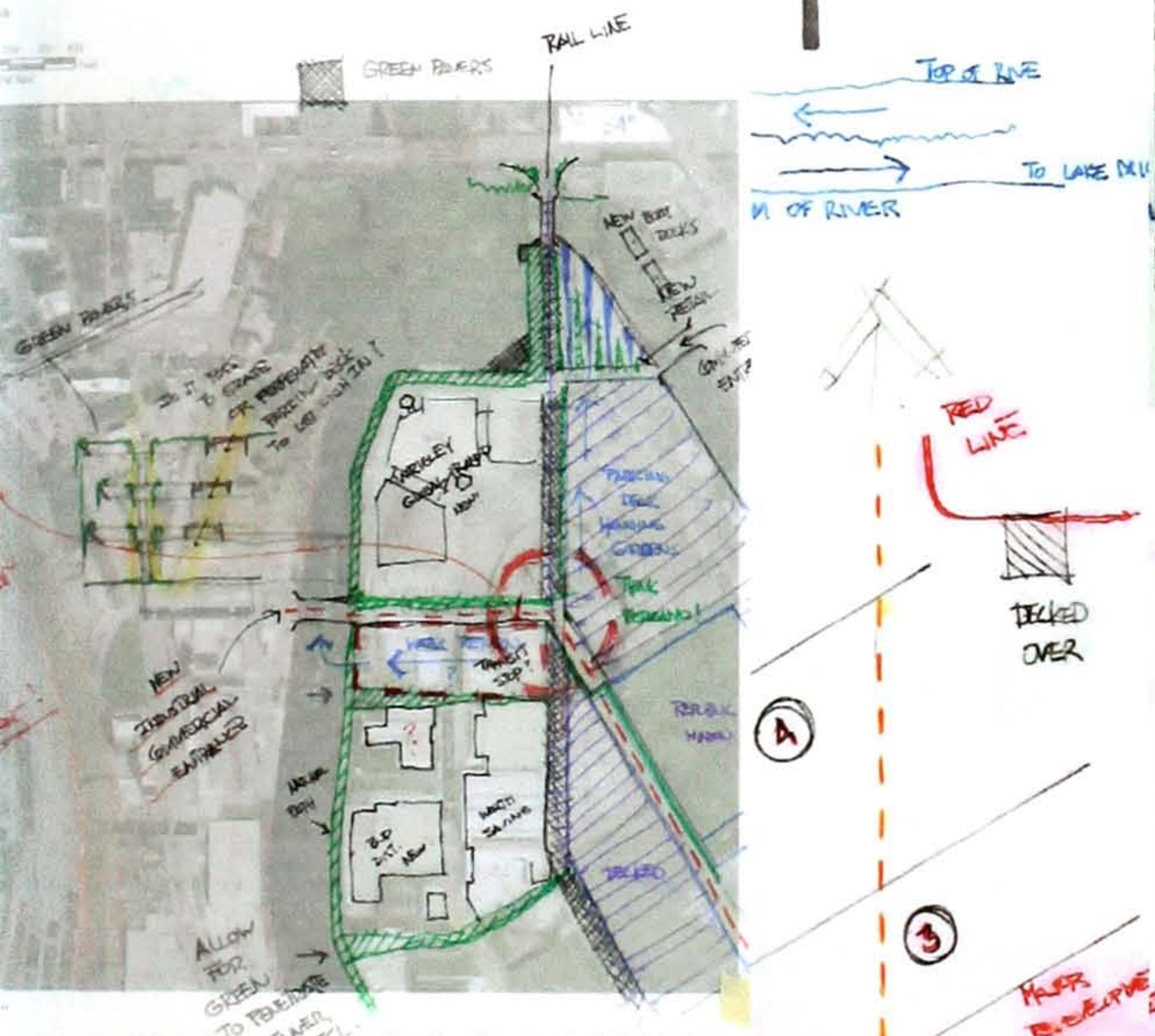
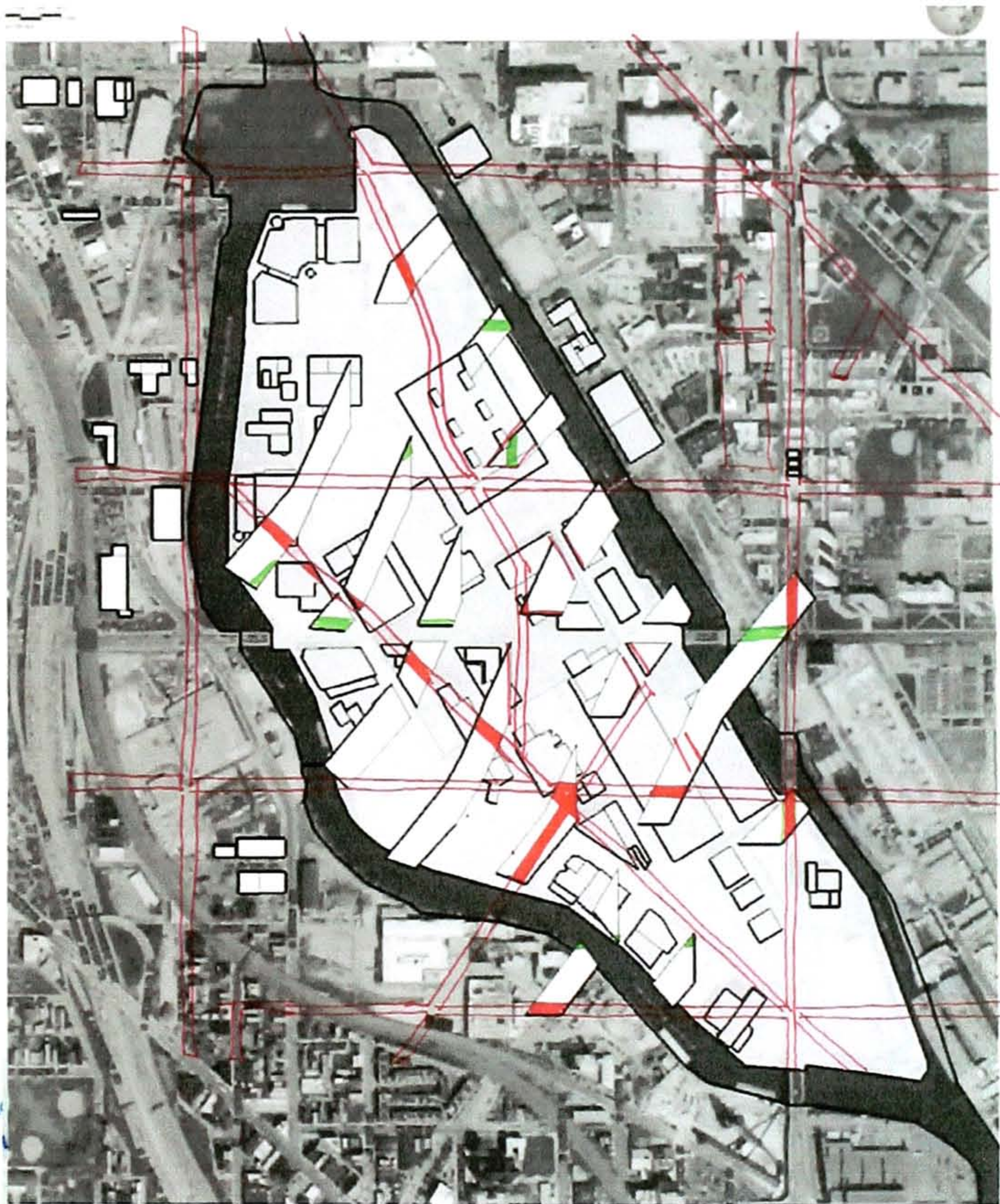
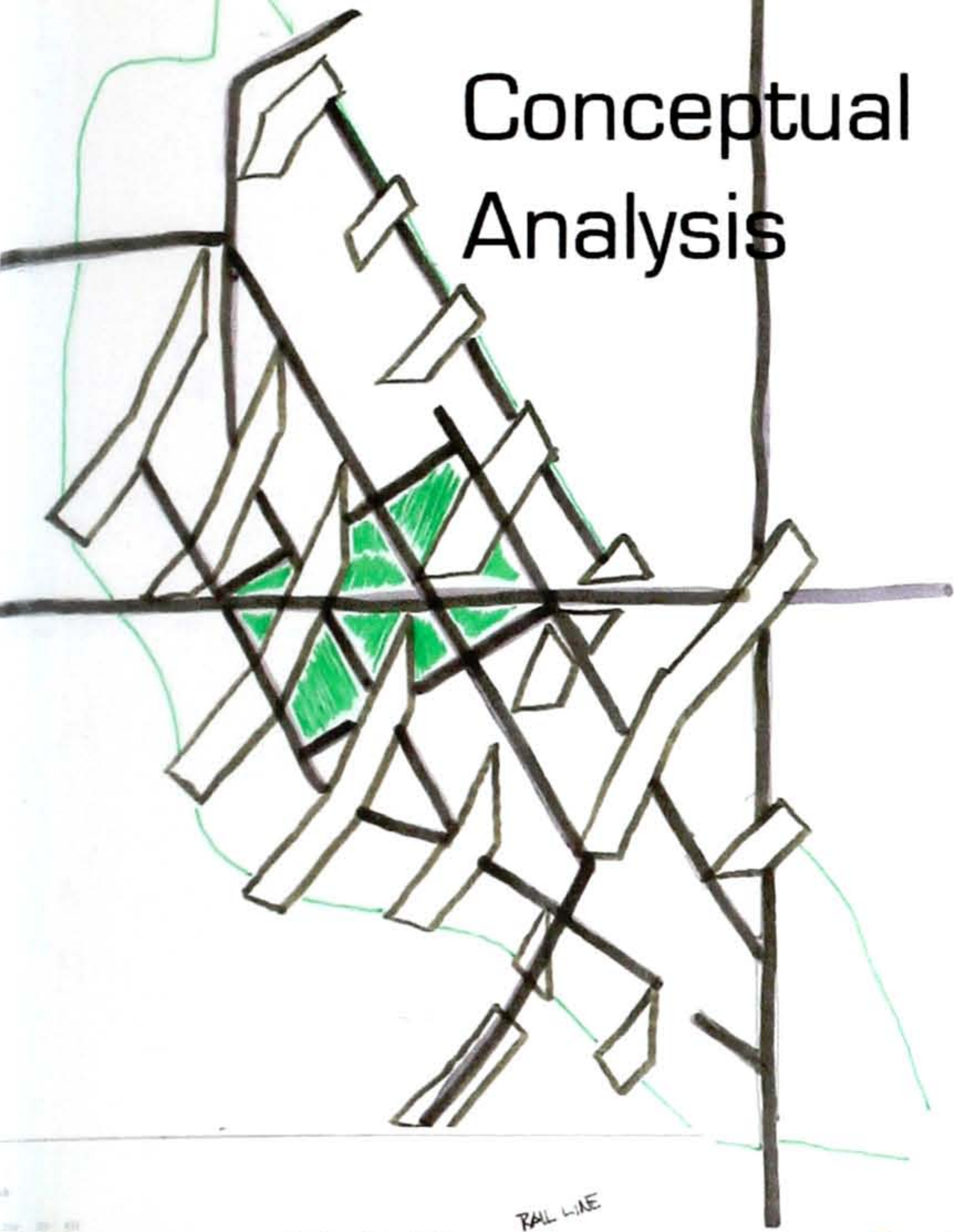








# Conceptual Analysis



PHASING PLAN 1 AND 5, 2 AND 3, 4

TAKE ADVANTAGE OF UNDER UTILIZED LAND

DEVELOP EXISTING INDUSTRIAL BLDGS. (EX. PARKING)

INCREASE ACCESS TO NORTH OF ISLAND. NEW BRIDGES

RETURN NEIGH. EDGE TO WEST RIVER SIDE

- PATHWAY

RE-CONNECT OPEN AVENUE.

STRENGTHEN/RE-INFORCE DIVISION GATEWAY

S/P/PA SET NORTH SIDE → LAKE

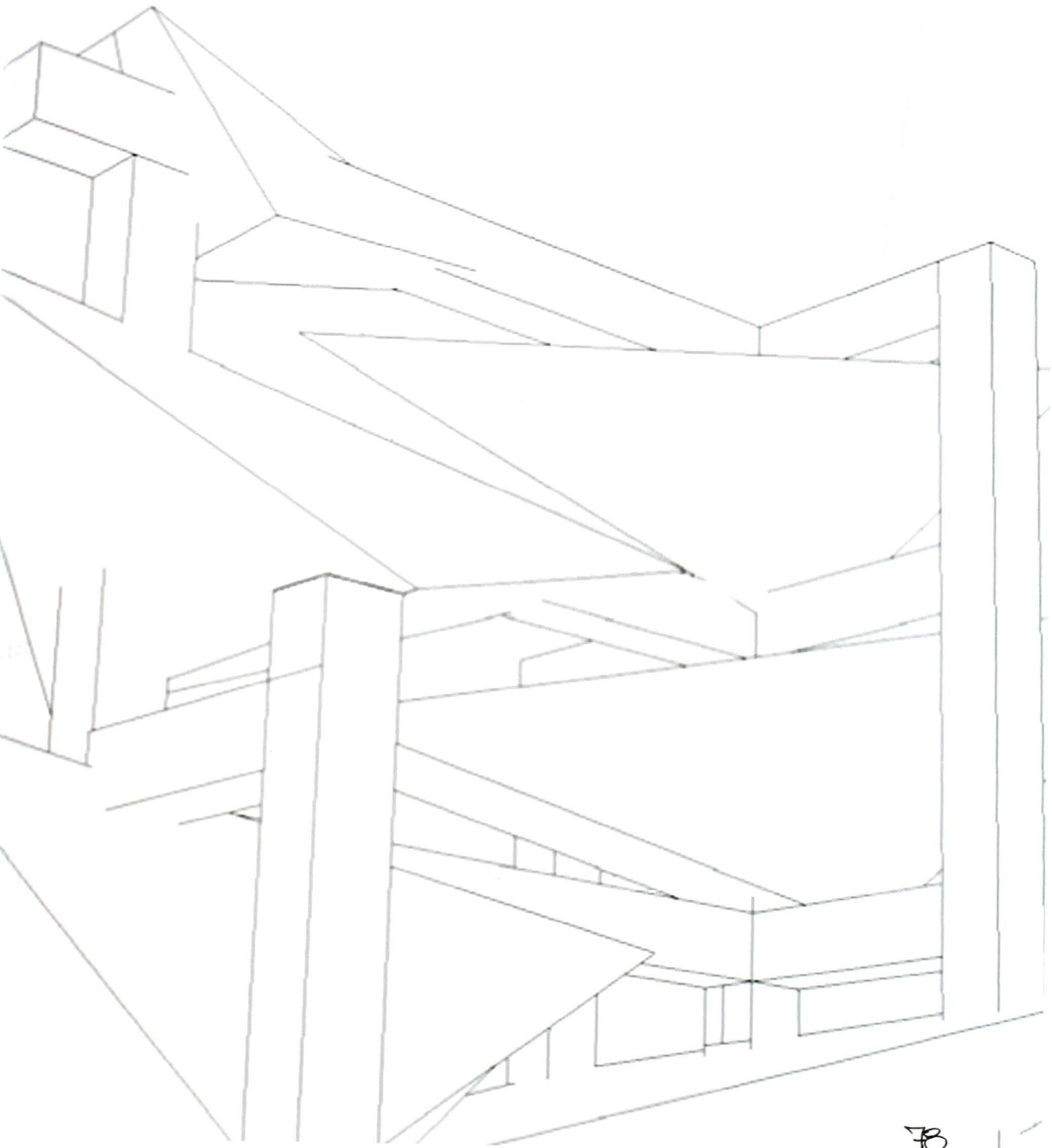
ADD MASS TRANSIT OPTION (e.g.) OR FERRY. NEED TAXI TO LOOP

30. REHABILITATION

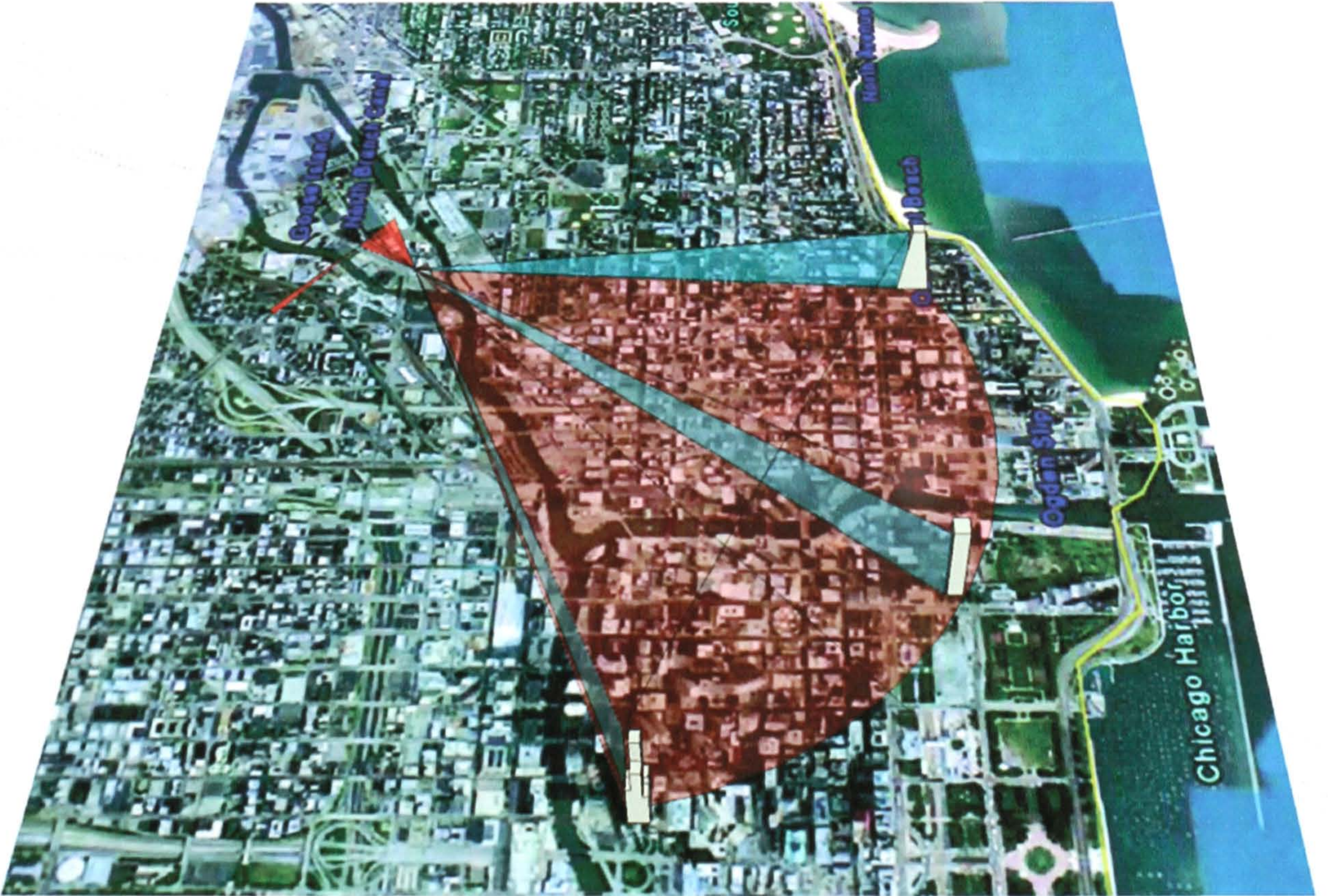
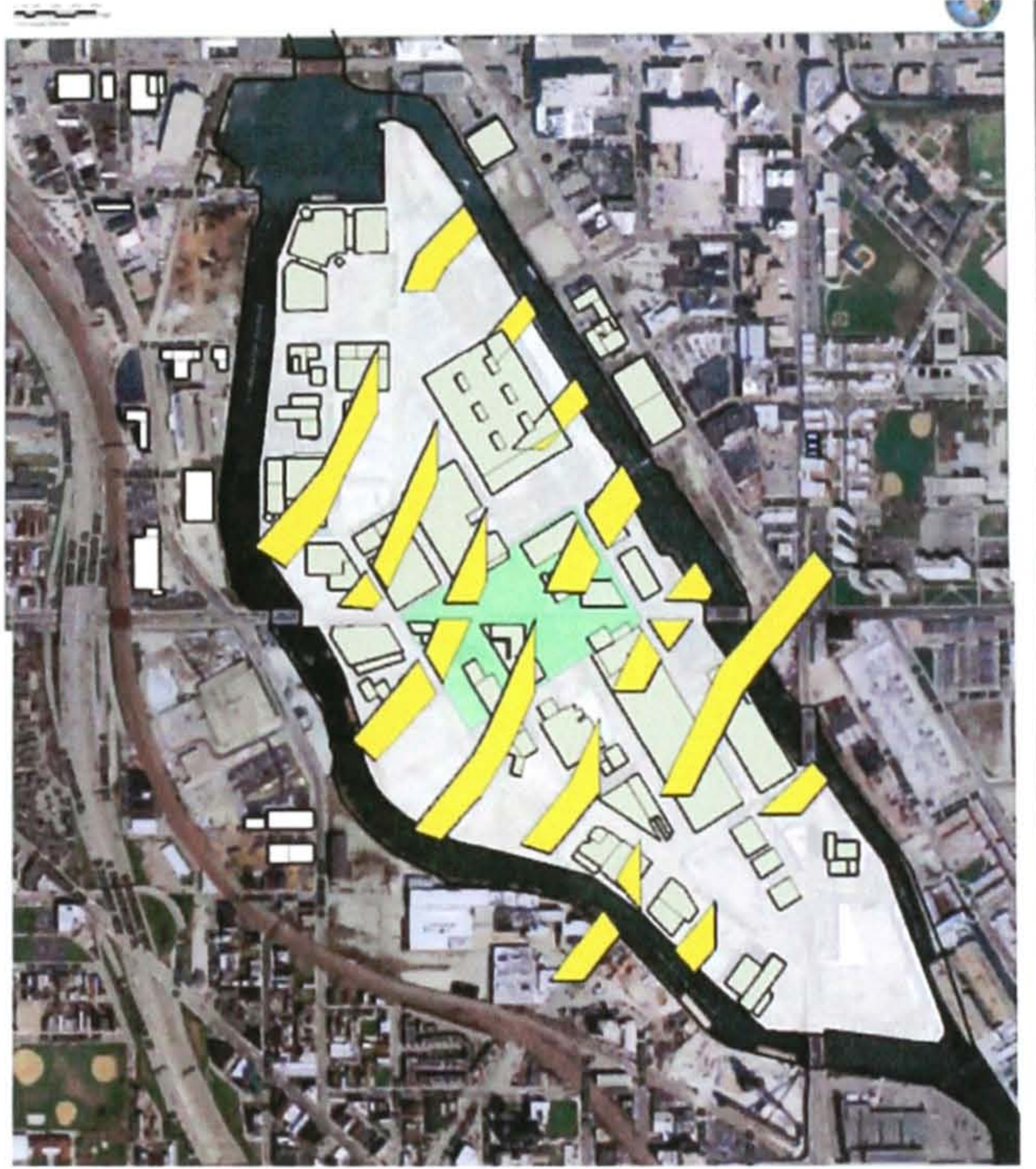
LAKE MICHIGAN

REF. BURHOM'S  
BARRE / BULLY ARTS  
POINT PARK

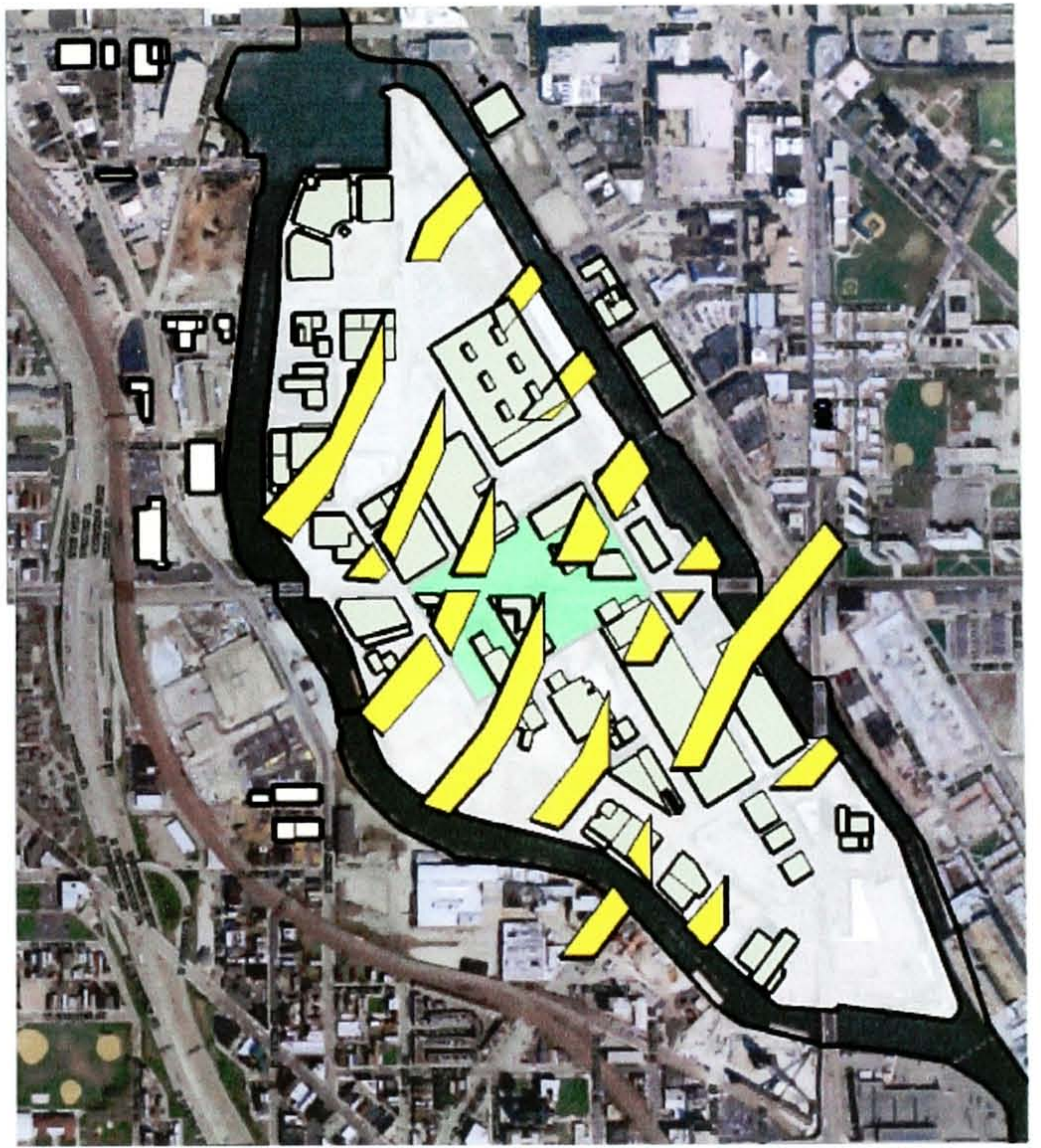




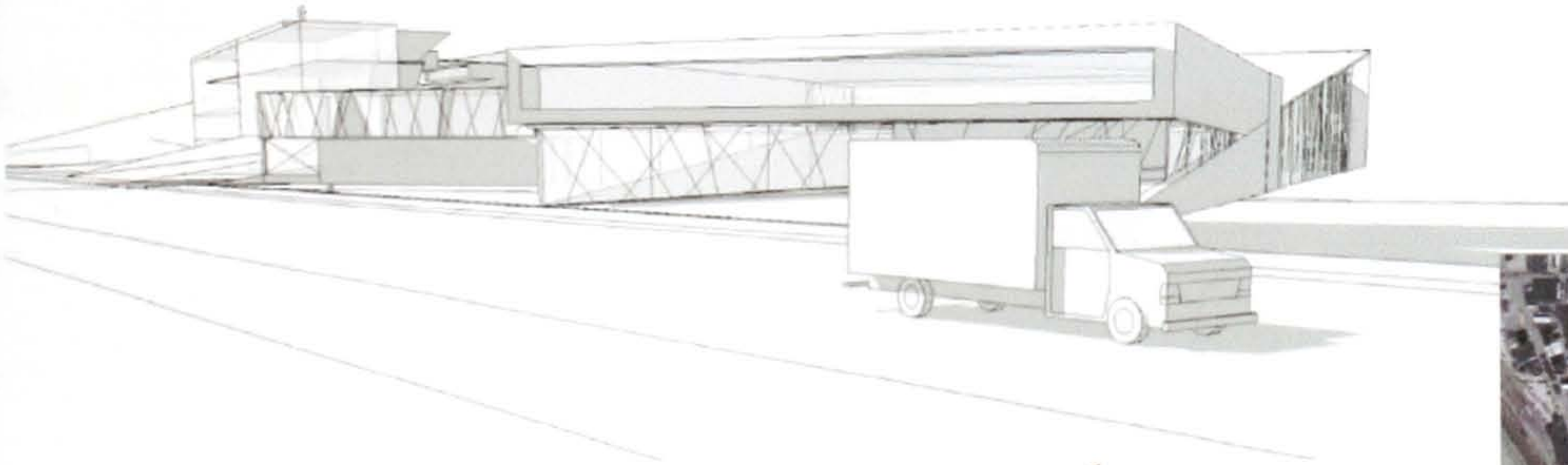
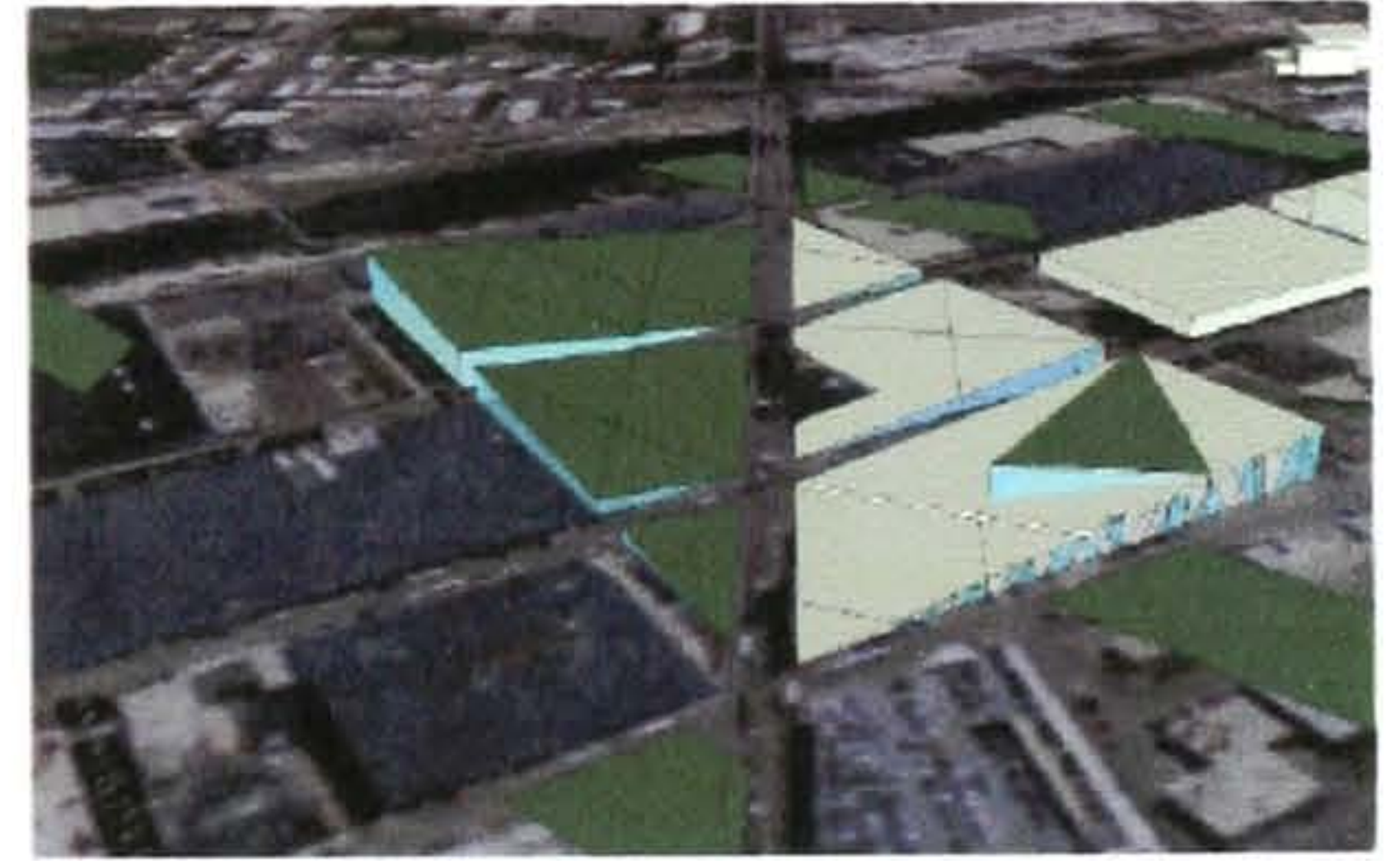
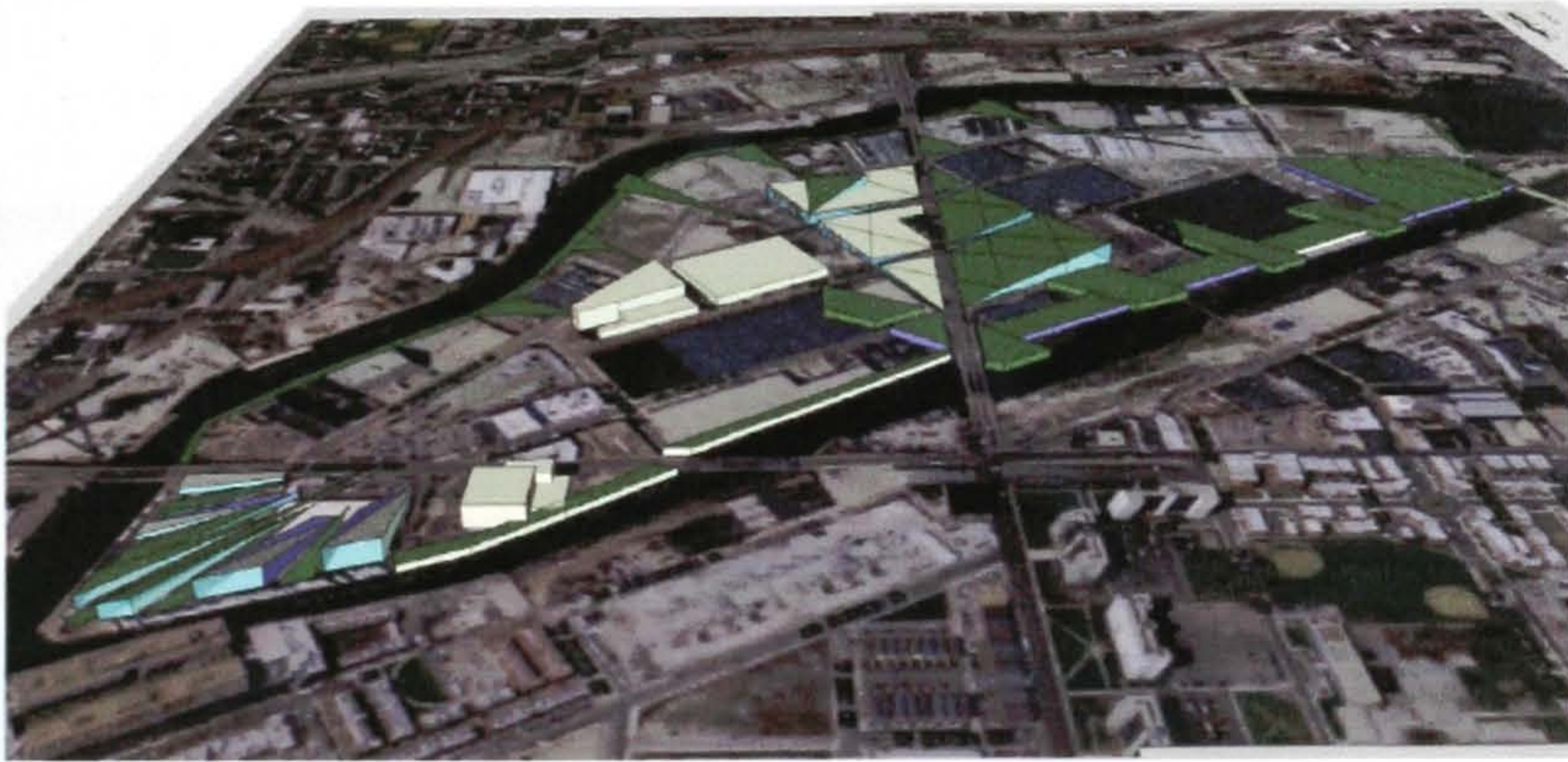




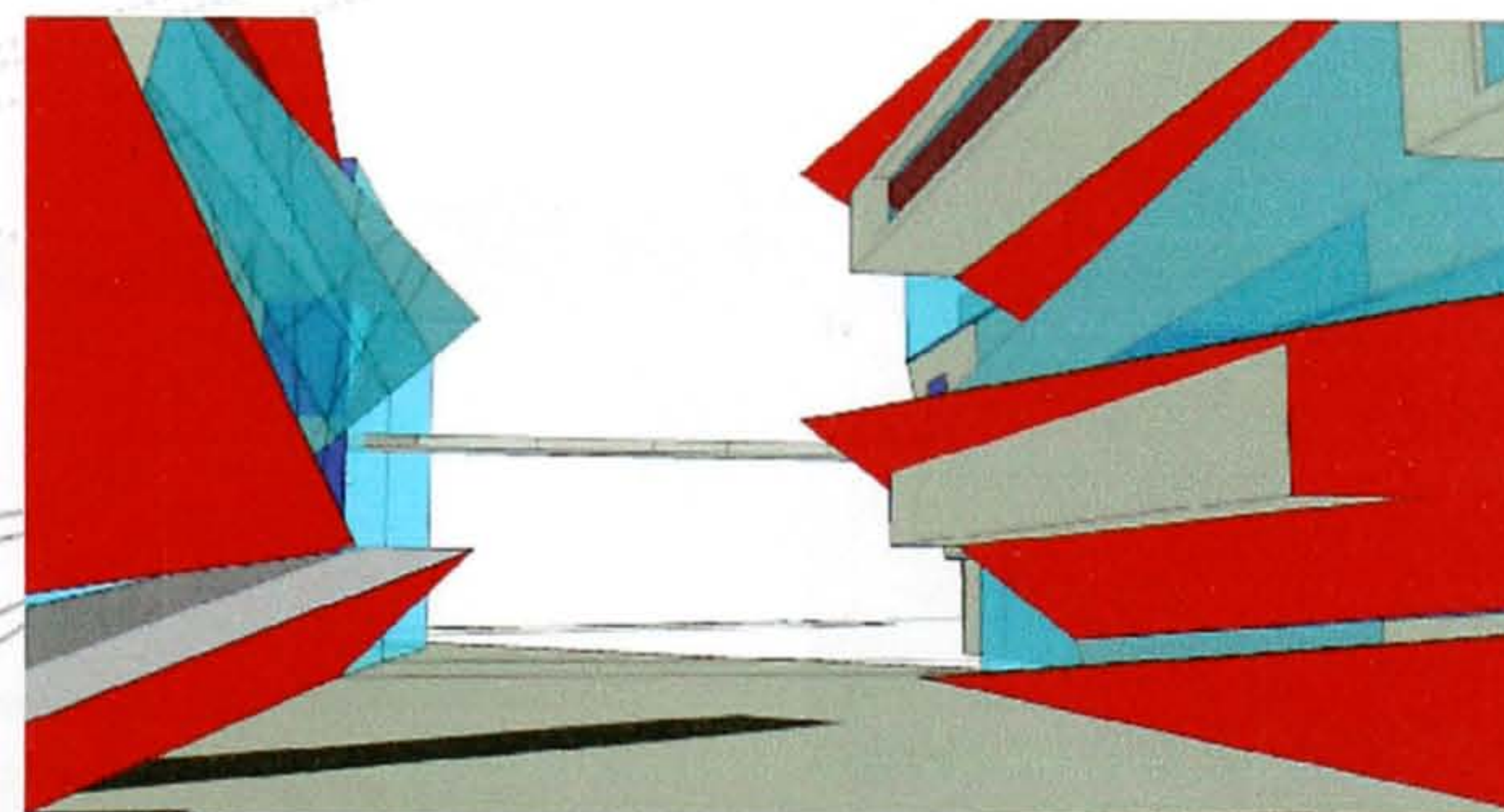
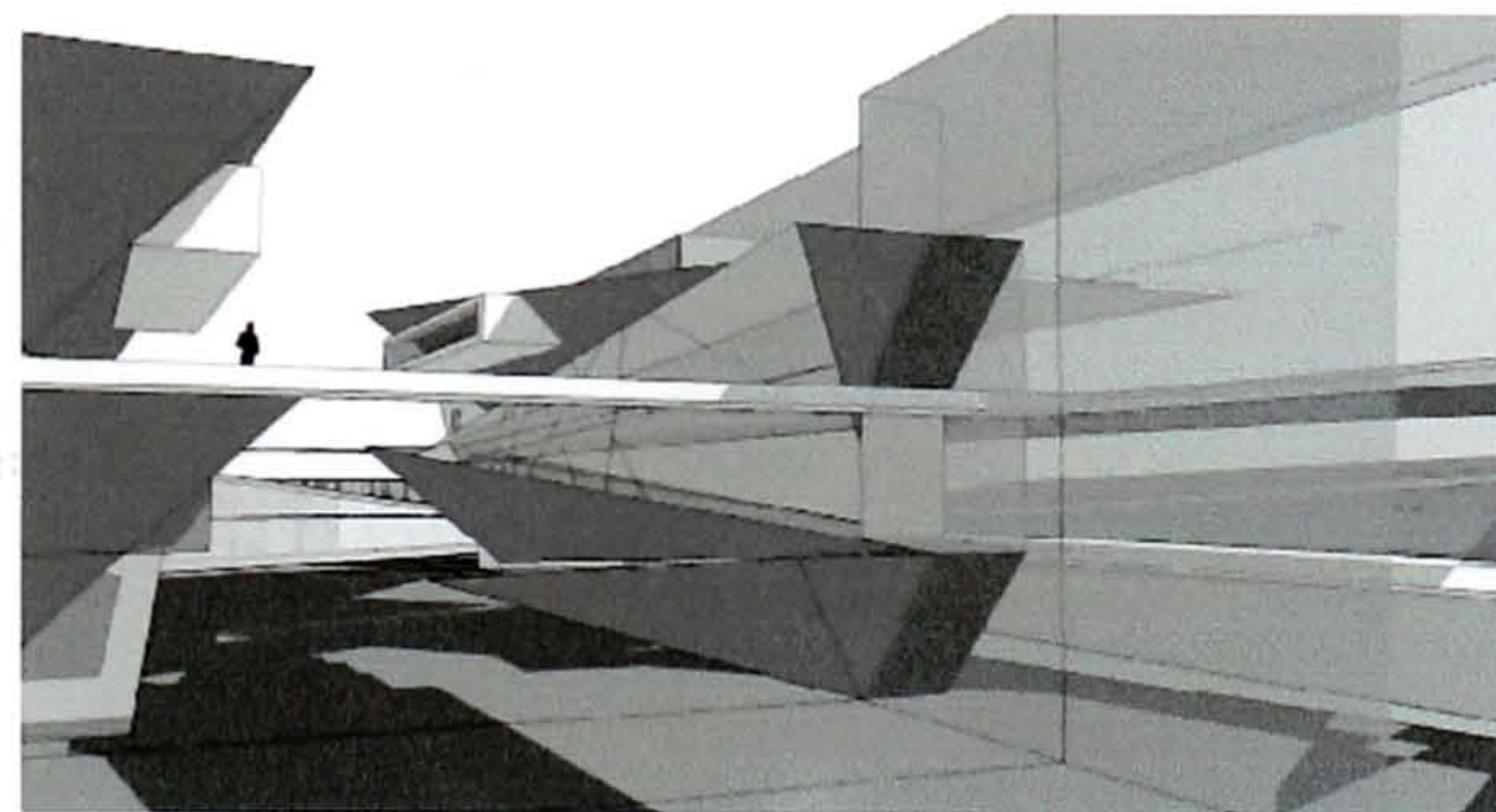
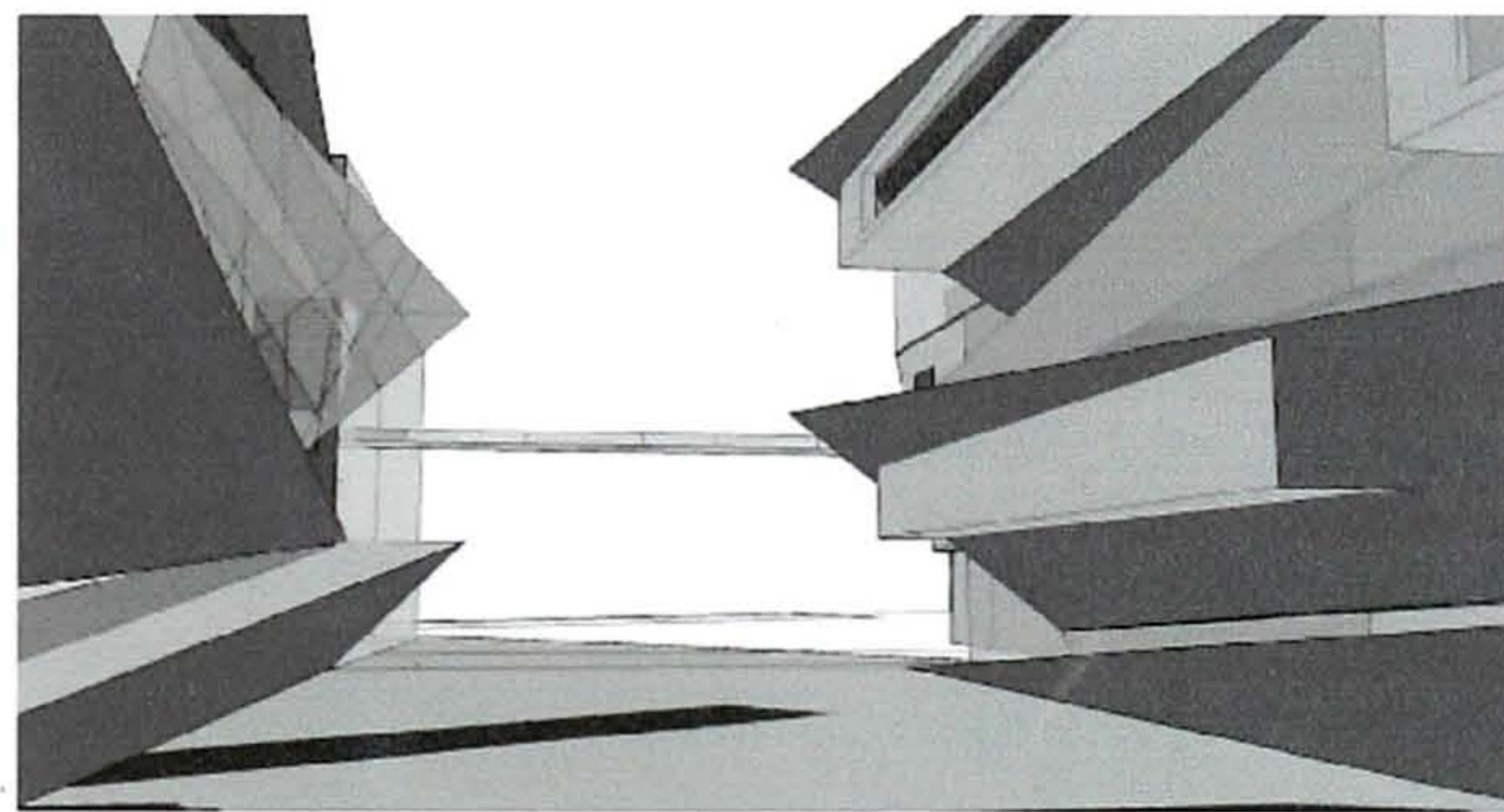
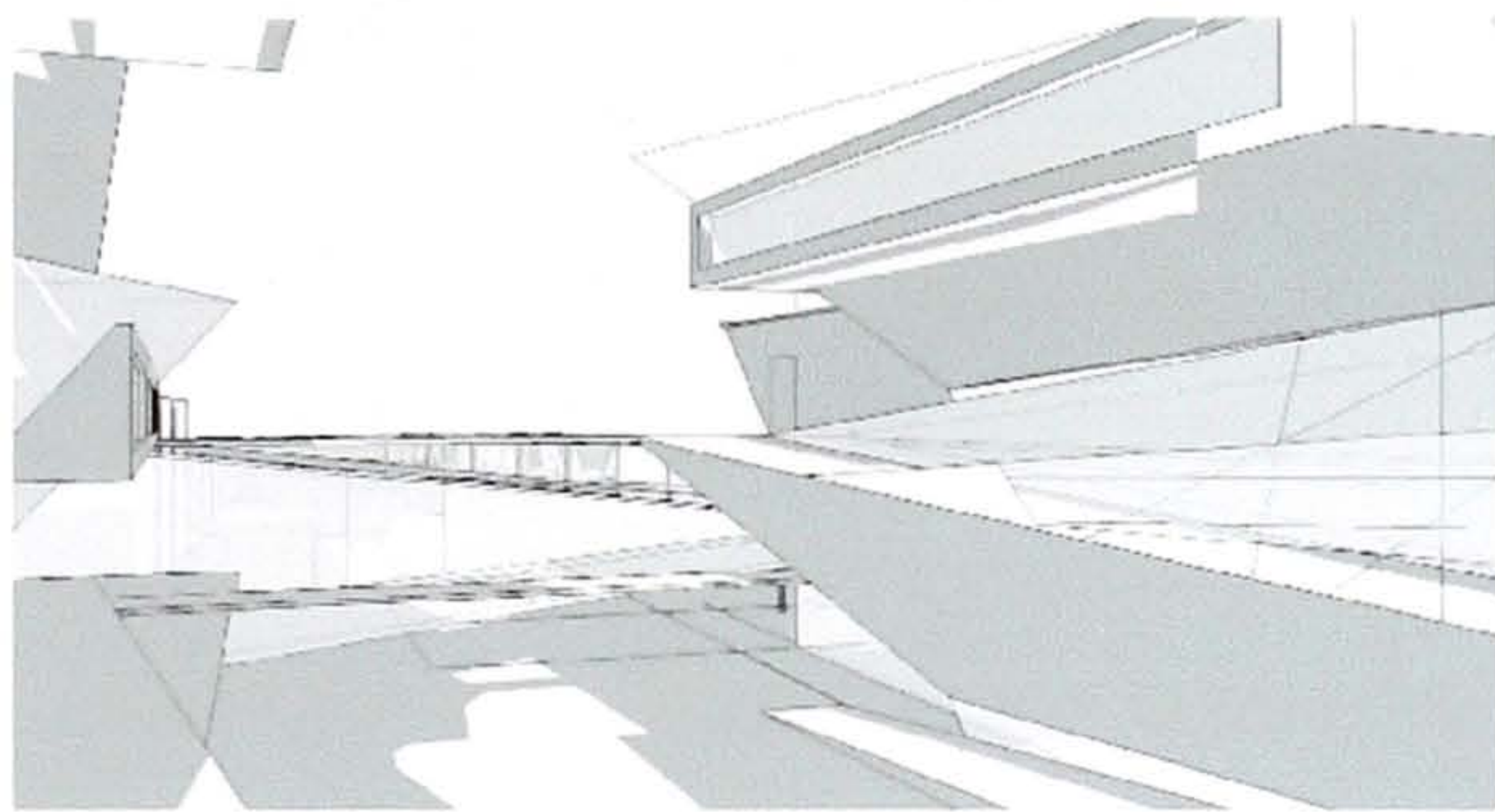
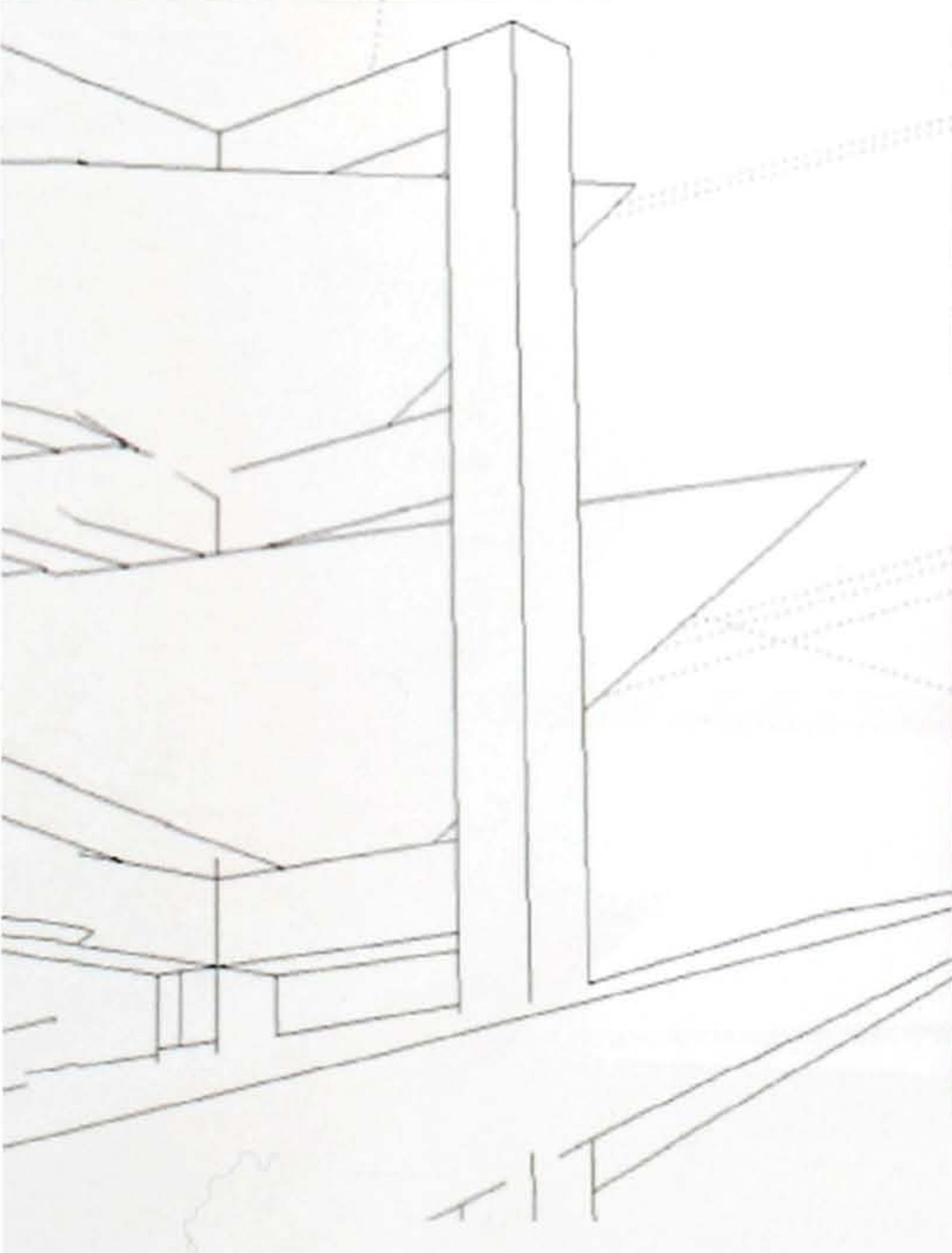
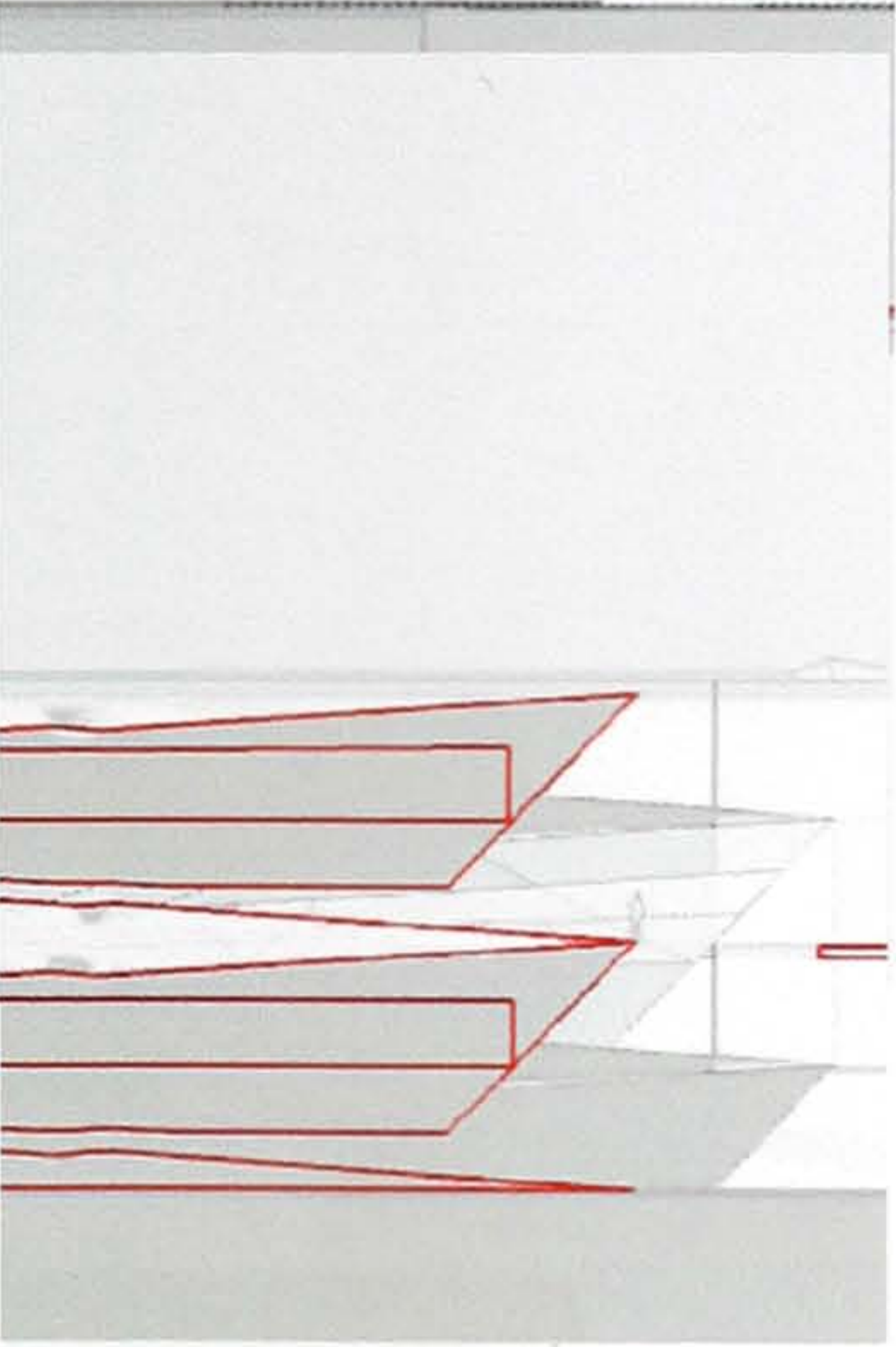
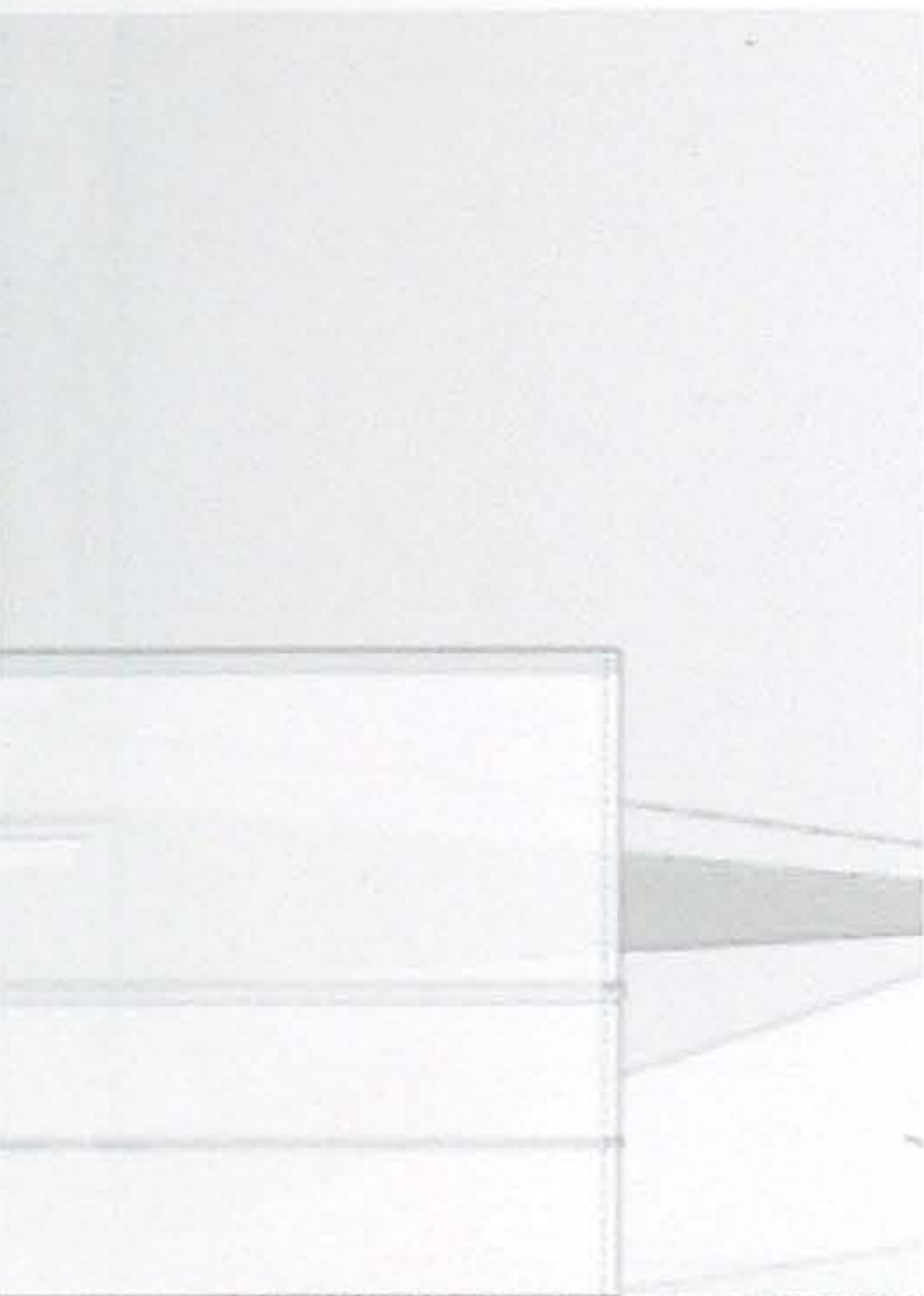




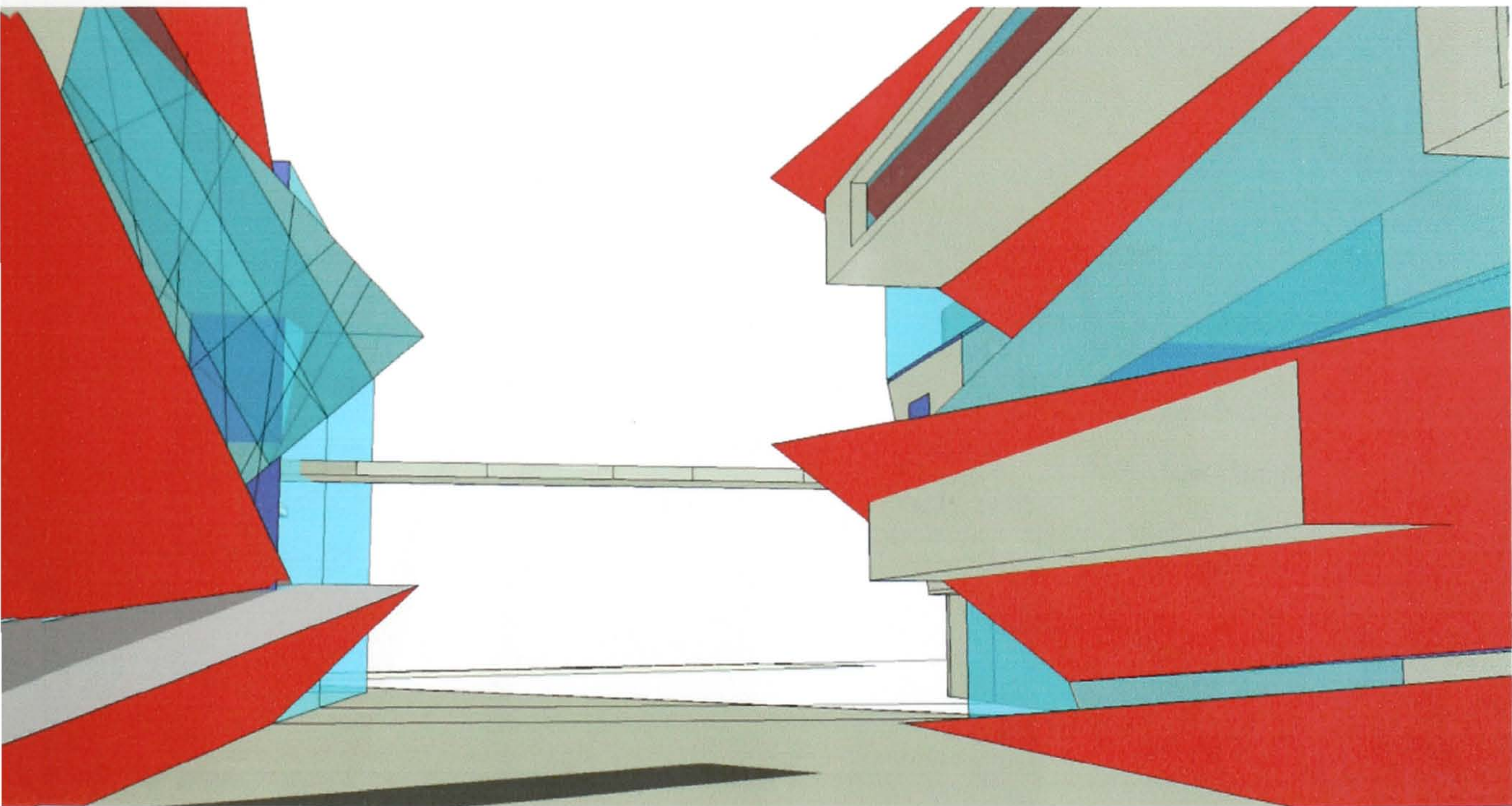
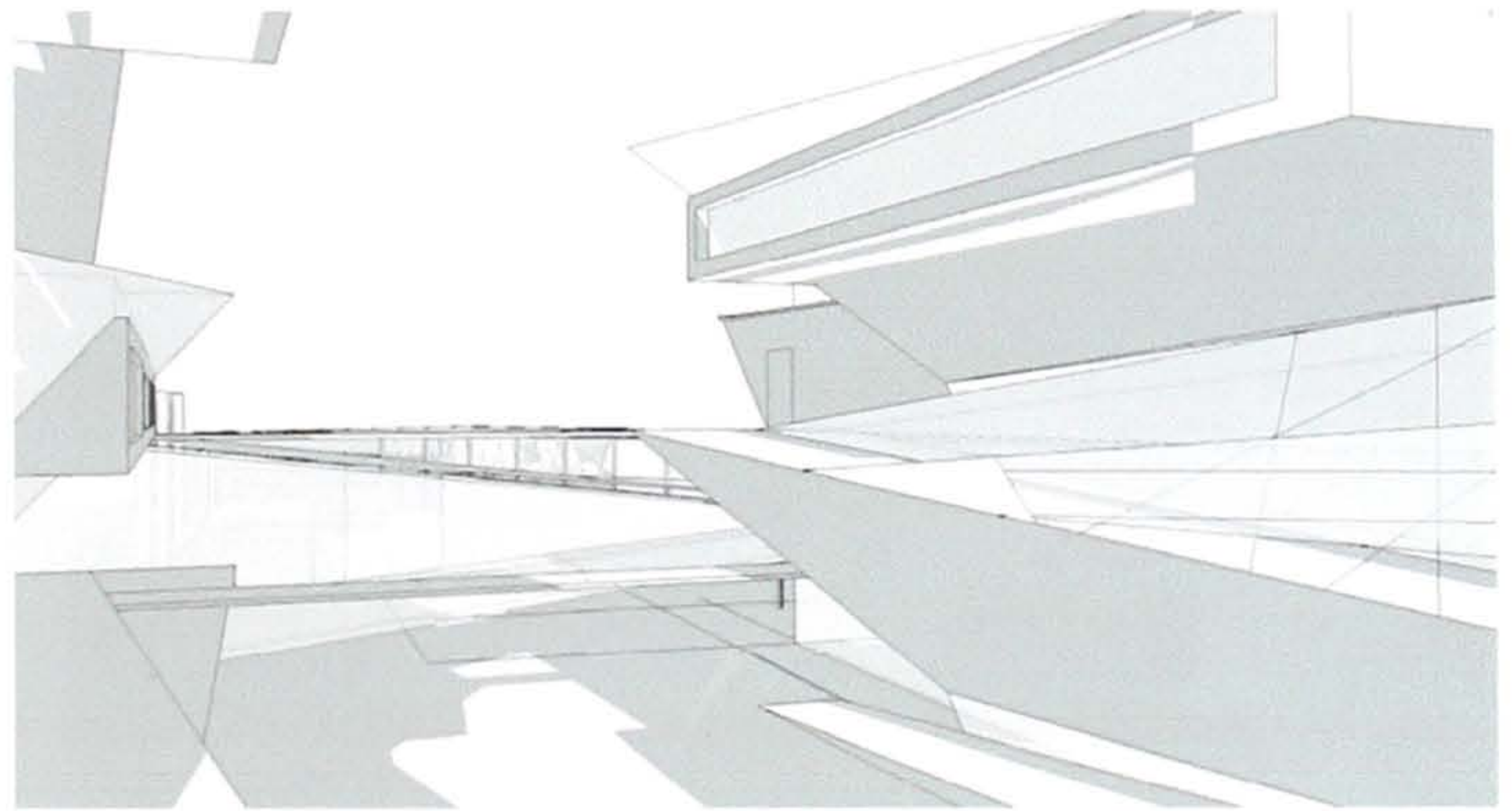
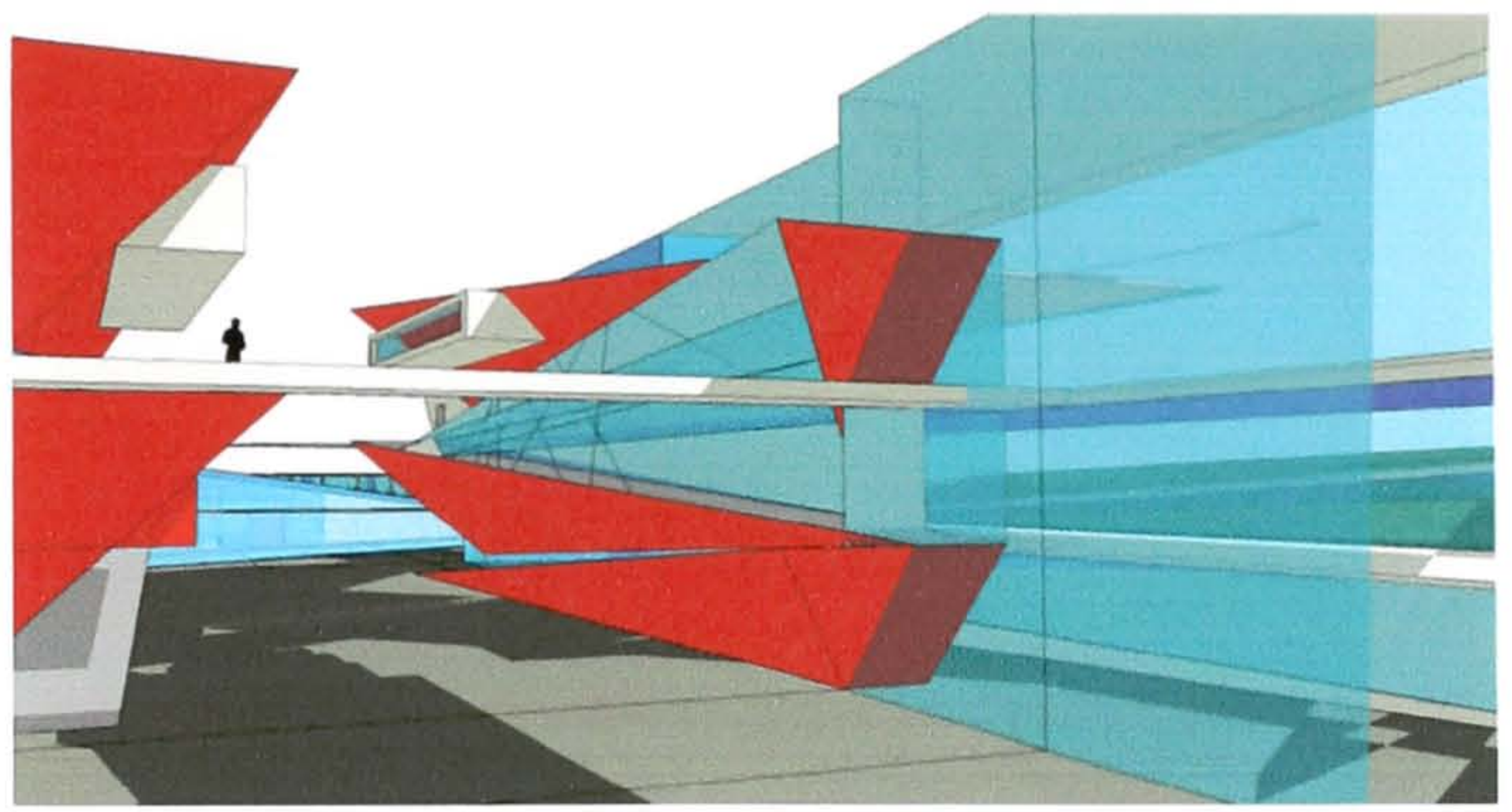






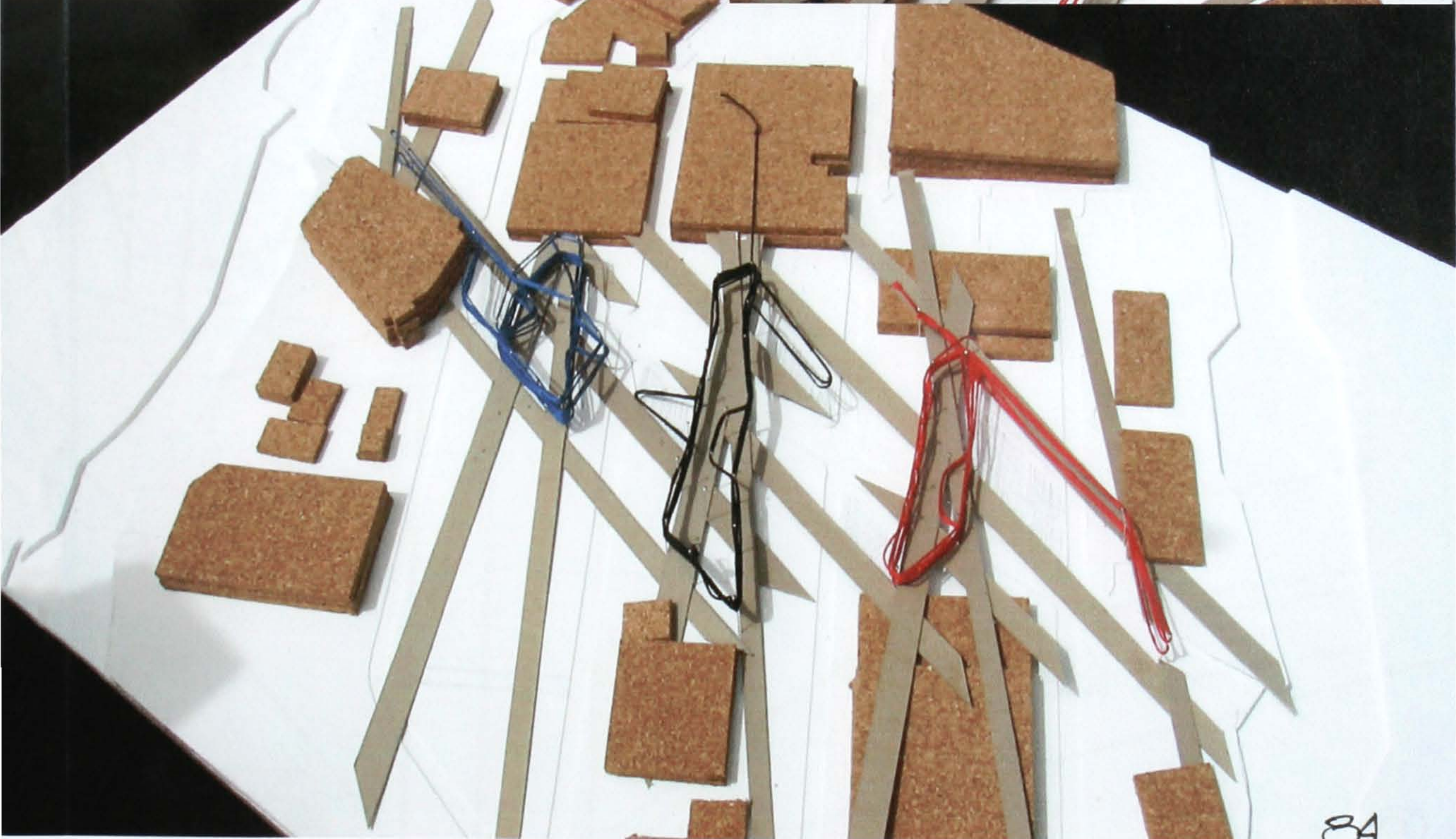




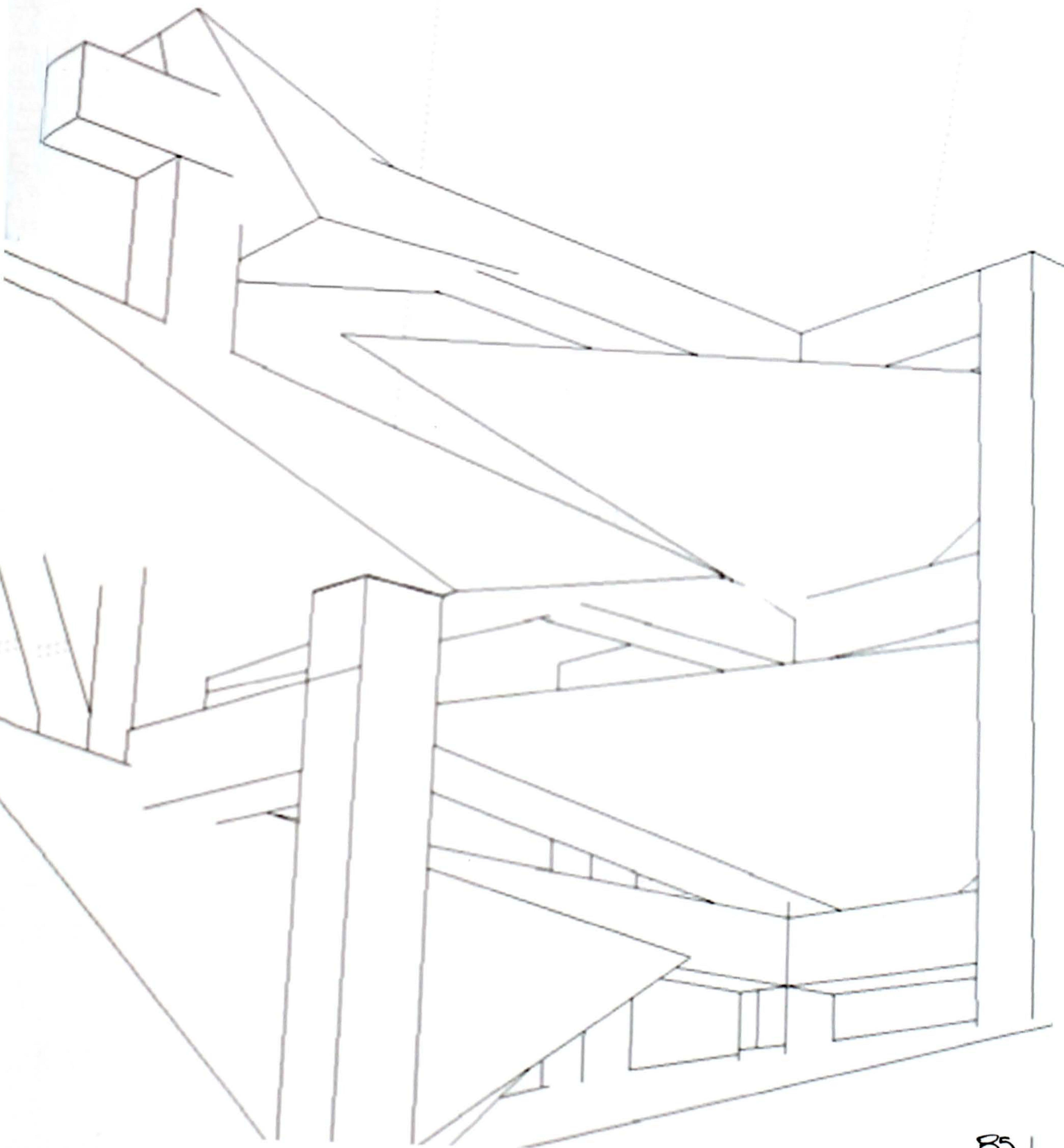




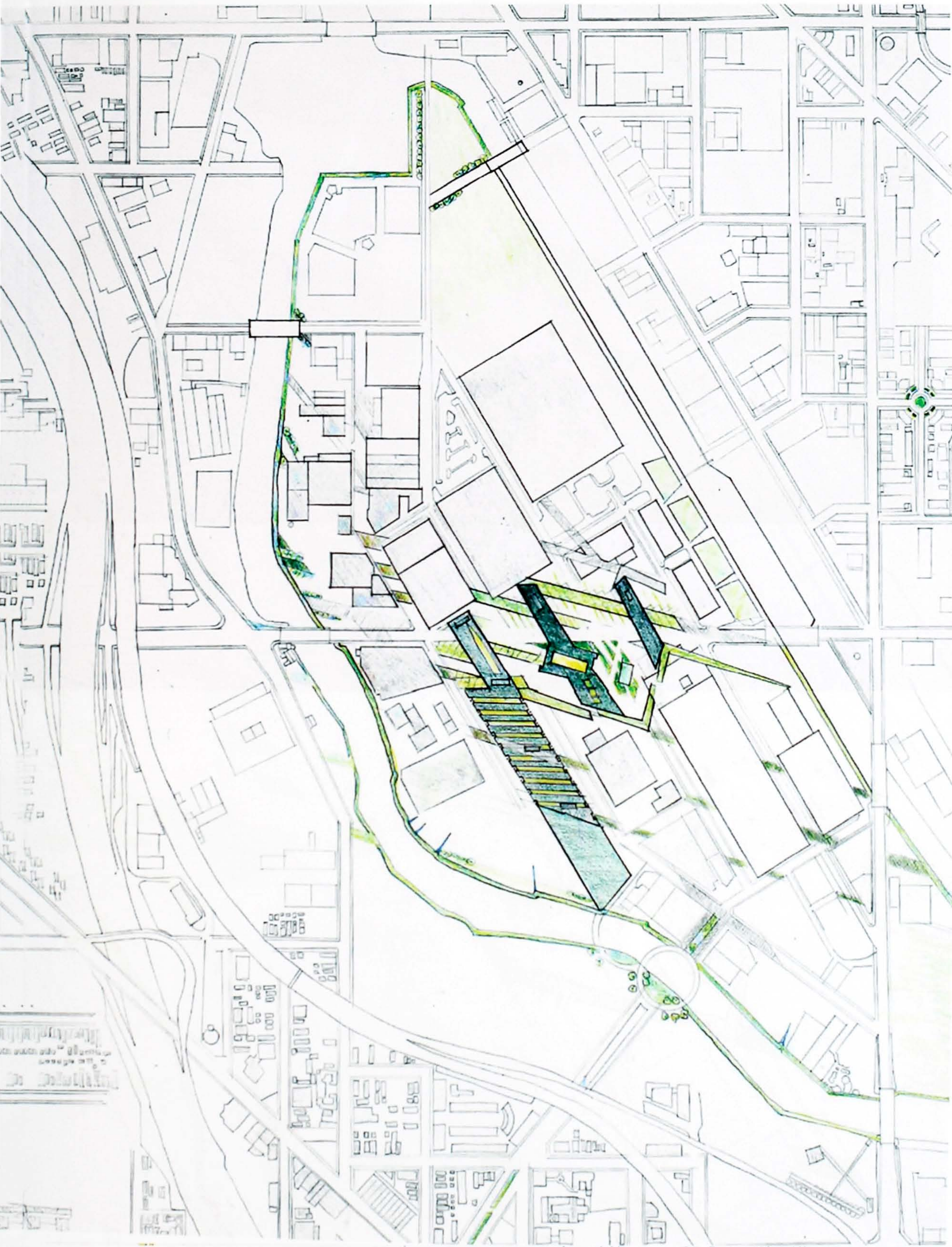
Conceptual Site Model:



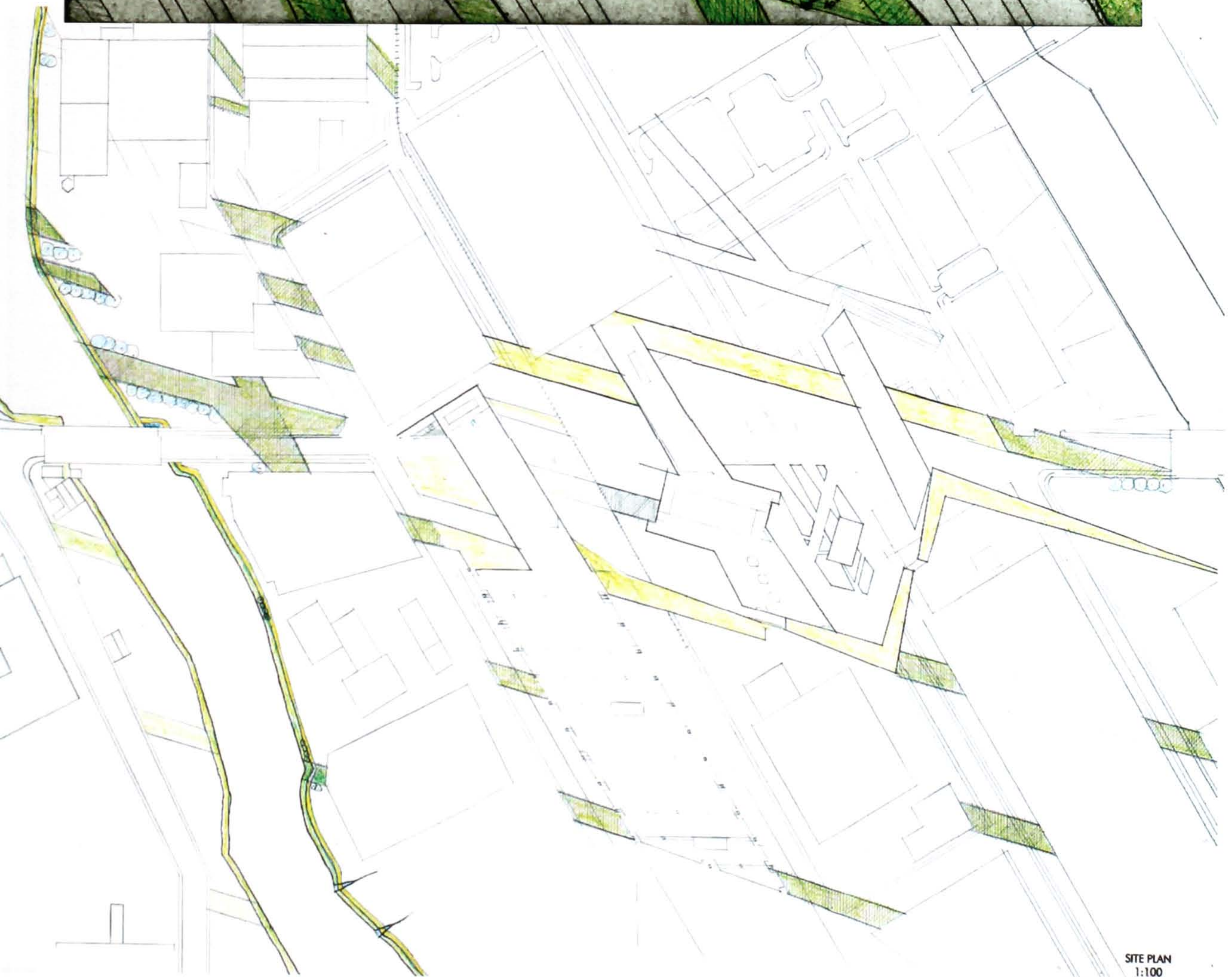
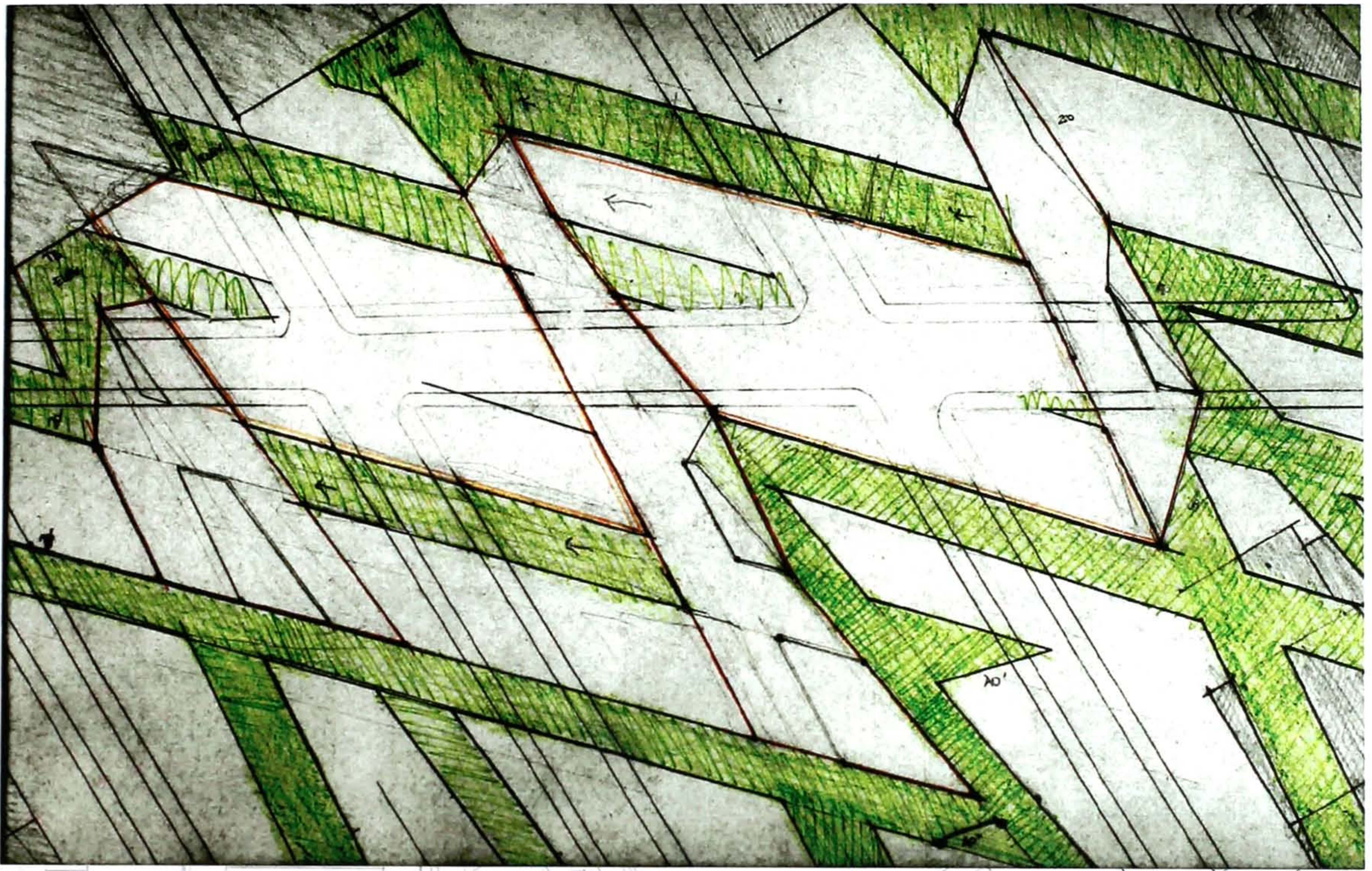




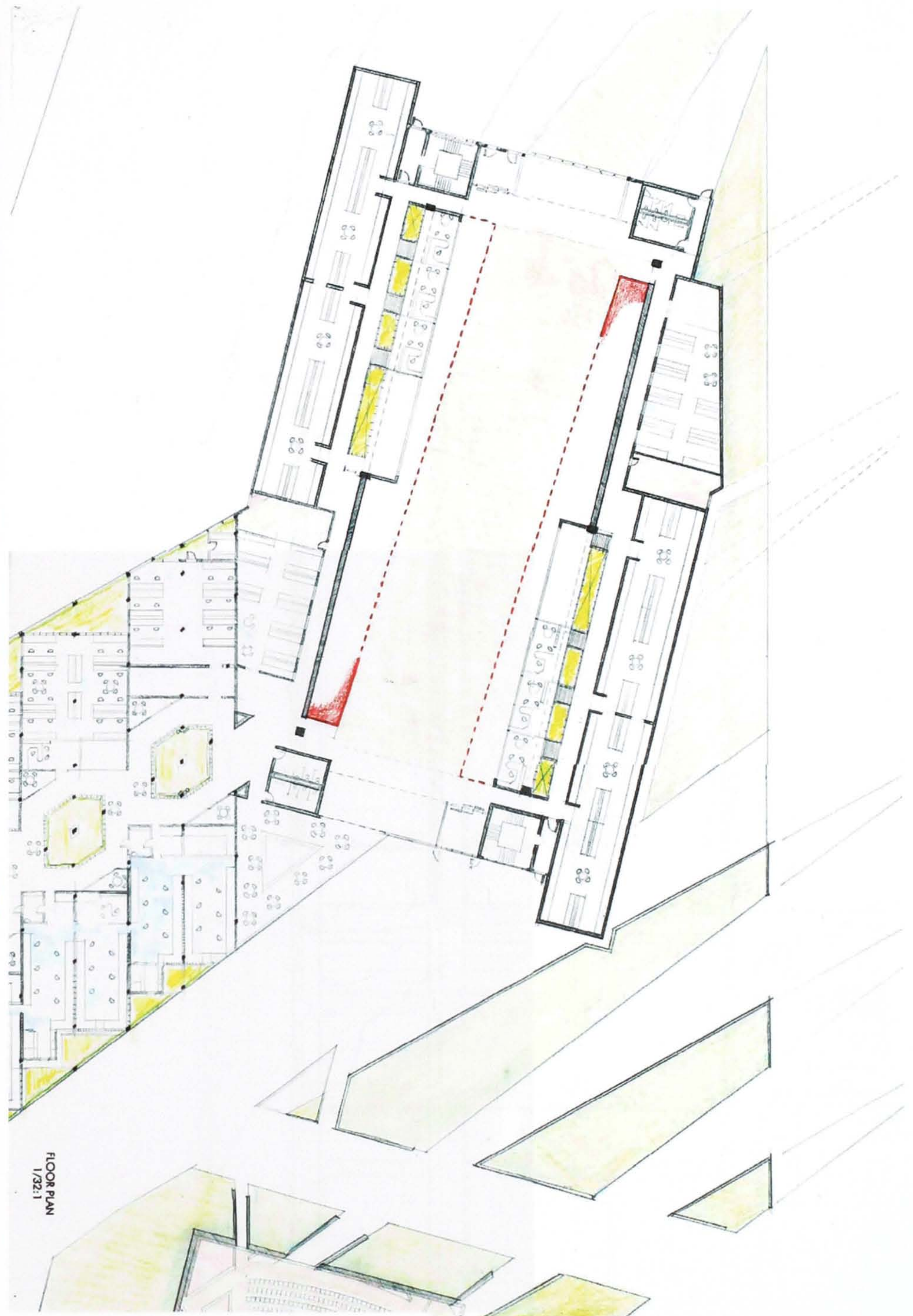
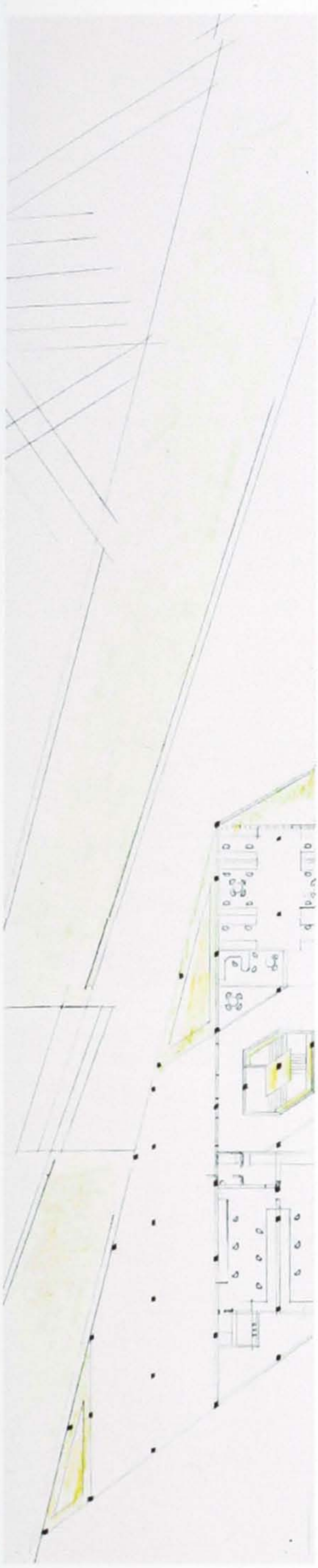




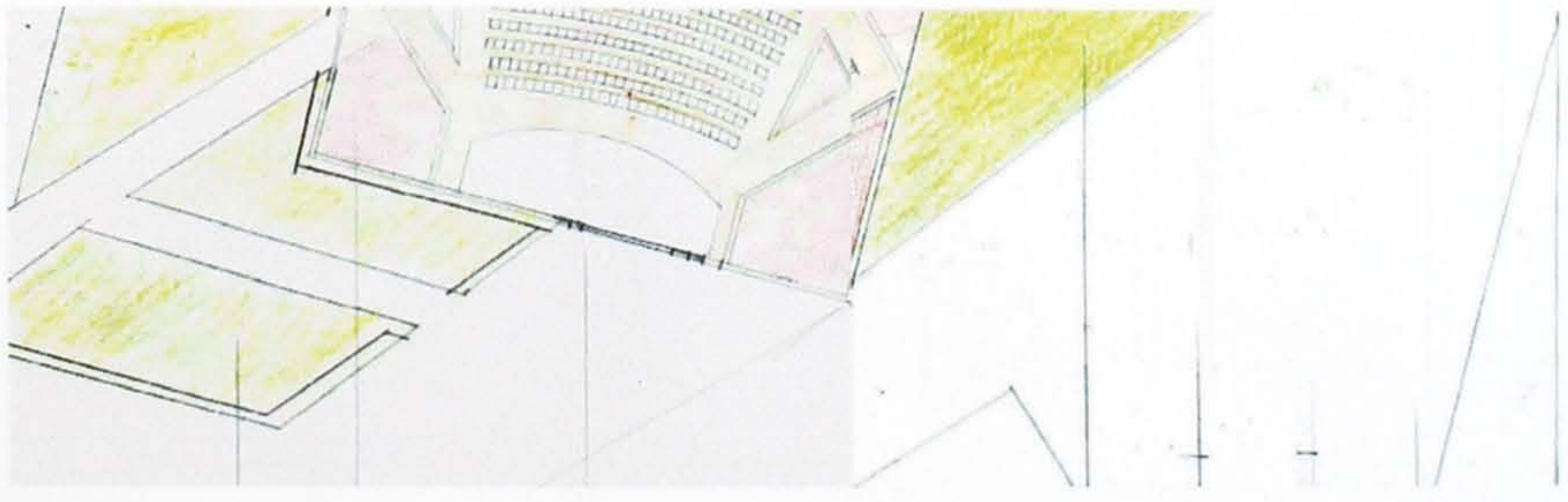




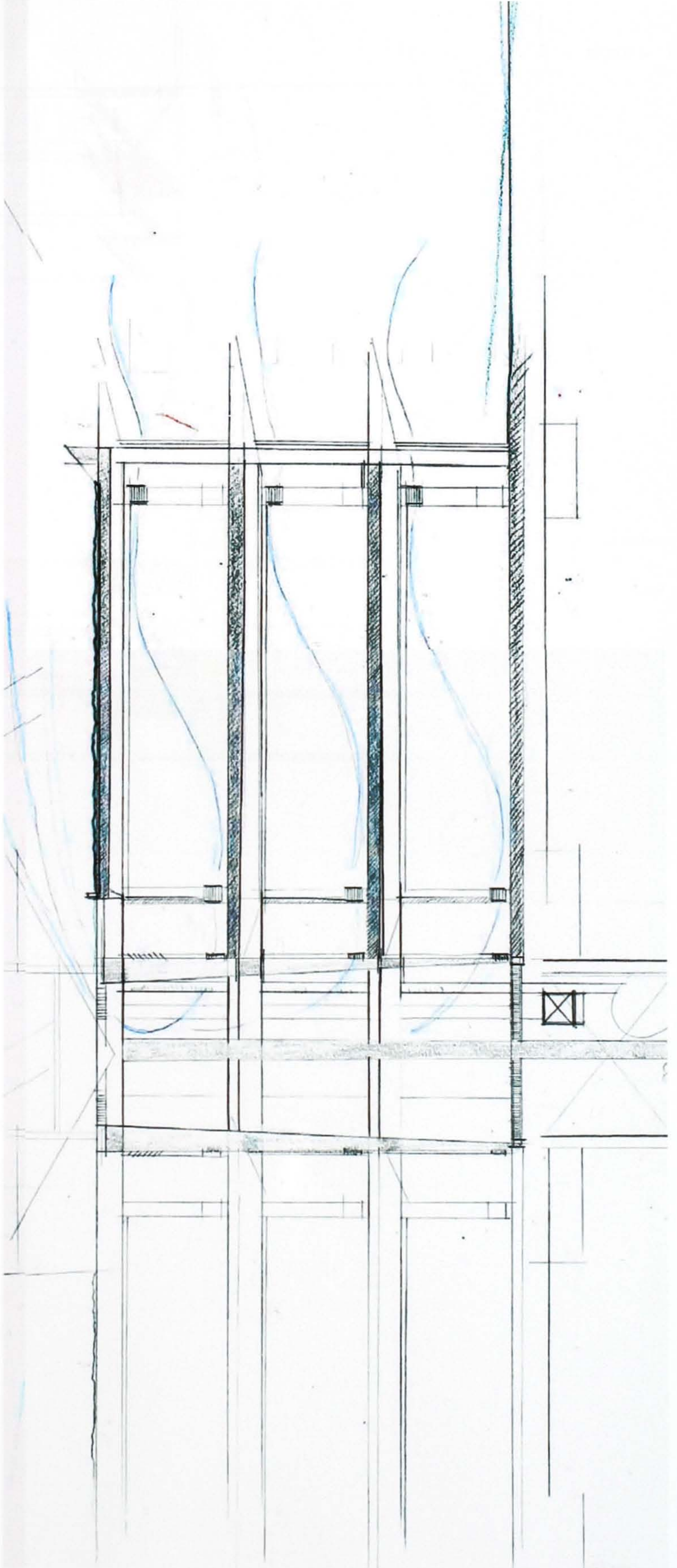




FLOOR PLAN  
1/32:1

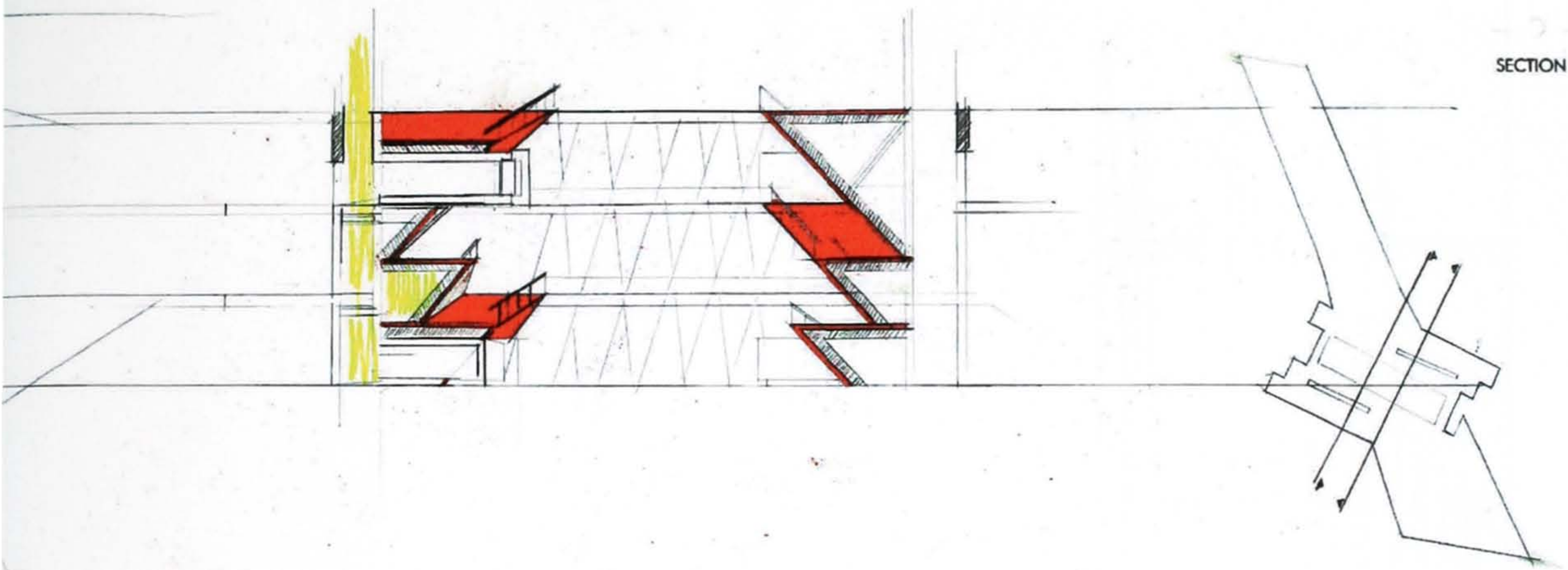




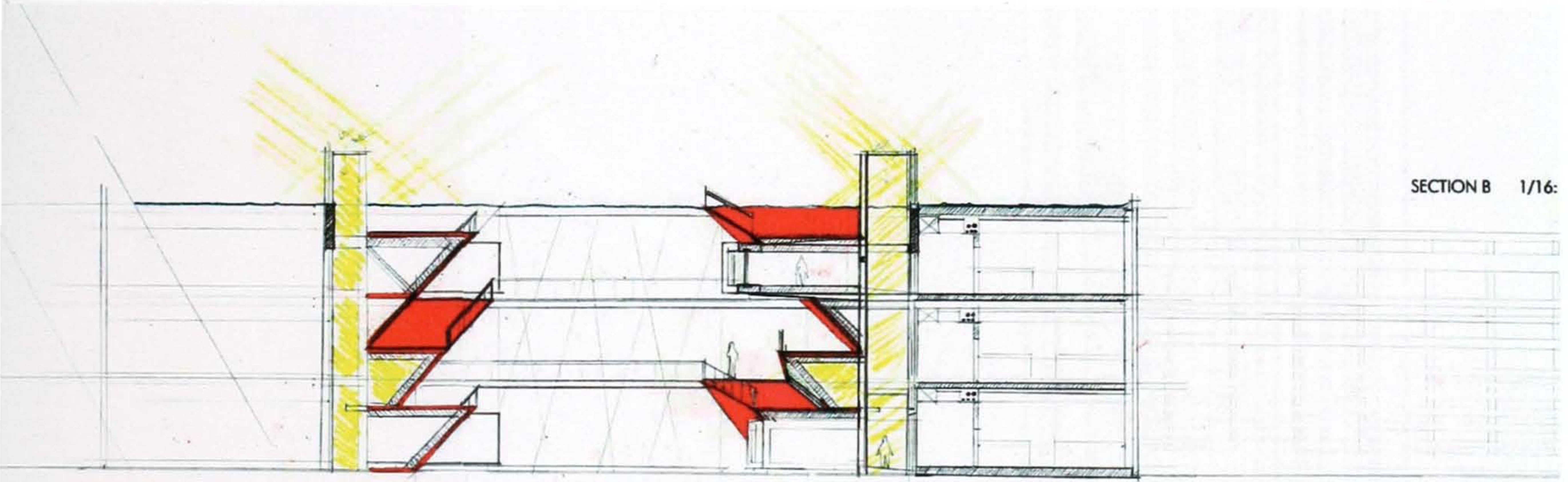




SECTION A 1/16:1

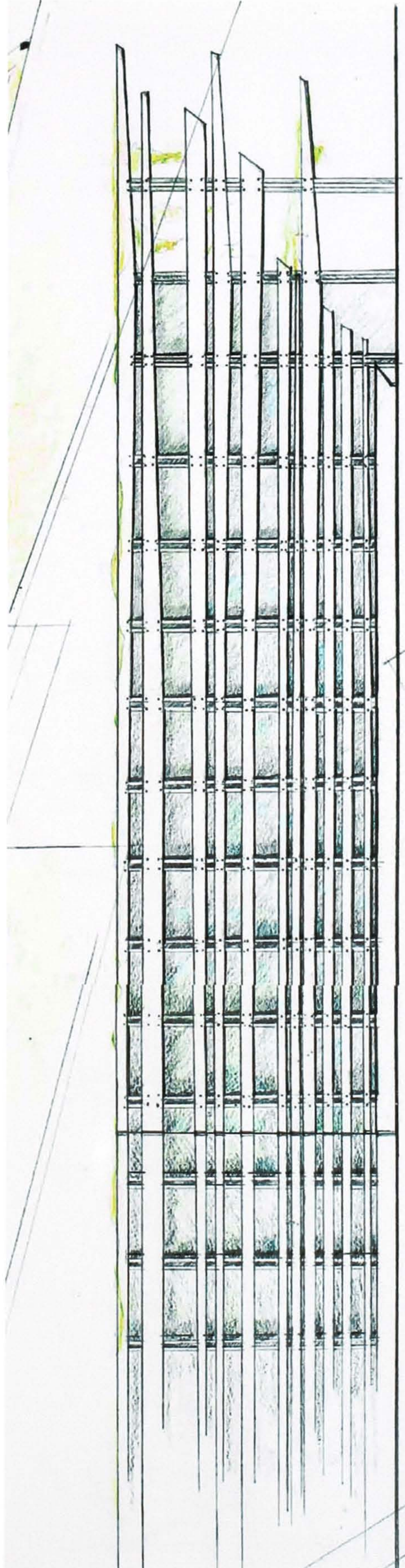


SECTION B 1/16:1



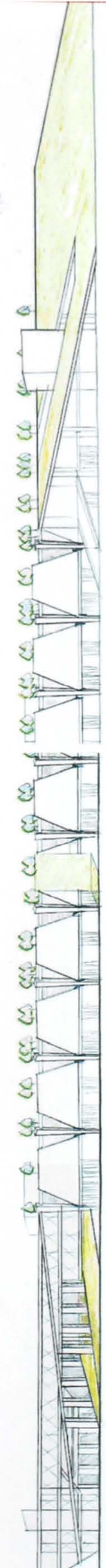
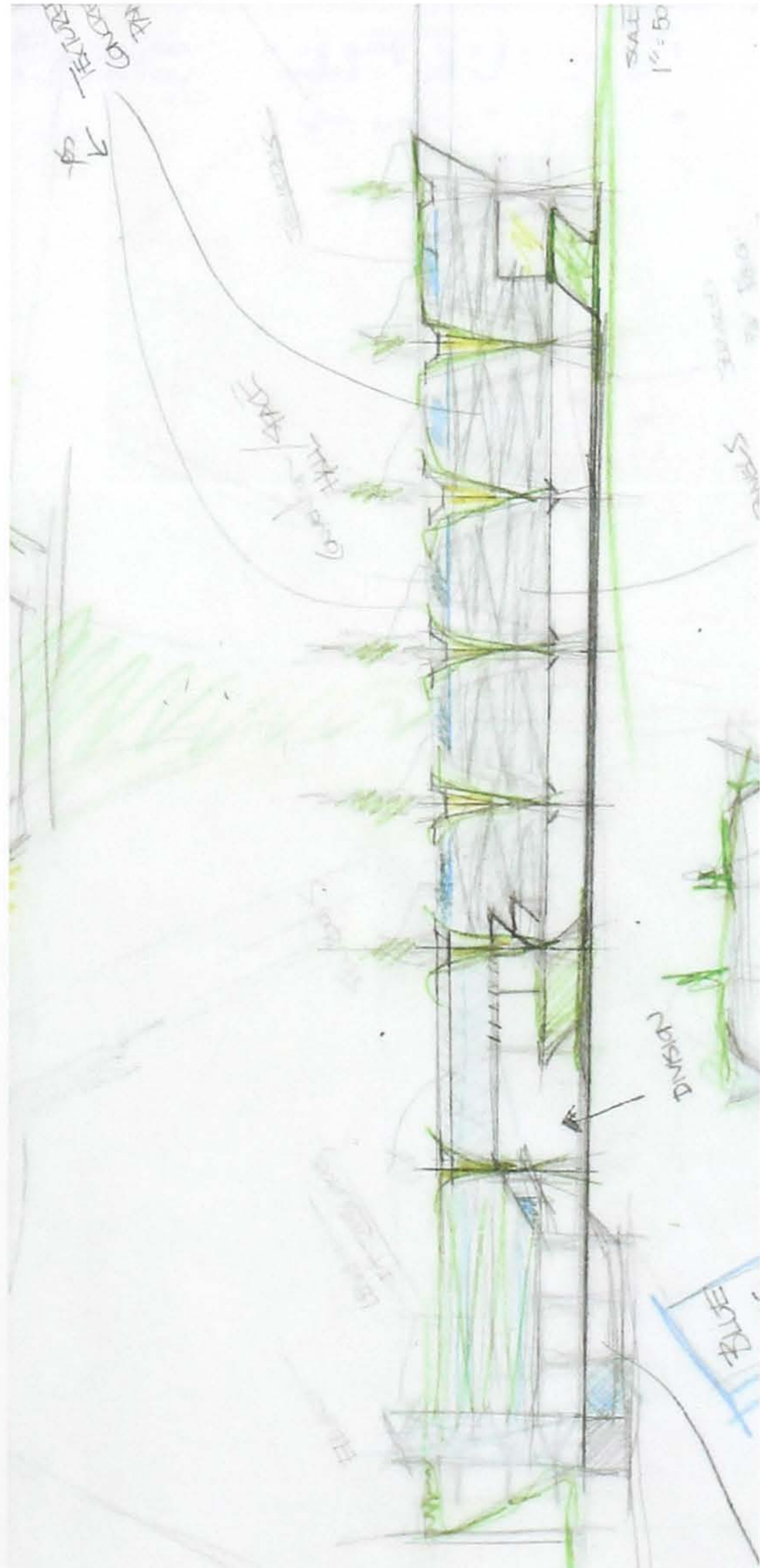
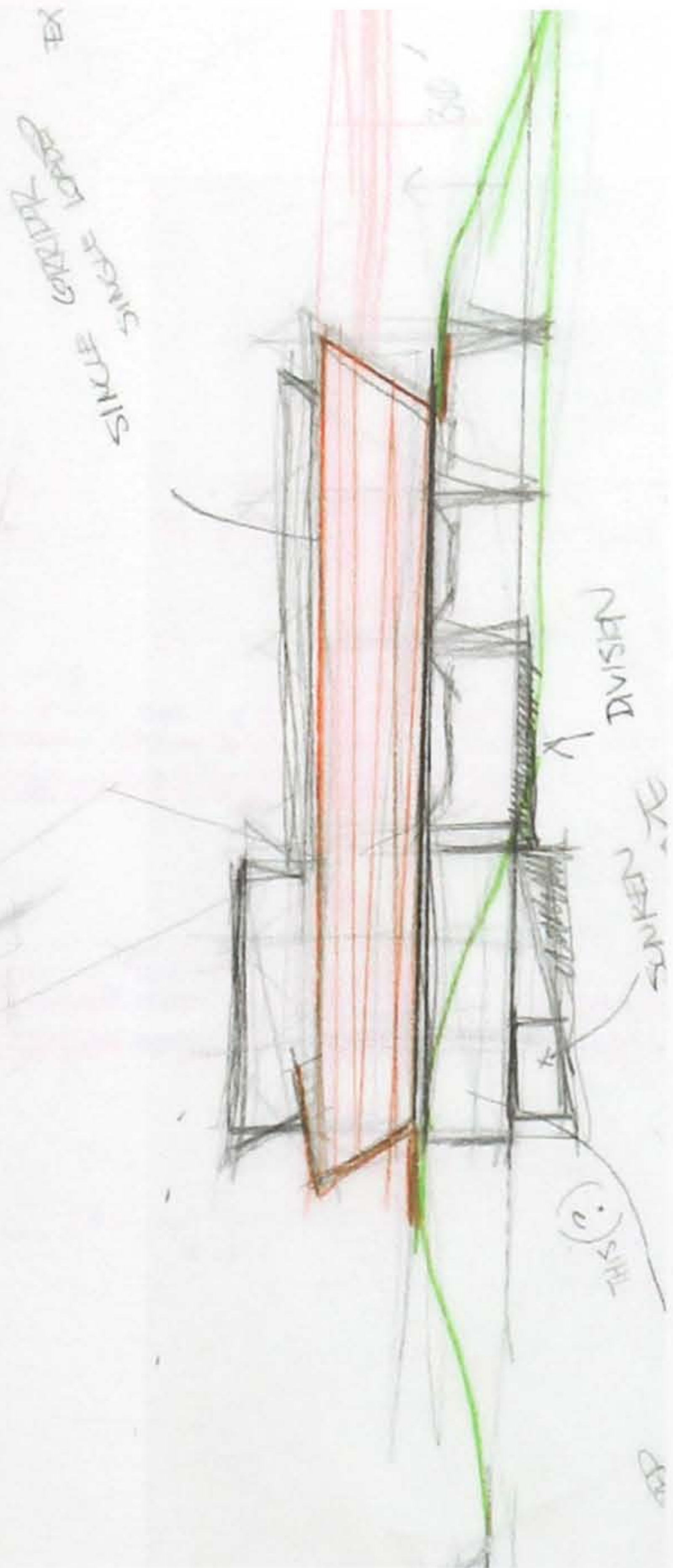
DR  
BOSTON





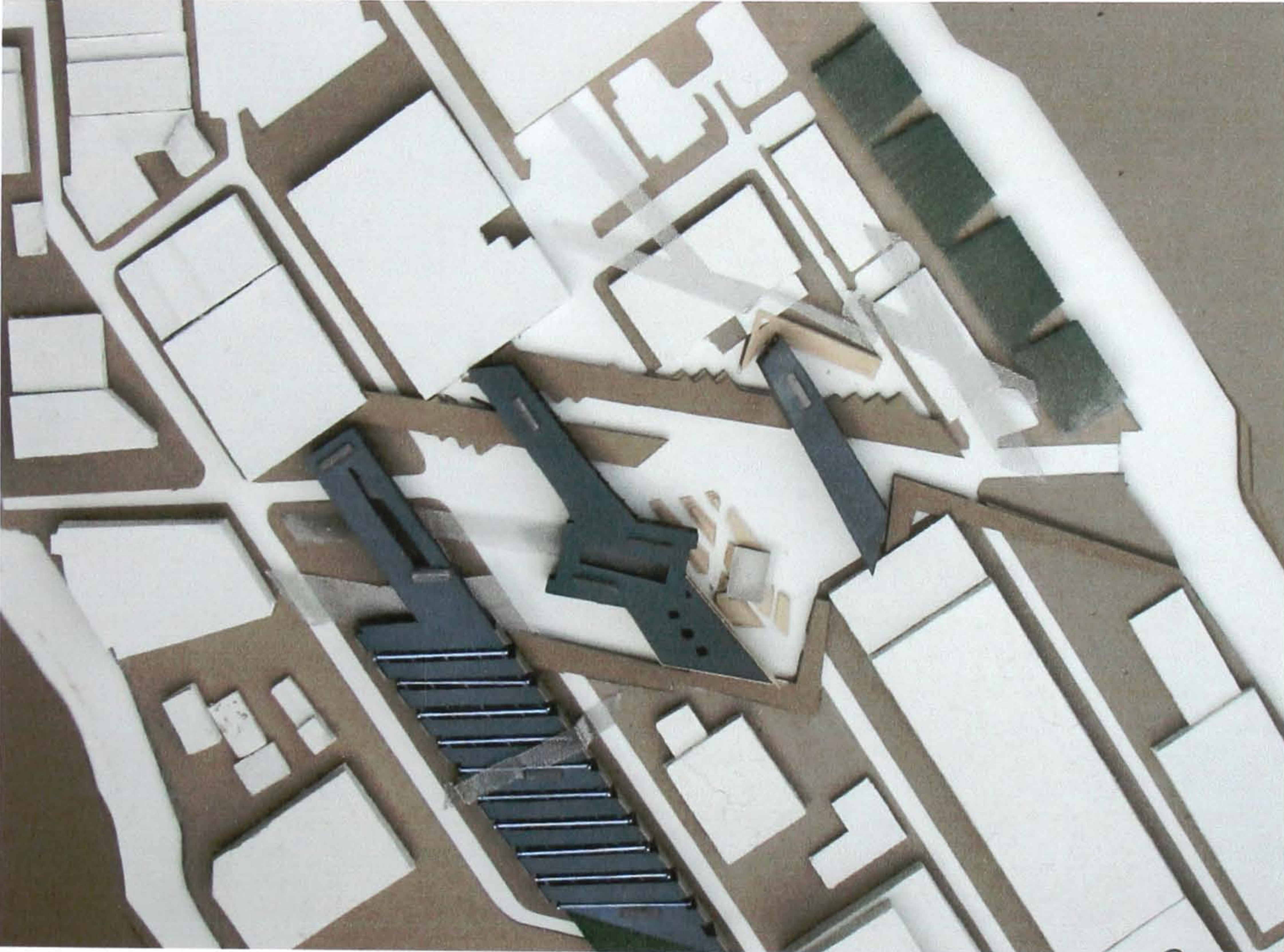
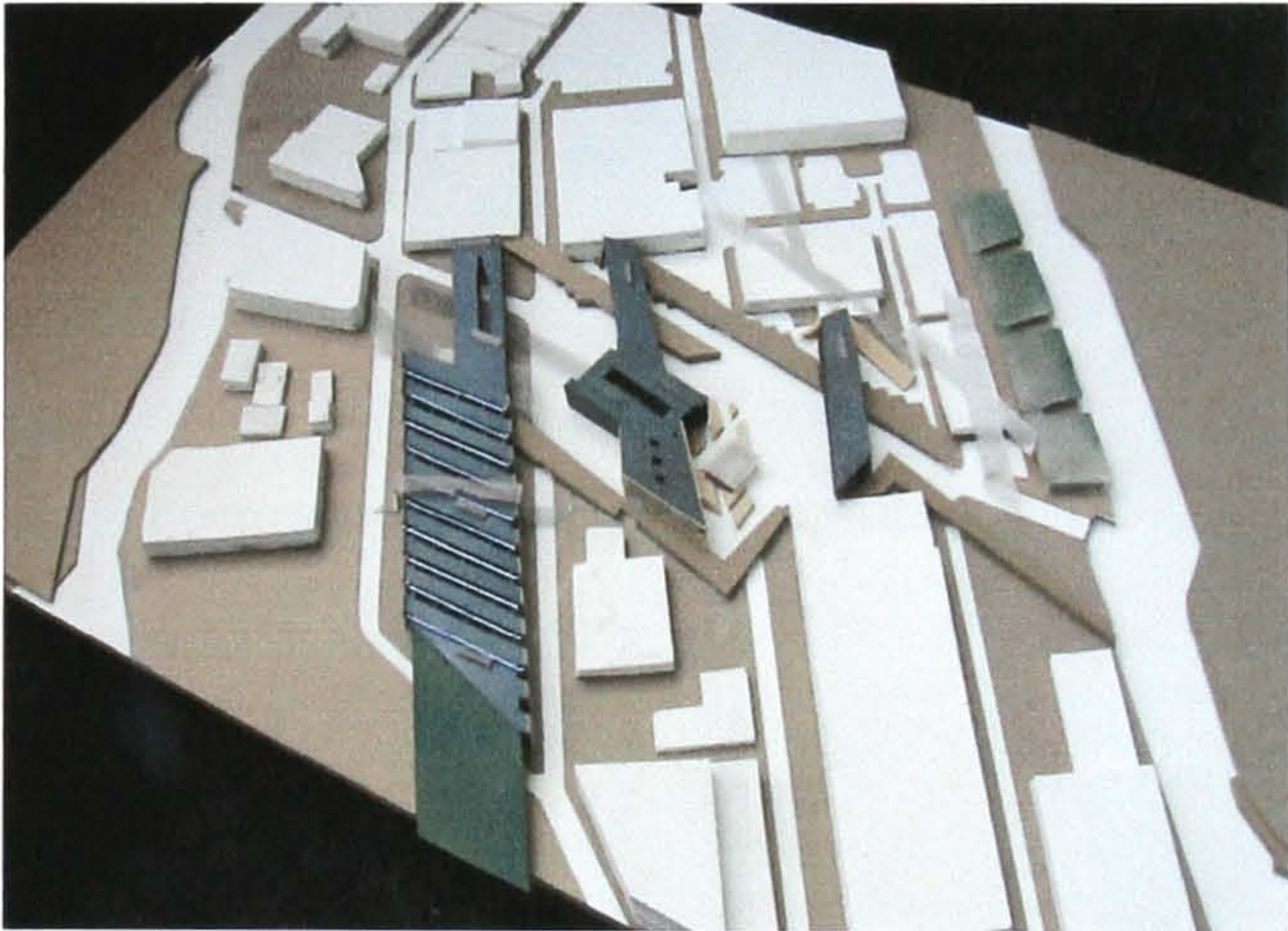
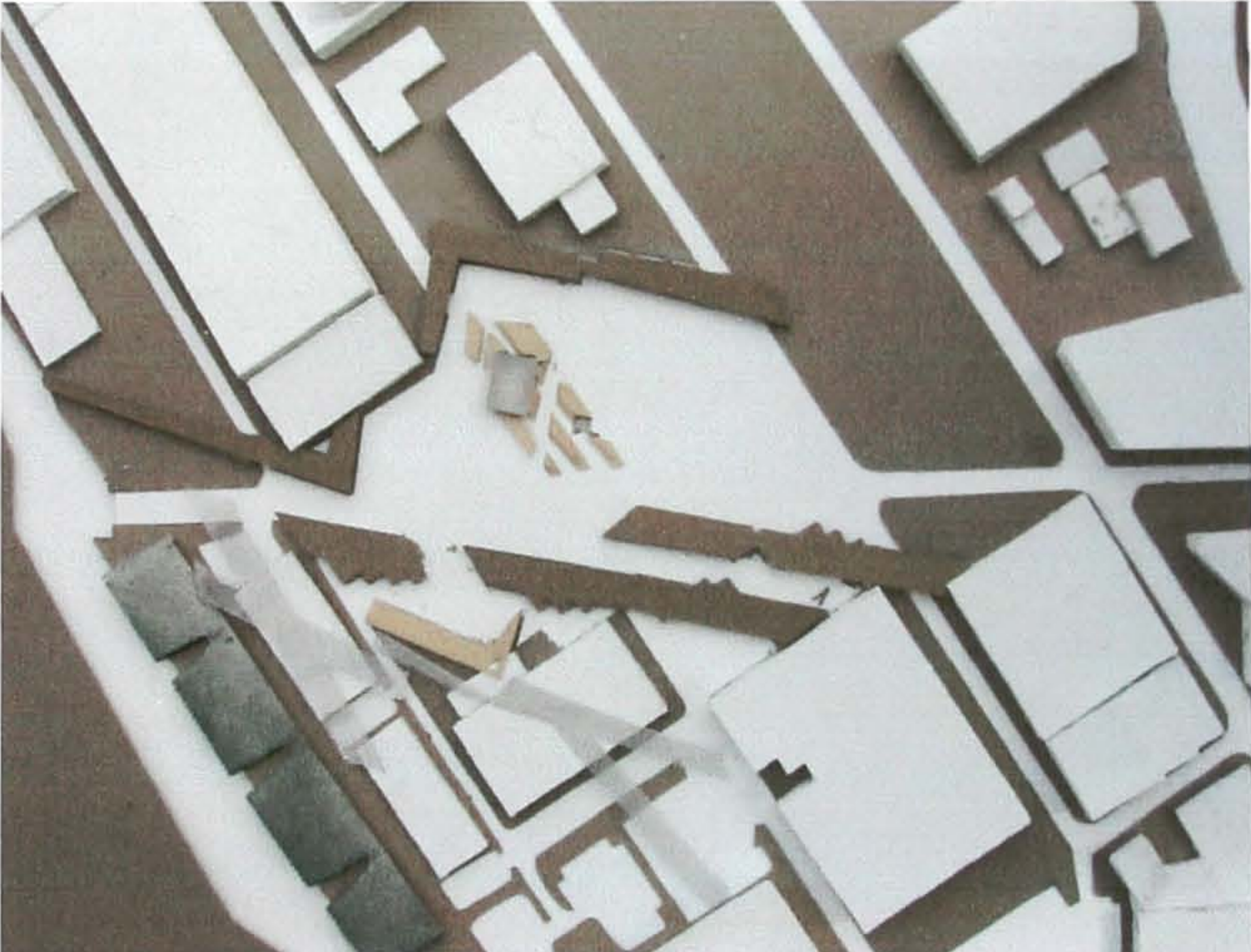
ELEVATION 1/16:1







# Final Site Model





# Final Models





## Conclusion:

The focus of my thesis deals with speculation into a Hybrid Urban Fabric. What was desired was a revealing of a new city fabric that is in a hybrid state of synthesis. This synthesis was to be found in the collision between the traditional relationship one shares or experiences the urban environment. The new relationships and concepts that had been revealed are set in opposition against each other:

- Individual Center vs. Larger Societal Center
- Individual Space vs. Collective Space
- The scope of the transition between the larger city scale to the individual building scale the elemental scale based within the program.
- Layers vs. Levels
- Horizontality vs. Verticality (horizon, circulation, presenting of the city)
- Natural vs. Man-Made

The new urban space was to be integrated within a specialized district within the City of Chicago on Goose Island that would be clustered along with industrial, service, gathering, research and development based upon the ideas and synthesized with the spirit of site and local landscape. The opportunities speculated upon hopefully allow for opportunities for cross-pollenization of use and space that act as the conduit for the speculation and revealing of new hybrid city relationships.



John Rachman in his book *Constructions* speaks of a "Dynamic Typology" that must not be ignored when dealing with the inherent complexities that exist in today's cities. "The city or urban setting is seen as an accumulation of superimposed hierarchies in which the partial invisible memory of cities is deposited." Rachman. Through my investigation I struggled with questions regarding Simplicity and Complexity. If the city is complex should personal space be simple, or vice versa. Should one celebrate the complexities that are found within the urban fabric that has been re-written over numerous times, I would argue against the oversimplification of things to the point that they become a forced homogeneity. But one must also heed that urban space and buildings must make sense within the chaos of the lived world and provide a type of unifying system that creates a sense of clarity and ease of use for the inhabitant. I am opposed against any extremely large tabular rasa moves that negate the complexities found in the urban fabric. I found through my investigation that by allowing existing fabric to remain allows for a more authentic position or stance. This position allows for the re-veiling of a type of opposition to occur between the old fabric versus the new.

The proposed project both landscape and building are dominated by the concept of pedestrian as the vehicle dealing with the concept of combining horizontal and vertical circulation simultaneously. This condition provided an opportunity to speculate upon intermediate transit options like the Segway personal transport and what this could mean to traditional relationships that the individual shares with the building and the relationship that the building shares with the urban fabric.

The circumstances that I sought to base this thesis upon was a post-industrial center that embraced the surrounding landscape and natural conditions and the city



beyond versus the immediate context. I sought to reinforce Goose Island as a re-mediated Natural center where nature did not exist in its original state.

This leads to a question that I now ponder, how arbitrary is my project although I can argue on behalf of my design strategies and moves exactly how much of my project is? Christian Norberg-Schultz has identified the larger grid that Chicago is based upon was the optimal solution, but this was for the vast expanses of the unsettled prairie, Does this still hold, is the strict grid the optimal solution for our cities as we move into the future each and every day. Or shall we celebrate complexity and embrace it within our city planning and architecture and I believe it will lead us to a more authentic experience with ones lived world.



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