

# Claiming The Urban Industrial Landscape

By Cynthia Mayhew Linton

Bachelor of Fine Arts in Printmaking, Pratt Institute  
Brooklyn, New York June 1978

Submitted to the Department of Architecture in partial fulfillment of the requirements for the degree of  
Master of Architecture at the Massachusetts Institute of Technology  
February 1992

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Signature of the Author

Cynthia Mayhew Linton  
Department of Architecture  
January 17, 1991

Certified by

Renee Y. Chow  
Assistant Professor of Architecture  
Thesis Supervisor

Accepted by

Renee Y. Chow  
Chairperson, Departmental Committee on Graduate Students

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# **CLAIMING THE URBAN INDUSTRIAL LANDSCAPE**

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Submitted to the Department of Architecture on January 17, 1992 in partial fulfillment of the requirements of the Degree of Master of Architecture.

## **ABSTRACT**

This thesis presents a proposition about a prevalent urban condition, that of marginal, left over, or disused space. It contends that these spaces, generally viewed as negative attributes by their communities have inherent value, and that appropriate and limited interventions will allow for new appreciation and greater use of these underutilized urban resources.

The site explored in the thesis is an area along the Cambridge and Somerville border between Union Square and the McGrath highway. It supports a variety of light industrial uses that first located there because of proximity to the railroad line. The current activities that surround this open area of disused rail sidings are scrap yards, auto parts stores, and warehouses.

The open character of the site and the location between residential areas of Cambridge and Somerville give it value. Because of its openness and nearness to dense residential areas it has value as a place from which to view the life of the city, to understand the history of the industrial worker in Somerville, and the growth of the city. It is a gathering place for young people, who are drawn to these sites partly because of their "unstructured" nature.

The program chosen to activate this site is one which brings together a shop or production facility for bicycle frames with complementary uses, including an instruction area for bike repair, meeting rooms for bicycle groups, and a retail store. Additionally, there is an outdoor component to the program that consists of ramps and other architectural features where bicycle riding can take place unimpeded by automobile traffic. In giving this program architectural form, the layering, the additive quality of the surrounding buildings, and the "randomness" of the total environment are accommodated, and its vitality reinforced.

The contention of the thesis is that this new set of uses is sensitive to the site, its natural characteristics, its architectural character and its community's needs. Understanding the landscape and the essential quality of a place is a crucial step in determining appropriate design solutions.

Thesis Supervisor: Renee Y. Chow  
Title: Assistant Professor of Architecture

# Acknowledgements

I would like to thank all those in the community of the school of architecture who have shown me new ways to see and to understand the world. I thank them also for their patience and love.

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for her clarity, consistency, professionalism, and warmth.

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Thanks to Scott Rabiet for always encouraging me to talk about what I think architecture should be.

Thanks to Patti Huminski for being beautiful, intransigent, and insistent about gaining self knowledge.

Finally thanks to my family:

my father who has always encouraged me to travel, to look at cities and to love their diversity;

my mother who first taught me about American painting;

my sister who shows me her appreciation of the flowers, the birds, and the trees, helps me keep everything in balance, and can always make me laugh.



# Dedication

In remembrance of my grandmother  
Gladys Diehl Gault  
for her love of language, of laughter, and Boston

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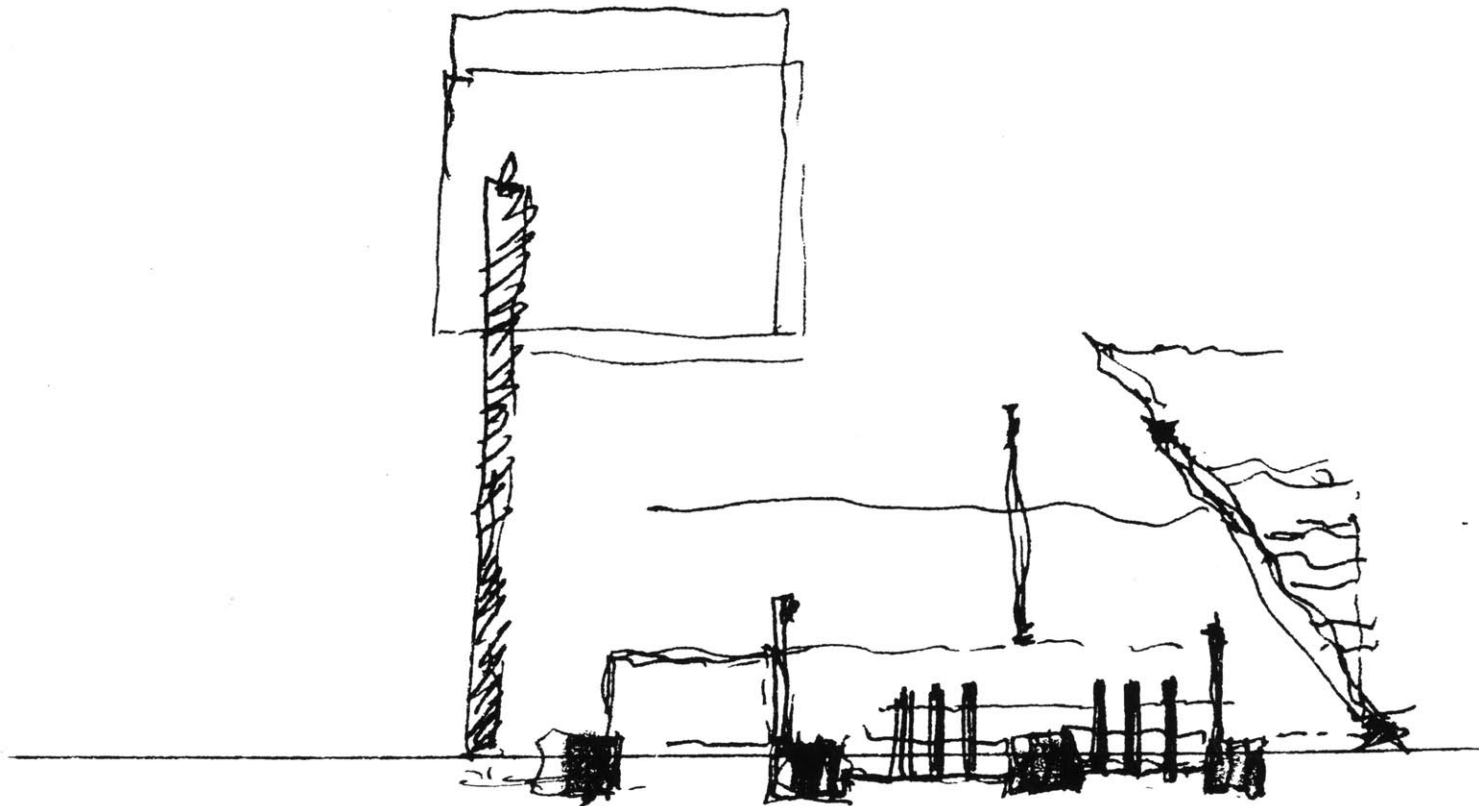
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# Part One Introduction



# Introduction

This project is landscape generated. What is the landscape from which this work has begun? How does it work? What are the characteristics that make it vital?

It is passion for a place that has motivated this investigation, a personal passion for a particular gritty urban landscape. Yet my curiosity extends beyond this place to other landscapes and cityscapes that I have encountered and others that I hope to see, live in, understand, and work with. The curiosity with which I approach these sites is contained and tempered by respect for the places as I find them, their natural characteristics, and history as they have been claimed and shaped by human beings. By trying to understand the specific qualities of this place along the railroad tracks between Prospect Street and the McGrath Highway on the border of Cambridge and Somerville I have attempted to describe an urban phenomenon that deserves attention. I believe that

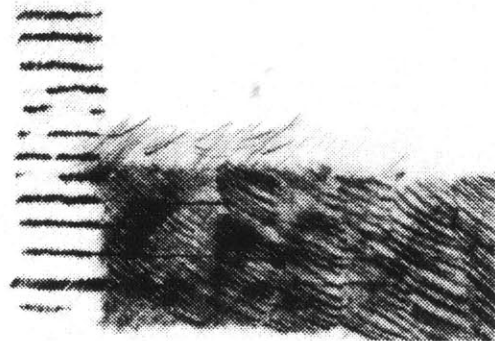
areas in cities that have residential and industrial uses intermingled can offer new possibilities for the city dweller at large, as well as for the local inhabitant.

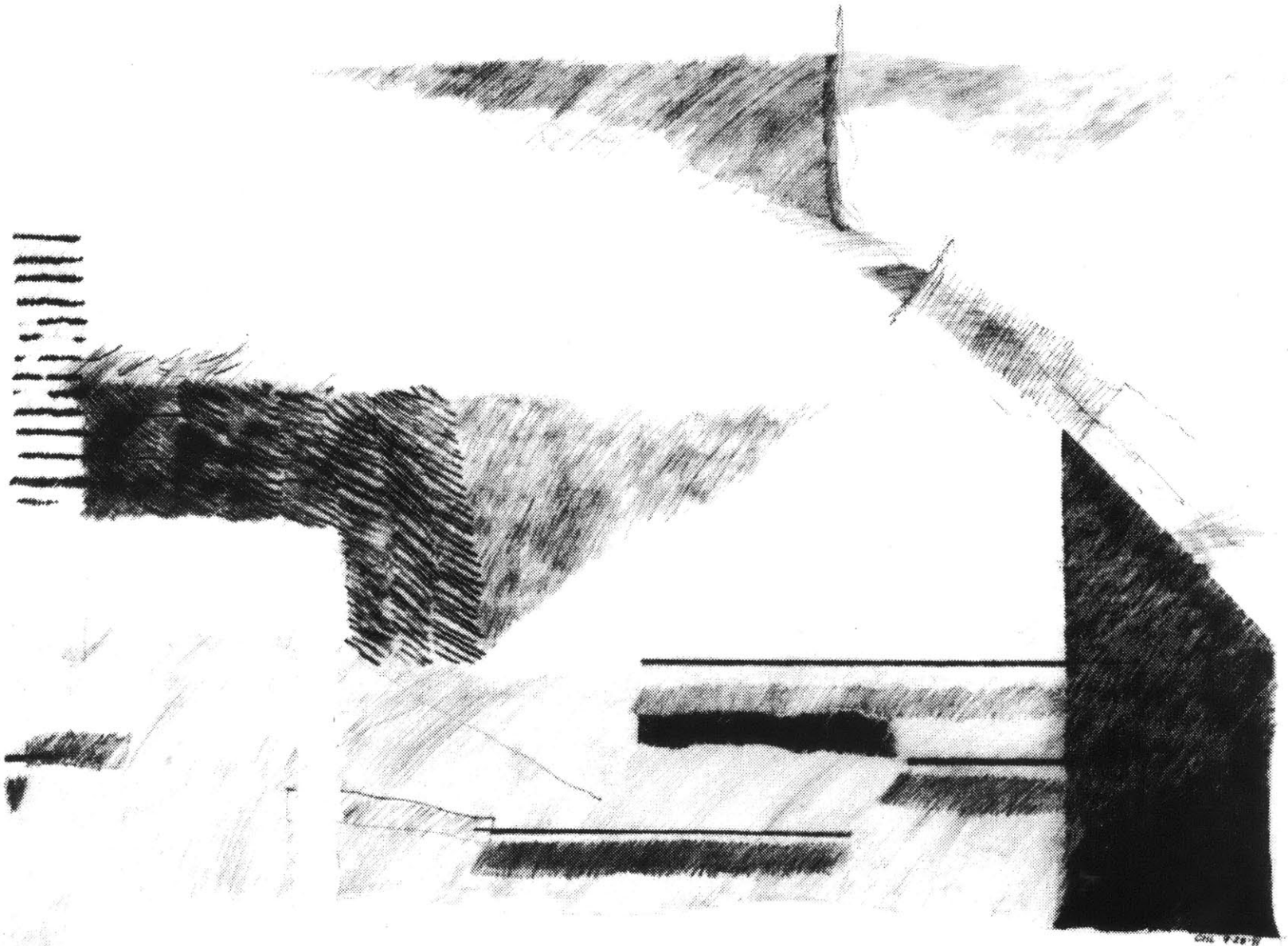
Beyond the understanding of the specific site that I have chosen for the location of my design exploration, I hope to be able to generalize about ways to understand essential qualities of "place." The aim is to offer design solutions that respect the qualities that make a place compelling.

# Landscape Drawing 1

## *“Impression Of The Site”*

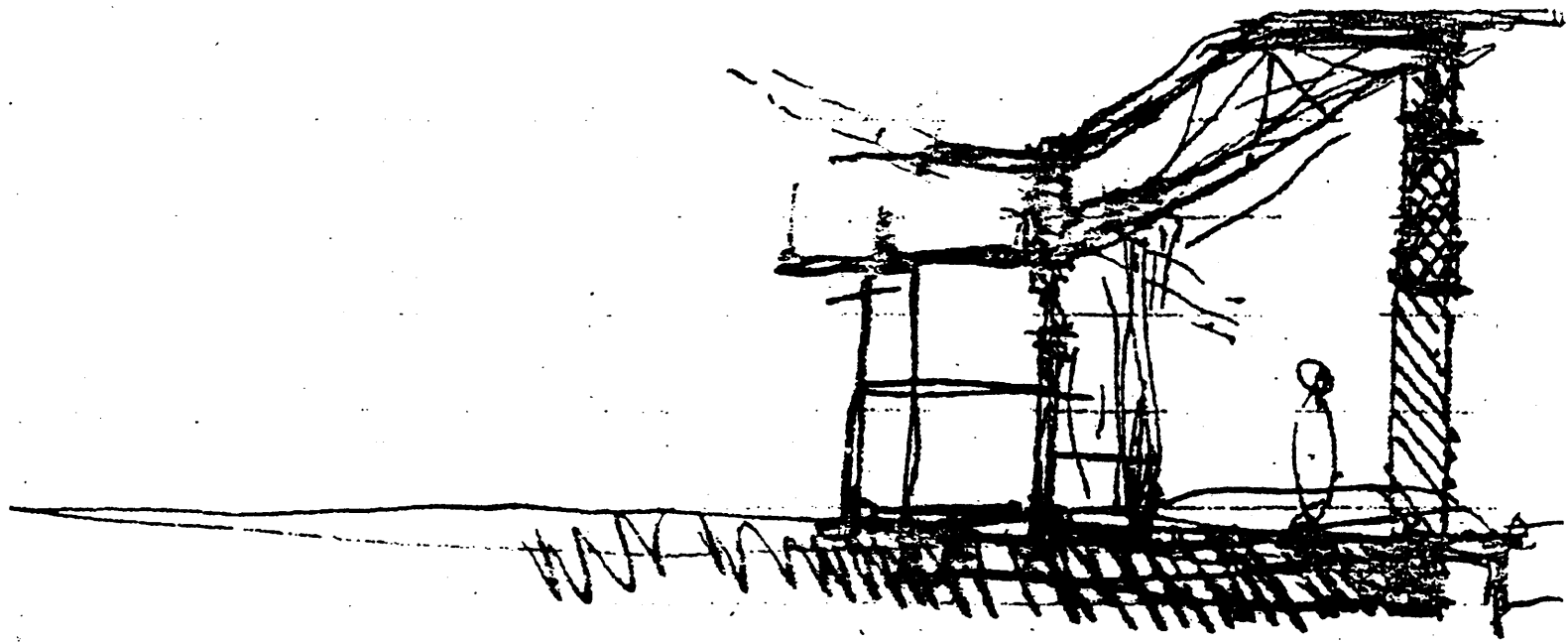
This is a tentative drawing. A soft drawing. It is as difficult as the beginning of any project. The direction of diagonal movement across the site is shown. The closure at each end of the site, made by the bridges, is marked with horizontal lines. These lines denote some transparency, at those points there is some sense of what is outside the site. There are more marks at the bottom of the page on the active Cambridge side of the site. The upper right hand corner of the drawing shows the sky.



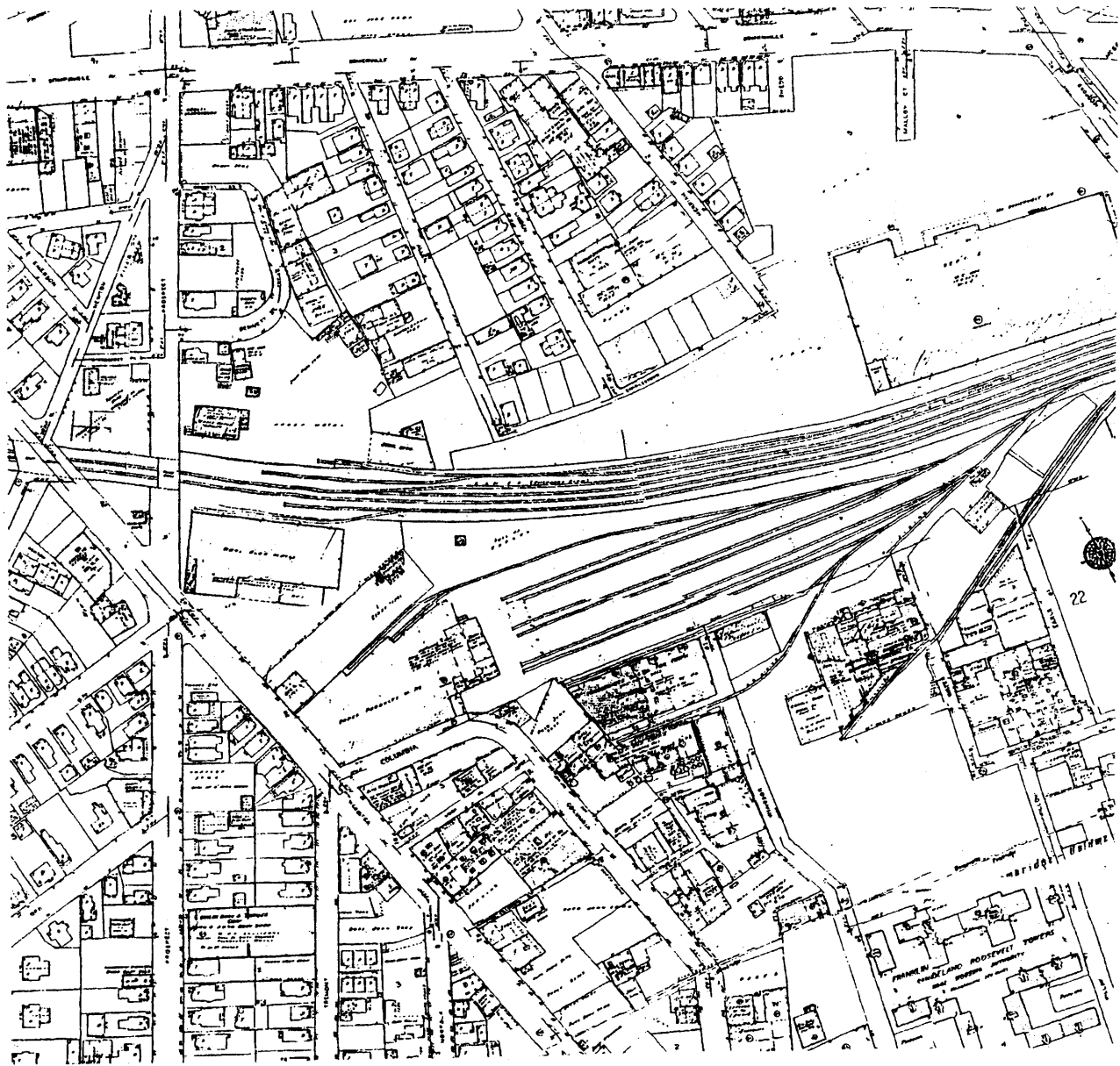




# Part Two Intentions







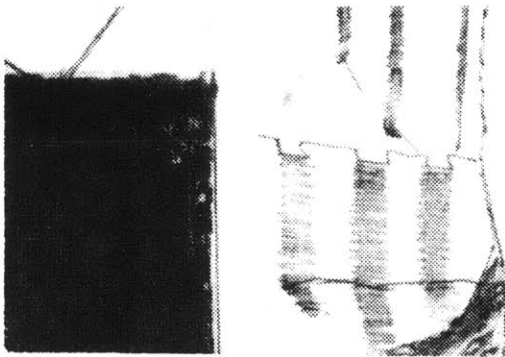
# Intentions

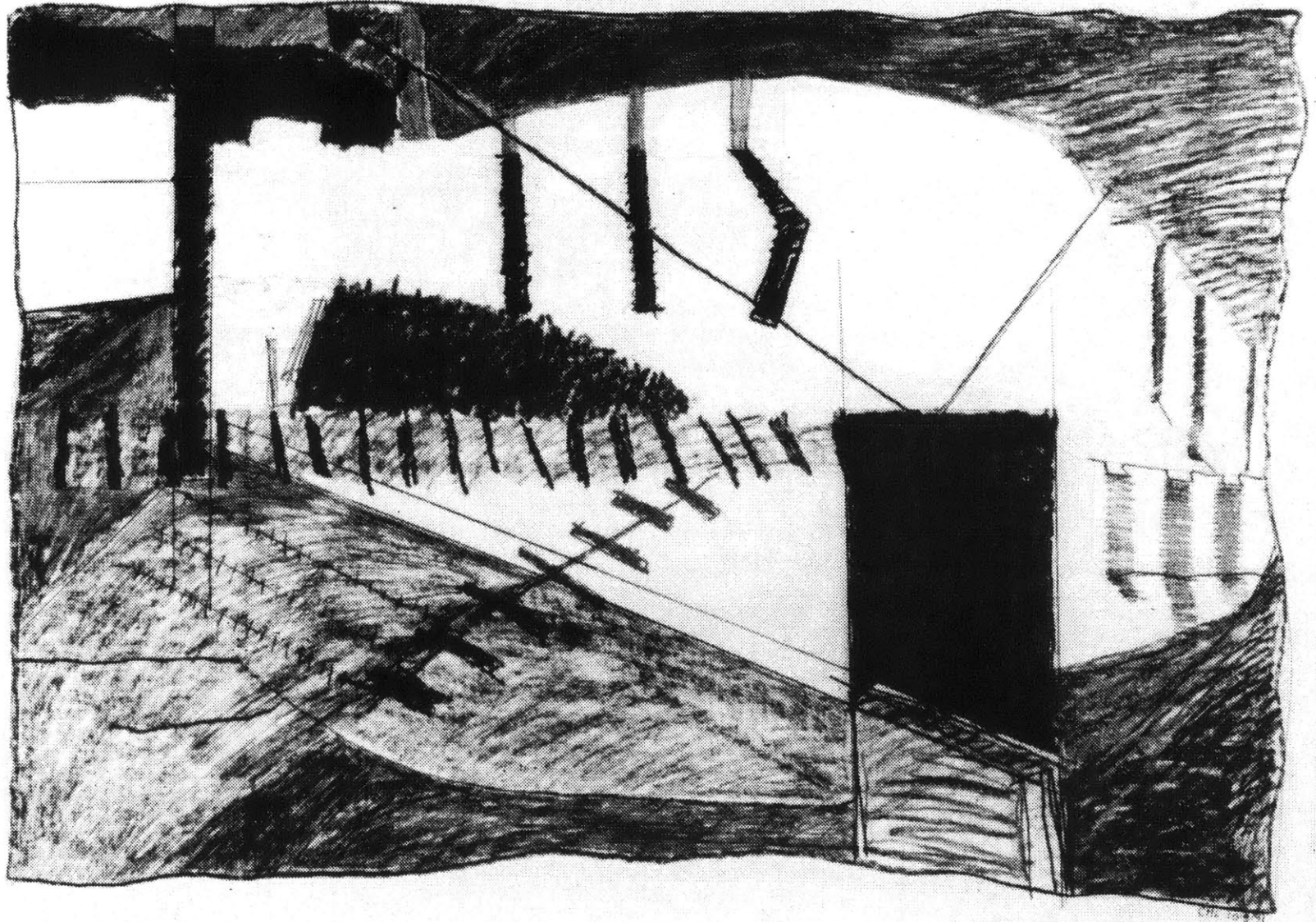
- The program and building should allow better access to and understanding of the site by the community.
- A dialogue should be built between the architecture and the existing landscape so that they intermingle.
- Architecture should make one stop and take stock of the everyday world and consider intention.

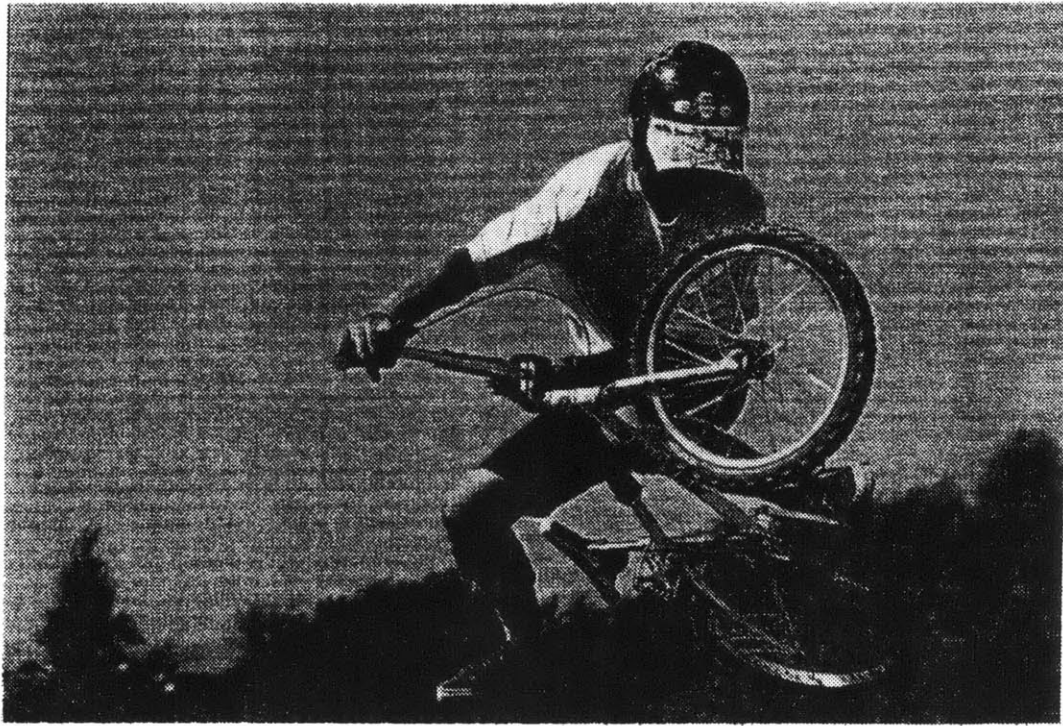
# Landscape Drawing 2

## *“The Big View”*

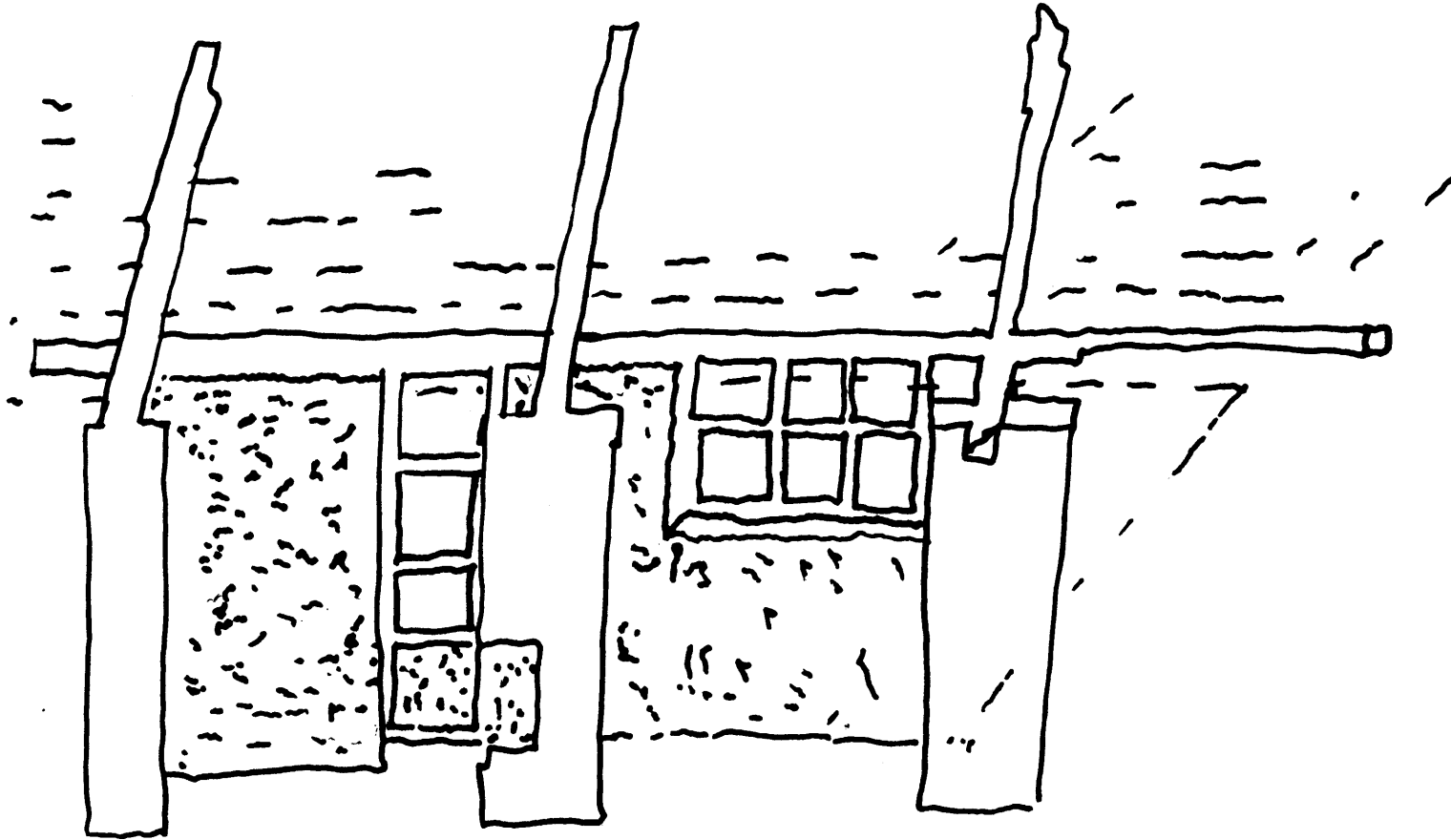
This drawing is very decisive. It marks out the open space of the site by giving all the surrounding elements color. The tracks run through the center of the image and a single track moves off to the bottom left hand side of the drawing describing the side yard. The important elements in the site that have some direct relationship to the views are all here. The mound is represented by a dark colored wedge shape along the tracks. From the mound the most powerful view of all is enhanced. The “big view” in the site is of the sky. Everywhere one is conscious of the sky first, even more strongly from the top of the mound. Other views that have strength locate the site in relationship to the rest of Somerville, and to Boston. These views are marked with vertical bands from the direction of the view down into the center of the image. The view of the Castle on top of Prospect Hill connects to Somerville, and the view of the Hancock Tower connects back to Boston.







# Part Three Design Process



## Design Process

While working on this project, certain aspects of the work became more important than I anticipated. It is clear that this undertaking which is independent, personally defined and structured, can not easily go forward without clarity about process. Although process is frequently addressed during the study of architecture at M.I.T. it does not necessarily follow that a student will come to terms with his or her own process or be explicit about it. In my case, I have wanted to integrate ways that I previously worked as a painter and printmaker to inform and enrich the ways that I work in architecture.

To do this I proposed to do eight specifically “non-architectural” drawings. By “non-architectural” I mean drawings that can not be understood as those using the standard conventions of plan, section, and elevation drawing.

The drawings were to be spaced evenly through the semester, one every two weeks. Each drawing focused on an architectural issue that I was also probing with more conventional design tools, in model and drawing. I planned to work on individual drawings for a specified intense period during which other pursuits would be abandoned. During this calculated break in the process I hoped to integrate the different things that I had been working on and evaluate them before moving forward.

In actuality, I worked on each drawing throughout the entire two week period. The drawings functioned as large “blotters” on which ideas and images were layered, uncensored, to be culled when needed further on in the design process.



The drawings cover a range of issues. They move from site-oriented drawings at the outset of the thesis, to drawings focused on the building section, and then finally return to drawings concerned with the issues of the entire site, as the design of the bicycle workshop and community center come to completion.

The following drawings appear in the thesis:

*“the impression of the site”*

*“the big view”*

*“the building section”*

*“containment”*

*“paths and walls”*

*“light”*

*“the section and connections”*

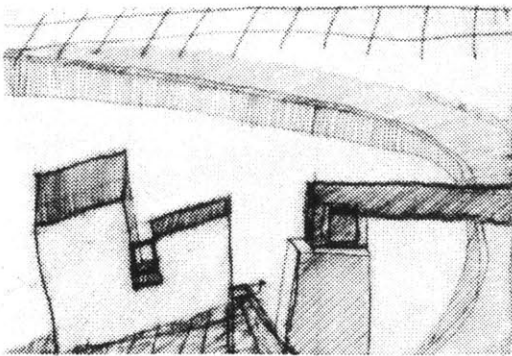
*“the new place”*

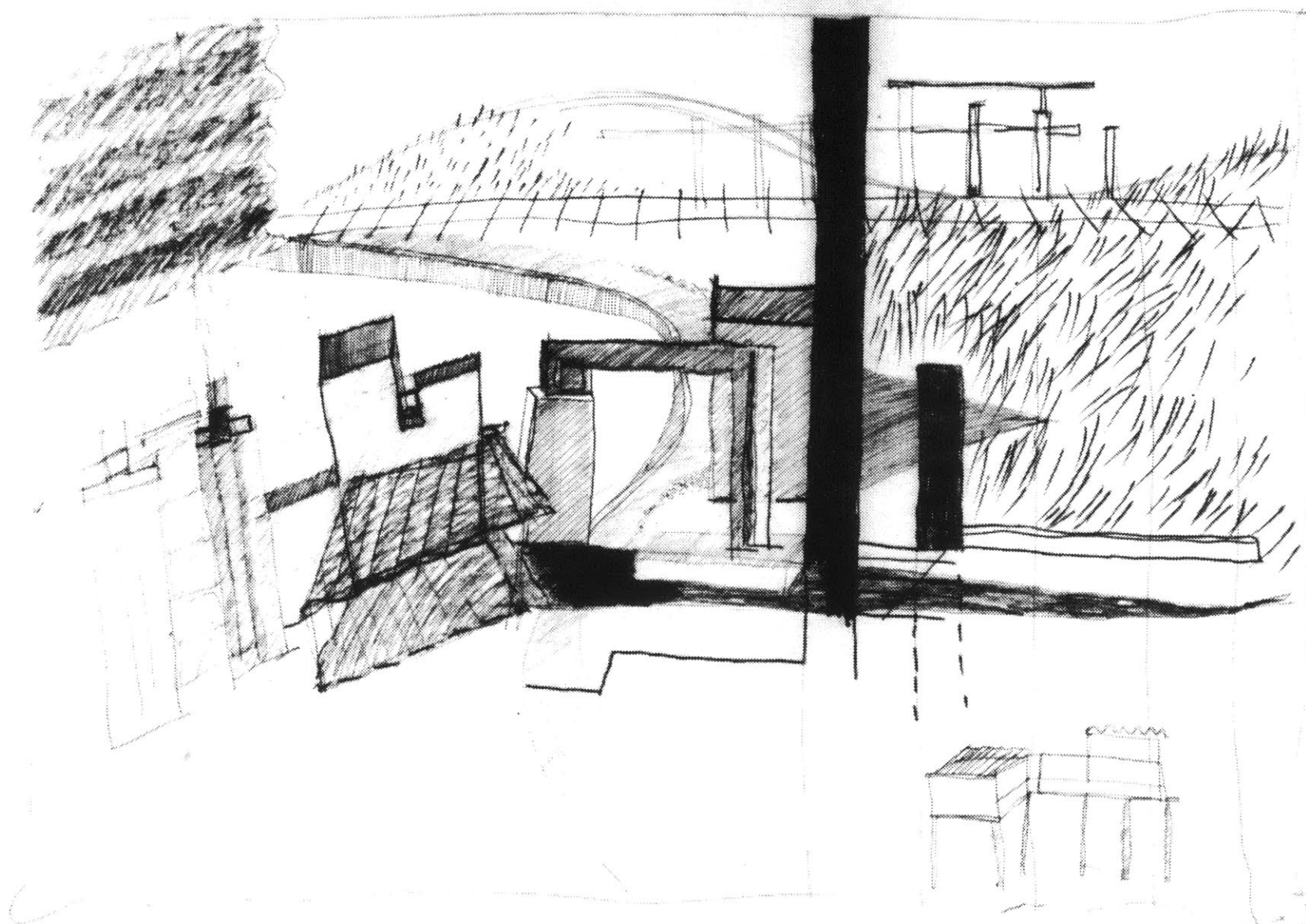
With each drawing I give a written description in order to clarify what I have gained from the drawing and from that, what I have attempted to put into the design work. In some cases the correspondence between the "subject" of the drawing and the content is minimal. This is because the reading of the site could not be fully anticipated and the drawings reflect what I learned through the process.

# Landscape Drawing 3

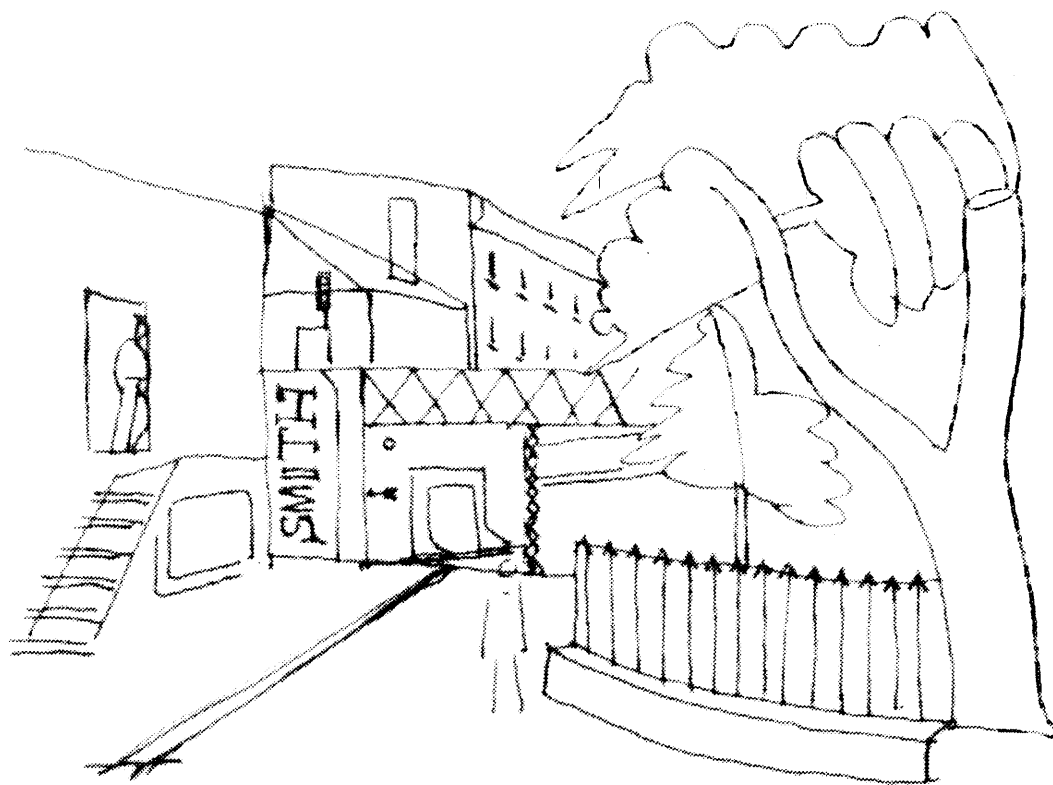
## *“The Building Section”*

This drawing has a large wall cut through, and shown in the center of the page. Is it a wall or a column? The rest of the drawing clearly does not show any part of a building in section. Falling off to the left of this wall, at an angle is another concrete wall. There is a corrugated roof projecting out from the second wall and a very small window above. At the top of that wall there is no roof. The drawing does not yet make a commitment about the inside versus the outside. The mound appears rolling through the back of this drawing and the grass, made with dark staccato marks, is everywhere. The tracks run across the page, but with less insistence than the grass. References to a second level appear here, both in miniature in the foreground, and back in a dip in the grassy landscape. A flat roofed building with columns and no closure sits in the dip looking fragile and temporary among the grasses. Perhaps it is just a pier with a covering.





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Stuart Davis,  
*Drawing For Trees And EL* c.1931

**Part Four Paintings:**

**Marsden Hartley, Stuart Davis**

## Marsden Hartley and Stuart Davis

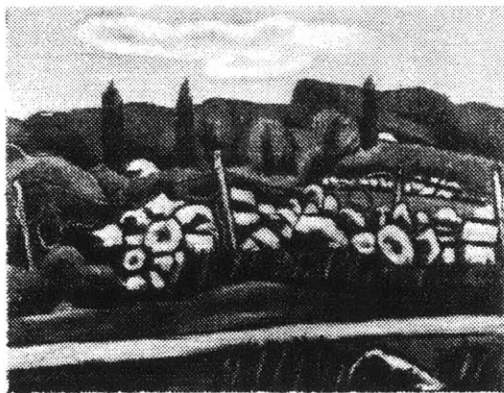
1. Marsden Hartley, *The Old Bars, Dogtown*, 1936

2. Marsden Hartley, *The Last Stone Walls*,  
*Dogtown*, 1936-37

1.



2.



The paintings of Stuart Davis and Marsden Hartley have been important to me. They play more than one role in the thesis. I believe that both of these artists succeeded in portraying the particular places that they painted with the passion that those environments deserved. In order to express the essence of place so clearly and intensely, they had to be keen observers as well as emotionally connected participants in the lives of the landscapes that they chose to paint. The “connectedness-to-place” interested me. Both men traveled, and lived outside of the United States. They each wrote about their experiences and their desire to return, and to paint in America. The experience away from the familiar landscape, cityscape, and culture from which they emerged sharpened their view. It fueled their desire to paint at “home”. Both men struggled with the prevailing European modernist ideas about painting and both produced work that incorporated lessons from modernist work into their most “American” work.

The choice to look at these artists in particular goes beyond my interest in how they were able to paint the landscape and cityscape with such intensity. Their work expresses qualities that are inherent in the site that I have chosen for my thesis. I have used the paintings intuitively through the process as an alternative means of description.

1.



1. Marsden Hartley, *The Old Bars, Dogtown*, 1936



The purpose was to add another layer of description in the hope that it would help in the total understanding of the place.

Marsden Hartley's paintings portray the stark quality of the New England coastal landscape. Hartley painted in Maine, Nova Scotia, and Gloucester. The paintings and drawings of Dogtown with its huge rocks, wild bushes, and posts, describe a bleak landscape with hints of human intervention. "Old Bars at Dogtown" represents a gathering place, or stopping place in this elemental landscape. For most of his life Stuart Davis painted in New York City. The paintings that he produced there speak of another aspect or quality that is crucial to the description of my site. His work is about the diversity, frenetic activity, and excitement of urban life. He used popular images, jazz references, and references to architectural form in his paintings.

*'Pictures of this kind...help to keep the eye of the beholder alive, force him to make observations, and give value to aspects of nature which everyday preoccupations too often leave unnoticed.'* - Stuart Davis

An understanding of, and a combination of these two qualities: the intense activity of urban existence, and the stark simplicity of the rocky fields at Dogtown, is what I hoped to borrow from these paintings for application to my work.

1. Stuart Davis, *Hot Still 'Scape in Six Colors - 7th Avenue Style*, 1940

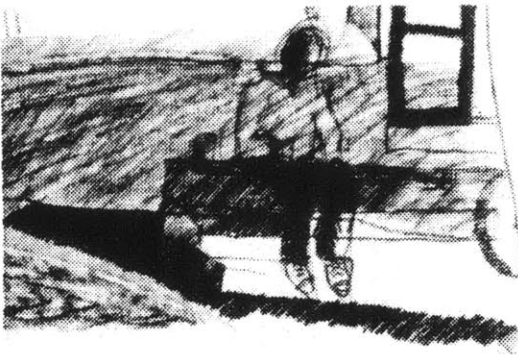


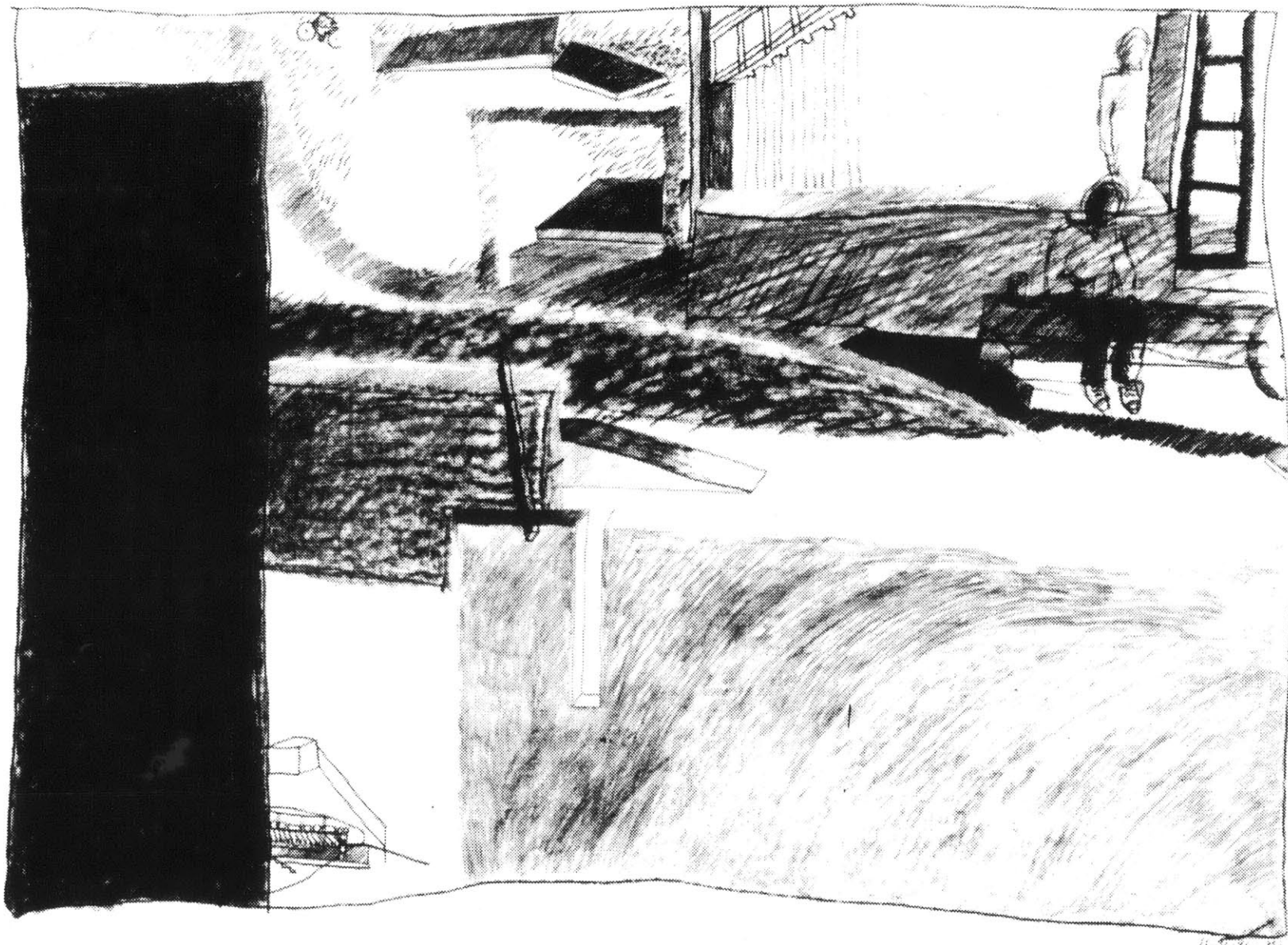
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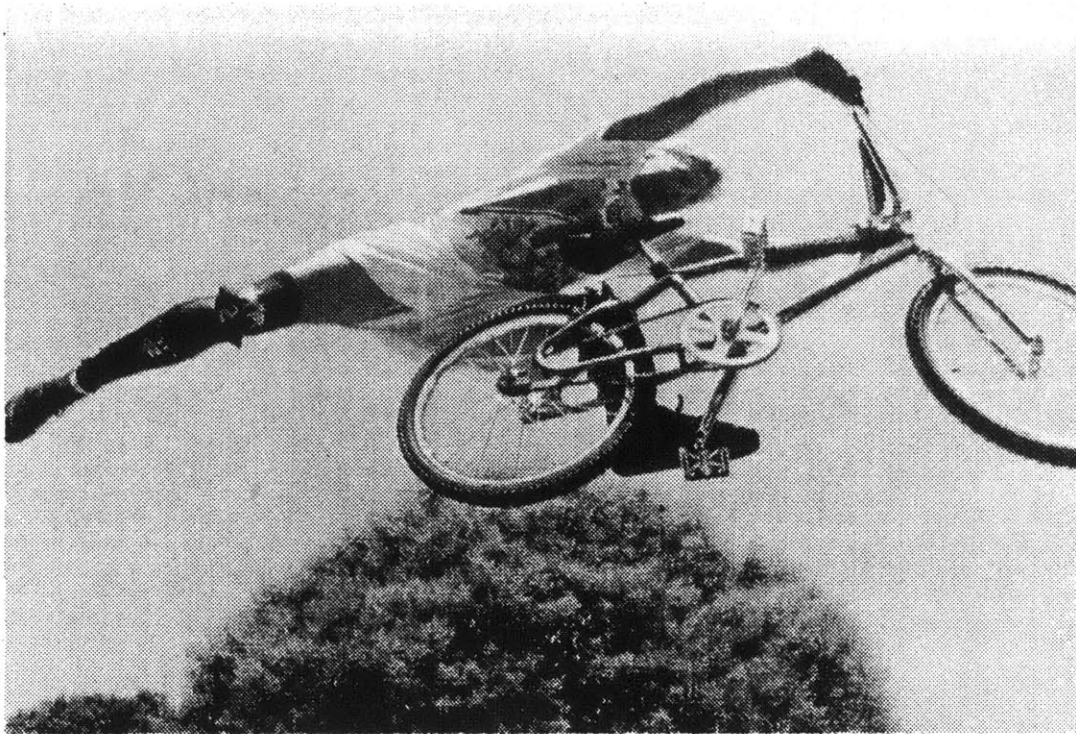
# Landscape Drawing 4

## *“Containment”*

There are large blue walls, concrete walls, and a corrugated metal wall. The corrugated metal suggests the possibility of a closure system for the building, but in this drawing it is not clear what is inside and what is outside. Someone is sitting on a step, back up against the building, there is a large opening behind the steps. Maybe the entrance exists just outside of the frame. The ramps, paths, and concrete frames exist to the left behind the building. What about these large dark walls in the foreground? Do they imply another building in relationship to the one where the people are, or are they just large walls in the landscape? What is the relationship between the concrete frames that get outside the building and the building closure? How do the windows work with the corrugated metal or the concrete? The difference between the experience of being inside or outside may be heightened by the use of the walls.







# Part Five Site

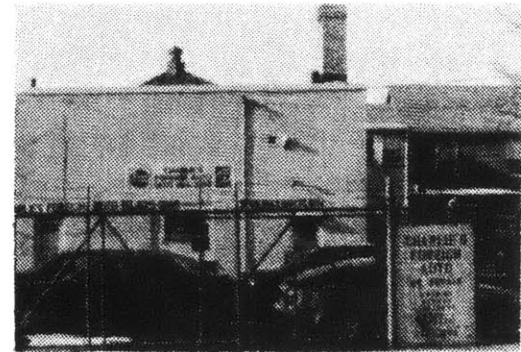
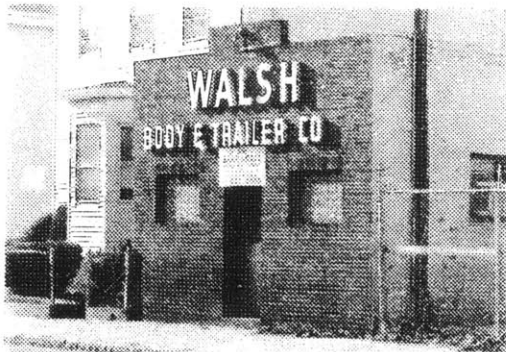


# Approaching The Site

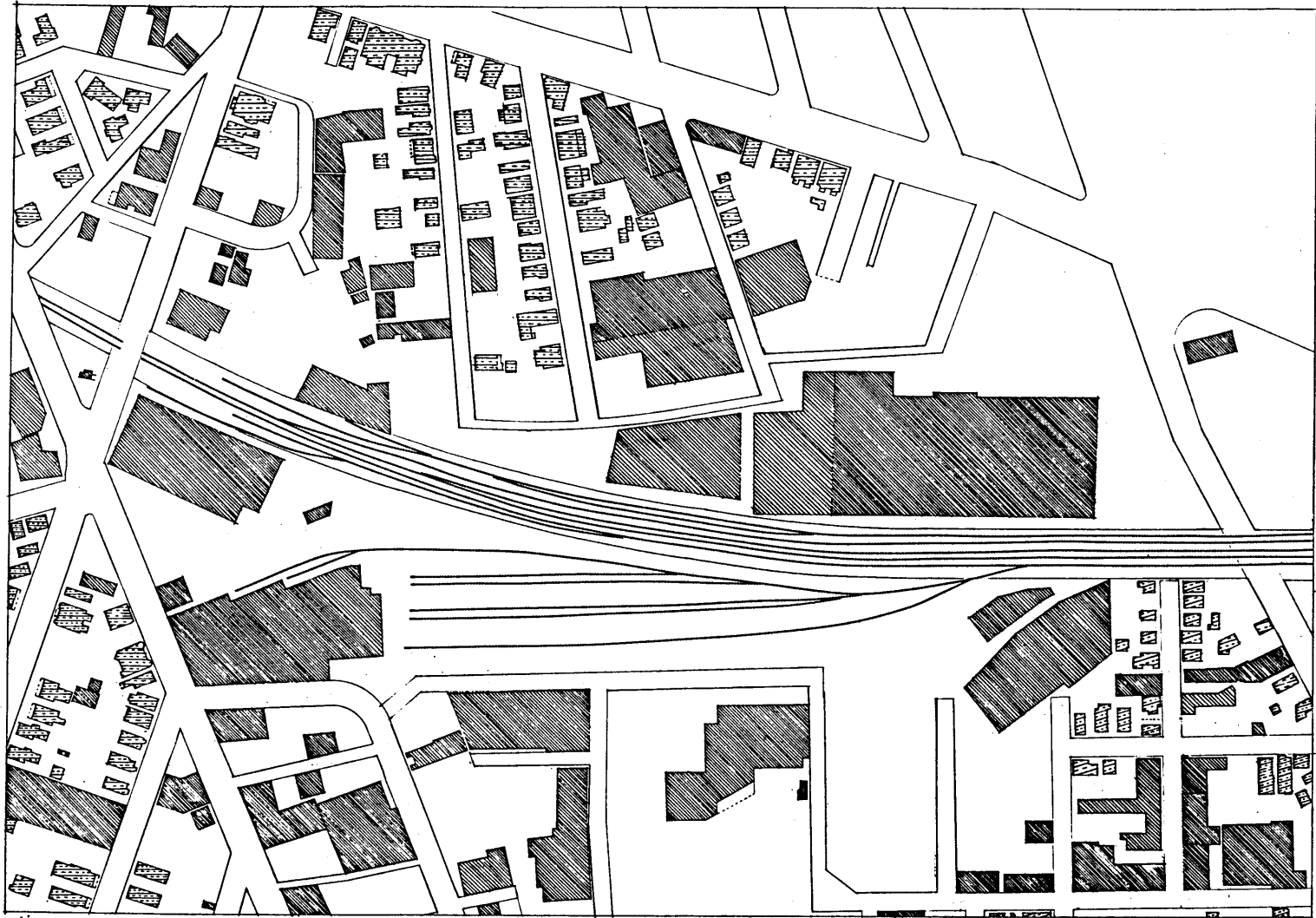
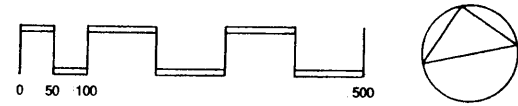
Journal Entry September 1991

Saturday a.m. A grey day. Puddles of water in spots on the sidewalk. Approaching the site along Prospect Street. An outside edge. Charlie's Foreign Autobody. A small house, a larger house, Forbes Printing Company on the corner. Walsh Body and Trailer Company. For sale or lease. Hedges and roses well kept in front of residences. Barbed wire around the foreign auto lot. Pale blue painted CMU garage in the middle of asphalt lot. Sprouted. Large trees at the back of the lot between it and the backs of the houses on the next street. How deep is the lot? How wide along Prospect Street?

1. Walsh Auto and Trailer
2. Houses along Concord St.
3. Charlie's Foreign Auto



# Industrial/Residential Use Diagram





The garage twenty two feet tall, shorter than its surrounding neighbors. Houses two and three stories. Constant traffic. Occasional pedestrians, an occasional bicyclist. Towards Somerville is the bridge, and the tracks. The hill rises up and is green. Corner of Concord, Prospect, and Webster. Three houses, more down Concord. Rent a Wreck, Zenith Auto Body, and Beacon Sales. Large and low. Fencing curved up along the bridge (how tall?). Cranes popping up behind Beacon Sales on both sides. More barbed wire. Webster Street Slopes down from the bridge, this wide open intersection with lots of sky. Webster Street. Back against green chain link gate of Savransky Bros. Co. Scrap Iron & Metals. Closed today. Looking at Rent A Wreck (busy) on the triangular corner formed by Prospect and Webster.

1. Advertising along Webster Ave.

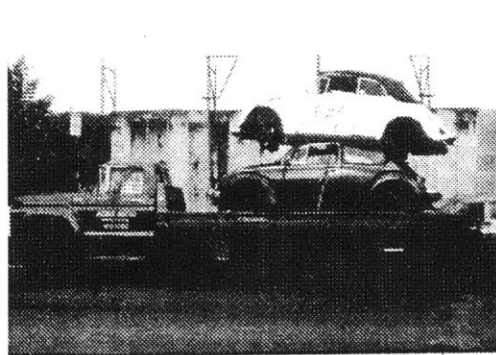
2. Piggybacked Bug

3. Columbia Auto Parts

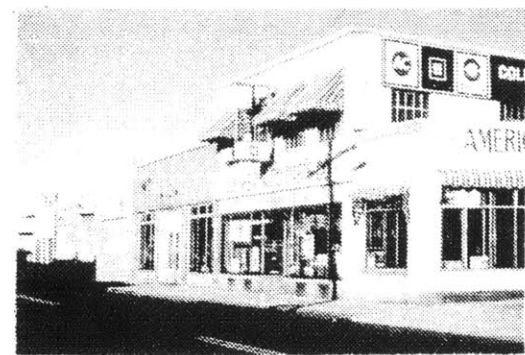
1.



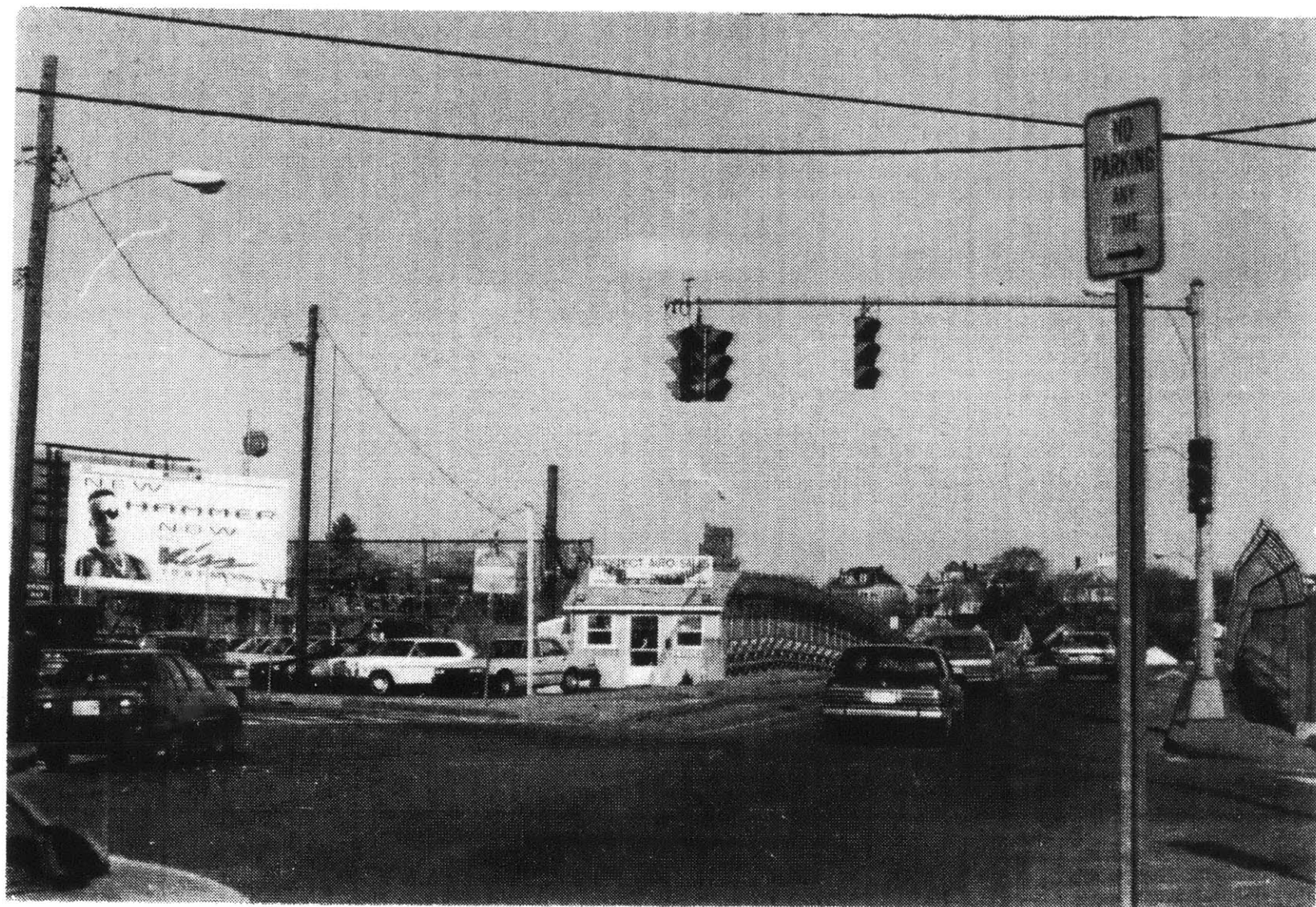
2.



3.



1. The intersection of Prospect St., Concord St., and  
Webster Ave.



Five triple deckers in a row. Two singles, a double, and two more singles. Asphalt shingle, then vinyl siding, simple stoops, but no porches. Subdued browns, beiges, pale greens. Roses, potted plants on one aggrandized stoop with sheltering roof held up by iron ornamental supports. Looking down Webster...Auto Body, Glass, Towing, Parts. Towards Cambridge...asphalt sidewalk on commercial side, lots of weeds.



1. Zenith Auto Body at the intersection

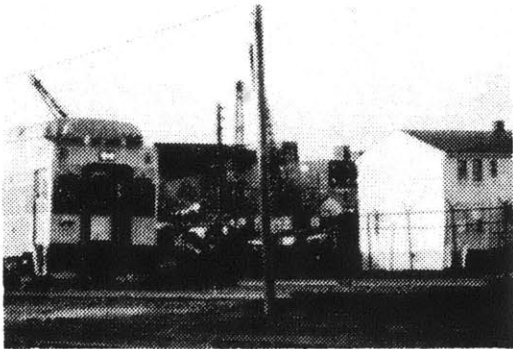
View into the site from Prospect Street



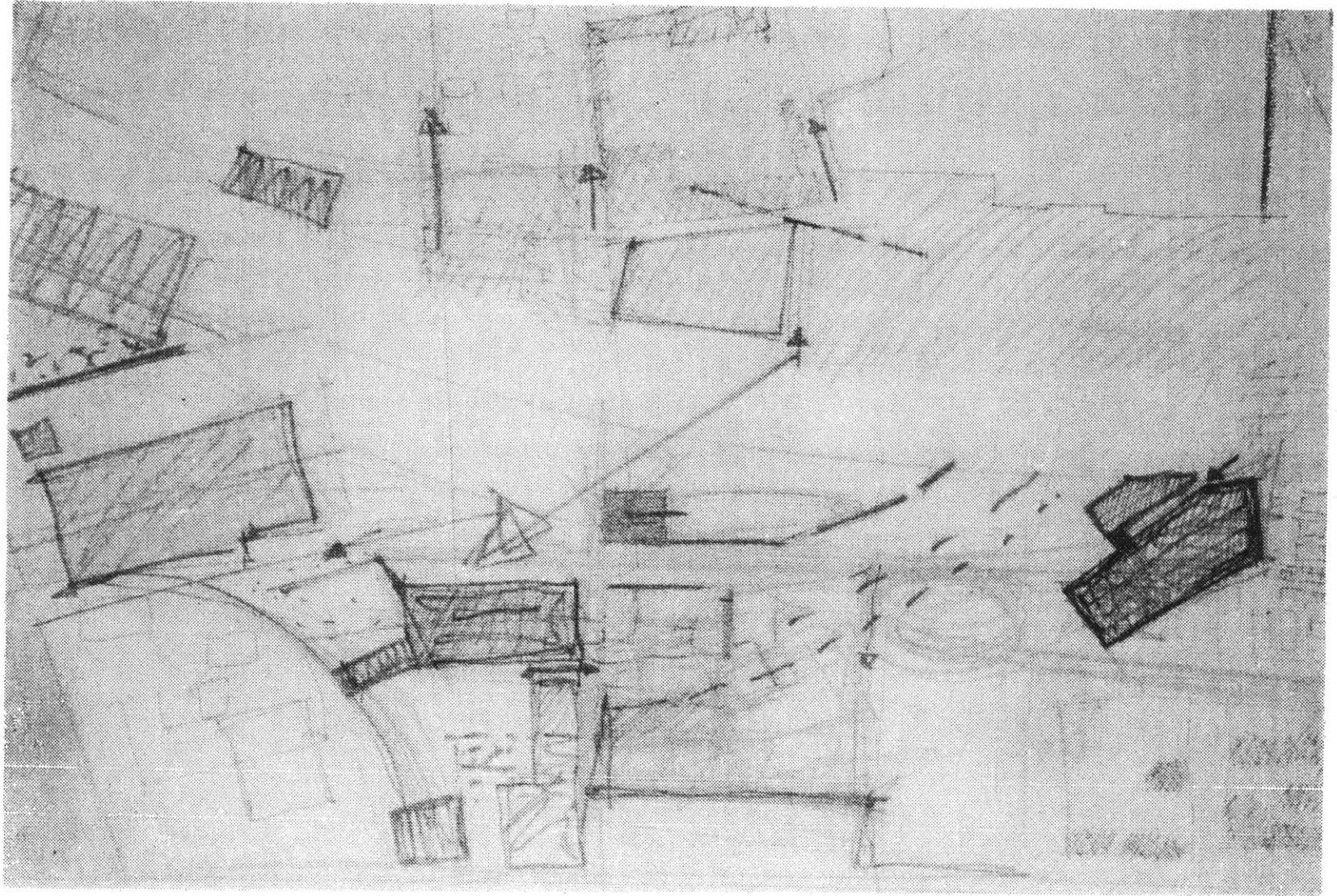
## Edges Of The Site

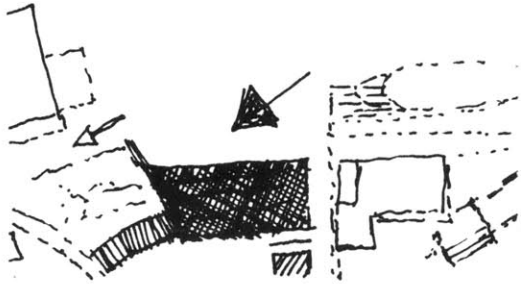
The site has four distinct edges. The experience of these edges varies. Each has a set of interdependent physical characteristics and uses that work together to create the quality of the neighborhood or zone associated with the "edge".

1. Commuter train passing through



1. Edges diagram



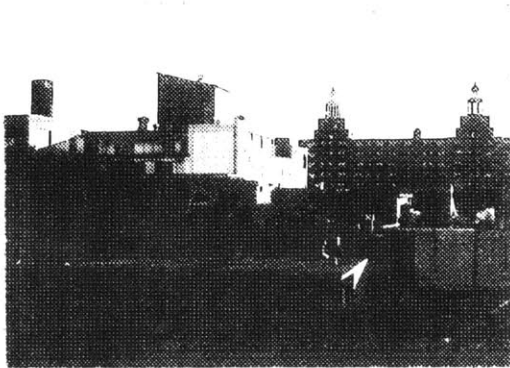


## Edge 1

The Webster, Columbia, and Cambridge Street edge which borders the west and south sides of the site is fairly densely built. There are small and medium sized commercial and industrial buildings packed along both sides of Columbia Street.

1.

2.



3.



1. Edge 1 diagram

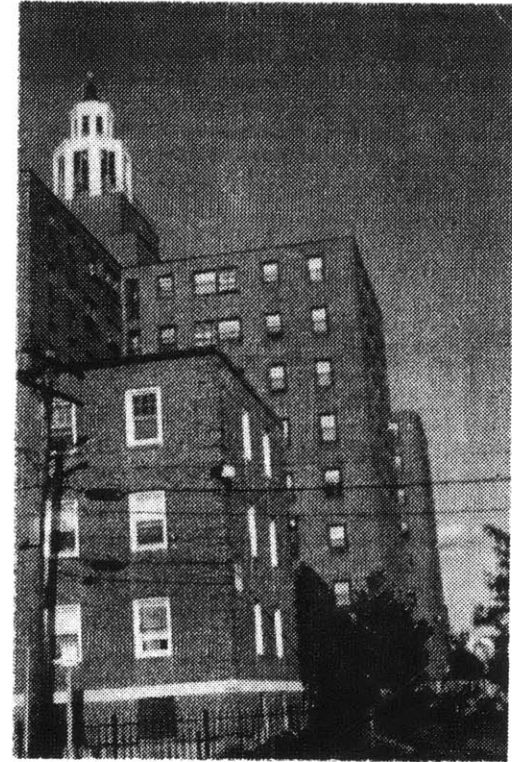
2. Research Foods building, F.D.R. houses

3. Auto repair shops of Columbia St.

They create a mediating zone between the open site with the larger industrial buildings, and the predominantly residential neighborhood along the west side of Webster Street which continues down Tremont and Norfolk Streets towards Cambridge.

Immediately bordering the tracks on the Cambridge side are several larger industrial buildings. Some of these are four or five stories tall. This height, substantially more than the height of the buildings along the other edges, gives this edge the hardest or least penetrable feeling of the four sides of the site. It is further reinforced by the size and the material quality of the public housing on Cambridge Street.

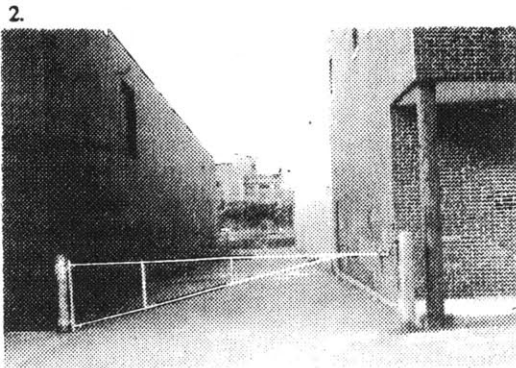
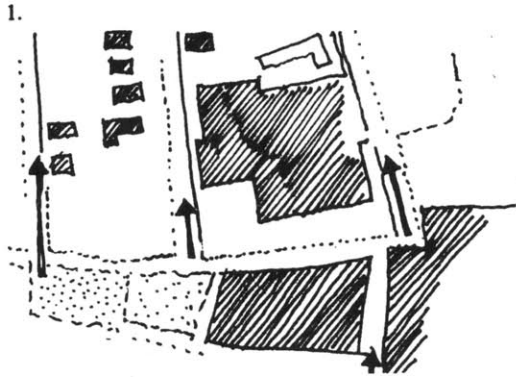
1. Tower of the F.D.R. houses





## Edge 2

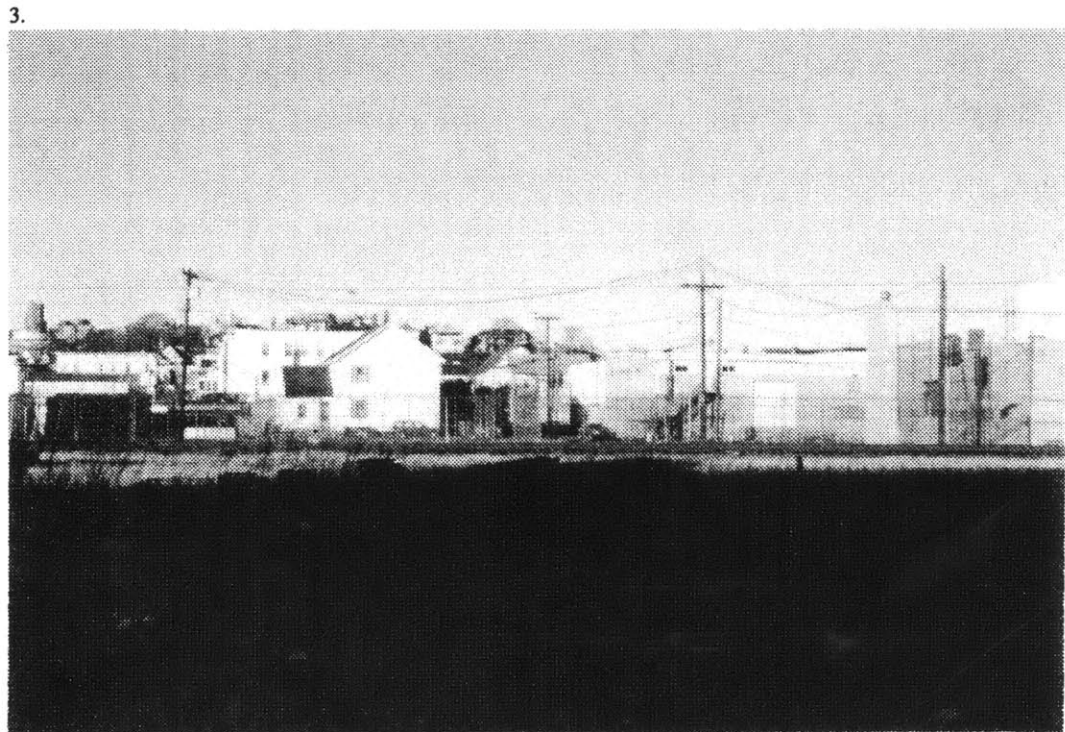
This edge borders the site on the north side from **Charlestown Street** to **Somerville Avenue**. In contrast to the Cambridge side of the site it has the most permeable character. Standing “inside” the site, it is possible to see through the residential area to Somerville Avenue and beyond it to Prospect Hill.



1. Edge 2 diagram

2. Alleyway between warehouses

3. Houses along the tracks



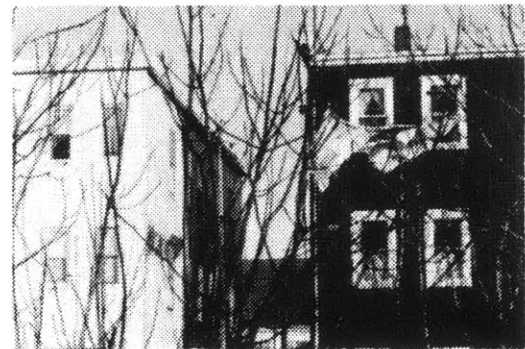
This residential pocket is small but homogeneous. The housing consists of wood frame triple deckers and occasional single family homes typical of many parts of Cambridge and Somerville. It is not interrupted with many commercial buildings.

To the east of this area the edge maintains its penetrable feeling even though the building type changes. The commercial buildings such as Bradlees and Fretters continue this character of penetrability by virtue of their low roof lines and the large amounts of parking space around them. It is possible to see quite a distance to the north east from here and the view of the concrete highway piers, the electric power plant and the smoke stacks in the distance creates another kind of feeling of openness.

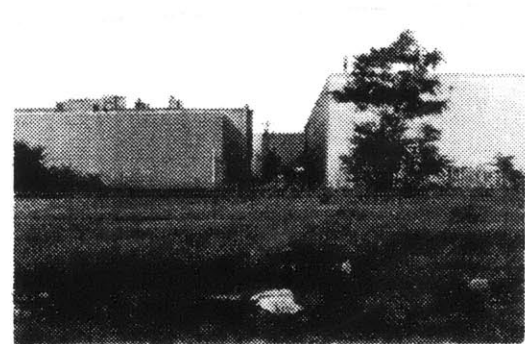
1. Houses with laundry on Linden Street

2. Back side of retail store

1.

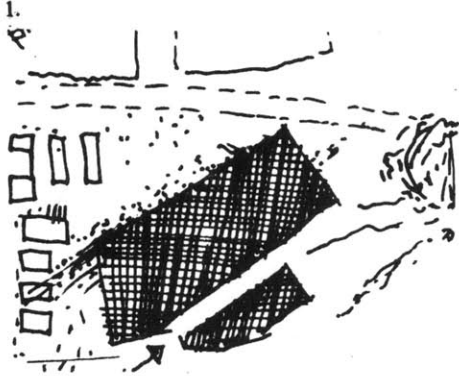


2.



### Edge 3

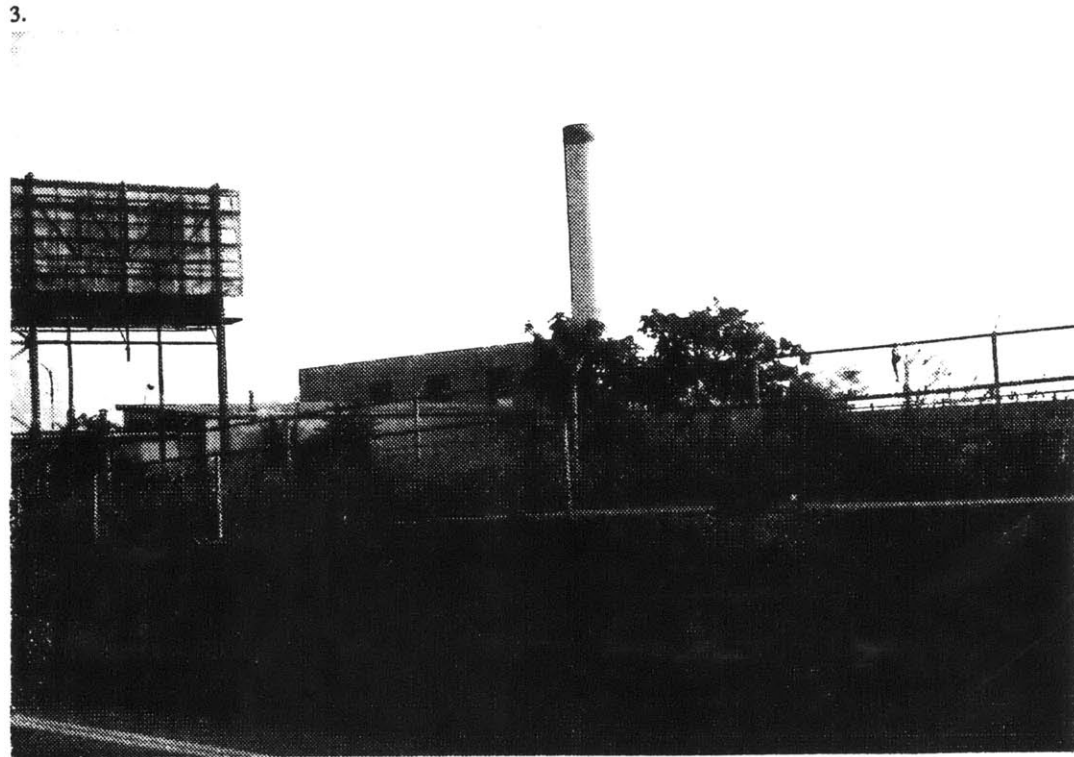
The **Medford Street** edge has the most evenly distributed amounts of residential, and commercial or industrial uses. This area bordering the side that is perpendicular to the direction of the tracks acts as a gate or an end to the site.



1. Edge 3 diagram

2. Railroad viaduct over Medford St.

3. Smokestack beyond Medford St.



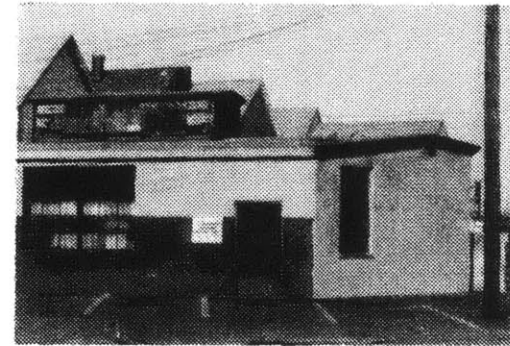
In order to get into or out of the site from Medford Street one has to negotiate the level change from the street and sidewalk to the tracks. It is a climb up and over the tracks to enter the site.

The industrial buildings on this edge of the site are largely brick buildings that are one or two stories in height. They appear to be older than the commercial and industrial buildings on the other edges and they are more densely packed. They are built right up to the street edge with no set backs and the parking and yards associated with them are smaller than those in neighboring areas. The overall feeling of this area is of a very contained, well defined zone that has a balance of uses. It is neither too dense nor too open.

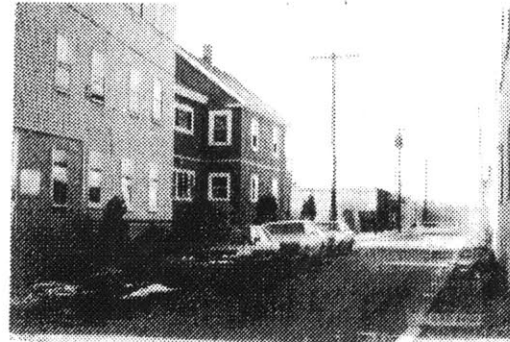
1. Garage next to houses on Ward St.

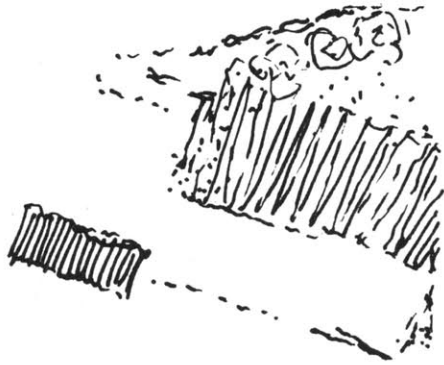
2. Houses along Ward St., looking towards the site

1.



2.



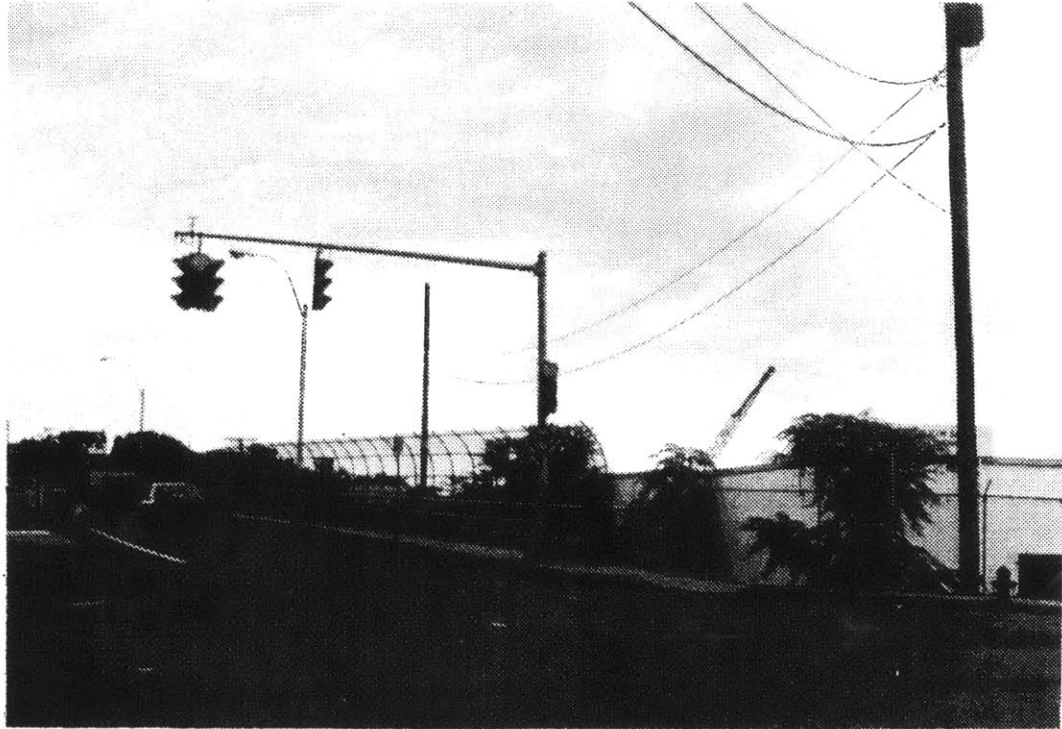


1.

### Edge 4

Prospect Street marks the final edge of the site. It is also perpendicular to the railroad tracks as is the Medford Street edge opposite it, to the east. The height of the Prospect Street bridge physically separates one from the site while allowing the easiest and most comprehensive visual access to it.

2.

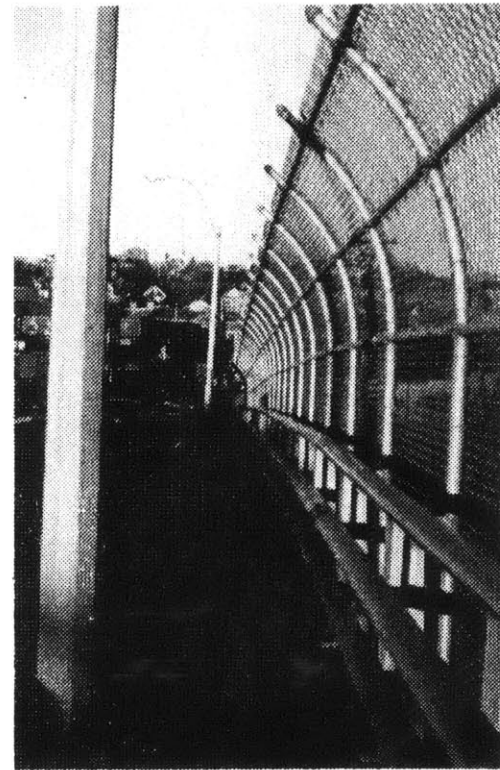


1. Edge 4 diagram

2. The intersection of Prospect St., Concord St., and  
Webster Ave.

The view from the bridge is not only of the full length of the site along the tracks but of the Boston skyline as well. Turning and looking further to the west, it is possible to see the commercial area around Union Square. This edge seems to be the truest edge, being physically separated from both commercial and residential development.

1. Sidewalk on the bridge over the tracks



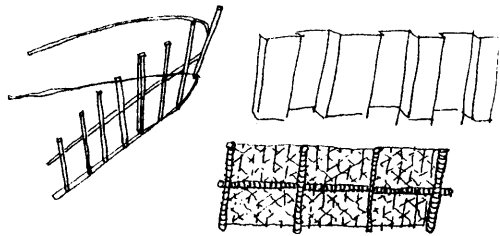
# Inside The Site

Journal Entry September 1991

Inside now. This view, back against brick wall of laundry building. Smell of bleach, detergent, chemicals. Radio coming out of the window. Soft jazz. The Cambridge side more closed. 5 floor warehouse parallel to the tracks. Sounds: sawing, tires on gravel, muffled voices, amplified telephone bell, dog barking, truck brakes. More chain link fence and jersey barriers. Still lots of sky.

Dried Queen Anne's lace, Yarrow, Butter and Eggs, little pink Asters. Sitting on a rusty body of a water heater. Parts of an old gas pump, a sink, tires, rust, bits of things. Conduit, bent guard rail, metal stud. Insect sounds, birds, dark clouds. Long low grey-blue wall across the tracks. Weed trees too. A boy on a BMX bicycle riding on the other side. A small boy crossing the tracks as I arrive. Nonchalant, at the same time purposeful. Dampness carries the smells of the flowers and grasses with it. Guys at the warehouse are outside on coffee break. Mechanical sounds of Royal White Laundry non stop. Clicking and Clacking.

1. Process drawing



The long open space, looking west along the mound





## Attitude Towards The Site

The qualities of the place allow for otherness, for stepping outside of oneself and one's regular routine. They allow for a view out, provide containment, protection, space for solitude and a reference back to the activity and everyday life of the city.

The question is: what are the ingredients that create this quality of place? Features that combine to give the place its essential character are: **tracks, the mound, sky, junk, weeds, building, and fences.** There are many ways that these ingredients may be seen and many levels at which they can be appreciated.

1. People crossing the tracks, view from the mound



They can be appreciated for the physical definition they give the place, and for their reference to use, history, and social life of the surrounding communities. Identifying and isolating them is necessary in order to reuse them and recombine them in vital ways, to give new design interventions continuity with previous patterns.

## Tracks

The railroad tracks run through the entire site and beyond it. They are the largest human intervention on the site. The size of the open space is determined by the existence of a side yard. The rail line has more than a dozen tracks that come off the through line.

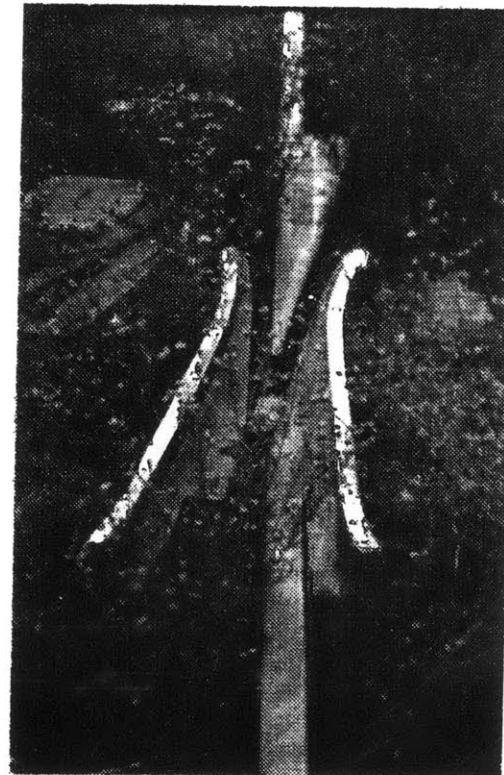
1.



1. A "desire line" worn in by people crossing the tracks

2. A disused switch

2.



The orientation of the buildings along the tracks is determined by these rails. It allowed for ease in loading and unloading of materials for industry. The tracks are critical in forming the site's closed ends. At Prospect Street traffic crosses above the tracks, and at Medford Street the trains move above the road.

1. Weeds growing along an abandoned siding



The trains now on this line are commuter trains that run through Porter Square to Fitchburg. Many of the rails in the side yard have been obliterated completely. Some are just visible through the overgrown grasses.

The trains no longer load or unload here. Still the trains that pass on their scheduled runs to Concord and Fitchburg mark the passage of the day. They recall an era when more goods moved by train than by truck. They make a connection both to other communities beyond Somerville, and to the development of this area which once attracted industries as diverse as brick making, meat processing, ice cream making, and shoe manufacturing. The tracks create continuity with the larger world.

## The Mound

The mound is the second most prominent feature on the site. It is a great green thing that appears like the profile of a beached whale. Although there are buildings that surpass it in size, they border the site. The mound exists clearly within the site. It rises twenty-five feet and runs more than two hundred feet along the side of the tracks. It is covered with grass, several small trees-of-heaven grow on top of it.

1.



1. The Mound

2. Mound & Figure

2.



The narrow sides of the mound are steep. Rubble and debris are visible at its edges. The long sides offer the possibility of climbing to the top. It is a mysterious thing, at first glance something natural, at second glance clearly the product of humankind, rubble dumped by the side of the tracks, abandoned and overtaken by “nature”.

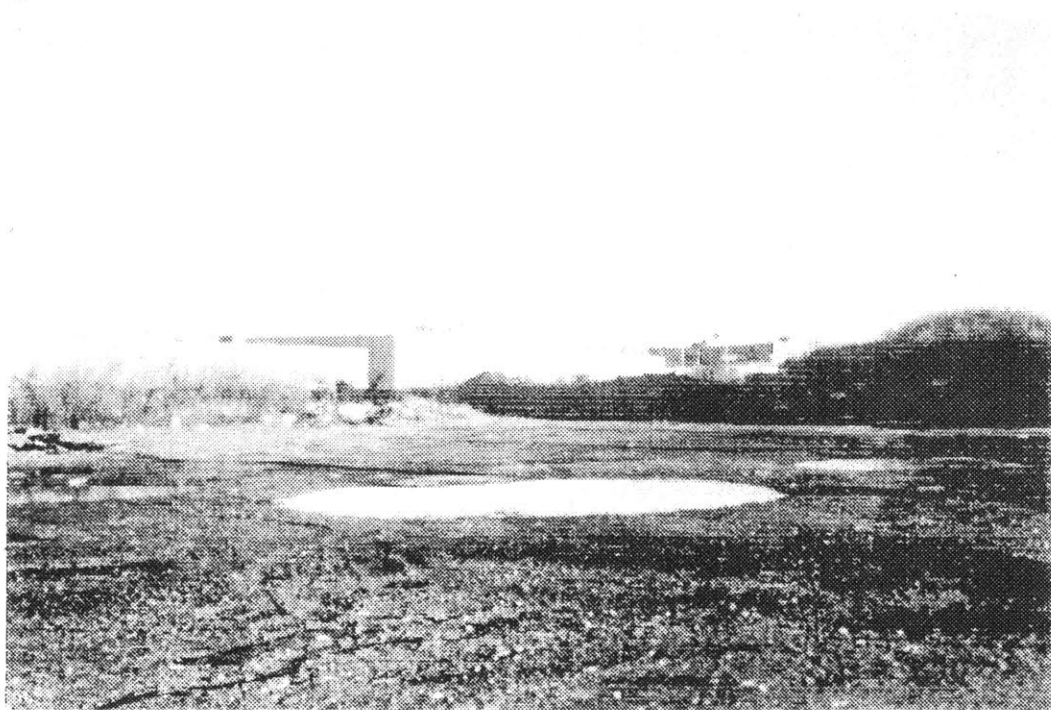
The view from the top of the mound is of the full length of the site. The experience of being on top of it is one of surprise. This strange bit of “nature” provides a spot within this abandoned rail yard to survey everything, yet be separate from it.

There are the usual signs of hanging out there: soda cans, and empty cigarette packs. There are rocks to sit on, places to sit and talk to pals. It is different from the bench in the park, the school yard, or along the river. Its separateness and uncontrolled character make it appealing. The effort needed to get to it is essential in defining its character. Can these qualities be incorporated into new design work without seeming strained or stilted?

## Sky

The presence of this much sky in a dense urban area is a gift. The frenetic pace of urban life can be relieved by having places outside the home to go and get away, to catch one's breath. Weather, time, and seasons can be seen in changes in the sky.

1.

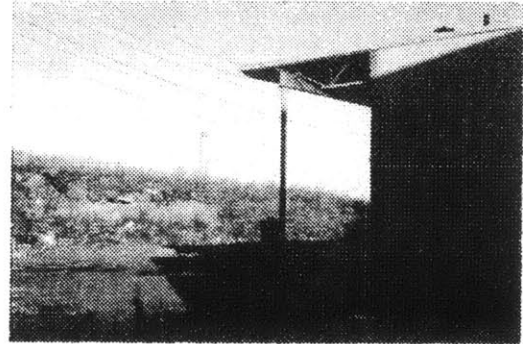


1. Puddle reflecting the sky

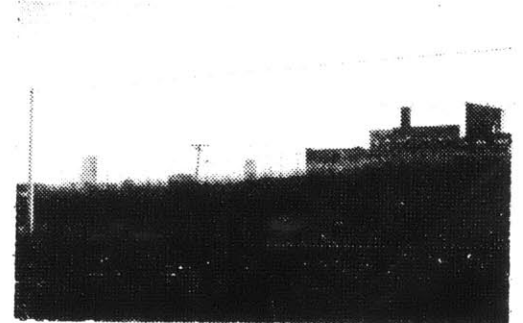
2. Smokestack and loading dock frame the sky

3. Buildings silhouetted against the sky

2.



3.

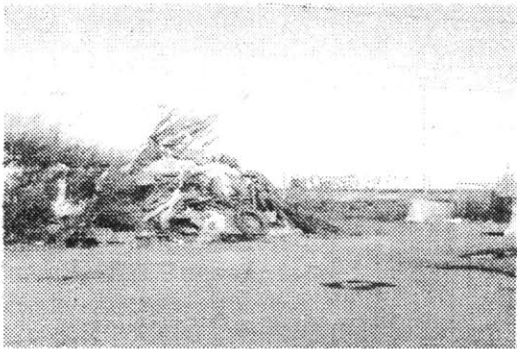


## Junk

Can there be possibly be such a thing as good junk? The lack of responsibility for or claim to this site has created a situation where there has been dumping of debris that no one has any use for. However, the junk men with their trade in used materials, and the use of these same materials in buildings and fences, serve to remind us that we can be resourceful and respectful about our use of resources. The construction materials that are stacked around the site often define smaller places within the site to sit. Scores of identical pieces of concrete or sections of track and railroad ties offer yet another opportunity to appreciate banal objects and step outside of the everyday way thinking and seeing.

1. Illegally dumped garbage
2. Graffiti on stacked sections of rails
3. Recyclable steel castings

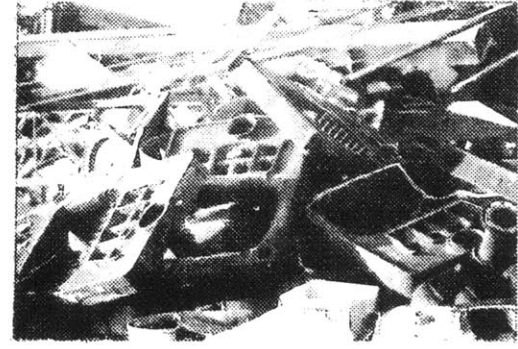
1.



2.



3.



## Weeds

The plants that grow in empty lots, that sprout out of cracks in the sidewalk are the same plants that are picked, pressed in books, and identified on trips to the country. The softness of the grasses and the colors and variety of the wild flowers that are found in odd lots in the city are a surprise.

1.



1. Wild flowers and rails

2. Weed trees in an empty lot

2.





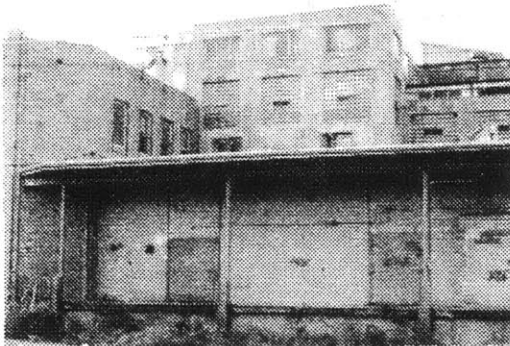
## Building

One building exemplifies the qualities of this site. The diversity of materials and the additive form of the Research Foods building give it an enviable vitality. The materials used in this building are modest and used in an unpretentious way. The form and use of the materials, though sometimes very active and oddly juxtaposed, seems natural. Much of the building is a light colored brick. It is combined with concrete block, corrugated metal, and in some places clapboard and plywood. The diversity is exciting. It remains sensible. One can determine from the use of these materials, the massing of the different parts of the building, and the kinds of windows used, the kind of task that took place in each part of the building. Office, processing, packing and loading functions are evident from looking at the building. The building offers a lot more to the neighborhood than much current industrial development.

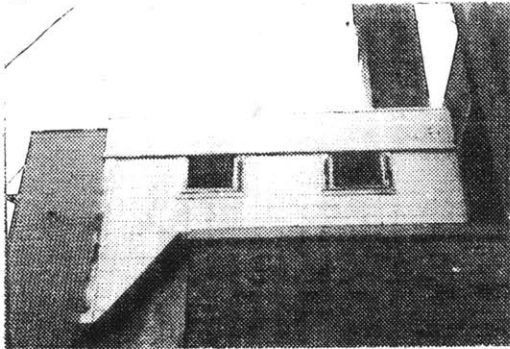
1. Loading dock of Research Foods

2. Concrete block, metal siding

1.

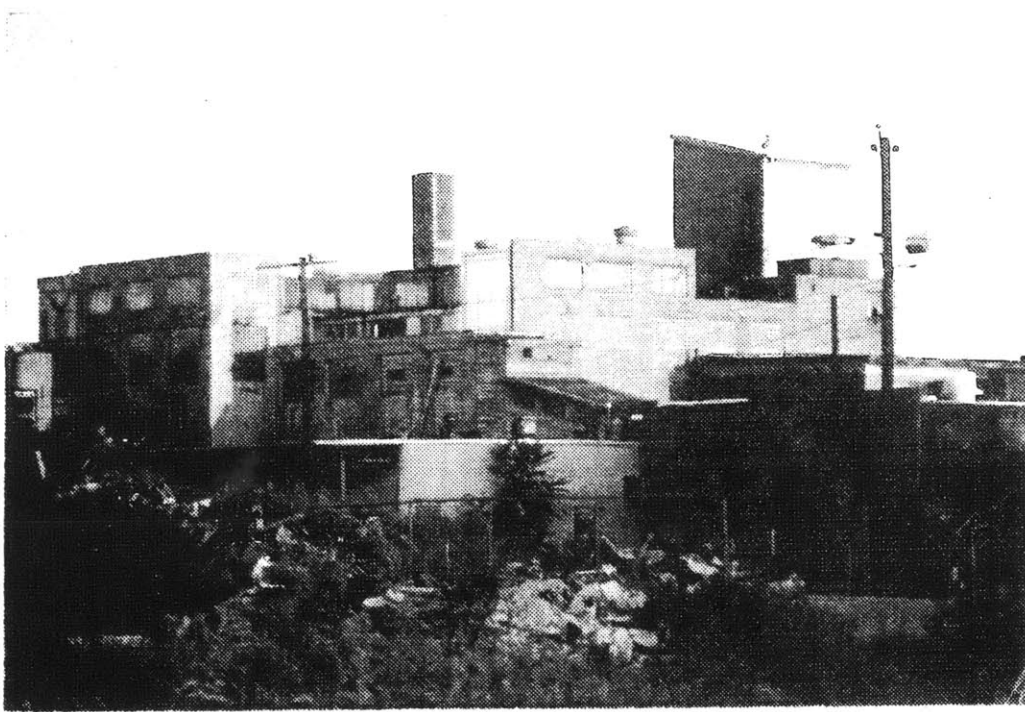


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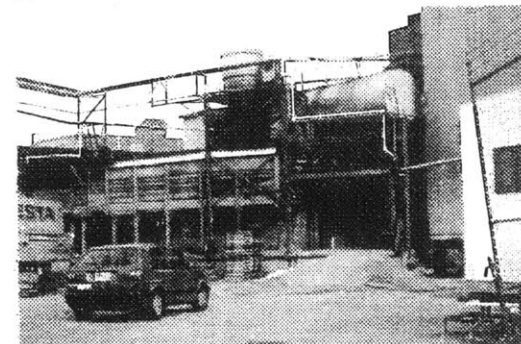


Other buildings in the vicinity of the site also have these characteristics, often they are in poor condition. I do not necessarily advocate renovating them, but lessons should be taken from them when designing for this type of site.

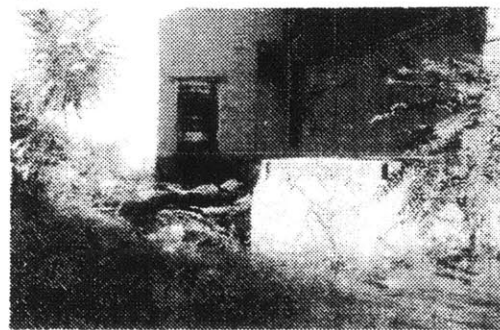
1.



- 1. The building, additive form
- 2. Machinery at the back of the building
- 3. Abandoned entryway, a shady spot
- 2.



3.



## Fences

The fences around the site serve several purposes, to control access to and from businesses, and to hide “ugly” materials. They may or may not be directly associated with a building. The chain link fences that most often control access to buildings and yards allow visual connection to the surrounding site. The opaque fences, often reused metal panels shoved into the ground, sometimes have beautiful surfaces, either from weathering, or from a previous use. These two predominant fencing systems have variants and combinations. In some places the opaque panels are pulled apart just enough to peak through them to see what sort of “ugliness” they hide.

1. Cloud, tree, fence

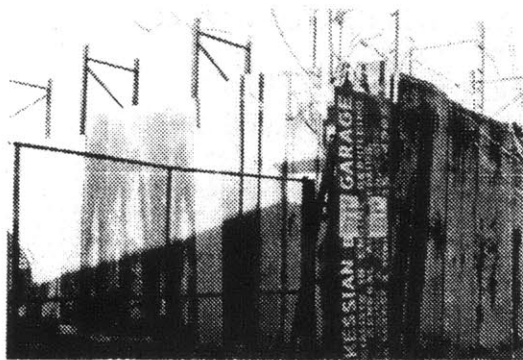
2. Corrugated steel and signs reused as fences

3. Fences diagram

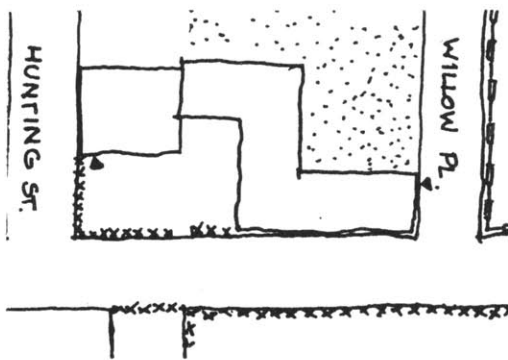
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2.



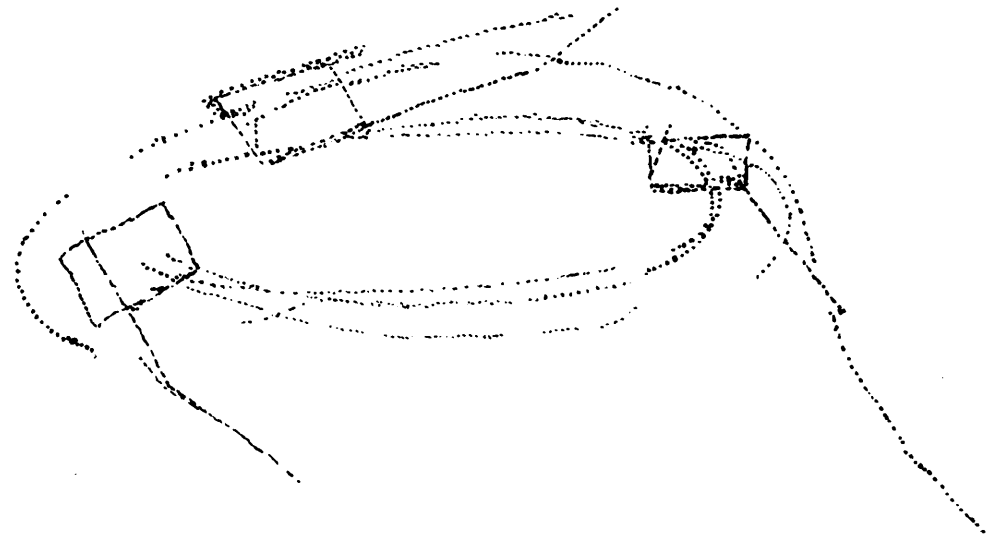
3.



## Summary

The features that I have detailed here are the primary ingredients that create an environment which is both active and restful at the same time. The openness of the area of the tracks and the "natural" components of the landscape give it the qualities that allow for rest and reflection. The buildings and their associated living and working activities give it urban energy. The combination of these two characteristics, and the recognition of their interdependency is what I was striving towards in my design projection for this area.

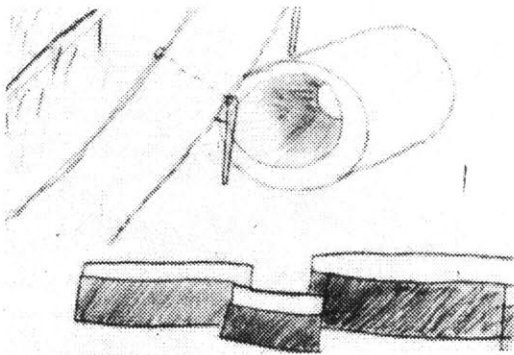
1. Process drawing

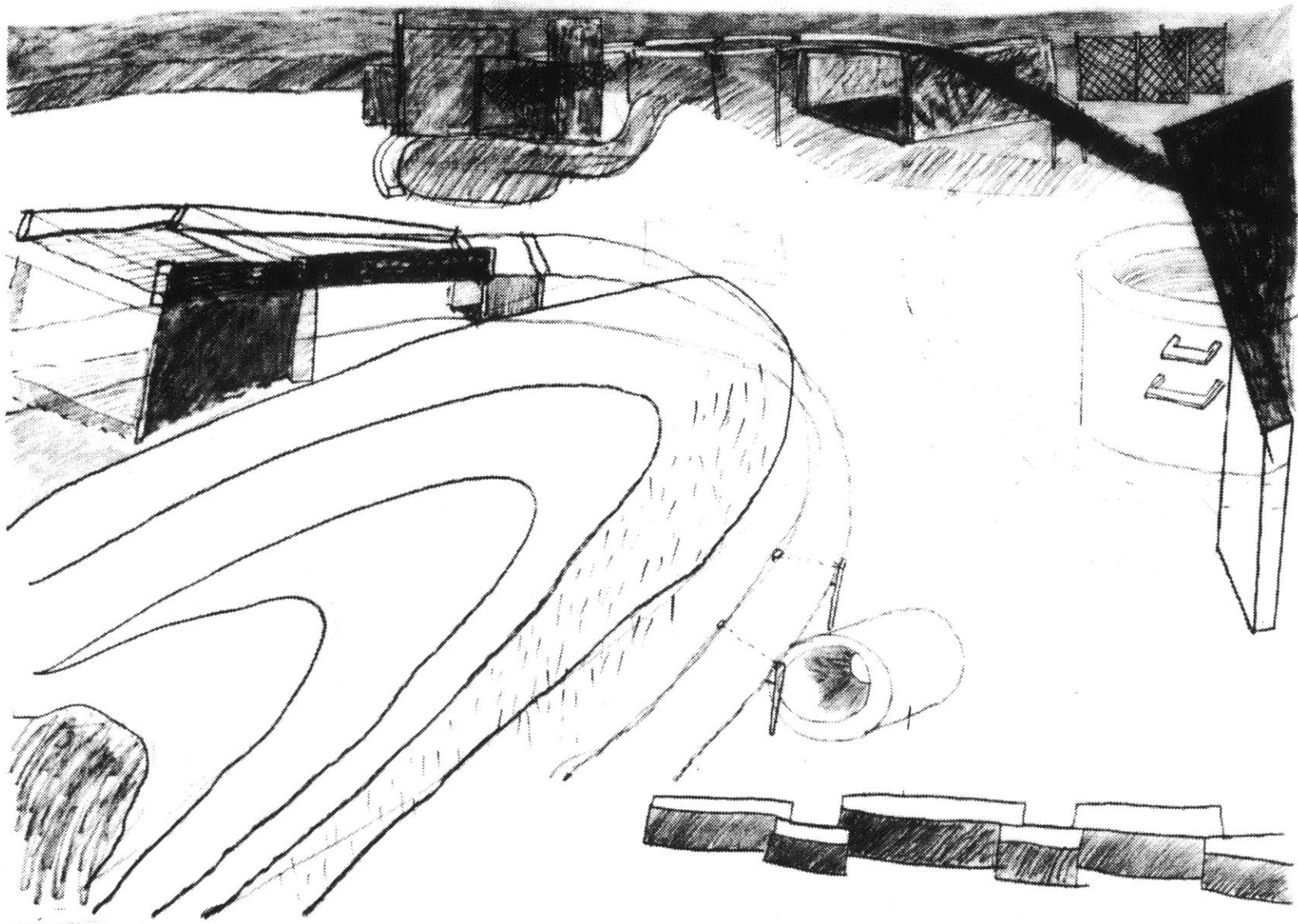


# Landscape Drawing 5

## *“Paths And Walls”*

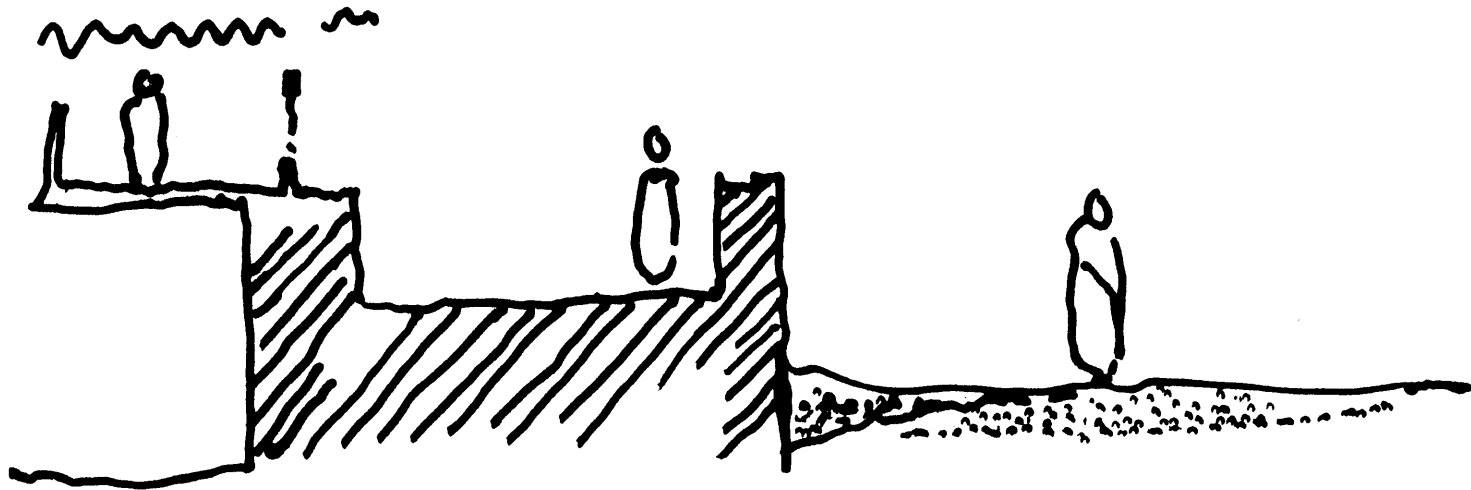
This drawing became an exploration of the possibilities for the outdoor bicycle realm, a place of exchange between the architectural world of concrete walls and frames and the world of the rising grass covered mound, scraggly trees, wild flowers and the railroad tracks. The building is left behind and the mound is flattened out in the lower left hand corner of the drawing. Precast concrete pieces of sewer pipe and box culvert litter the landscape. A ramp raised on a steel frame encircles the mound, flies over the box culvert and disappears behind a wall. There are various stopping places here: a low wall out in the open, the top of a concrete cylinder, in front of the concrete wall under a covering, hidden inside the box culvert under a ramp. Then there are places to bicycle, on the ground and above it, on dirt, on smooth concrete, on “board walks” around the mound. There are things to bicycle through, to bicycle behind, and to jump over.







# Part Six Program





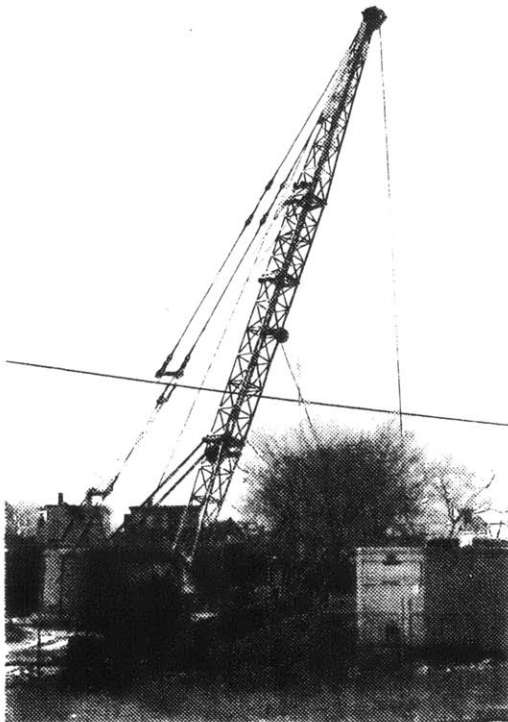
# Program

## Attitude Toward The Program

This thesis proposes that good design begins with a thorough understanding of the character of the place in which one wishes to work. That understanding comes from engagement with the place and the use of diverse tools to get at what the essence of the place is. Each place is different. Interpretations and analyses of a place will also be different and should reflect the attitudes of a designer without overshadowing the sense of the place. Fixed physical attributes are only one part of the equation needed to describe the essence of a place, the other key part is a dynamic ingredient, human beings. The needs, desires, and aspirations of the people in the community are critical.

There can be more than one match of use with a building or an environment. The concern here was to chose a program that would have an indoor and outdoor component to encourage the use of the area at different times of the day and in different ways.

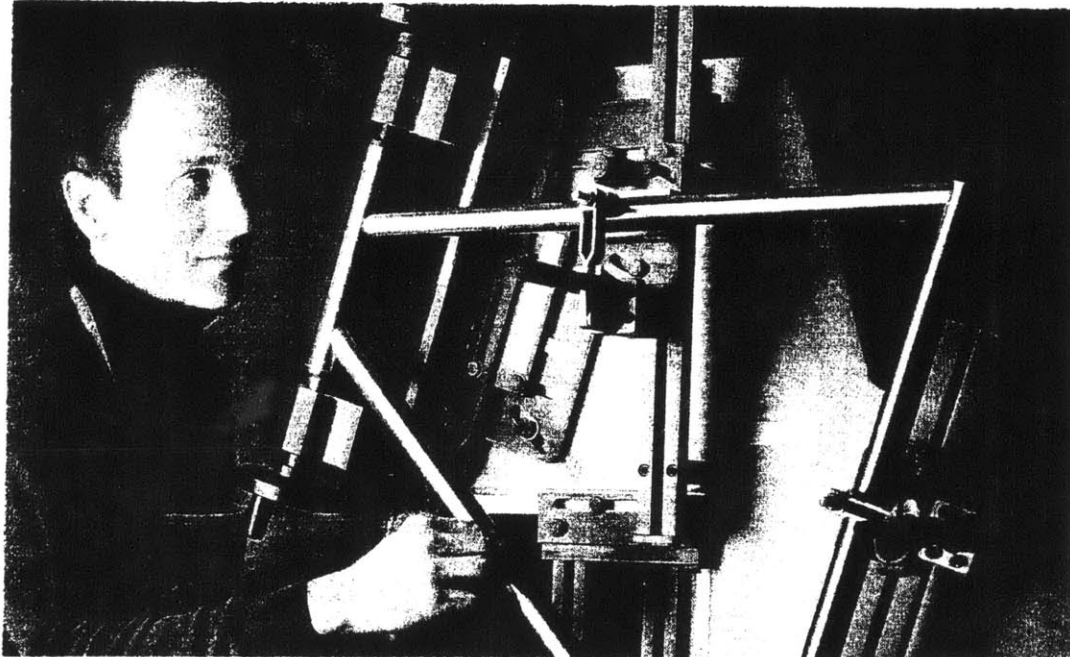
1. Crane at junk yard



## Selecting The Program

The program options that I considered had a range of built components. One possibility was to propose a "park", another was to propose something with changeable built elements or temporary enclosure such as a farmers market, and a third was to propose a factory or work place that was consistent with the existing fabric. The third option could have a strong presence in the site but still needed additional components to engage the total site.

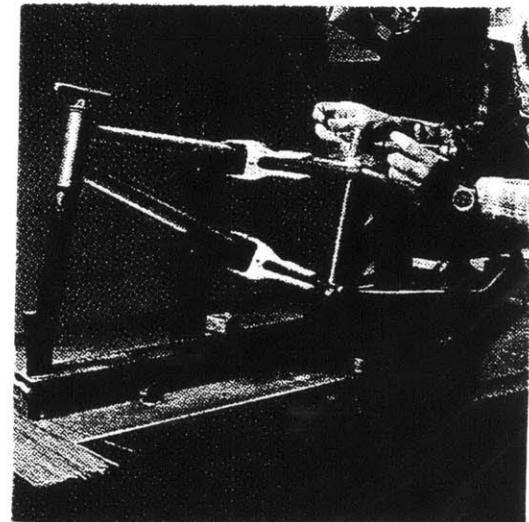
1.



1. Bicycle craftsman

2. Tack welding

2.



The bicycle frame shop combined with a community bicycle workshop where bicycle mechanics and maintenance are taught, offered the opportunity for people to understand first hand how something that they use is made. This fosters an awareness of the interconnectedness of peoples lives, and a respect for others. The final component in this program is the track and ramp which provides an area for bicycling off the city streets.

1. Polishing wheel



# **Program Outline**

## **Bicycle Frame Shop**

### **Ground Level**

#### **Work Stations**

**Frame Building**

**Frame Finishing**

#### **Spray Booth**

#### **Shipping and Recieving**

#### **Loading Dock**

#### **Locker Room**

#### **Rest Rooms**

#### **Reception Area**

### **Second Level**

#### **Lunch Room**

#### **Lounge**

#### **Roof Deck**

## **Community Bicycle Center**

### **Ground Level**

#### **Retail Store**

**Show Room**

**Storage**

#### **Class Rooms/Meeting Rooms**

#### **Dining Area**

#### **Kitchen**

#### **Rest Rooms**

#### **Teaching Work Stations**

### **Second Level**

#### **Offices**

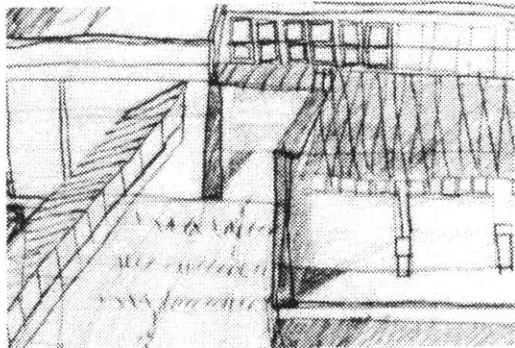
#### **Class Rooms**

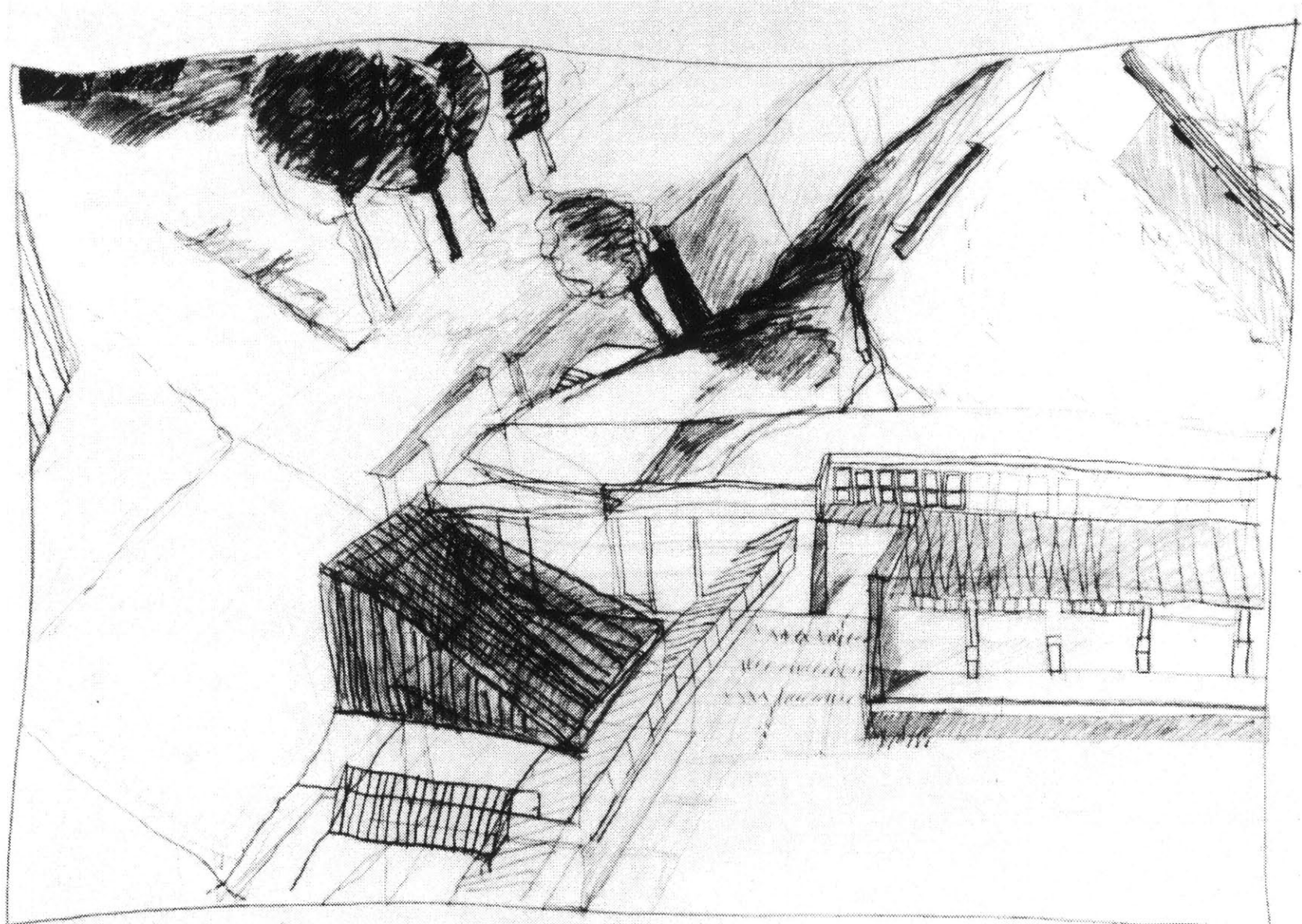
#### **Roof Deck**

# Landscape Drawing 6

## *“Light”*

This drawing, a skewed birds eye perspective, is one of the more conventional and architectural of the drawings. It looks at the approach, arrival, and entry to the building. The view is from above the inner courtyard, looking back toward the neighborhood. It has a single point of view. Moving down the street, along the wall, the opposite side of the street is screened by trees-of-heaven. The concrete wall holds back a mound of earth that rises to the roof of the first building. It is a long low building with a flat roof. At the courtyard side it steps down letting light in along the length of the building. Behind the building inside the concrete wall are hints of the world of ramps. Some are low and concrete, others are wooden and supported by steel frames. Perpendicular to the low building is another building with a shed roof. Together they make a gate to the new realm between the neighborhood and the railroad tracks.

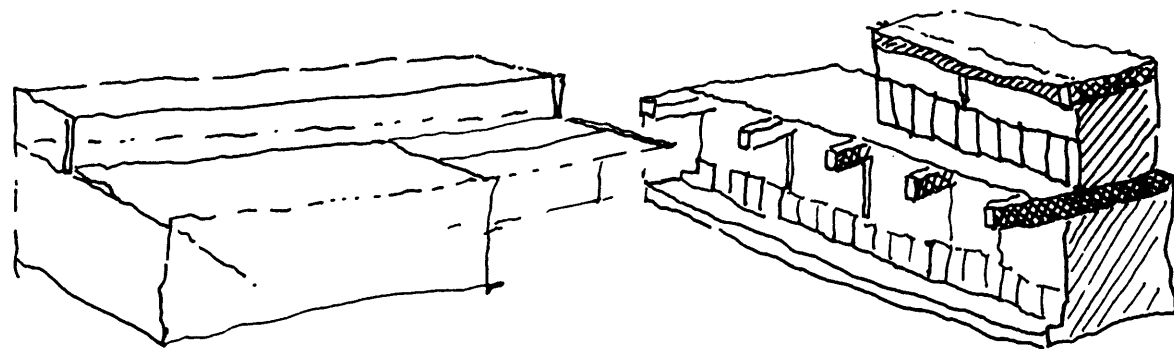




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# Part Seven Design





# Design

## Site Decisions

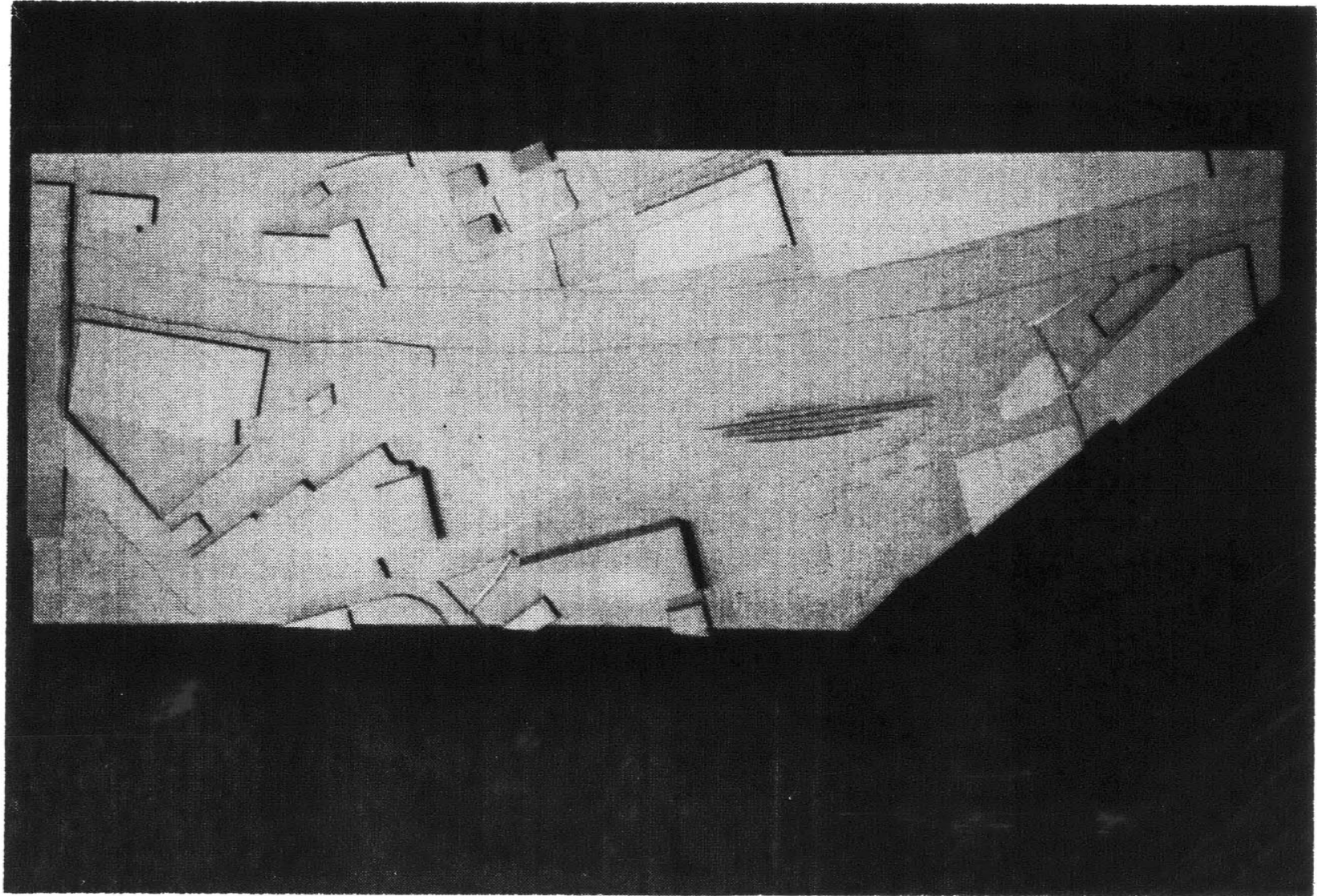
The first consideration necessary to come to terms with this site was where to locate the building program within this very large area. The portion of the site which offered potential buildable space is bounded by Webster and Prospect Streets on one edge, Charlestown Street on the Somerville side of the railroad tracks, the built edge on the Cambridge side of the tracks, and Earle Street on its eastern side.

Some issues bearing on the decision about where to build were: whether the open area by the tracks would be considered the front or the back of the building; how the community would enter the facility; whether the new building would respect the existing street edges; how the new building would relate to the tracks; and how it would relate to the "mound".

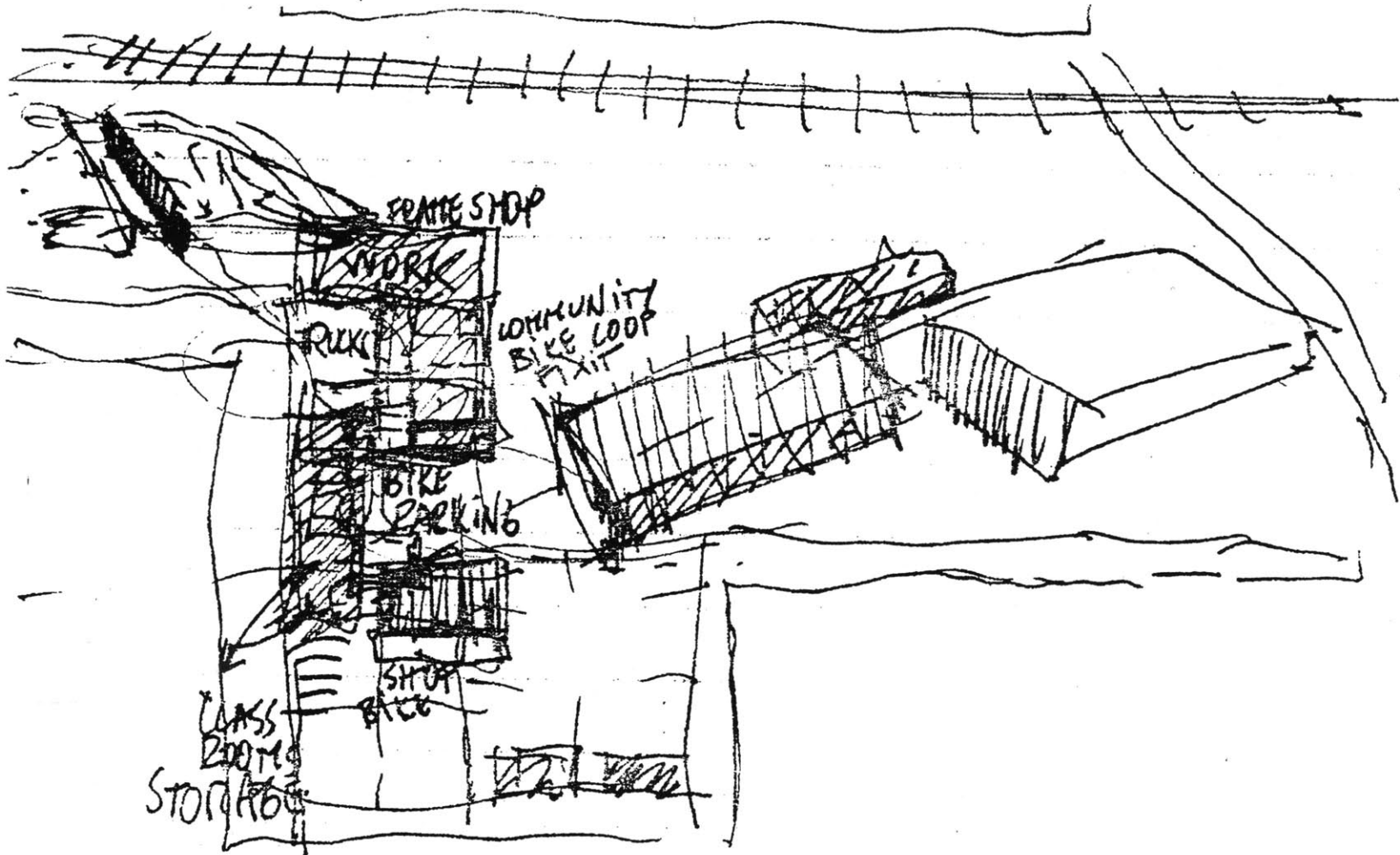
1. Looking down Webster St. at Columbia Auto Parts



1. Site model



1. Process drawing



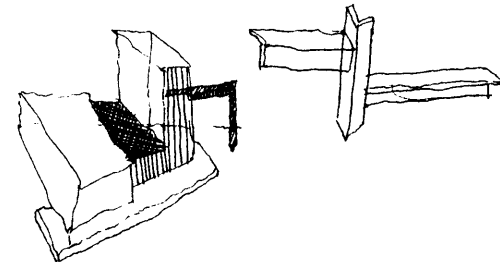
In order to begin to answer these questions I made several design projections. I modeled the entire site at 1:80. The design projections highlight different attributes of the site. I also began to develop an attitude about the program and the relationships between its various components. I concluded that the two major program areas, the factory and the community bicycle workshop, although complementary, should exist in two distinct built pieces and that these two portions could form an exterior courtyard that would build a relationship to the larger landscape and neighborhood.

To model this program relationship on the site I made a series of L-shaped pieces out of sheet brass, and fine steel screen. The dimensions of the pieces were taken from surrounding industrial buildings whose footprints were roughly what was needed for the new program.

1.Process drawing

2.Process drawing

1.



2.

**ATTITUDE:  
THE OPEN SPACE  
IS COLLECTIVE BACK  
YARD.**

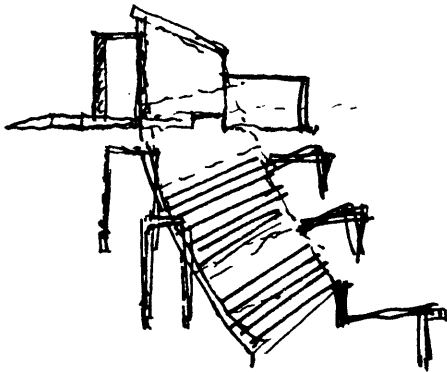
The transparency of the screen, and the partial containment of the L-shaped pieces began to suggest possibilities for what parts of the building might be open or closed, and how they could relate to each other. The metal and the screen also referred to possible material differences that reflect the diversity of building materials of the surrounding neighborhood.

### Option 1

The first pass at organizing the site looked at the lot between Windsor Street and Water Street adjacent to the tracks. This was the location of the Research Foods Inc. building. I was interested in this location in part because of its proximity to Columbia Street. I wanted to reinforce and expand the character and qualities of this street with the new intervention.

There is a physical connection from Windsor Street to Columbia Street here. This location is near the most active edge of the site without opening directly onto either Prospect Street or Webster Street,

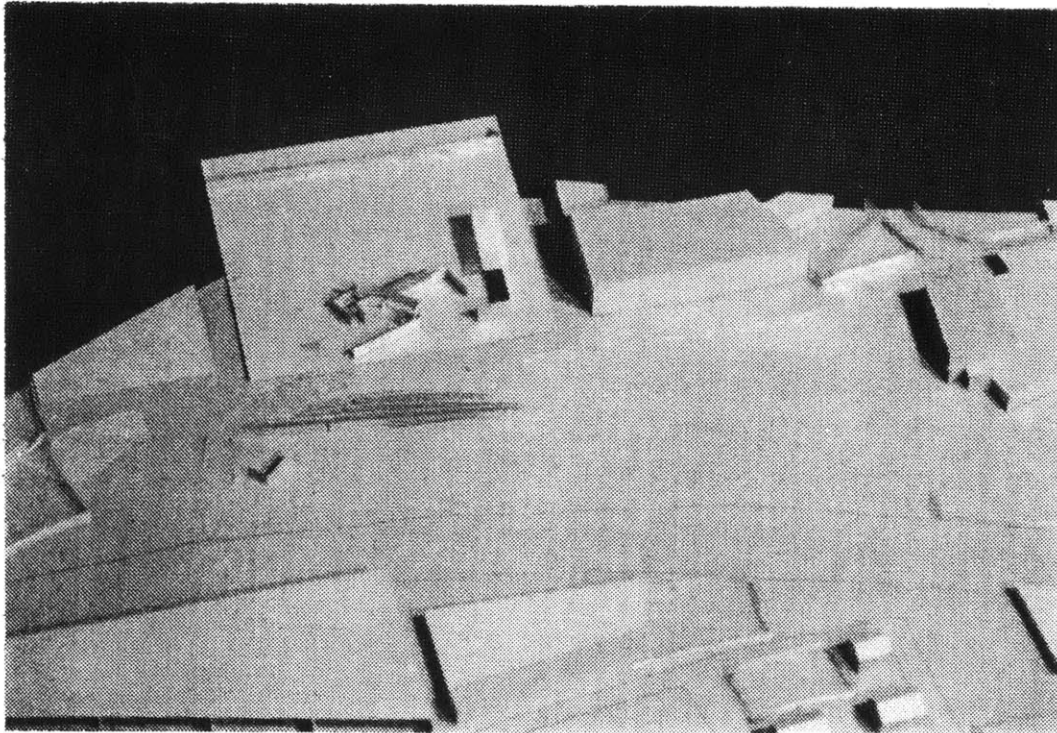
1. Process drawing



and therefore offers an accessible yet protected entrance to the site.

The sketch model builds in two directions: along the Windsor Street edge and in the long direction of the railroad tracks. The arrangement of the individual els creates a small "courtyard" along the track side of the lot.

1. Model for option 1



The angle of the pieces along the tracks reinforces both the informal "crossing" of the tracks and the direction of the tracks in the side yard previously used for loading and unloading materials and manufactured goods. The smaller "L" out on the far side of the mound, on the broadest gestural level, attempts to engage the mound and the open space with the new building intervention.

#### Option 2

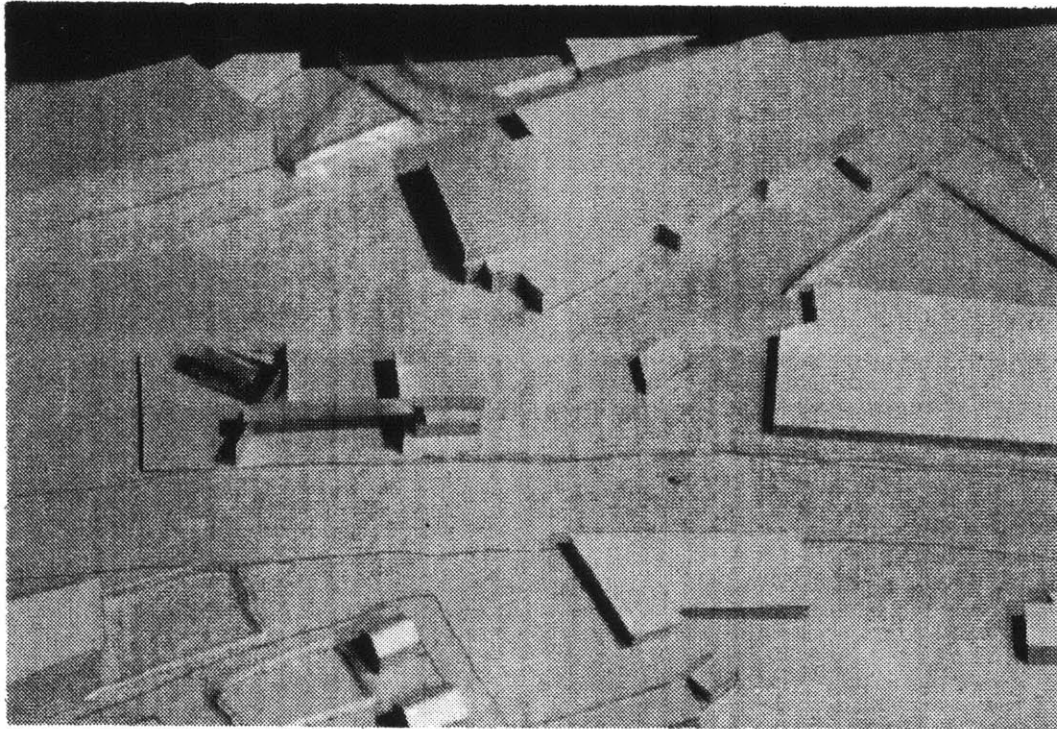
The next pass was an attempt to push beyond my initial inclinations. Central to this thesis is a protective attitude toward this site. One way that I believed that its integrity could be maintained was in selecting a building site that was not on a major road, and so would need to be discovered.

This pass, however, takes the opposite position. The sketch model is located in the open space right next to the railroad tracks. It breaks with the existing building pattern by being in the site, rather than on an existing street where it would reinforce the edges of the open space. The building is entered from Webster Street.

1. Process drawing



In spite of the long distance from Webster Street the building is still more easily accessed and creates more of a front door to the site than the previous pass. The positioning of the building next to the tracks gives a full view of the site to the eastern edge at Medford Street. Within that view is an understanding of the size of the mound that is not apparent otherwise. The nearness to the railroad tracks and to the Somerville side of the tracks further differentiates it from the other options.



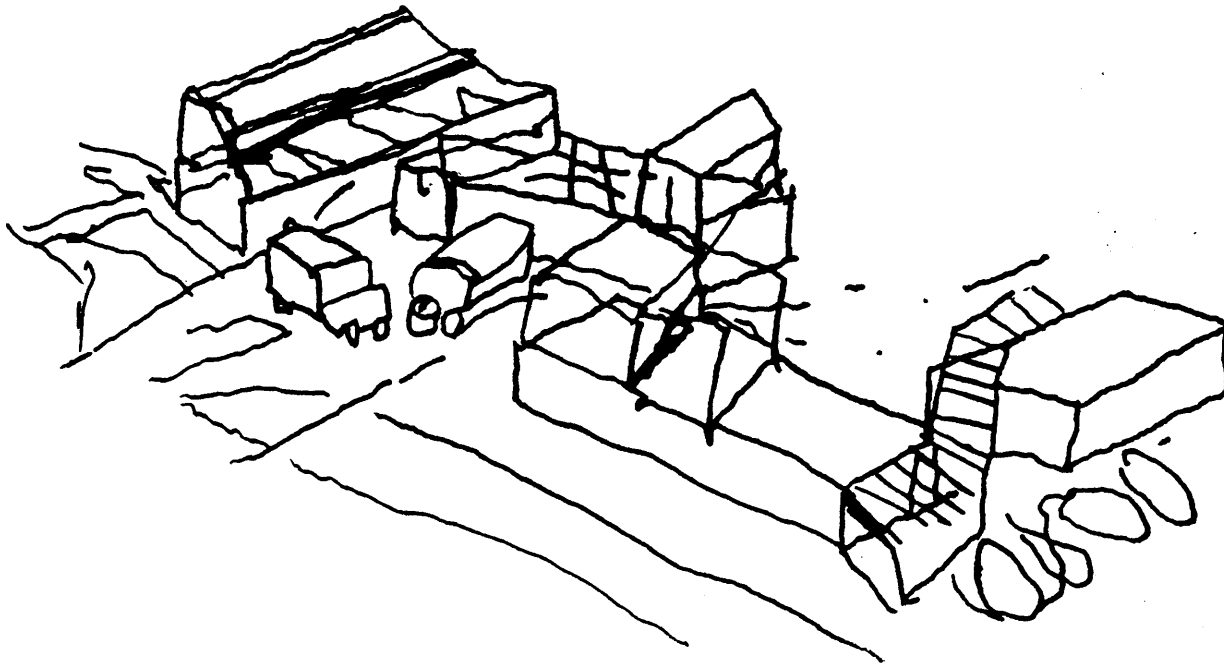
1. Model for option 2



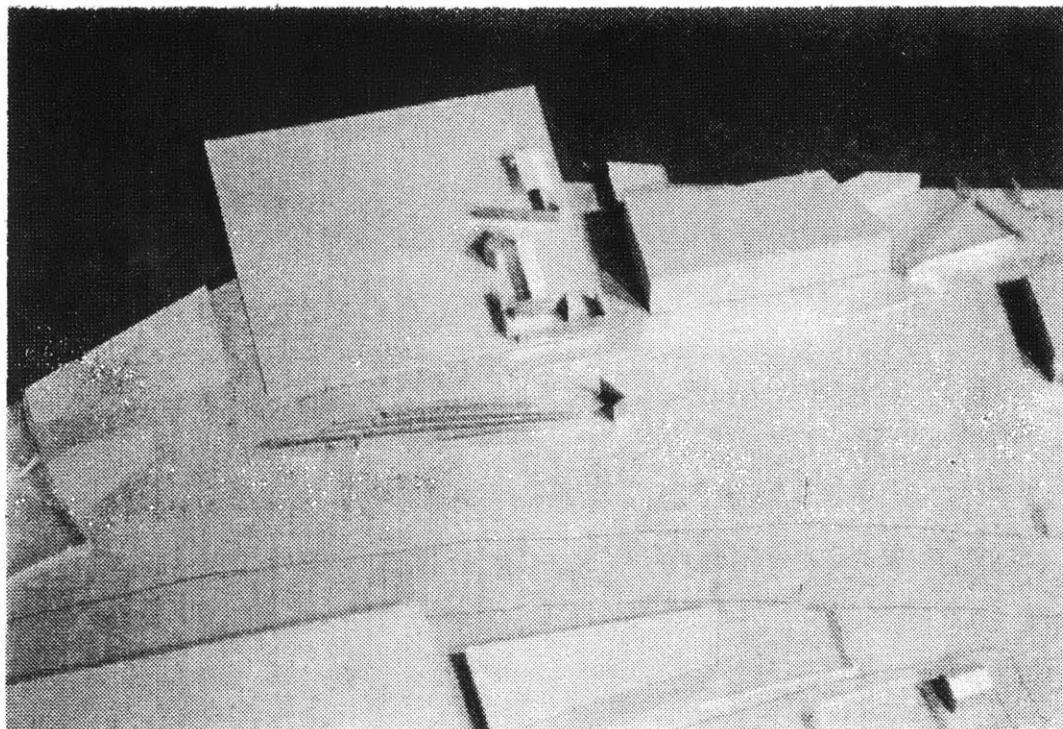
### Option 3

This option returns to the corner of Windsor Street and builds back from the lot line away from the tracks. Its major direction is perpendicular to the tracks. It continues the existing edge as did Option 1, but emphasizes the crossing of the tracks and the relationship to the residential area opposite it. The position on the corner just allows for a view past the mound.

1. Process drawing



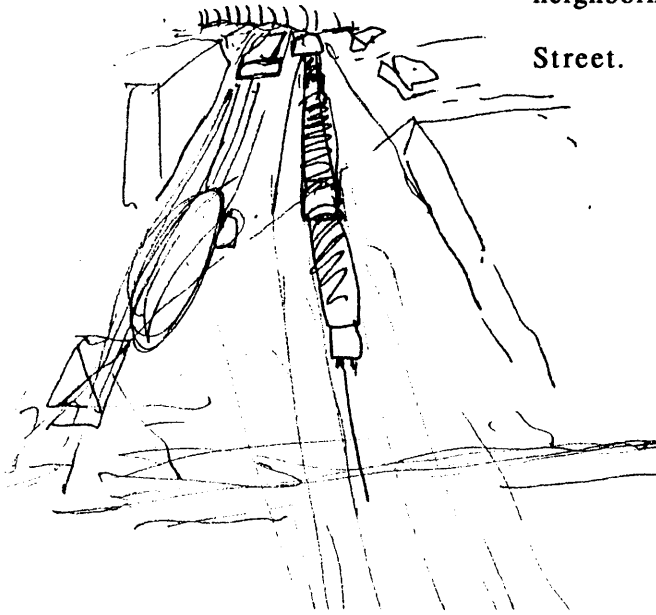
1. Model for option 3



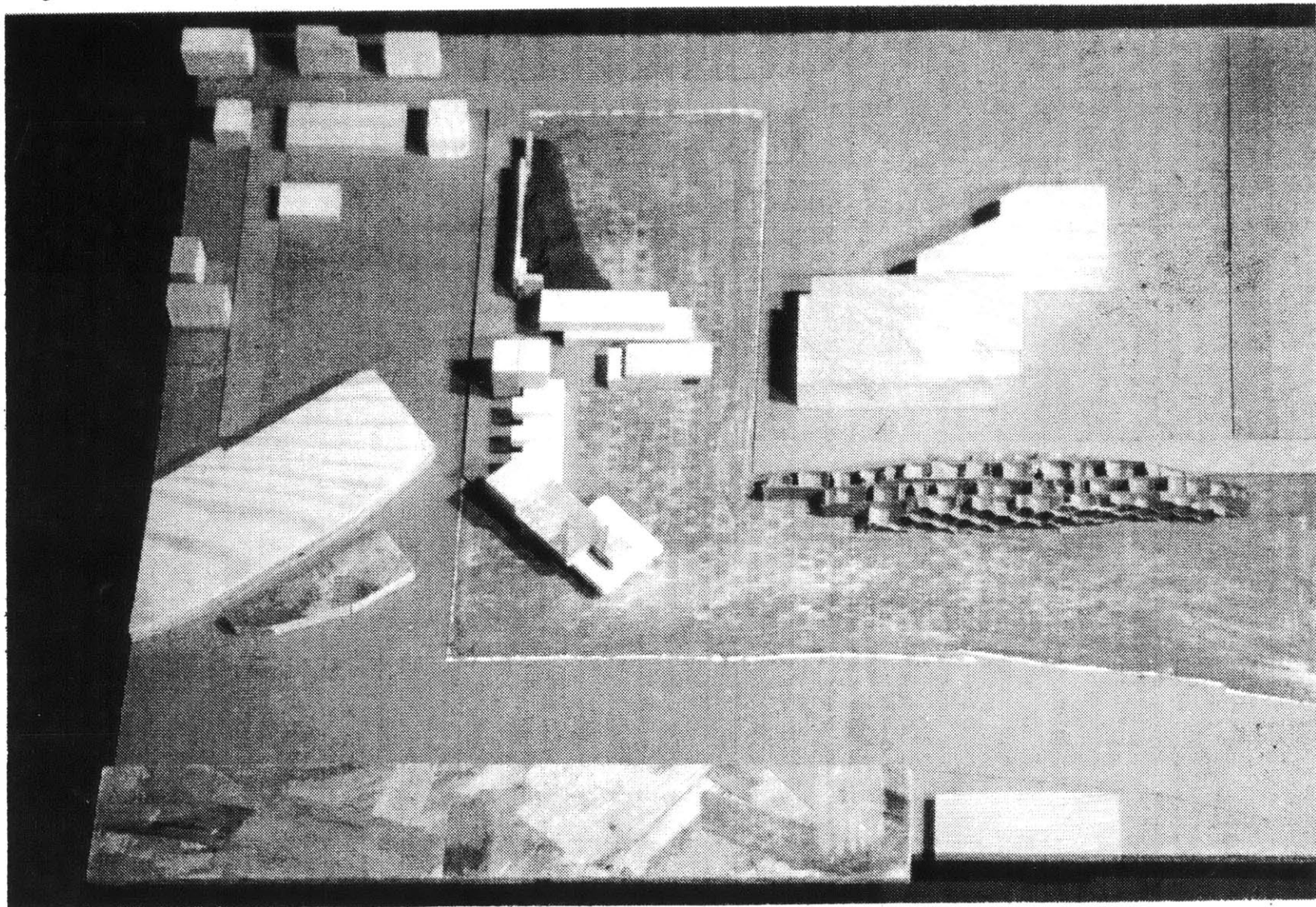
## The Site Solution

The conclusion that I reached was one that incorporated the best attributes of these three passes. I chose to locate the bicycle center building toward the eastern end of the site on the empty lot between Earle Street and Water Street. This site is far enough from the mound to see it, and offers the possibility to engage it. The long view of the entire open site along the railroad tracks toward Prospect Street is available from this area, which is positioned between the residential neighborhood along South Street and the industrial area of Columbia Street.

1. Process drawing

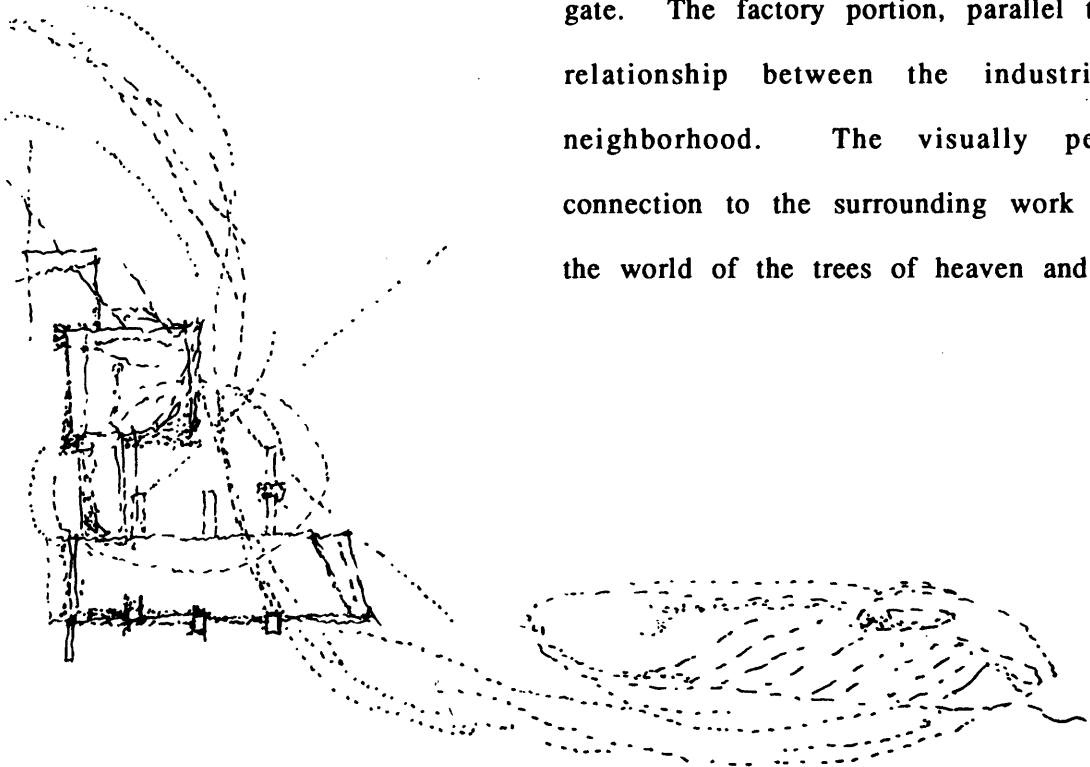


Design for final site on Earle Street

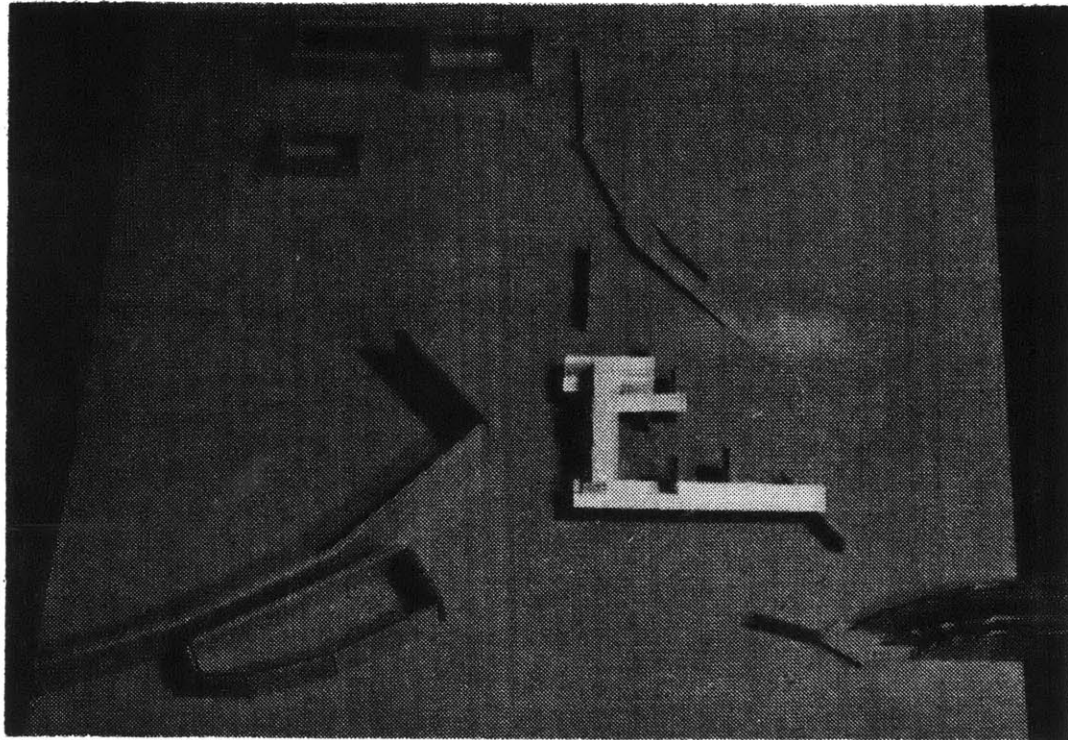


Once I chose this site I made another gestural model. This model at 1:40 continued working with the two program pieces. As in the previous models, they were arranged in an L-shape with a connecting piece to create a shared outdoor territory between them. The protective attitude toward the site remains evident in the use of the factory portion of the program as a filter to the open space. The whole building worked as a gate. The factory portion, parallel to the tracks, maintained the existing relationship between the industrial buildings and the residential neighborhood. The visually permeable factory section allowed connection to the surrounding work world, the world of the trains, and the world of the trees of heaven and tall grass.

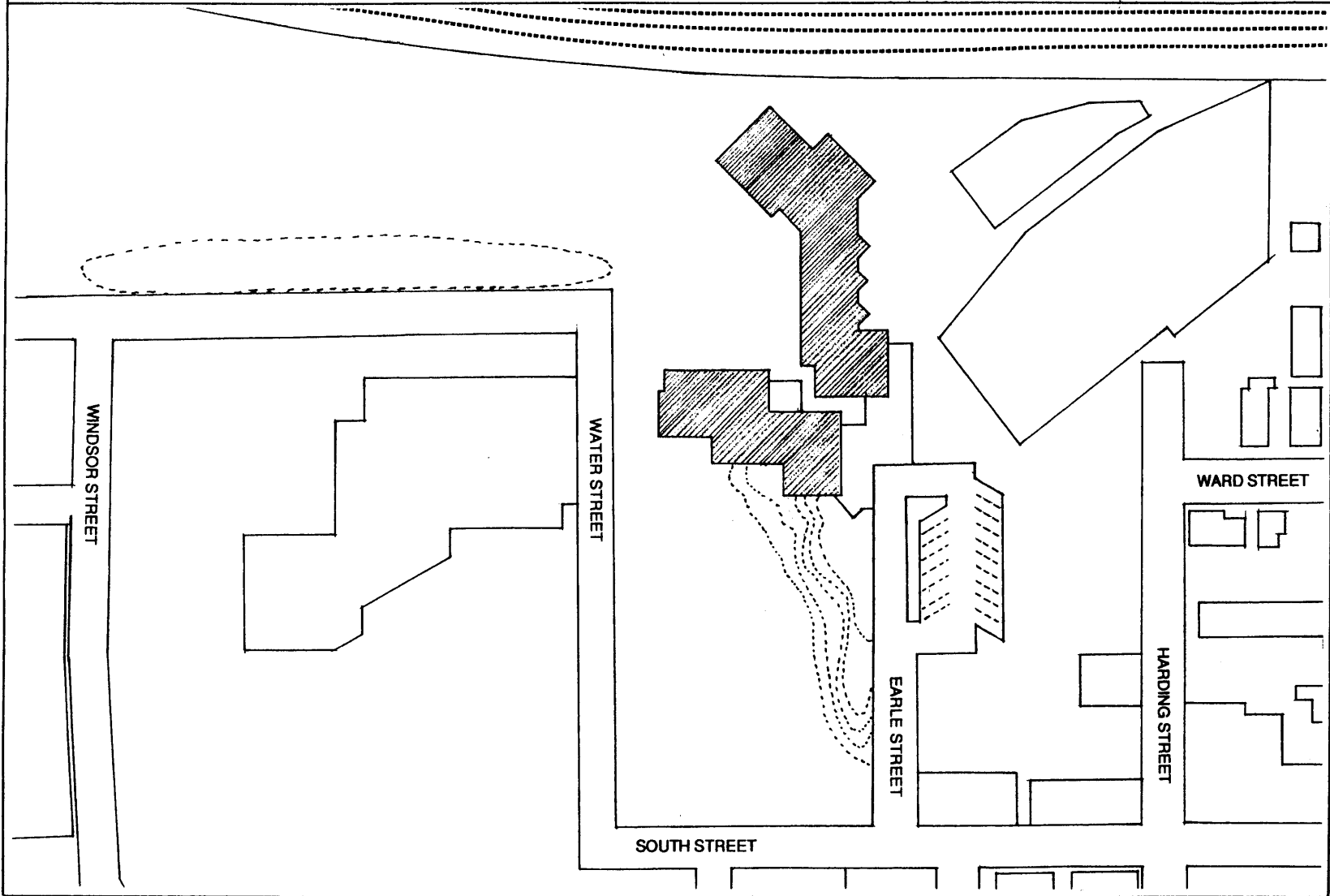
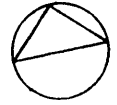
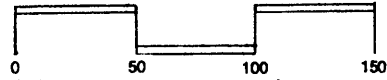
1. Process drawing



1. First sketch model of building organization



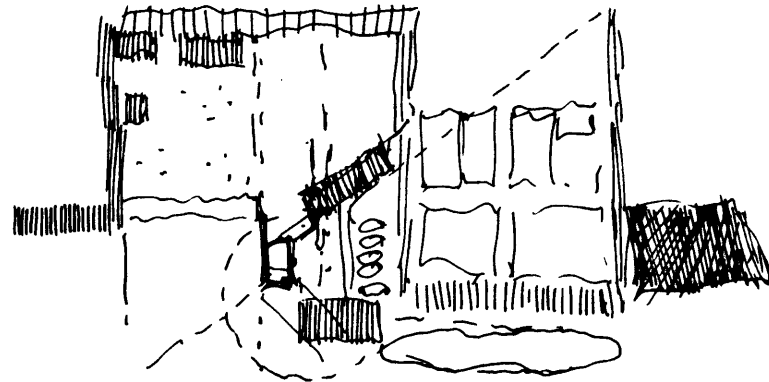
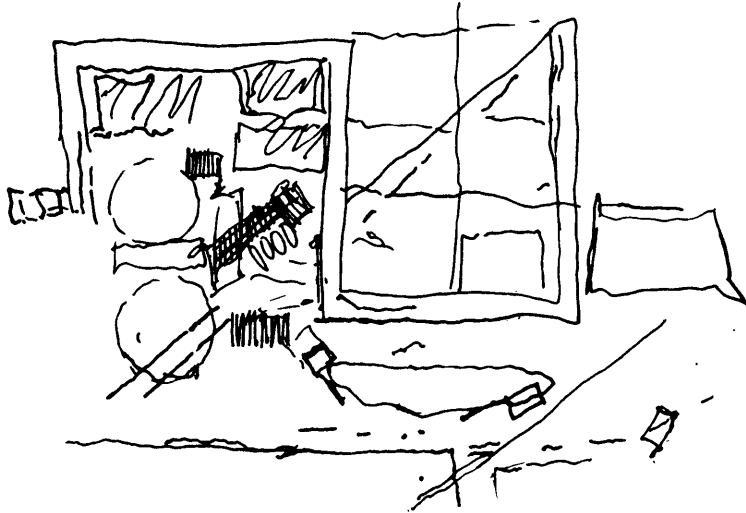
# Site Plan



At this point I began to draw and model at 1/16 inch scale and at 1/8 inch scale. The move to building size decisions made me rethink some of the earlier site decisions and relationships. I reversed the relationship of the major program components by moving the community portion farther into the site and placing the factory closer to the existing community.

This move meant taking a more trusting position. As in the original spirit that I intended, the building still acts as a gate to the site. It serves as an entrance that is open and encourages use of the entire site.

1. Process drawing





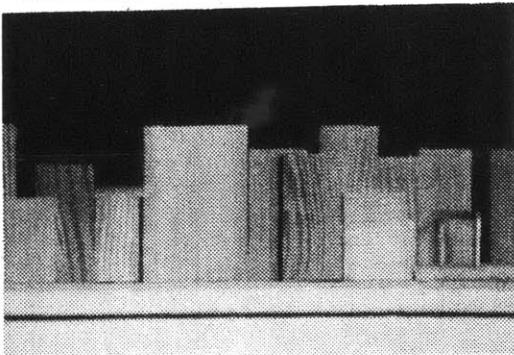
I also returned to another initial concern of making an understanding of a manufacturing process available to the community by placing the bicycle frame shop closer to the residential portion of the neighborhood.

The value of this kind of work environment lies in its use as an educational tool. In providing the opportunity for people to understand how things are made, I hoped to convey or bring about an understanding of the interconnectedness of peoples' lives. The building pieces still work together to form shared outside territory, now as an inlet or resting place off the large open space.

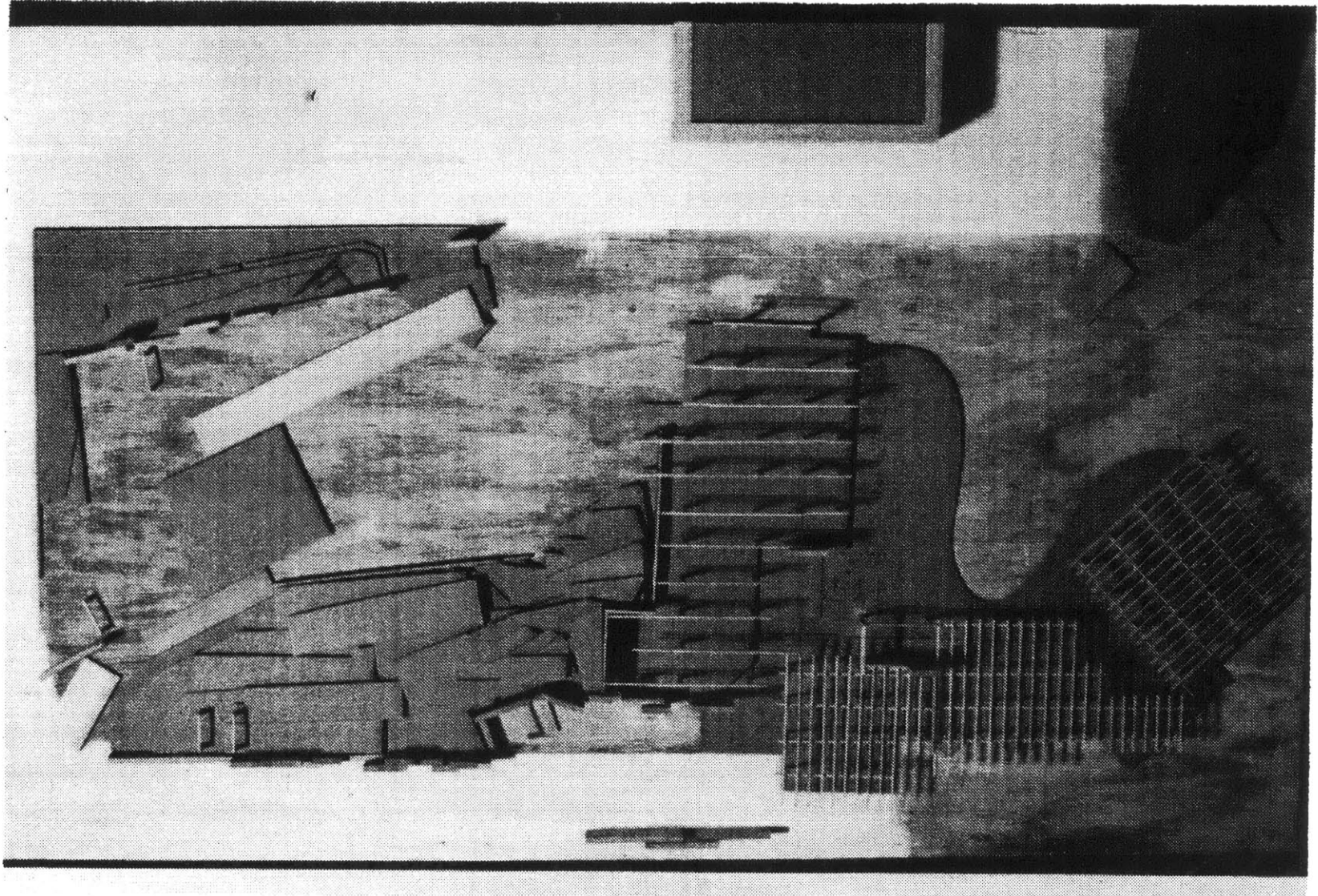
### **The Building**

When working at the building size I made decisions about construction systems and materials. These decisions were based on programmatic concerns, and contextual concerns. The contextual concerns related to existing industrial building materials and forms, and to the landscape. Could I use something of the existing vocabulary while creating a new place that would heighten the qualities of this landscape?

1. Model detail



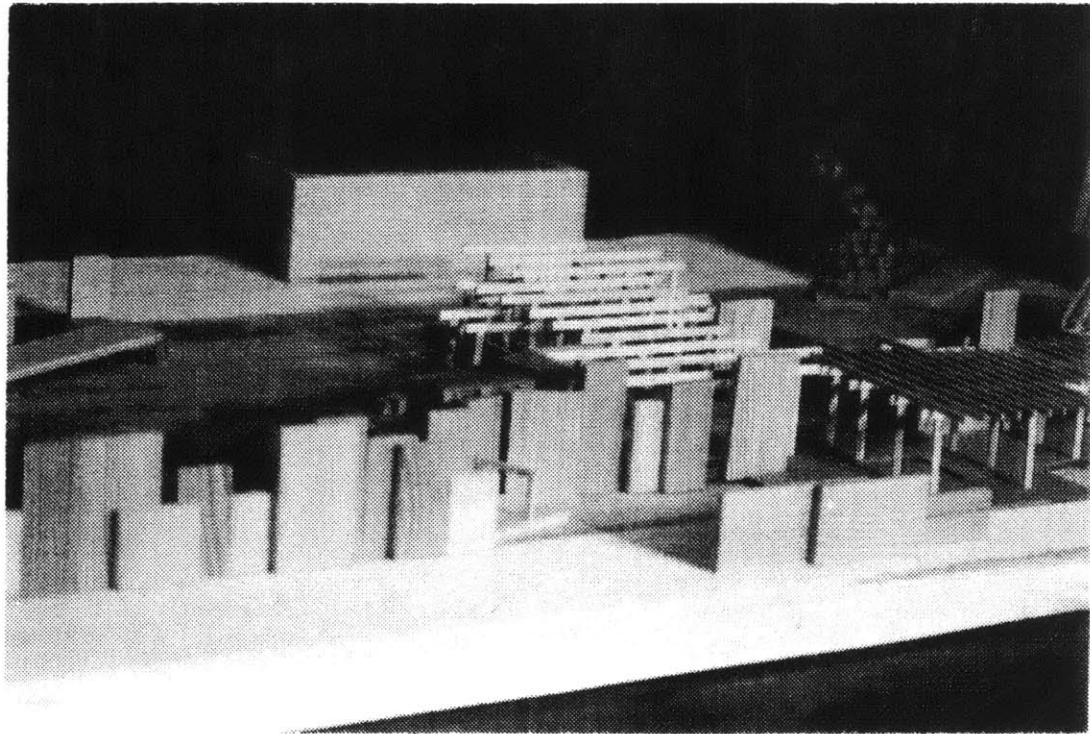
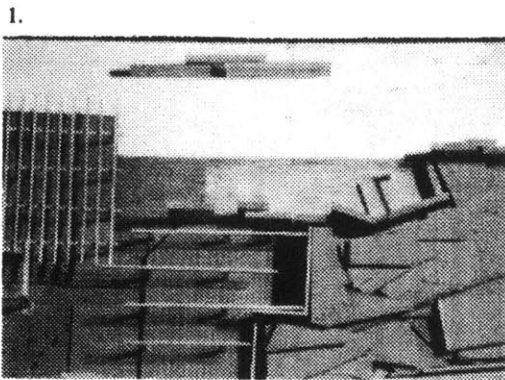
1. 1/8" scale building model



The choice to use concrete frames the way I did came from a desire for a strong and simple system which would use the same elements in both landscape and building. I saw the building and landscape decisions as interdependent. The construction of the concrete wall along Earle Street that moves into the building, breaks up and then reappears again helps to create a profile similar to that of the mound.

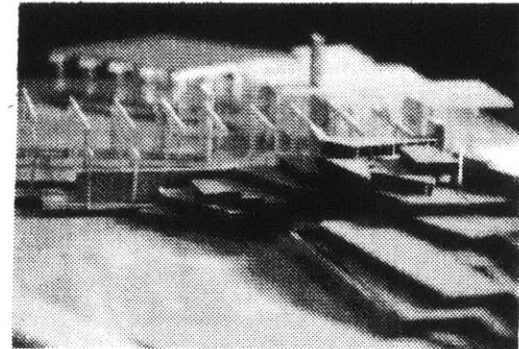
1. Model detail

2. Model detail

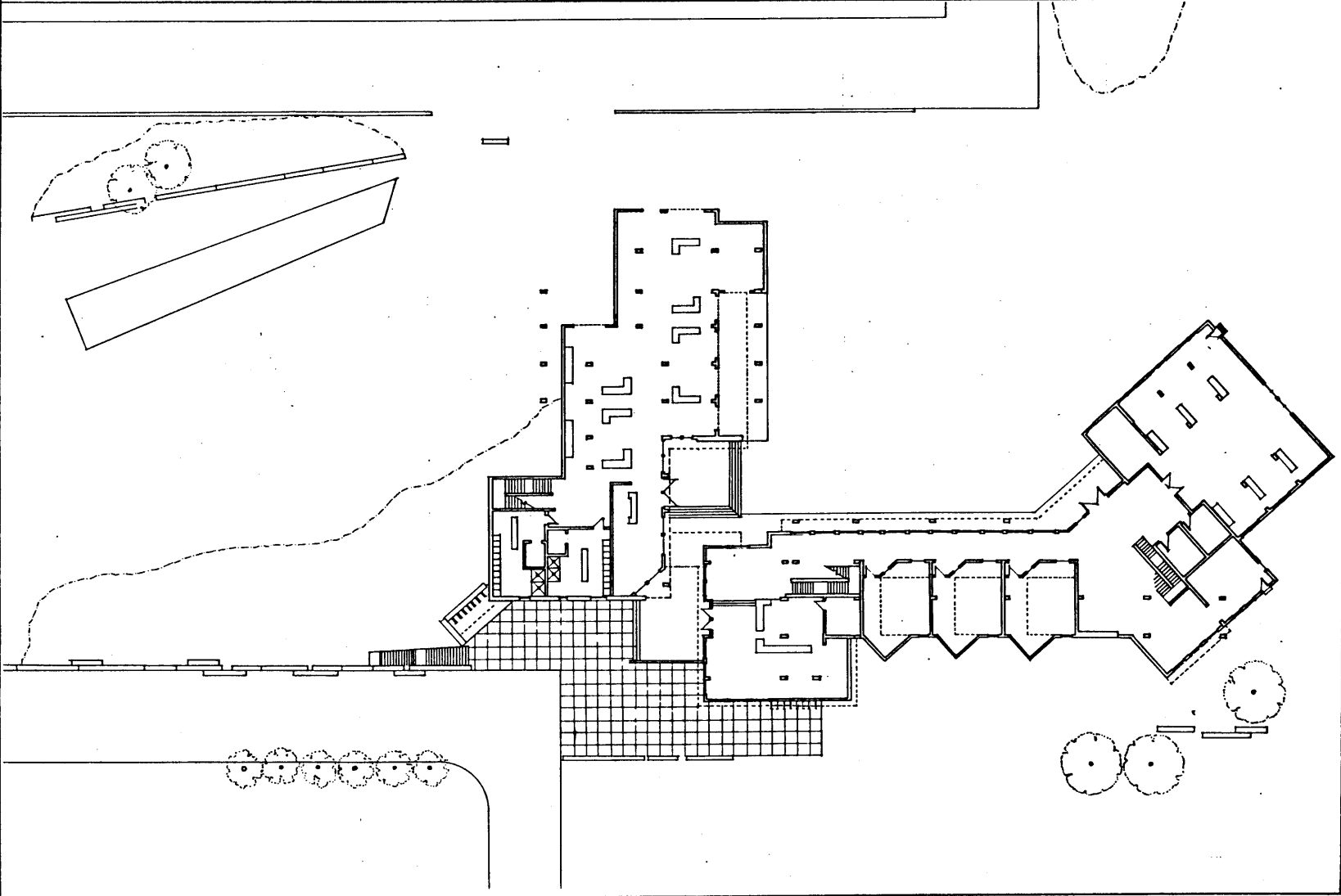
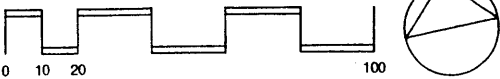


In the building organization, I looked at the relationships between the two parts of the program, the entrances, the overlapping functions, and the elements of the landscape. Could I have used the systems and materials that I chose in a way that more clearly expressed site qualities or program relationships? The building attempts a transformation of the existing vocabulary, but does it convey anything about working and manufacturing? Can it make sense out of the larger site and the program issues as well? The models and drawings that follow are the results of struggle with these issues.

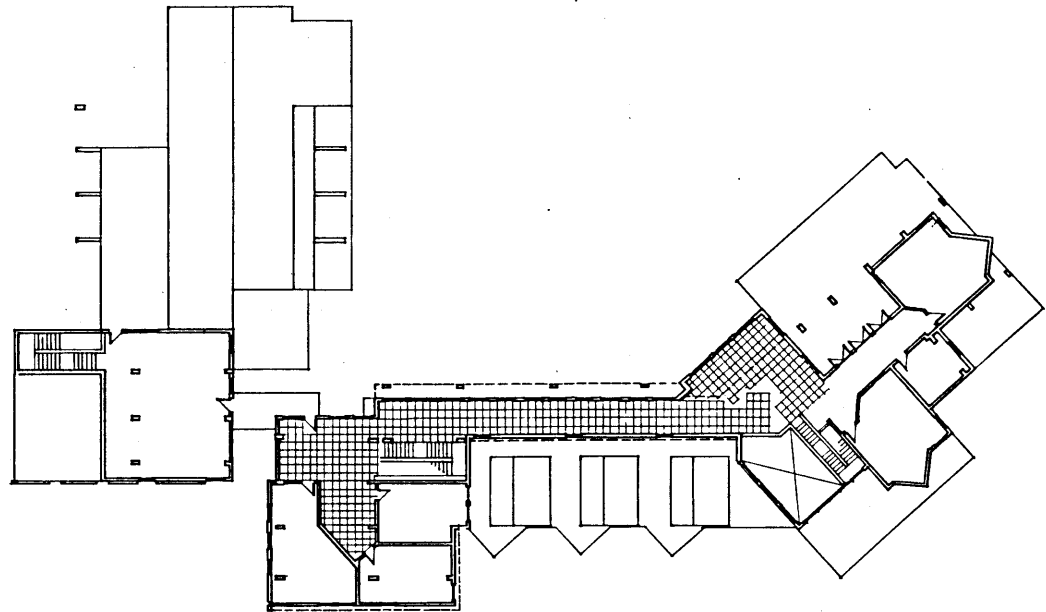
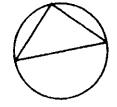
1. Model detail



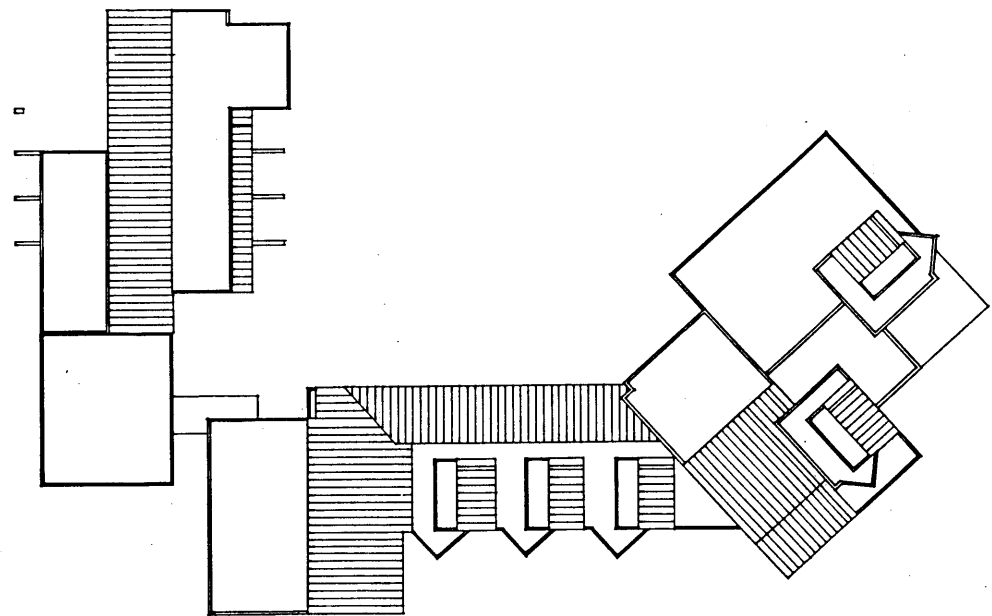
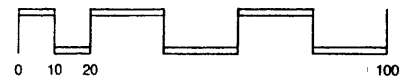
# First Floor Plan



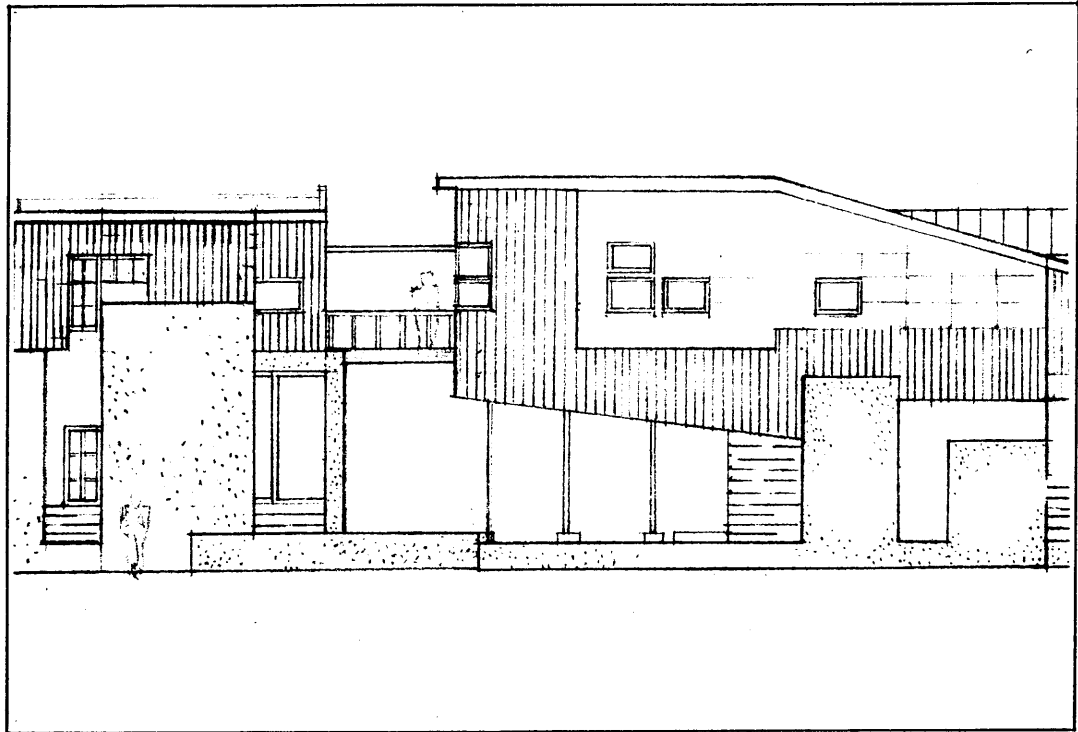
# Second Floor Plan



# Roof Plan



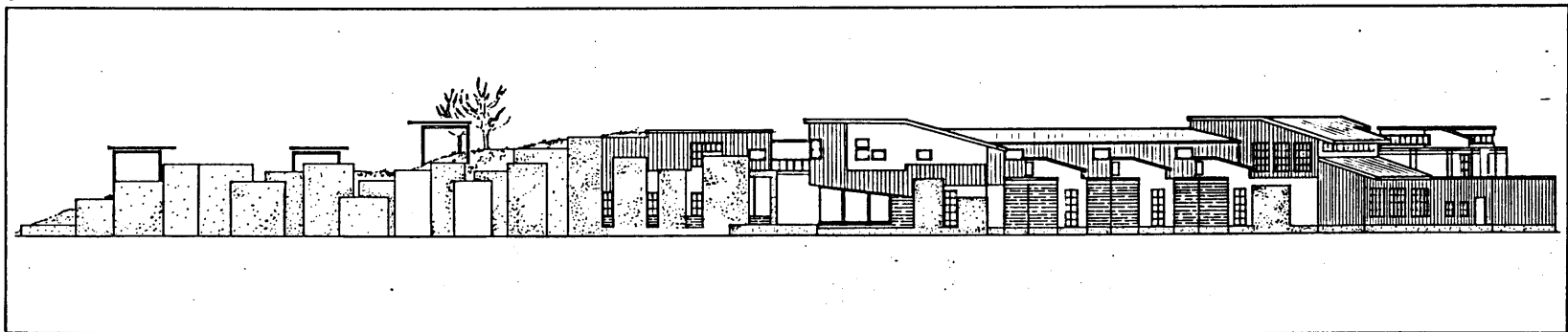
2.



1. East elevation

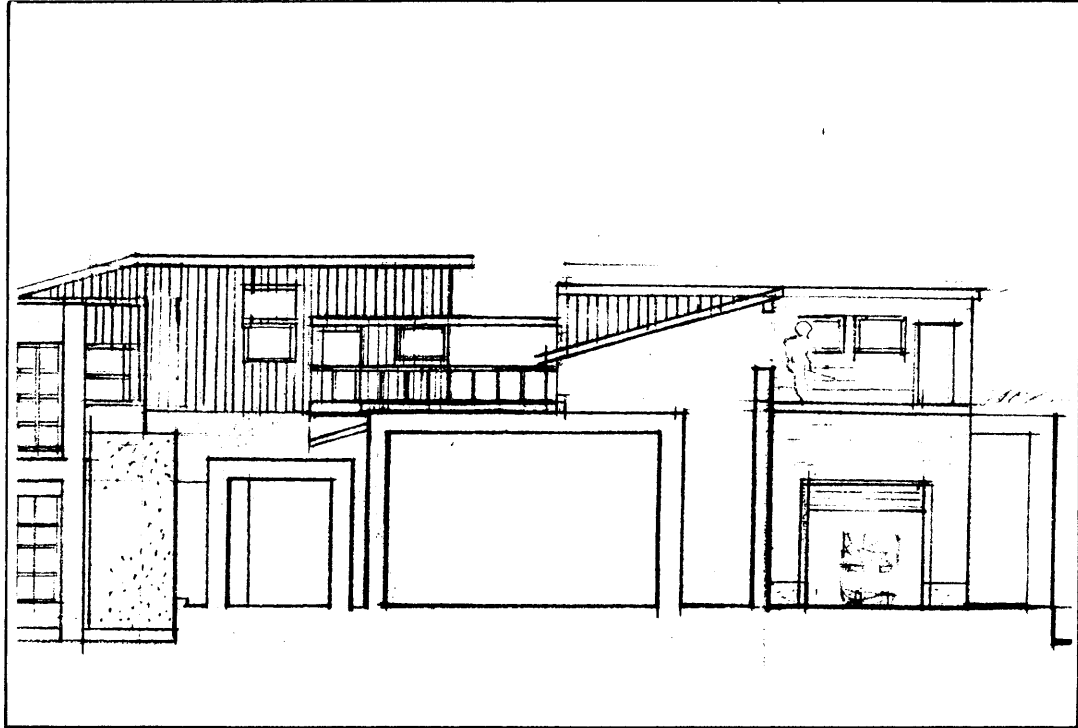
2. Elevation detail

1.





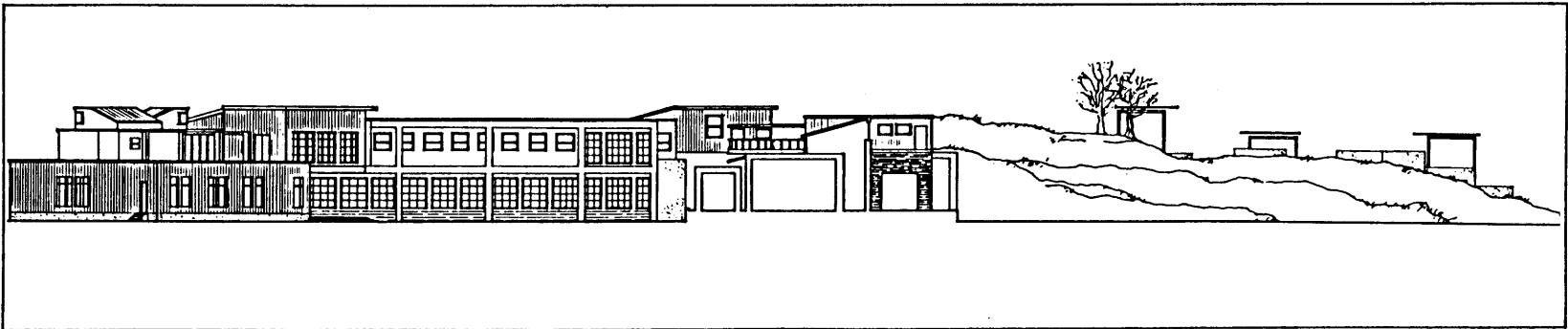
2.



1. Courtyard elevation

2. Elevation detail

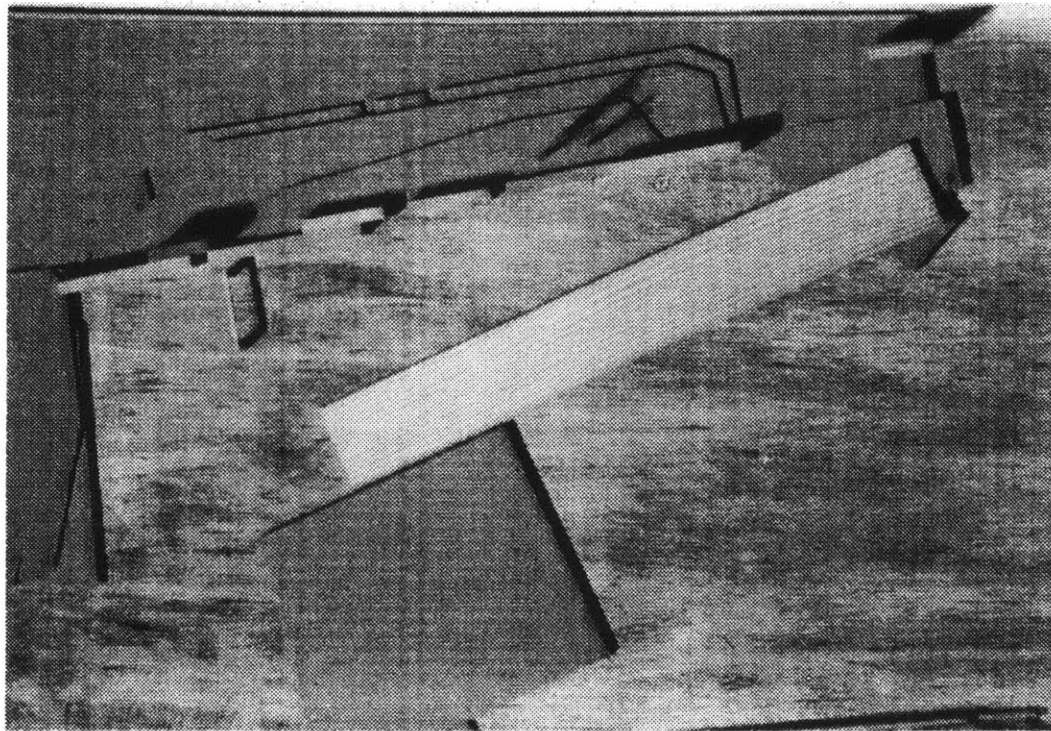
1.



## The Bicycle Realm

The development of the outdoor bicycle realm began with a gesture for a ramp in the first model at 1:40. Diagrams of ways that the building might get out into the large open space and engage the mound exist from the earliest site explorations. The first ramp made a gesture attempting to move diagonally from the residential community to the mound.

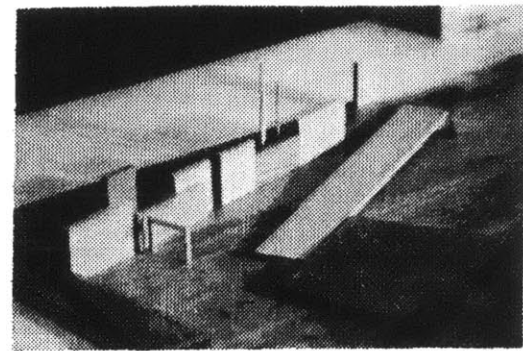
1.



1. Model detail

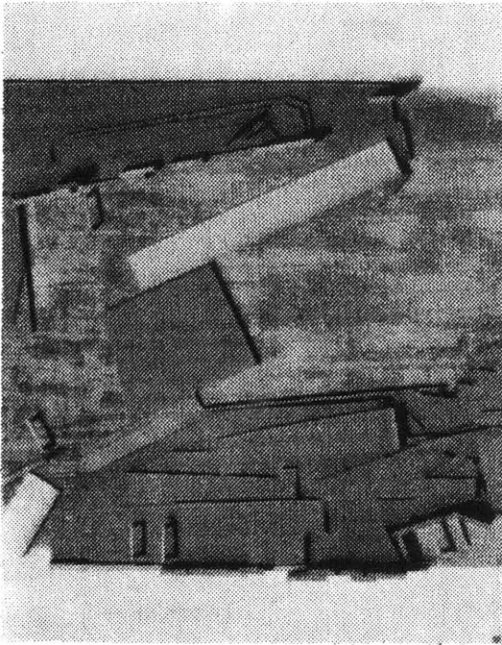
2. Model detail

2.



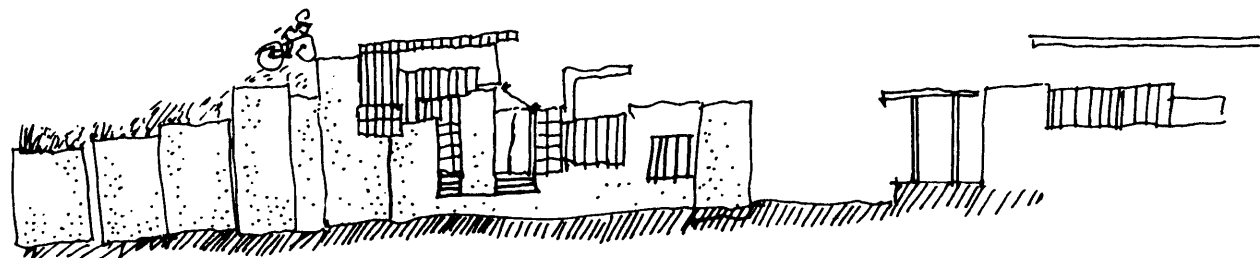
The next question that I asked was how to get from the back part of the site to the mound. The edge of the site along the factory arm was tight. Should the bicyclists go over the building, through the building, or under the building? The final design solution created a perch or viewing place from the top of the building without making a highway over it.

1. Model detail



The manipulation of the ground in order to get to the top of the building, the huge retaining wall, and another wall opposite it are all part of the world of bicycles. The protective attitude toward the site lessened as the project progressed but the attitude toward the mound remained constant, it should not be directly manipulated. Different kinds of ramp materials, and widths and heights of ramps should exist, as well as planting to enhance the approach to the mound and the open space. The ramps that get closest to the mound are raised off the ground and supported by a steel structure. They are less solid as they get farther from the building yet still tied back to it.

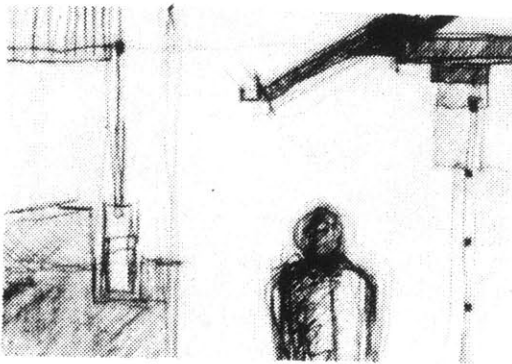
1. Process drawing

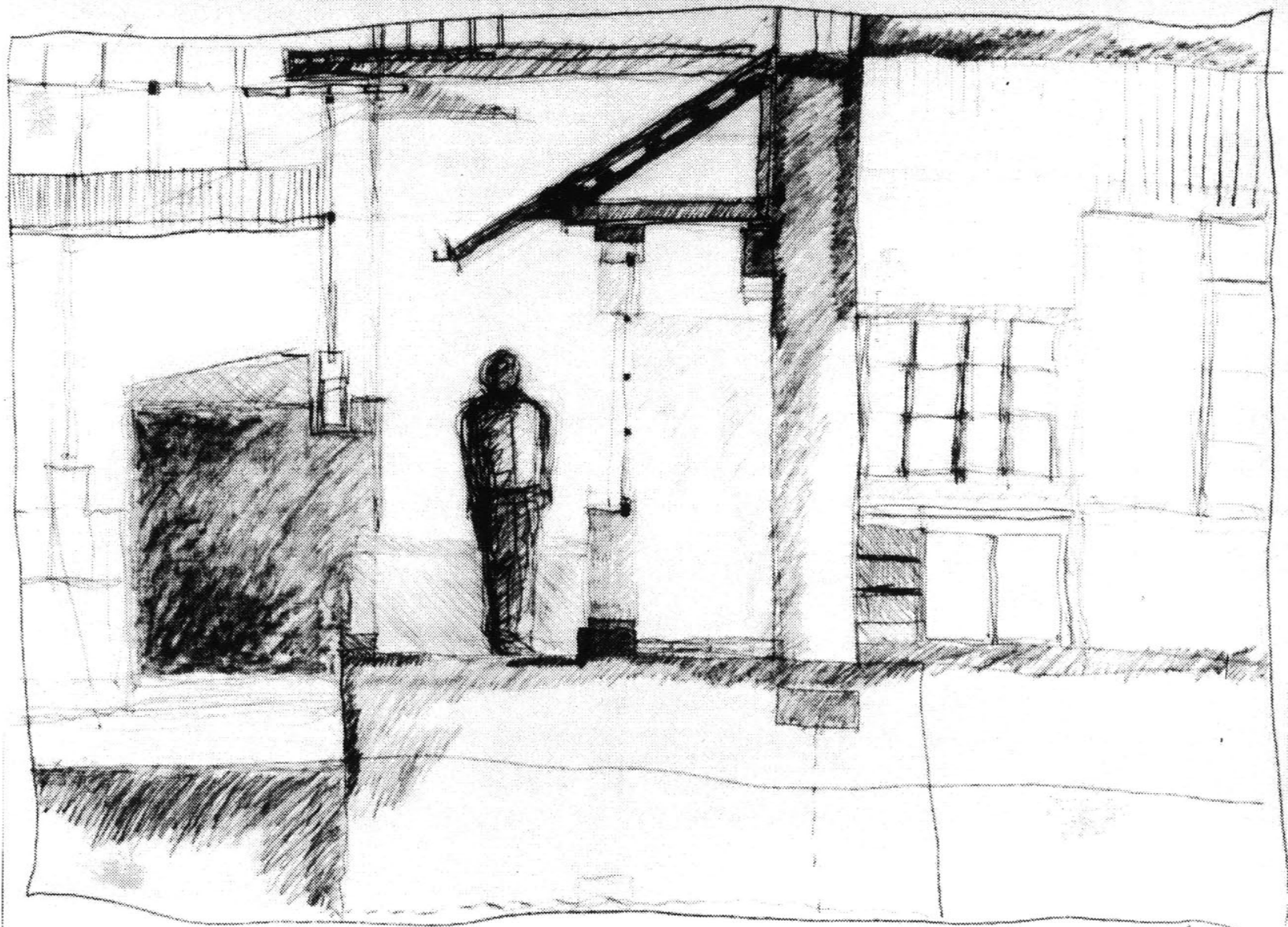


# Landscape Drawing 7

## *“The Section and Connections”*

This section is cut through the workshop and shows the level difference between the courtyard and the work area. It shows the relationship of the platform outside the work area to the courtyard and to a work station inside. Windows, low walls and roofs begin to appear. Behind where the section is cut another section and elevation of the overhead walkway are just visible. The scale of some of the sections shown is unclear. The color has some relation to real material possibilities, concrete is warm grey, copings pop out in yellow, brick is blue grey, perhaps it is glazed.

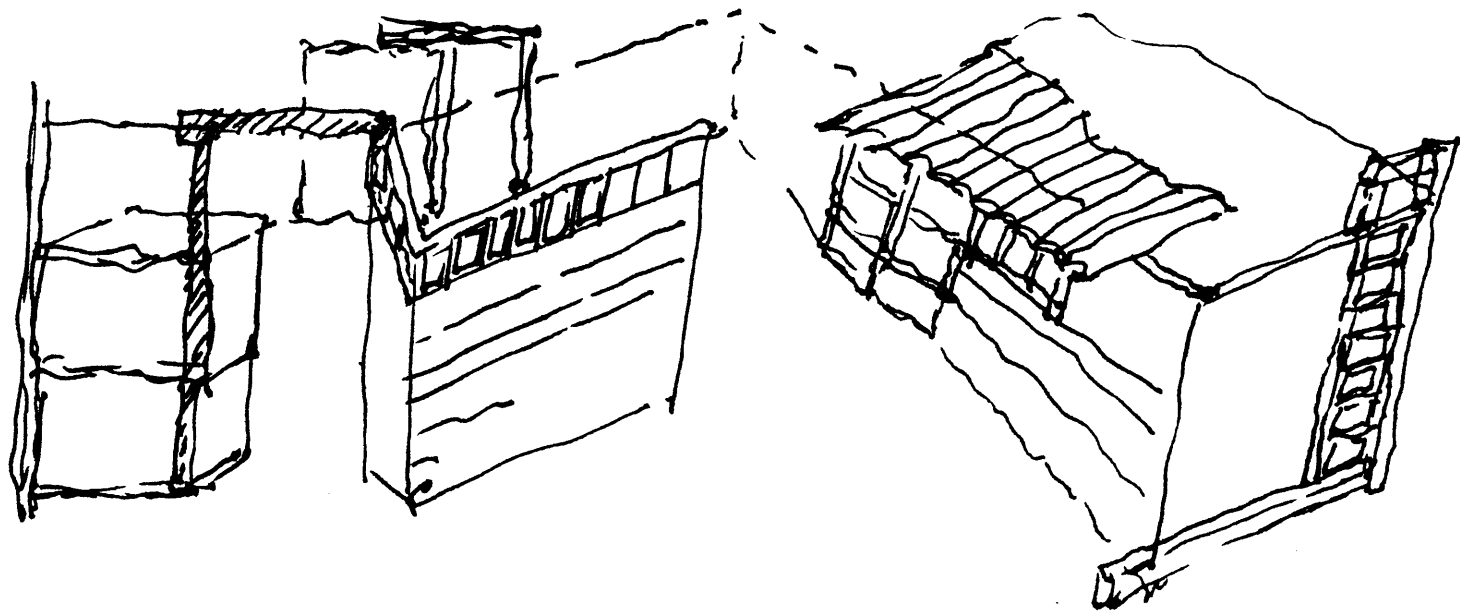




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# Part Eight Conclusion





## Conclusion

The goals that I set out at the start of the thesis shifted a bit. The most important ones remained in the forefront and emerge through the drawings, writing, photographs, sketches, and architectural drawings in this document. Through different kinds of description and analysis I have tried to draw out the characteristics that make this site what it is, and I have tried to design a building that enhances and expresses the essential character of the site.

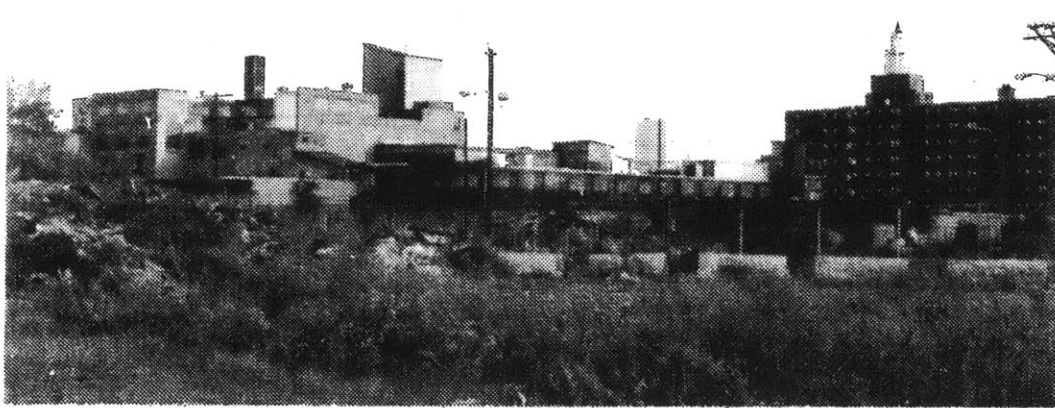
To do this and then to translate those characteristics to the design portion of the thesis, I looked at the elements that create this character and their relationships to each other. I am satisfied with this part of the work. I have been able to use written observation, and the large landscape drawings more fully than I ever have before and I have been able to trust intuitive ways of working.

Some of the regrets I have about this product are that the programmatic exploration and the connection back to the community were not more

fully and realistically developed. I would have liked to look more closely at the needs of teenagers, the group that I targeted as the most likely to use a facility such as this one. Architecturally I would have liked to push the design further, towards the design details to see how I could make the essence of the site apparent at that level.

Nothing is ever complete, the fact that the thesis left questions that still seem worth answering is a good sign. Initially I planned to study more than one industrial and residential area, and in the future I expect that I will do it.

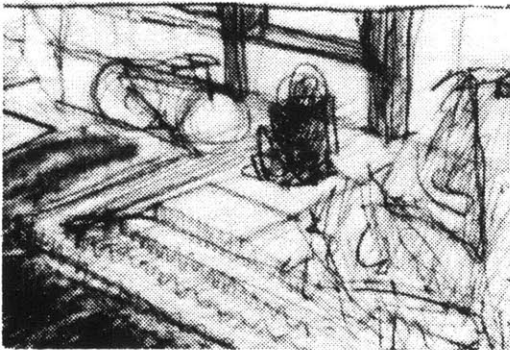
1. Mound, building, fences, sky, weeds, junk

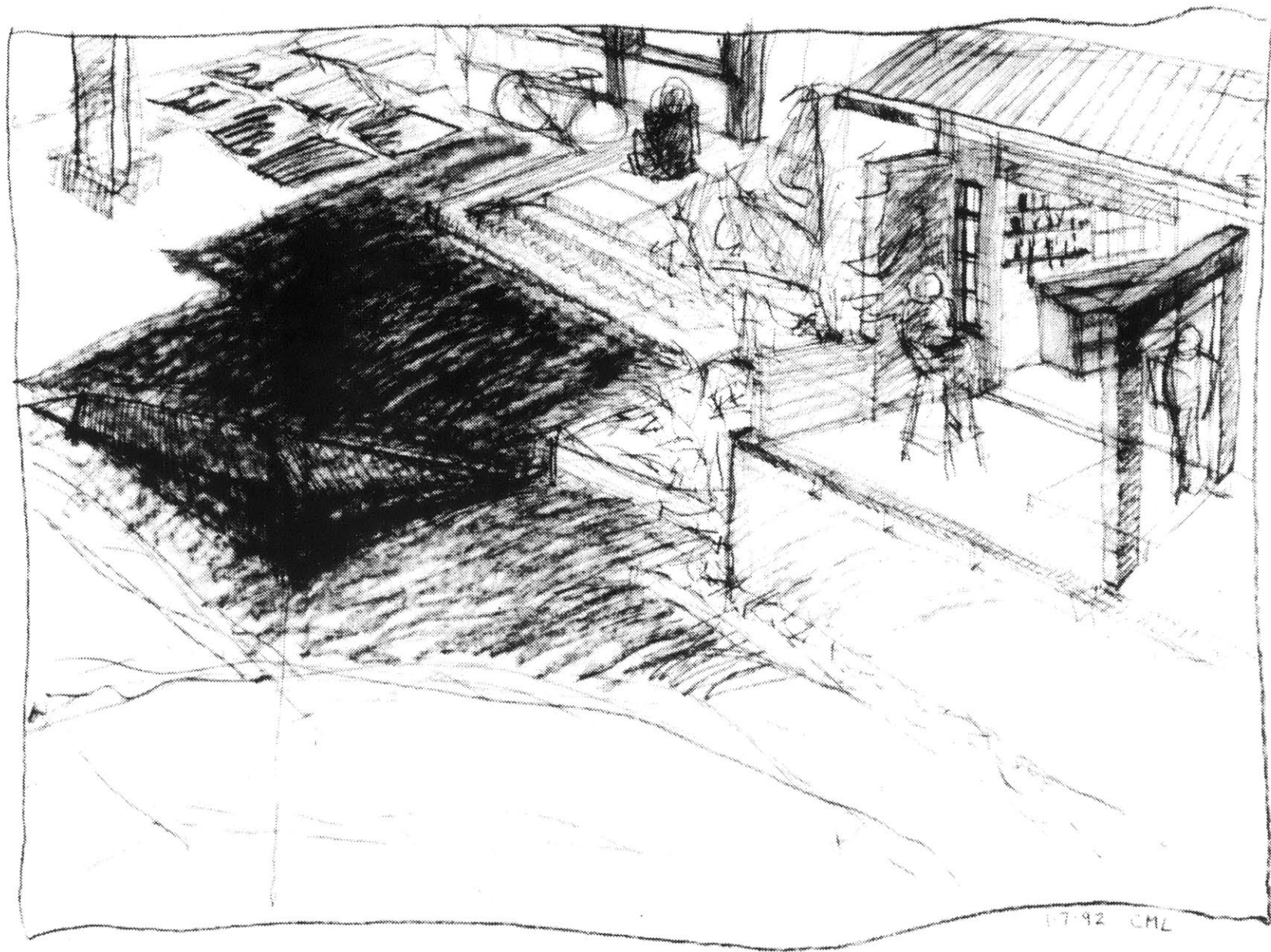


# Landscape Drawing 8

## *"The New Place"*

This final drawing is another bird's eye perspective. It shows the inner courtyard inhabited with workers and a bicyclist. The bicyclist has leaned her bicycle against the building and is sitting on the steps that lead to the main entrance of the factory. A tree is growing between the steps and there are plants growing at the edge between the factory and the courtyard. One bay of work space shows with a bench, tools on the wall, and a frame on the bench. There is a grey wedge in the courtyard, a form to arrange with others like it to make into jumps to practice bicycle stunts.





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## Photography Credits

- xi *Transworld Skateboarding* March 1992
- 6 *BMX Plus* February 1992
- 12 *Bmx Plus* February 1992
- 28 *Bmx Action & Freestylin's* January 1992, Brad.
- 62 *BMX Action & Freestylin's* January 1992, Ray Sarapillo
- 65 1, *Bicycle Guide* June 1990, Michael Furman  
2, *BMX Action & Freestylin's* January 1992, Scott Montgomery
- 66 *BMX Action & Freestylin's* January 1992, Scott Montgomery
- 70 *BMX Action & Freestylin's* January 1992, Kris Noble
- 102 *Transworld Skateboarding* March 1992
- 111 Robert Rodriguez

All other photographs in the thesis were taken by  
Cynie Linton and Scott Rabiet

