

# BUILDING, LANDSCAPE AND SECTION

by Daniel B. Johnson

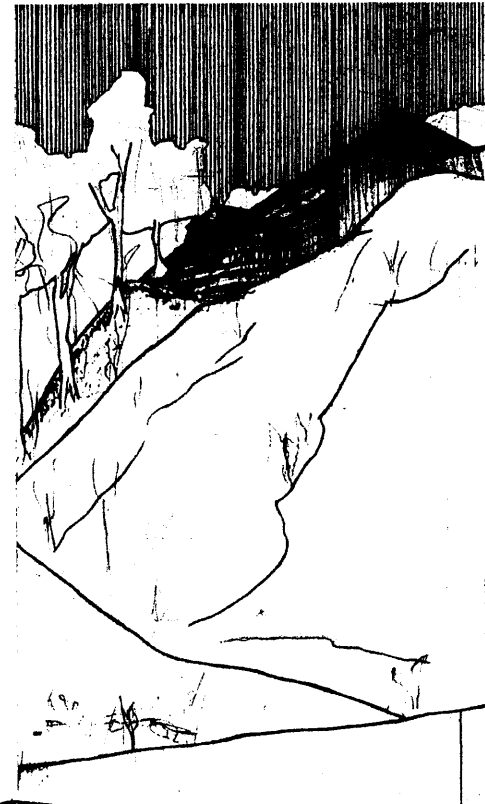
Bachelor of Fine Arts  
St. Lawrence University  
June 1977

Submitted to the Department of Architecture  
in partial fulfillment of the requirement of the degree  
Master of Architecture  
at the Massachusetts Institute of Technology

February 1992

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.....  
Signature of Author

Daniel B. Johnson  
Department of Architecture  
17 January 1992

.....  
Certified by

Thomas Chastain  
Assistant Professor of Architecture  
Thesis Advisor

.....  
Accepted by

MASSACHUSETTS INSTITUTE  
OF TECHNOLOGY

FEB 21 1992

U  
Renee Chow  
Chairperson  
Department Committee for Graduate Students

LIBRARIES

notch



DEDICATION

FESTINA LENTE

Dedicated to my teachers:

Doc Holladay and Tom Chastain  
who sat tight in the saddle and let loose on the  
reins;

Fernando Domeyko  
for his commando ZOK ZOK criticism;

Richard Tremaglio and Chris Risher  
for their commitment to subvert the anticipatory  
and discipline of process and transformation;

Maurice Smith for his rigor of formal inquiry, and  
his devotion to teaching real architecture.

Thank you all for your truly critical approach,  
your ever so slight encouragement, and for leading  
me to a method of continuing of my education.



## ACKNOWLEDGEMENTS

I acknowledge :

My Parents, who were my first teachers;

Dan, Mark \*\*\*, and Bill for pulling me through the final model;

Anoma, and Alex for their drafting;

Creigh, for her general patience, and support: also for her critical help with the text;

Kairos for photography of the work documented here;

Mark Hans Daley, and Sue for their semester long help and criticism of the notebook (Mark) and final book (Mark and Sue), most especially for their long hours of help in the final production;

Also to my office mates (Julia for her continual criticism) and Al Cynie and Julia for the commitment to our health,happiness and productivity;

And lastly to Chris for his insightful late night chats and for keeping my non-academic life from exploding.

Thanks to all of you, in whom I had the utmost confidence and who's influence can be seen throughout a productive semester of which I am very proud.



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Submitted to the Department of Architecture  
on January 17, 1992  
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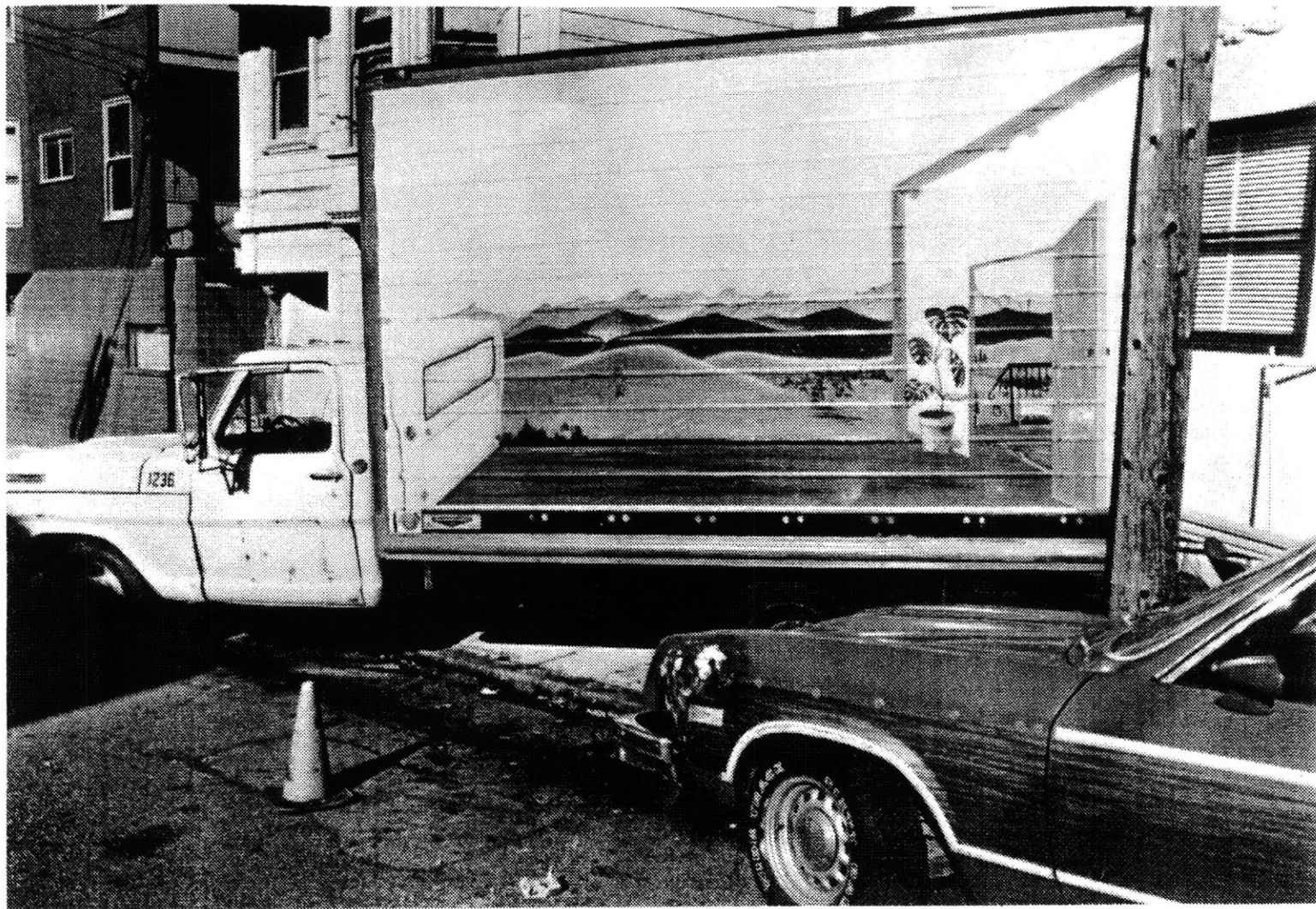
Thesis Advisor: Thomas Chastain  
Assistant Professor of Architecture

Thesis Readers: Fernando Domeyko  
Lecturer

Richard Tremaglio  
Adjunct Professor

## ABSTRACT

All buildings have in their section a relationship to the landscape on which they are sited. Therefore we as inhabitants of these buildings may or may not have a relationship with the landscape. It is the supposition of this thesis that the relationship is important, understandable, and assimilable. Selected buildings and their landscapes were examined to reveal some of these relationships. A notebook where observations, processes, thoughts and works were recorded, was used as a method of inquiry. Finally a design which draws on the assimilated knowledge of the building/landscape relationship is put forward.



JACK WELPOT, PAINTED TRUCK, 1979.



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## INTRODUCTION

This thesis is set up with a methodology to generate the design of a building and a body of understanding. This is not a self-indulgent process; one has a responsibility to make the method/process clear to oneself and to others. It was planned that the synthesis of this understanding and its manifestations in a design become observable to me and to the reader.

The manner of making this clear was to keep a notebook in which observations, analysis, and integration were recorded. The process was set up so that initial observations, (drawings, writing, photos), and analysis, (drawings, writing, photos, diagrams), culminated in design, and documentation. Layout of the notebook was coordinated with the requirements of the final product therefore in most instances it was possible to copy the notebook directly for the final book. The assumption was that the directness allowed a clarity and simplicity that would make better observations and interpretations, of architecture as well as observations and interpretations of this working method. The intent was for the design process to be integral with the notebook, therefore in the final thesis (notebook), assimilation, design, and process all become evident. It is a way to look critically at a process, to gain understanding of how one works, and to begin a more disciplined approach to the observation, understanding, and integration of architecture which we deem exemplary.

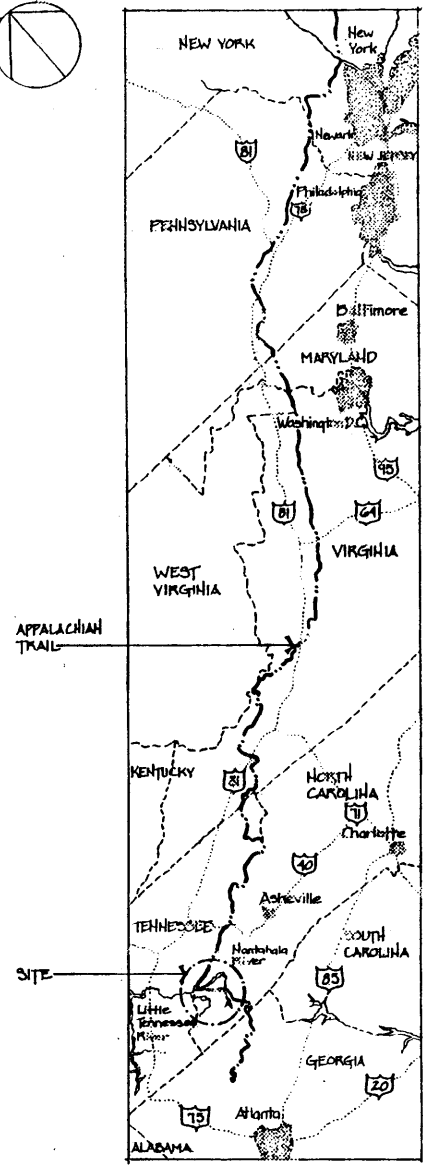


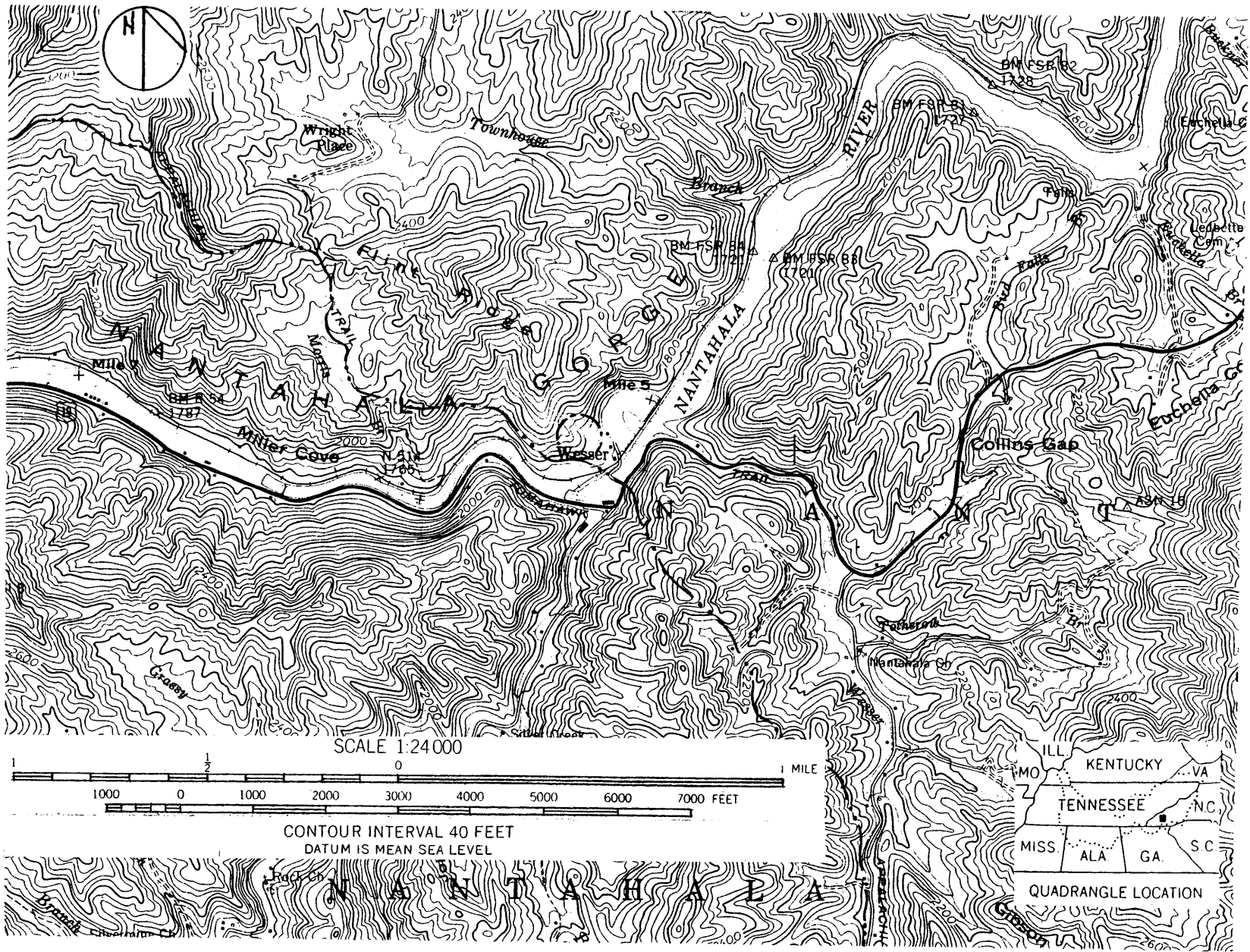
## Dr JACKSON

A familiar premise is that man in addition to his spiritual identity, is part of nature. He is a biological organism, subject like all other creatures to the laws of nature, This implies that he is constantly affected by his physical environment . Each of us is dependent on it, not only for the material necessities of life but for health and for the balanced functioning of our senses, and ultimately for emotional well-being, The subjective relationship to the environment , how it affects our senses is the one we know the least about; but we are beginning to study it and recognize its importance, We know that sounds and lights and forms and colors and movement and the other living organisms in our environment influence, for better or worse, our psychological and physical condition; this is merely another aspect of our participation in nature.

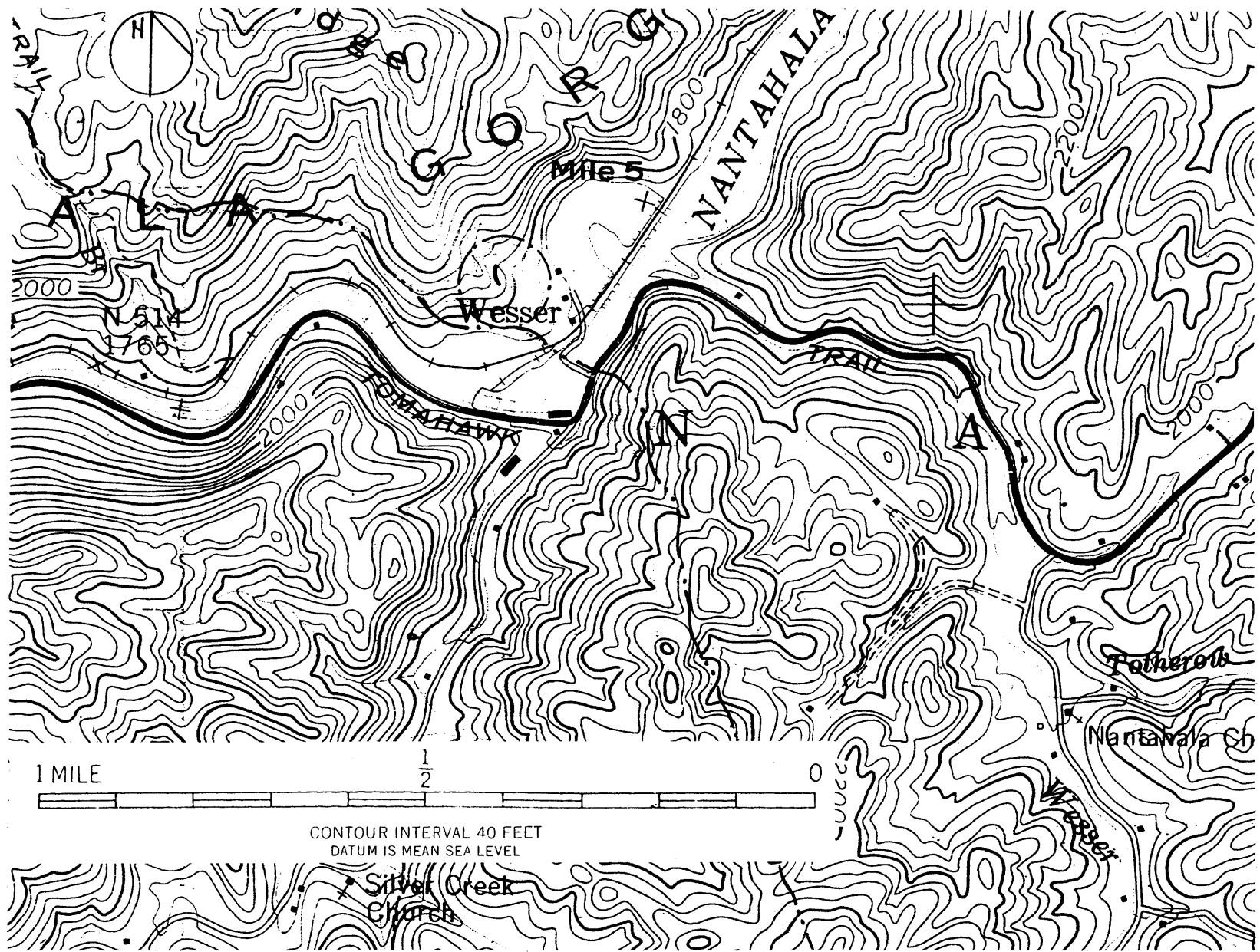
## **SITE**

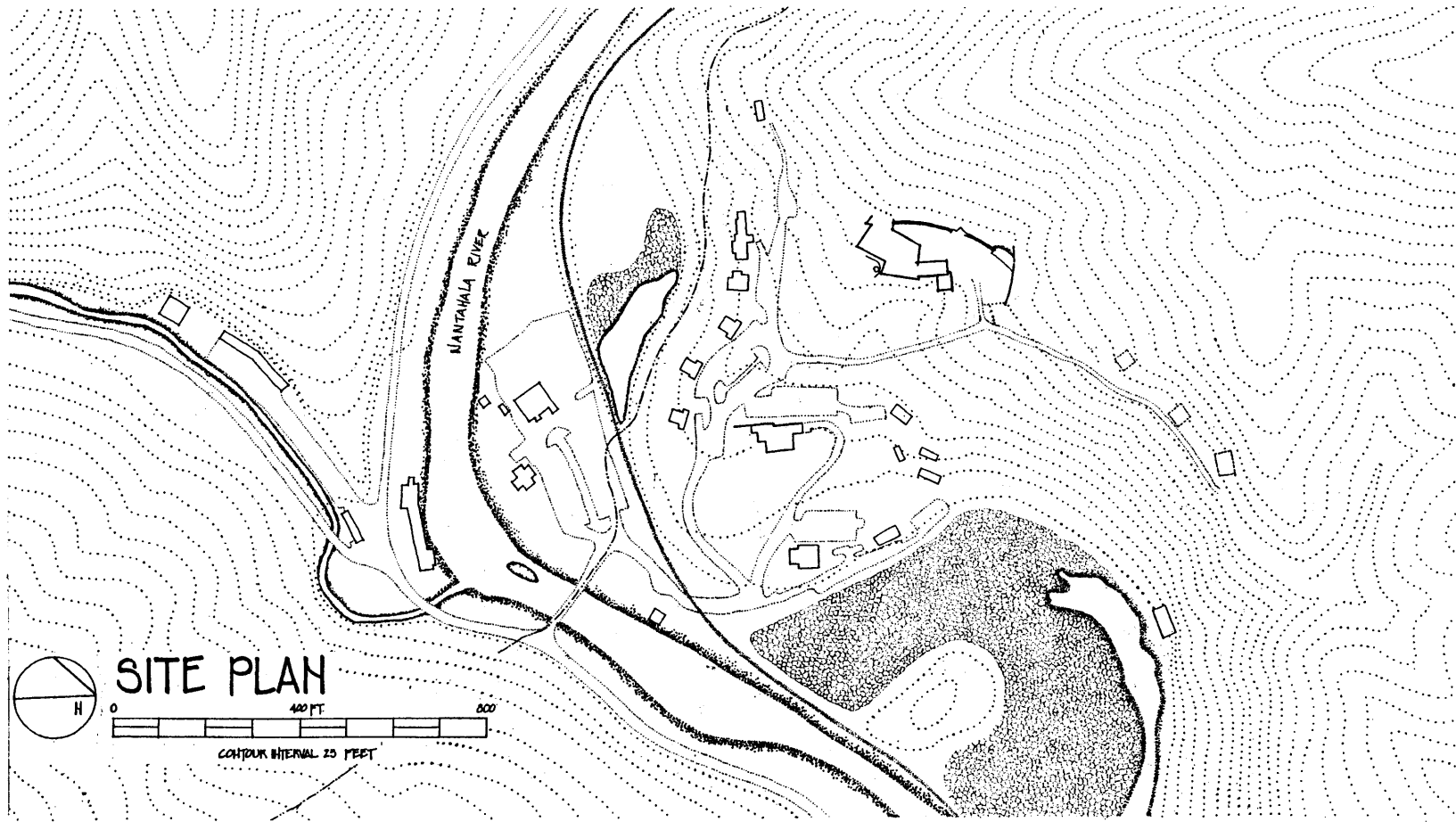
The site is in very western North Carolina in the Great Smoky Mountains. The client is Nantahala Outdoor Center which is an outdoor recreation and educational community. The terrain is very steep, so steep in fact that the Native Americans named the region Nantahala, or "land of the noonday sun". There will be two sites: one where the site is carved to allow the building to sit in the land, and one where the land is not carved and the building is set on the land.











Stein Gertrude: Lectures in America, " Plays"  
(Boston :Beacon Press, 1957, after Random House,  
1935),p.125

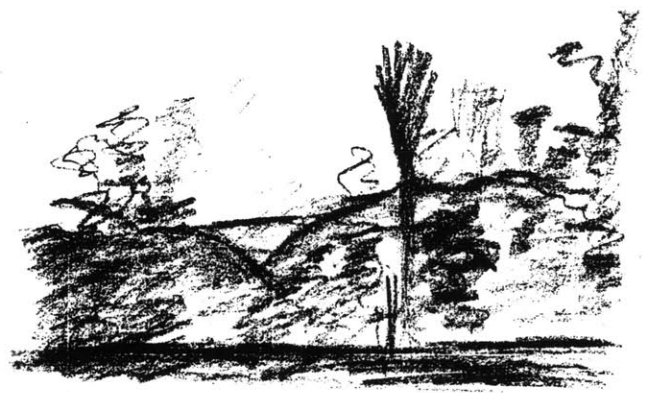
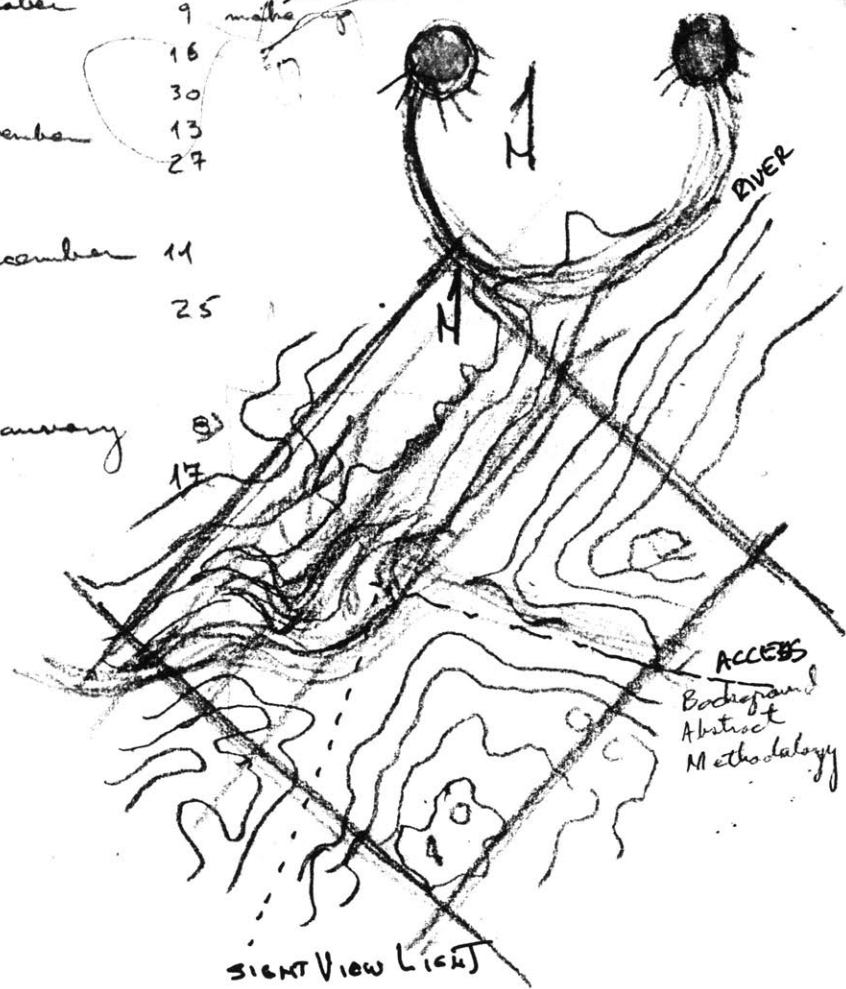
**"The landscape has its formation and as after all a play has to have formation and be in relation one thing to the other thing and as the story is not the thing as any one is always telling something then the landscape not moving but being always in relation, the trees to the hills the hills to the fields the trees to each other any piece of it to any sky and then any detail to any other detail, the story is only of importance if you like to tell or like to hear a story but the relation is there anyway..."**



SCHEDULES

September 13 pin up  
 October 2 miss  
 October 9 maths up  
 16  
 30  
 November 13  
 27  
 December 14  
 25  
 January 9  
 17

START WRITING CATEGORIES



1/2" section  
 site model @ 1:100 reverse plaster  
 1/16"

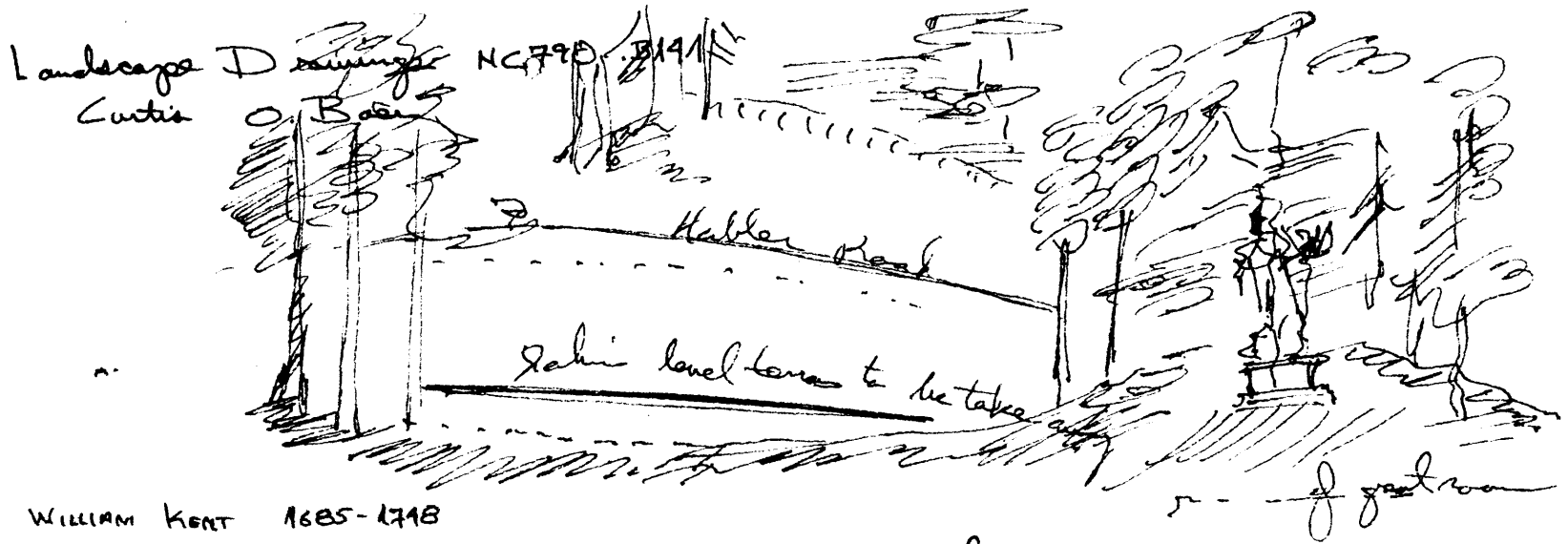
Painting  
 site painting - landscape

Drawing  
 ink of plan/section (several)



## METHODOLOGY

An intent of this thesis was to develop and employ a method or system to the way I examine the world. Constable says in *The Art of Nature* "... system can by no means be thrown aside. Without system the field of nature would be a pathless wilderness; but system should be subservient to, not the main object of, our pursuit." The method or system was to maintain a "sketch" book where entries were made of observations and thoughts, copies and originals, designs and transformations. There was to be a regular process that focused on the steady digestion of form and its generation. The idea being that the sketch book becomes a way of thinking. It is a many layered text of images and words richer than either standing alone. The sketch book is integral to the design process and to interpretation of the world. Using this method of sketching, drawing, writing we are able to move beyond what we see into a different realm from the real that is observed. "Drawing is of such excellence that it has an independent life, being capable of creating for itself natural objects better than nature itself." This quote from Leonardo aptly describes the transformation which can take place through the cognitive and physical filters of the sketch book.

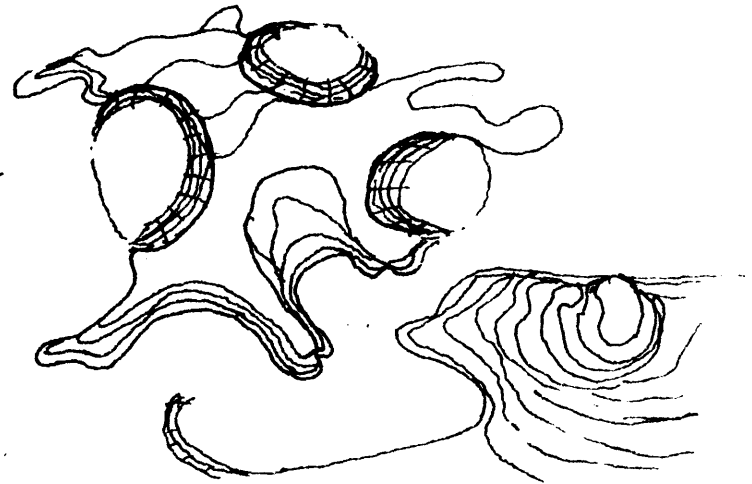


WILLIAM KENT 1685-1748

landscape information as well as pictorial  
 also reference to "great room", starts to define space of the viewer as well  
 as distance  
 fore ground dark / background light  
 more information / less information

GÜNTER BEHNISCH & PARTNERS

landscape sketch contours showing Olympia  
 glände in contour  
 landscape @ the site information size





The method of using a sketch book was chosen because the openness of its process allows many things to happen simultaneously. It allows for the development of drawing as well as the investigation of form. It allows for writing as well as the use of color, the generation of new ideas as well as copying from others. Analysis and synthesis can co-exist. The sketch book allows us, to use the phrase of poet Paul Valery: "Trouve avant de chercher" (to find before looking).

It is important to realize that it is not what we draw; rather it is what we see. However through drawing what we see returns to the world of the physical. Drawing what we see becomes not only part of our visual memory but also part of our motor memory. Along with drawing comes an understanding that is not only cognitive but physical. In producing; our work is filtered through this cognitive and motor memory. Drawing and sketching, information becomes (as Katsuhiko says in his introduction to the sketchbooks of Halprin) part of our creative memory. Images and information become imbedded in such a way that recall brings layers of higher intellectual and physical understanding in association. The sketch book is the start of a life long process of establishing creative memory and progressing towards this higher understanding.



i. Alexander Cozens: Number 7 of *The Various Species of Composition of Landscape, in Nature* (No. 61).



ii. Constable's copy of the above (No. 62).



SANDRO BOTTICELLI

1440 - 1510

DANTE & BEATRICE RISE TOWARD HEAVEN

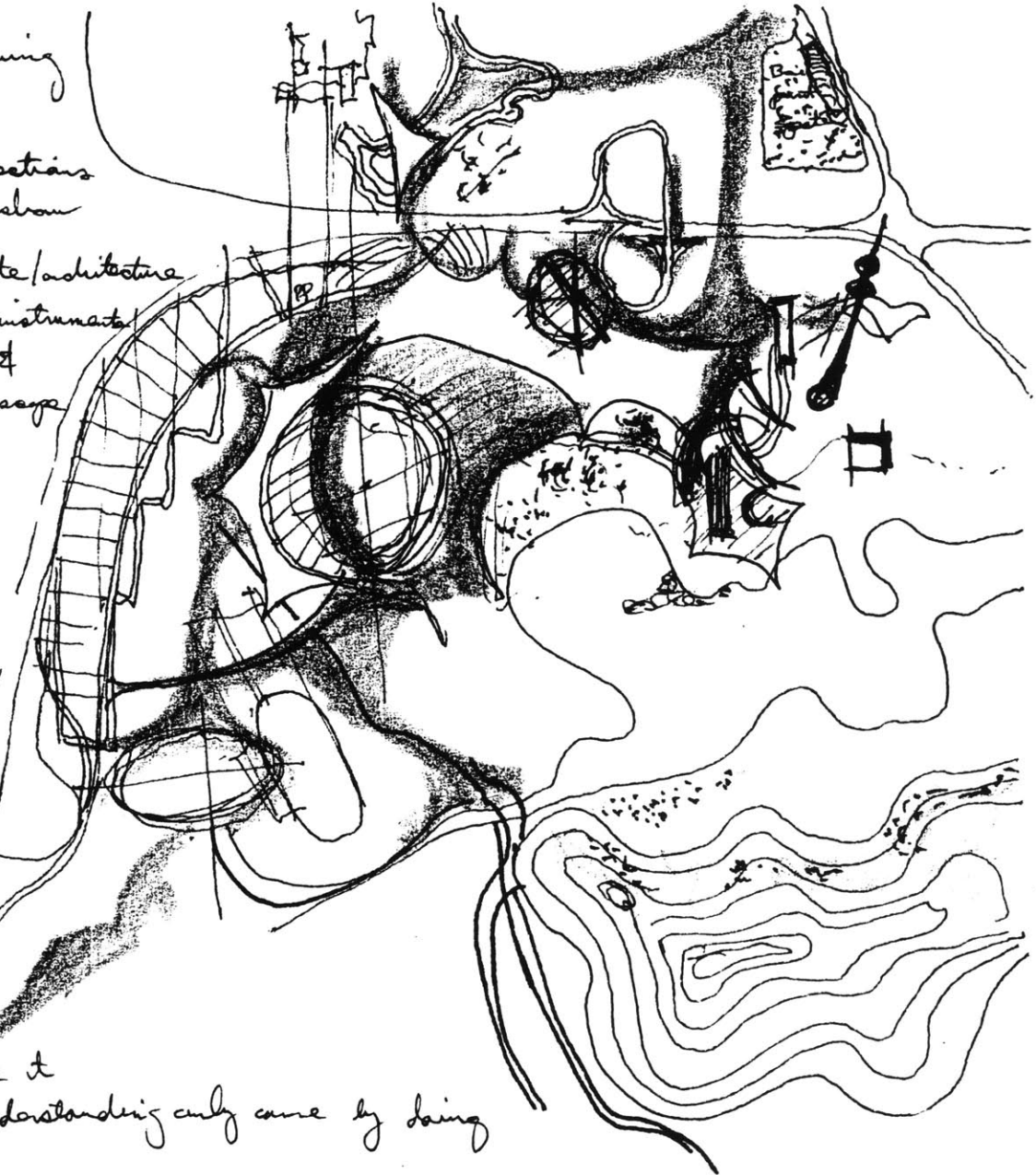
16

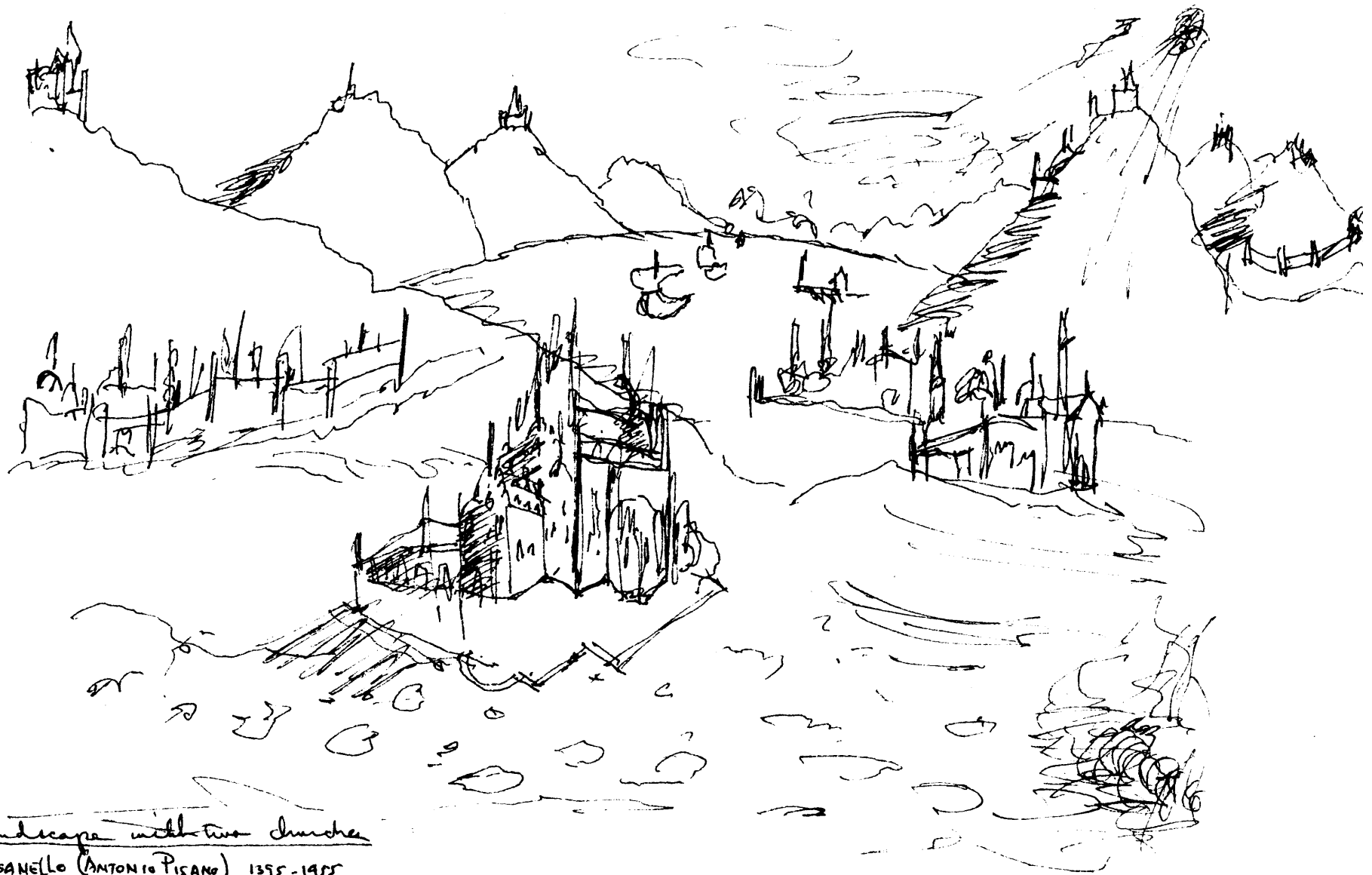
shows the river Lethe-Euhoë on a plateau and the movement of trees by the celestial wind  
It is good for its transparency and information clearly presented with simplistic methods

Olympia Park drawing showing  
roof form & land form  
access & landscape/water directions  
simple use of shadow to show  
height  
goal to show character of site/architecture  
and relationships of sport instruments  
and ideas of transparency &  
continuity of the land scape

"HENCE IT IS EASY TO OVER  
LOOK THE FACT THAT THE  
ESSENTIAL ELEMENT OF OUR  
DESIGN IS BENEATH AND  
BEHIND THE ROOF: THE  
SETTING FOR SPORTS AND  
GAMES, THE MÜNCHEN  
OLYMPIA PARK"  
Dehniisch book  
Gunter quote

The value of copying  
The pool only appeared  
after I "drew" it, even  
though I knew exactly where it  
was/in in reality. True understanding only came by doing





Landscape with two churches

PISANELLO (ANTONIO PISANO) 1395-1495

one example of quattrocento landscape seen as pure landscape. good for subtlety of line and abstraction of forms - sailboats - which are not mentioned in text but referred to as a plain what it is three boats and collection of churches. It is a sketch for the "creative memory" as I see it. Appeals to me for its basic notation of water, rocky boats and form which can be latter filled in but what is between the sketch and final work is a "gap" which allows for the drawing to be more than just "the slope of things"

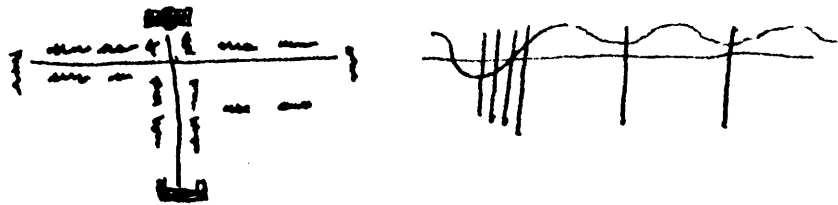
LAWRENCE HASPIN SKETCHBOOK

"our relation to nature is a primary design force ... the forces that are operative of the natural forms, shapes & processes surrounding us." pg 20

"Since

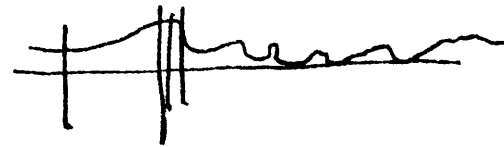
MOTATION = movement mutation

RENAISSANCE



PAGANINI 1st piece @ 13 yrs old

MEDIEVAL

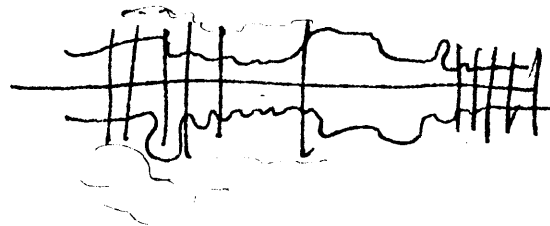
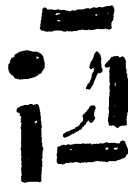


Intro by Jim Burns

"WHEN ORGANIC ARCHITECTURE IS PROPERLY CARRIED OUT NO LANDSCAPE IS EVER OUTRAGED BY IT BUT IS ALWAYS REDEVELOPED BY IT" FLW Pg 32

Realm of ideas

MODERN



Protection from wind by hedge rows of the house - roof forms an association with nature forms - wind lines of vegetation

Skanted roof also allows for sun to enter

## SEA RANCH

### IDEAS

People have to relate to Natural..... so pressure keep houses back from coast/edge allowing access to coast/rocks

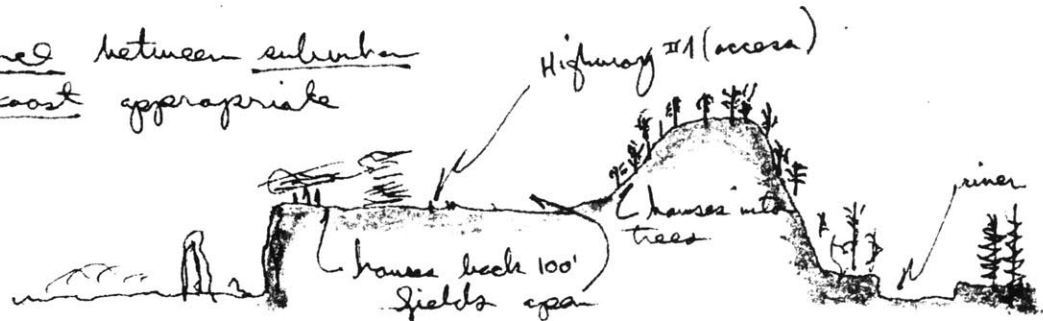
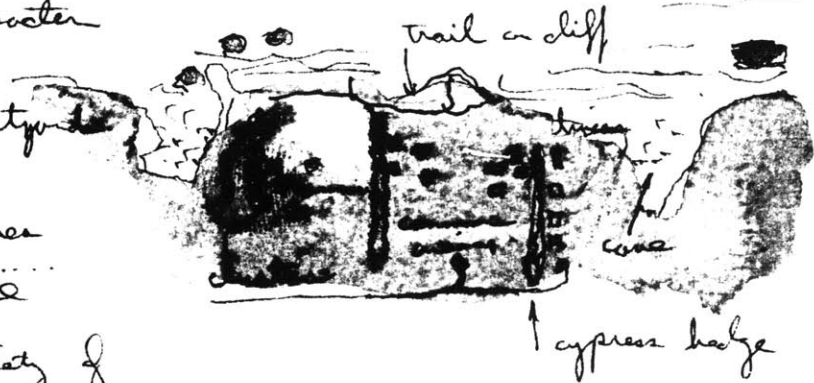
important to maintain indigenous character  
Avoid avoid suburban subdivision

Cluster hedges in FARM FORM around courtyard  
Joined aggregates

Vegetation creates roomlike spaces for houses  
hedge rows are steps in land scape <sup>scale</sup>

Variety of people wanted so have a variety of lot sizes for variety of costs

Make people aware of difference between suburban "gardens" and more north coast appropriate vegetation planting



# SEA RANCH

no roads in fields, drive up draws  
houses @ edges where they cannot be seen by  
others

No lawn gravel cover only

Only native trees

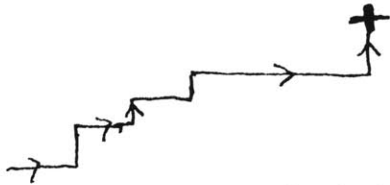
maximizing rugged nature in prettiness

natural material no paint

Avoid sub organization

visual easement - view

## ROOSEVELT MEMORIAL



interesting to note that Halpain wanted to go as far  
as modifying planting to affect bird population  
positively because FDR liked birds - total  
integration/spirit

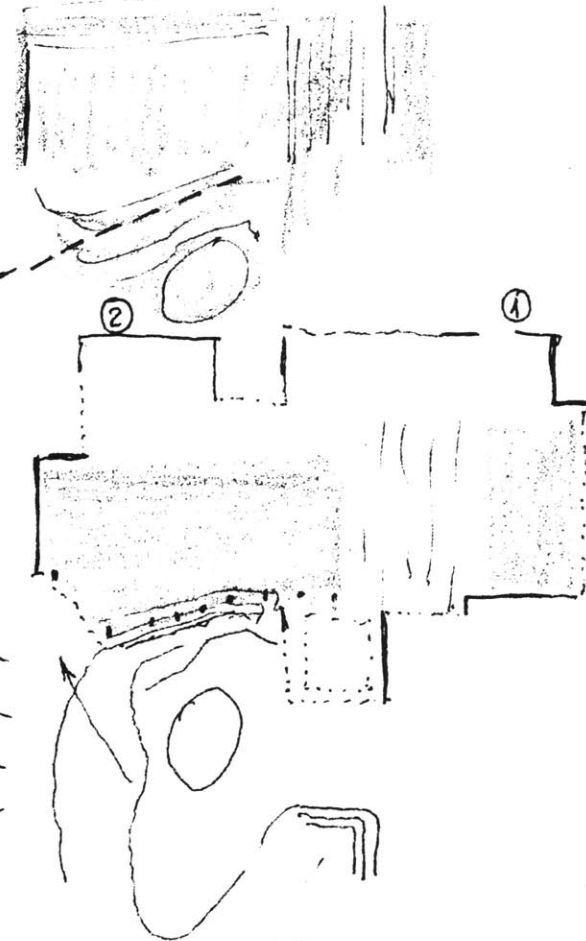
AALTO - Bldge as resolution between landscape & another element (urban)

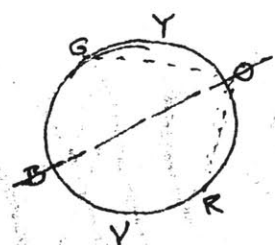
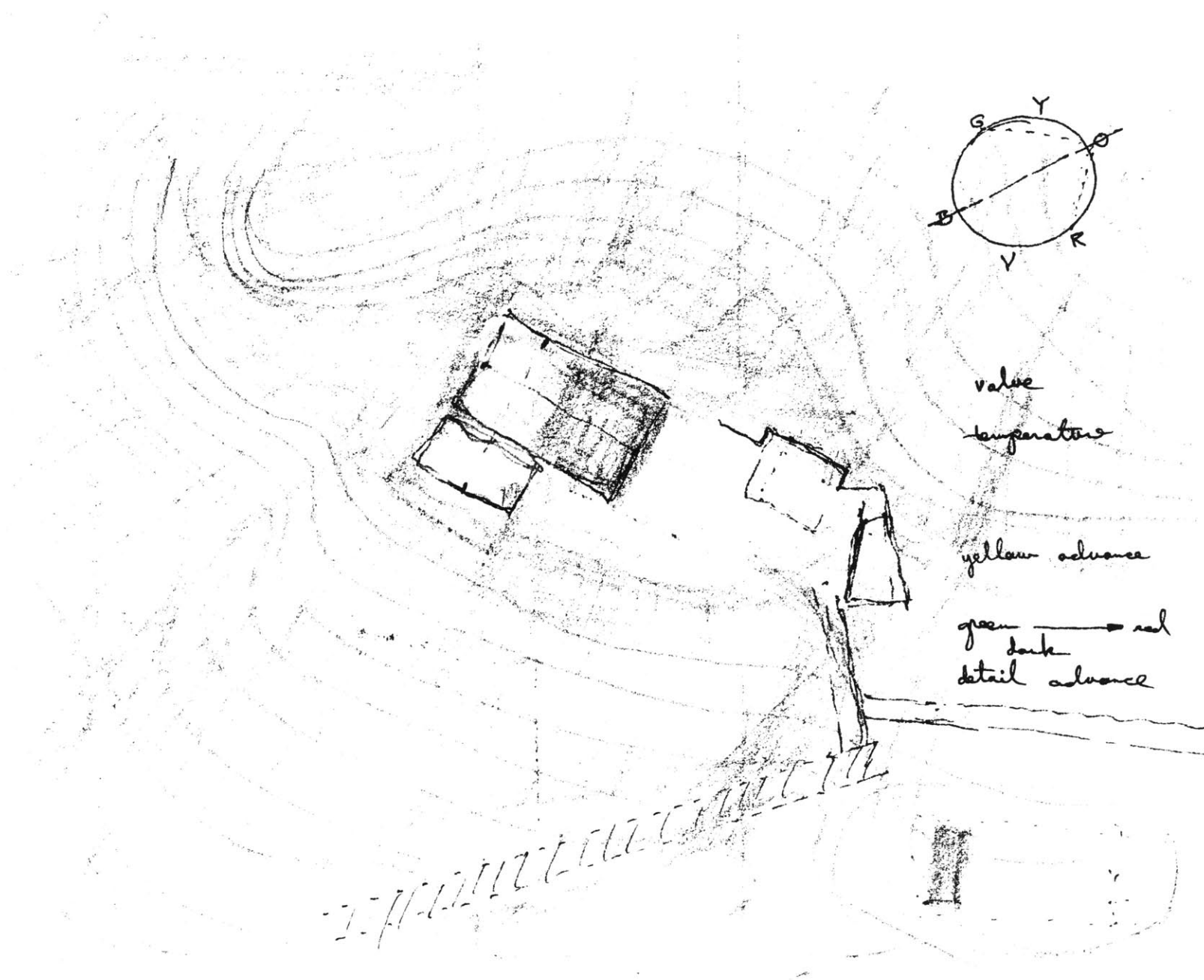
## UNIVERSITY POOL JYVÄSKYLÄ

1962/63 I 1973/75 II

FAÇADE "breaks in"  
plan and columns move  
out into landscape  
so bldg moves out  
to engage the hill  
instead of being  
pushed out looking  
like it slid off hill

stairs from/over  
hill into pool  
inside outside pool





value  
temperature

yellow advance

green → red  
dark  
detail advance



Sketch photo copy of Michelangelo, casual signature  
dug; not controlled and shows a process of  
thinking and not of showing drawn from a  
designed standpoint and not from a representational  
one

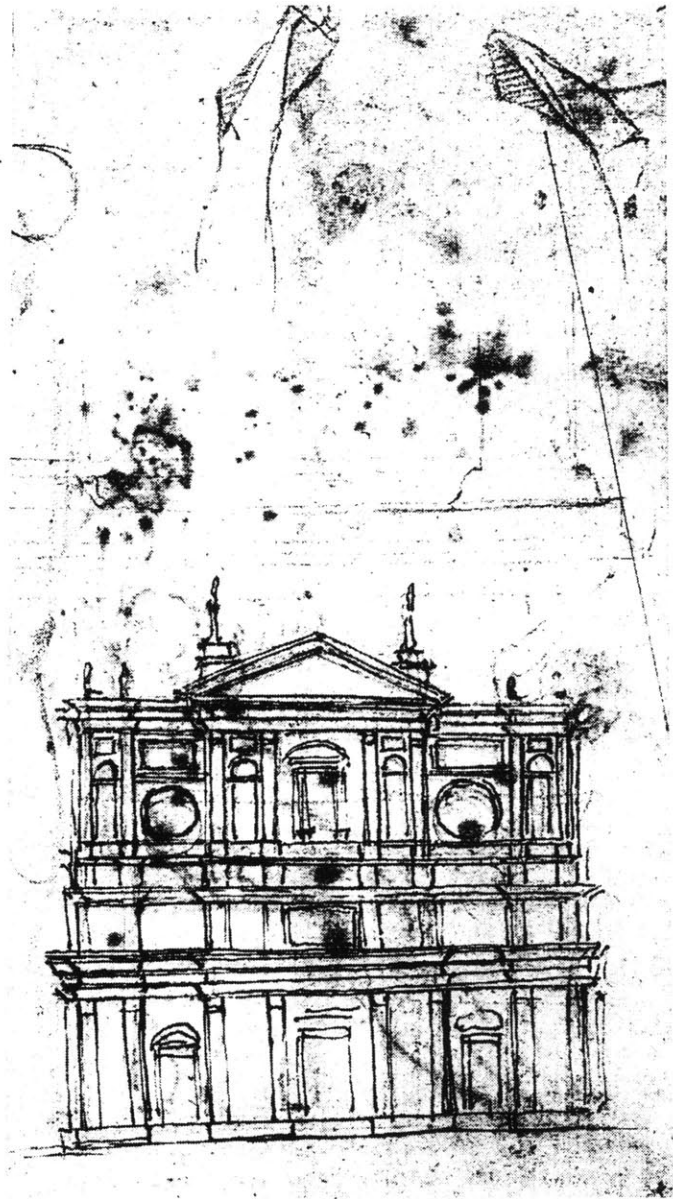
"THEY CAN BEGIN WITH ANY IDEA. THEY CAN BEGIN  $\bar{c}$   
A FOUND OBJECT THEY CAN BEGIN  $\bar{c}$  NO OBJECT, THEY  
CAN BEGIN SOMETIMES EVEN WHEN I'M SWEEPING THE  
FLOOR AND I STUMBLE AND KICK A FEW PARTS THAT  
HAPPEN TO THROW INTO <sup>AN</sup> ALIGNMENT THAT SETS ME  
OFF IN THINKING AND SETS OFF A VISION OF HOW  
IT WOULD FINISH IF IT ALL HAD THAT KIND OF  
ACCIDENTAL BEAUTY TO IT."

DAVID SMITH

Idea of simplifying to just do one building and do  
it down to level of details to be associative  
 $\bar{c}$  all sizes - not two larger ones as in  
two sites

Smith another investigator of form - form  
of everyday objects = the is only form  
color Aalto's investigation of form

Dobson's space church form of  
object at the Horizon - Landscape  
object on horizon / building = landscape



Constable: the art of nature 10.20.91 pg 13  
 on copying @ the home of Sir George Beaumont

"I have copied one of the small slender - - breezy sunset - a most pathetic and soothing picture. Sir G. says it is a most beautiful copy. Perhaps a sketch would have answered my purpose but I wished for a more lasting remembrance of it - a sketch of a picture is only like seeing it in one view. It is only one thing. A sketch will not serve to drink @ again & again - a sketch here is nothing, but the one state of mind - that which you were in @ the time".  
 A.A.H.



AACTO copy DW 10.7.91

diag of unstruct

direction of landscape  
direction of architecture  
access

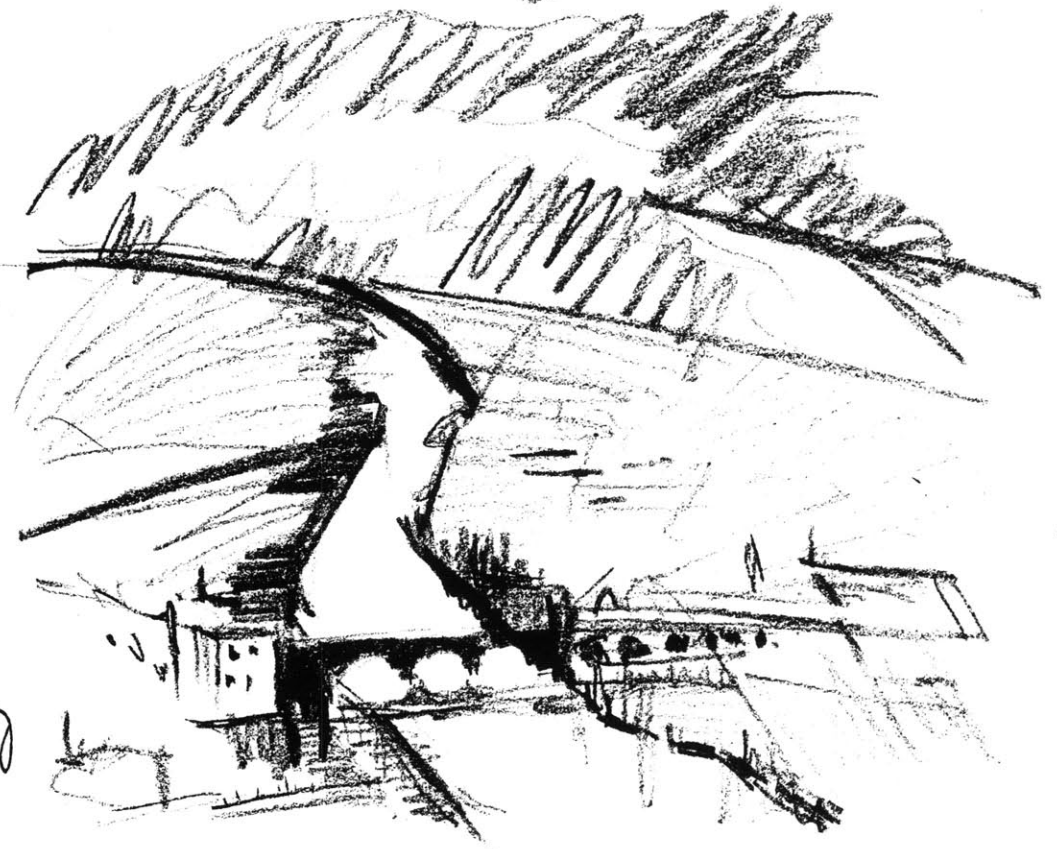
landscape size piece  
building "

use of light  
base context diag

Nalabooka  
to examine horizon  
Max Ernst  
Group of seven  
church



containment of landscape  
and containment of building  
with "small" / habitable / built  
landscape in the middle



## PAINTING

AAalto 1898-1976 pg. 26

Just as it takes time for a speck of fish spawn to develop into a fully-grown fish, so, too, we need time for everything that develops and crystallizes in the world of ideas. Architecture demands more of this time than other creative work. A minor example that I can mention from my own experience is that what may seem to be just playing with form may unexpectedly, over a long period, lead to the emergence of an actual architectural form.

Le Corbusier

Corbusier referred to his artistic method as "a marriage of contours" By allowing objects to share profiles or by interweaving the outlines of two figures, formal rhymes and spatial rhythms were orchestrated to create harmony. From this arises a third figure of metaphor or harmony.



FREDERIC E. CHURCH, ICEBERGS AT MIDNIGHT, LABRADOR  
1859.

## PALASADE urban landscape

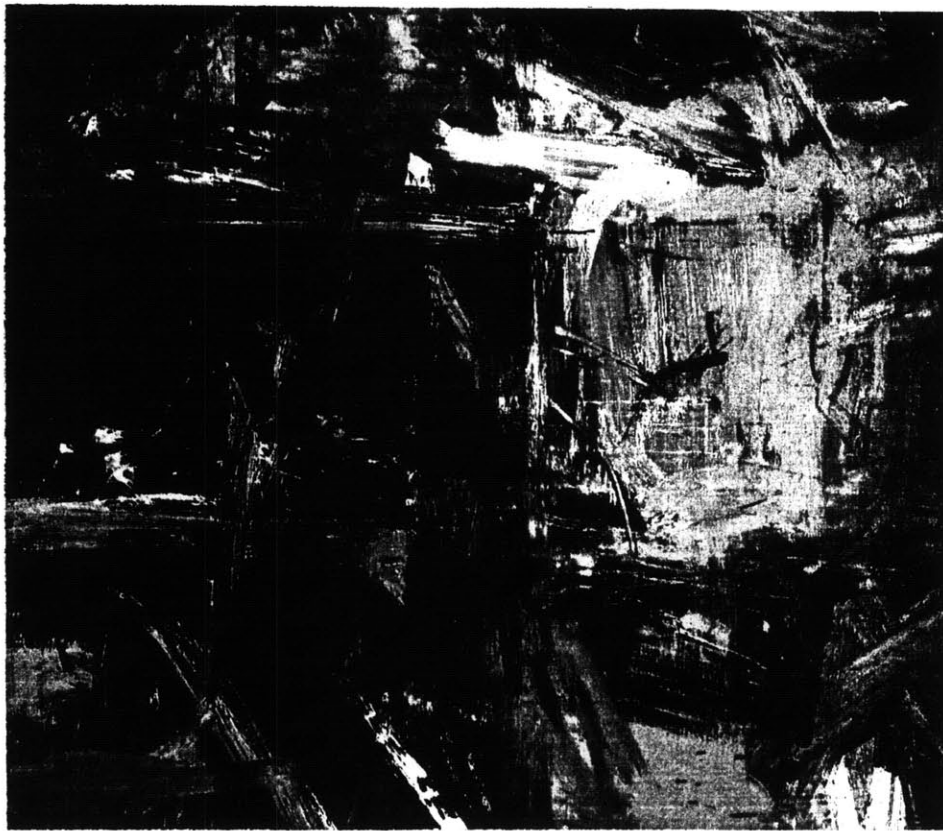
Dark blue cool background  
light warm red/yellow foreground  
= SPACE

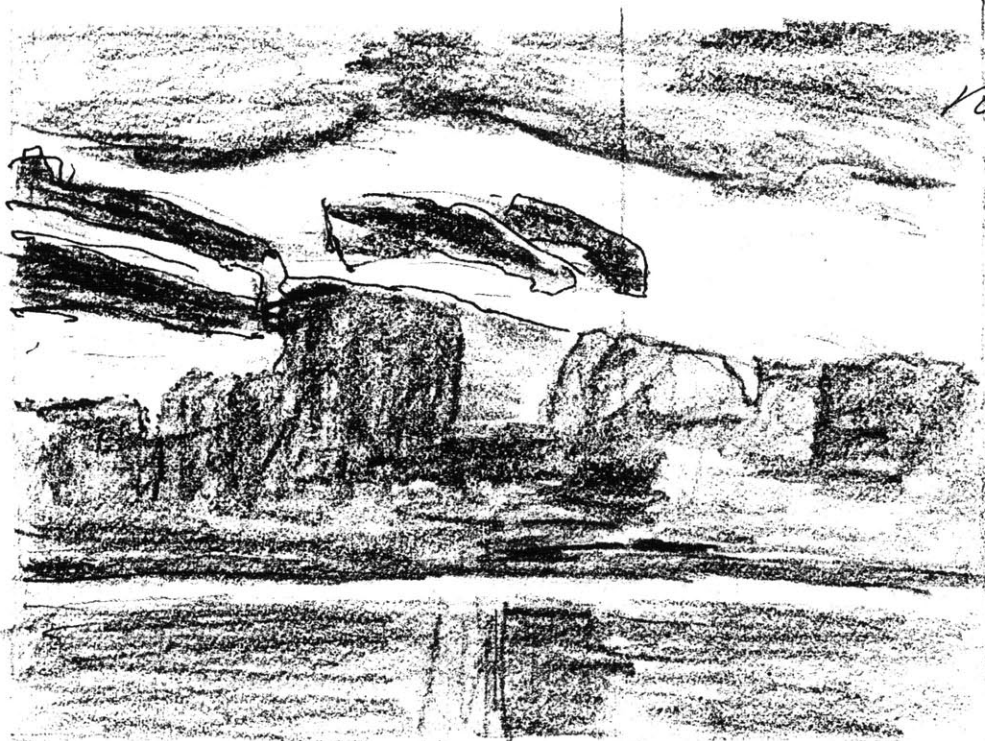
blue left violet right next to  
orange which makes association  
because orange & violet have  
common association of red in  
addition

ORANGE                      VIOLET  
YELLOW+RED              RED+BLUE

where as blue on right side  
of painting has addition of  
white which makes it cool  
and contrast to orange/warm  
but is light so same in  
value. It is much lighter in  
value - other blues/violet  
so advances giving space  
to canvas and produces a  
torque or pull on plane of  
picture SPACE/territory

DE Kooning 1957





J.E.H. MAC DONALD  
LAKE JUNCOE 1917

Base color is | form and builds space of ptg  
strong horizontal built by lower portion of painting  
Painting horizontal direction  
but builds a vertical & horizontal  
elements  
makes associations of form & horizon  
and built horizon of tree/building/  
mountain form that is inhabitable  
horizontal constructed from complimentary

dark form  
makes containment  
& horizontal moving  
through

simultaneous contrast  
of color



speed

highest area of complexity @ top

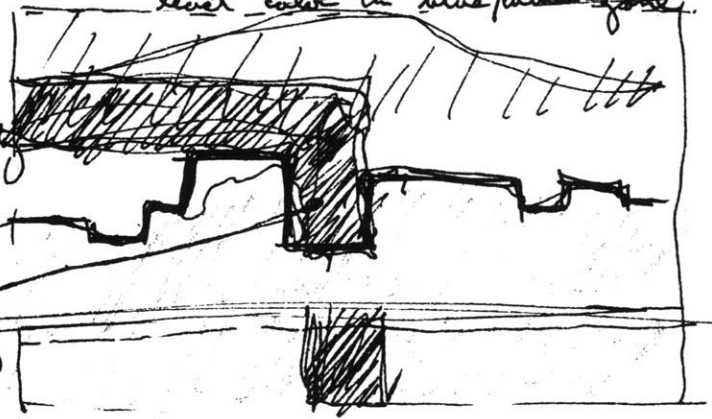
details advance - more details @  
center of painting  
highest contrast below that = B & W  
So zones of contrast reinforcing  
horizontal

horizontal zone horizon

- black/white contrast

- strongest horizontal built from  
compliments so it's an assembled  
unit making a larger more  
complimental or relationship of  
opposites - dynamic instead of  
likes = static

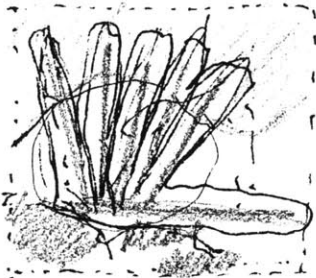
- relationship below is also contrasting  
between chroma - most color to  
least color in blue/white zone



Group of Seven 1920-1930±  
 Loan fine is symbol of man in nature  
 paint simply  
 lay drive/behave  
 painting with the paint

"OUT OF A CONFLUENCE OF MOTIVES THE VITAL ONE HAD TO BE  
 DETERMINED UPON. SKETCHING HERE DEMANDED A QUICK  
 DECISION IN COMPOSITION, A SUMMARIZING OF MUCH  
 DETAIL, A SEARCHING OUT OF SIGNIFICANT FORM, AND A  
 COLOUR ANALYSIS THAT MUST NEVER ERR ON THE SIDE  
 OF TIMIDITY."

A.Y. JACKSON SKETCHING IN ALGOMA  
 THE CANADIAN FORUM (MARCH 1921)

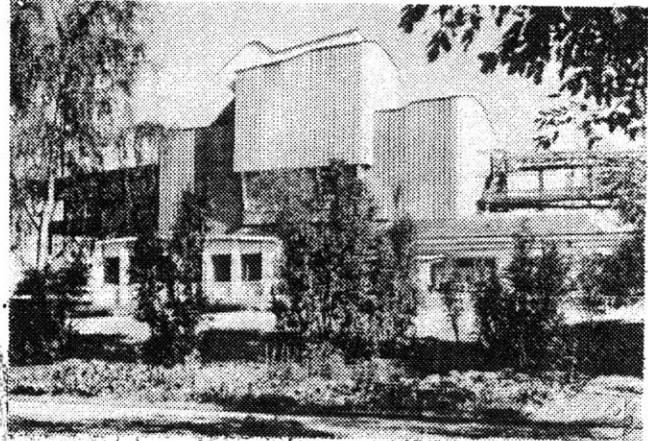


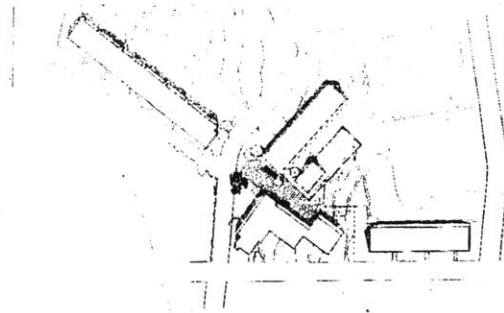
form radiating from horizontal  
 form of orange color - architectural  
 patches - urban form / AALTO  
 color directional  
 grey horizontal  
 blocks vertical  
 lt blue/green = objects  
 white/light grey vertical

1 form in grey  
 NO HORIZON  
 MAN NOT REPRESENTED

TOM THOMPSON  
ALTHAM BIRCHES  
 1916

AALTO FACADE shows  
 same shape as the  
 abstract landscape  
 horizon. Collective  
 memory of natural  
 form horizon  
 (see opposite page)

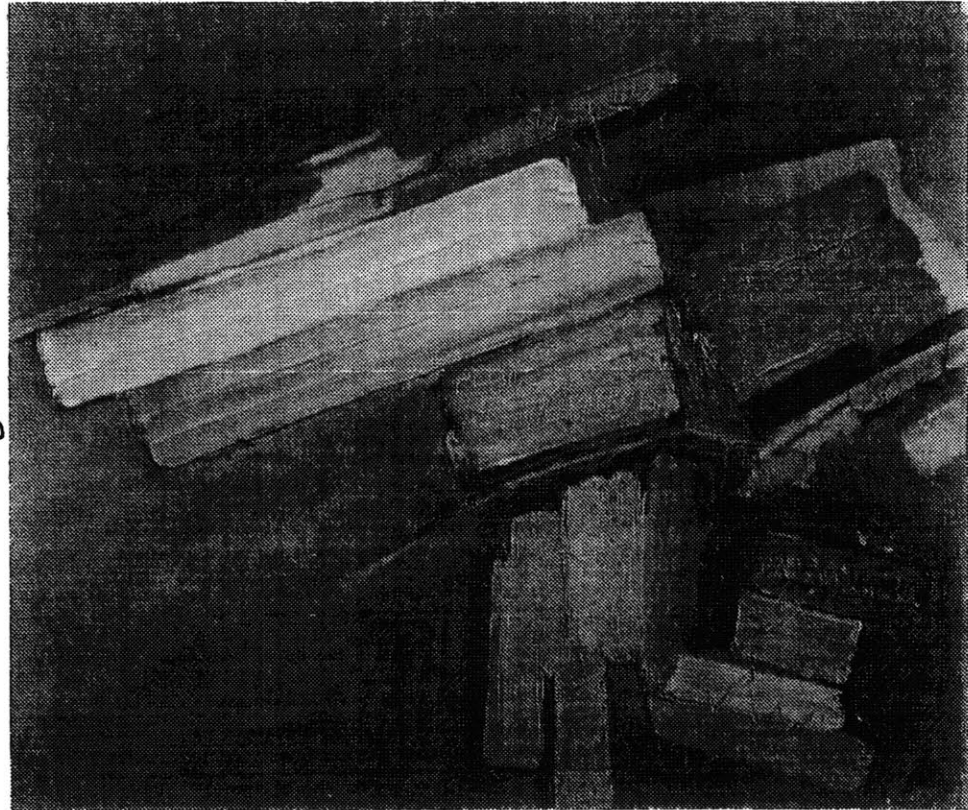




HOUSING ESTATE NATIONAL PENSION FUND  
HELSINKI

"My wife gladly asked Le Corbusier if he would eat with us. The table setting started out in a symmetrical fashion, and the various changes of the objects during lunch became the subject of an aesthetic analyses. The common objects of everyday life-plates, spoons, forks, bottles, and glasses-seen through his eyes lost their trivial utilitarian connections to reveal their real identity as plastic forms; the unique form of each object. This is what Le Corbusier meant when he said it was necessary to pull the string; to find the "gate of miracles" where the chaotic appearances of the forms and colors are reconciled and harmonized. His challenge was to learn "the rules of the game, the most beautiful game man has ever invented, the game of art". Seeing is not a gift of God but a discipline to be learned. The dinner table served as a model for visual analysis; its components were like vocabulary and grammar of a visual language."

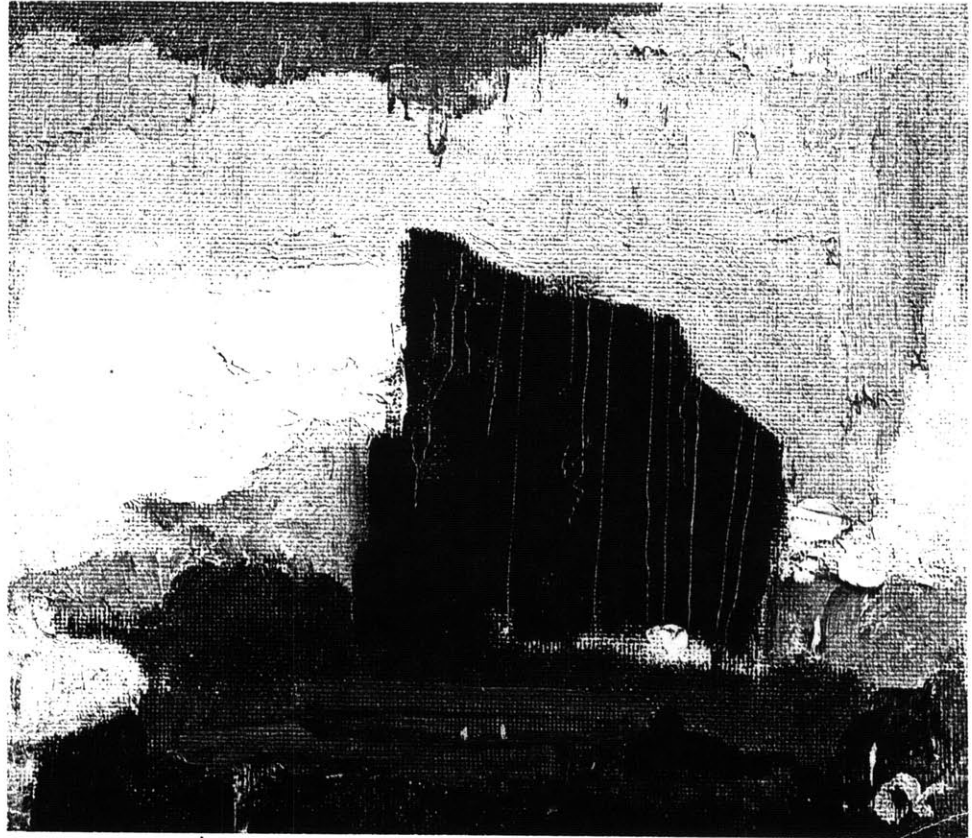
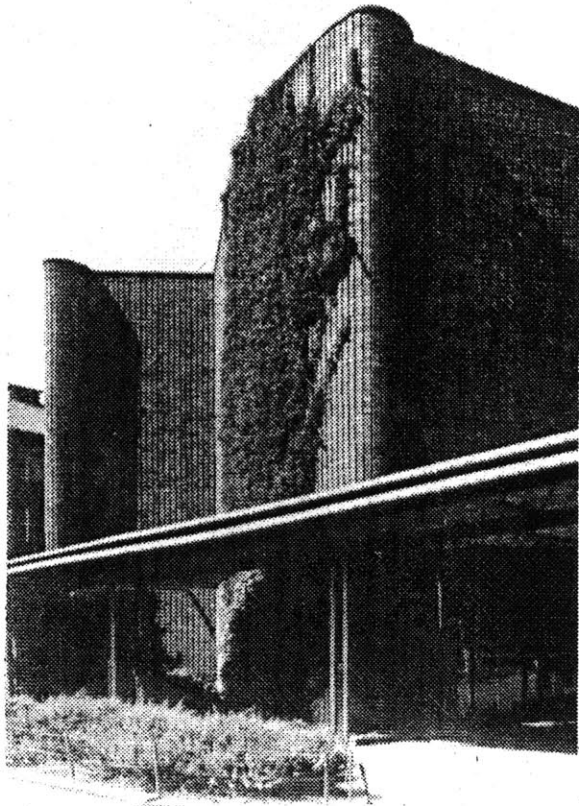
p 5 from luncheon with the Nivola's and Corbu



ALVAR AALTO 1898 - 1978 p 51

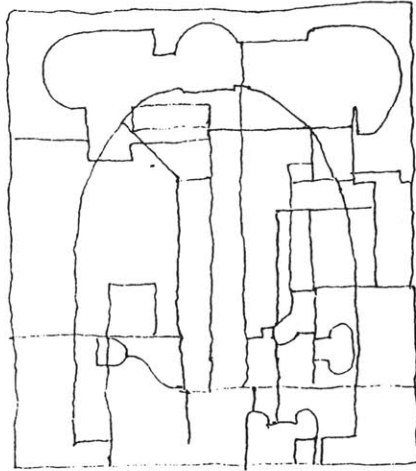
Two AALTO paintings which are investigations of abstract form. One "could" imagine them to be abstract plans or elevations. Taken with his quote on page 26 it is easy to see that his was a continual exploration which provided information that he sure was layered into creative memory. Whether it reappeared in his buildings or his buildings in his paintings is of not that much importance.





ALVARO SIZA 1978-1978 Pg 247

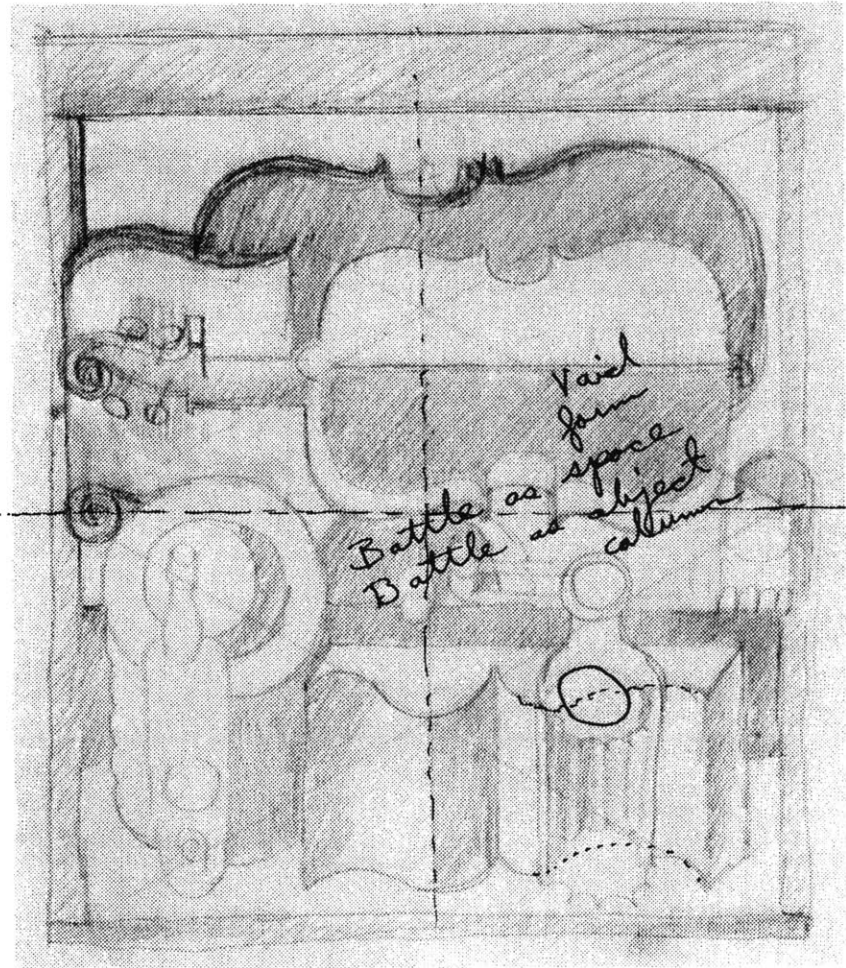
what is important is the investigation in another medium. This allows for transformations and interpretations which might not have happened on a normal design path. Not to mention experimentation that is on going in texture and color. We perceive buildings in many ways, space distance, color, perspective, time.



Kapoc - "Every form is a record of its origin"

Corbusier - "Drawing is a language, a science"

Above: Corbusier plans from Villa Savoye all 3 levels superimposed on one another, looking much like his drawings or paintings, curves of right angles, not so much as carpenter center which has curves angles and pilasters which were in his code male - angle/pilasters: female curves lines

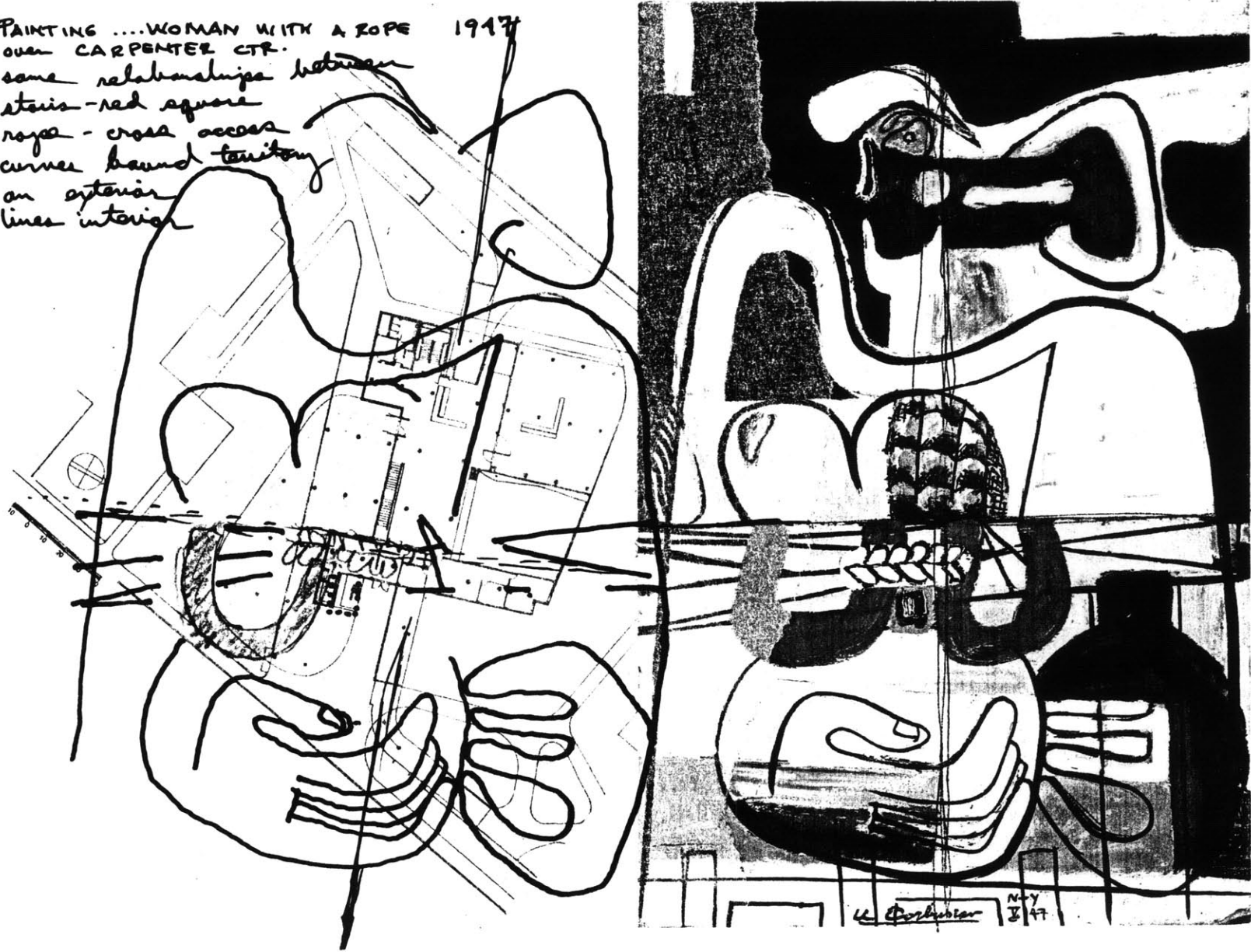


LECORBUSIER, VIOLIN, BOOK, BOTTLES, & A PILE OF PLATES 1920.

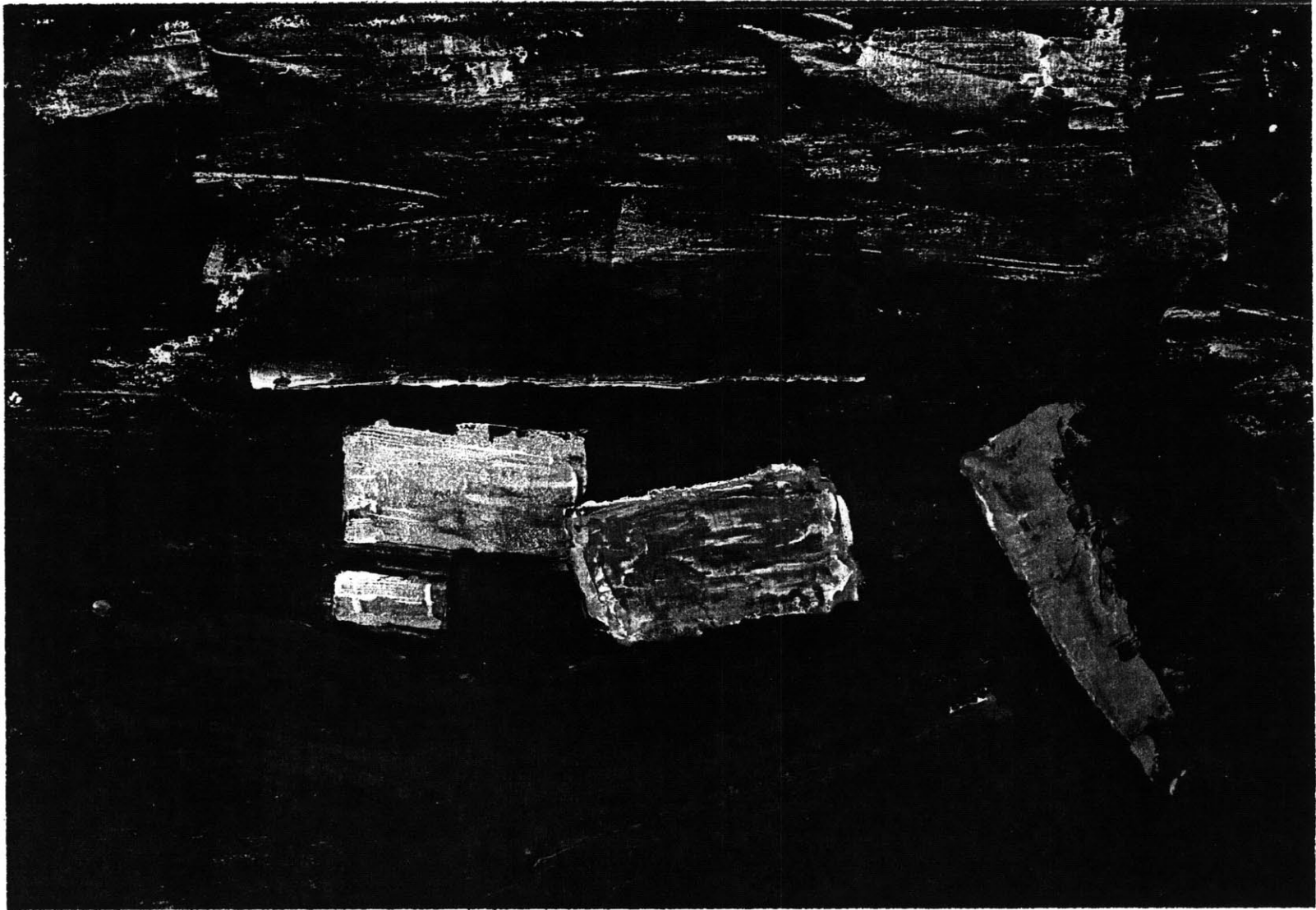
curves color fields

Similarity between drawing above and painting opposite and carpenter center all similar formal relationships and exploration. Even subdivision not by line control but by deployment of objects

PAINTING ....WOMAN WITH A ROPE 1917  
over CARPENTER CTR.  
some relationships between  
stairs - red square  
rope - cross access  
corner bound territory  
on exterior  
lines interior



W. F. ...  
NY  
1917

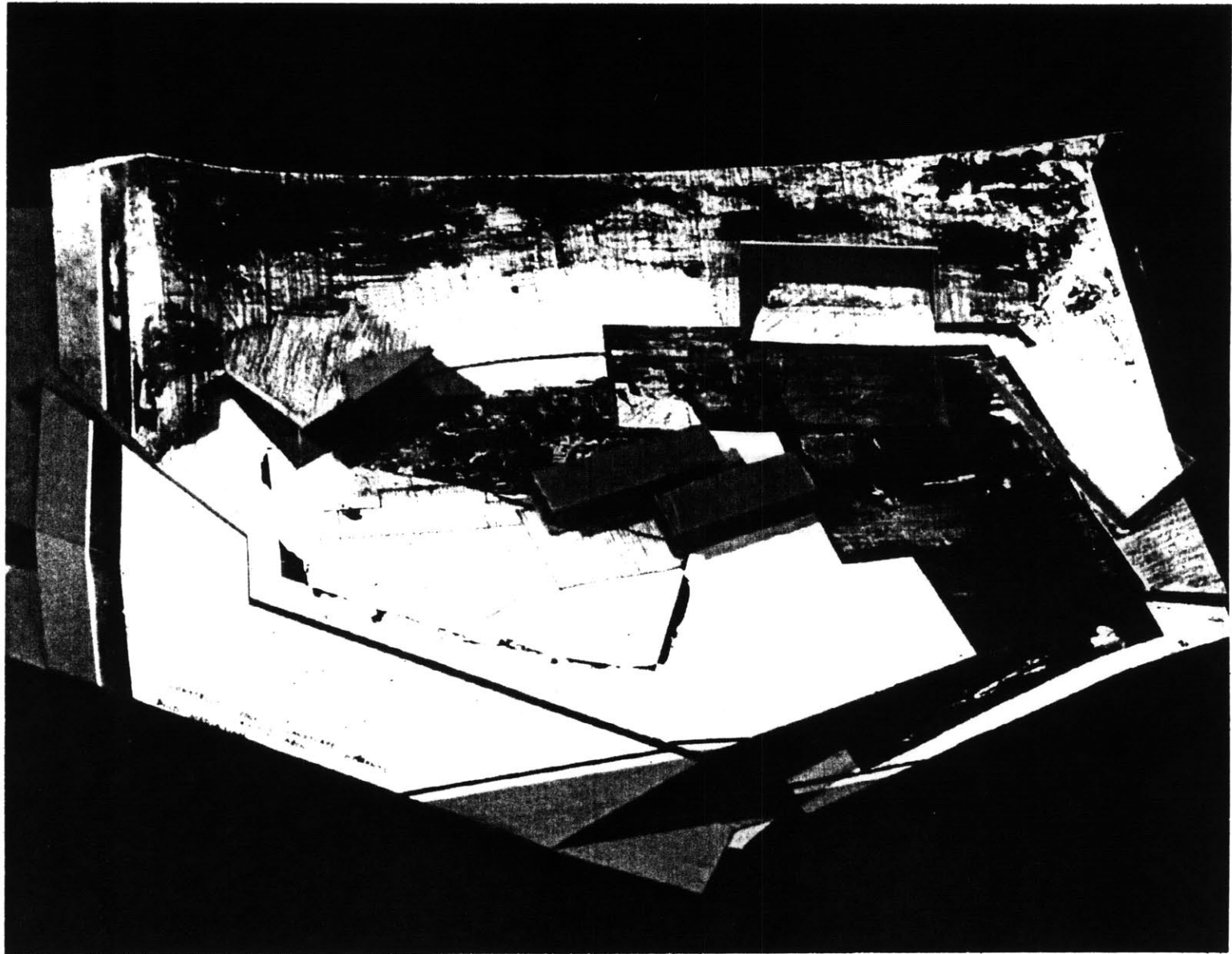






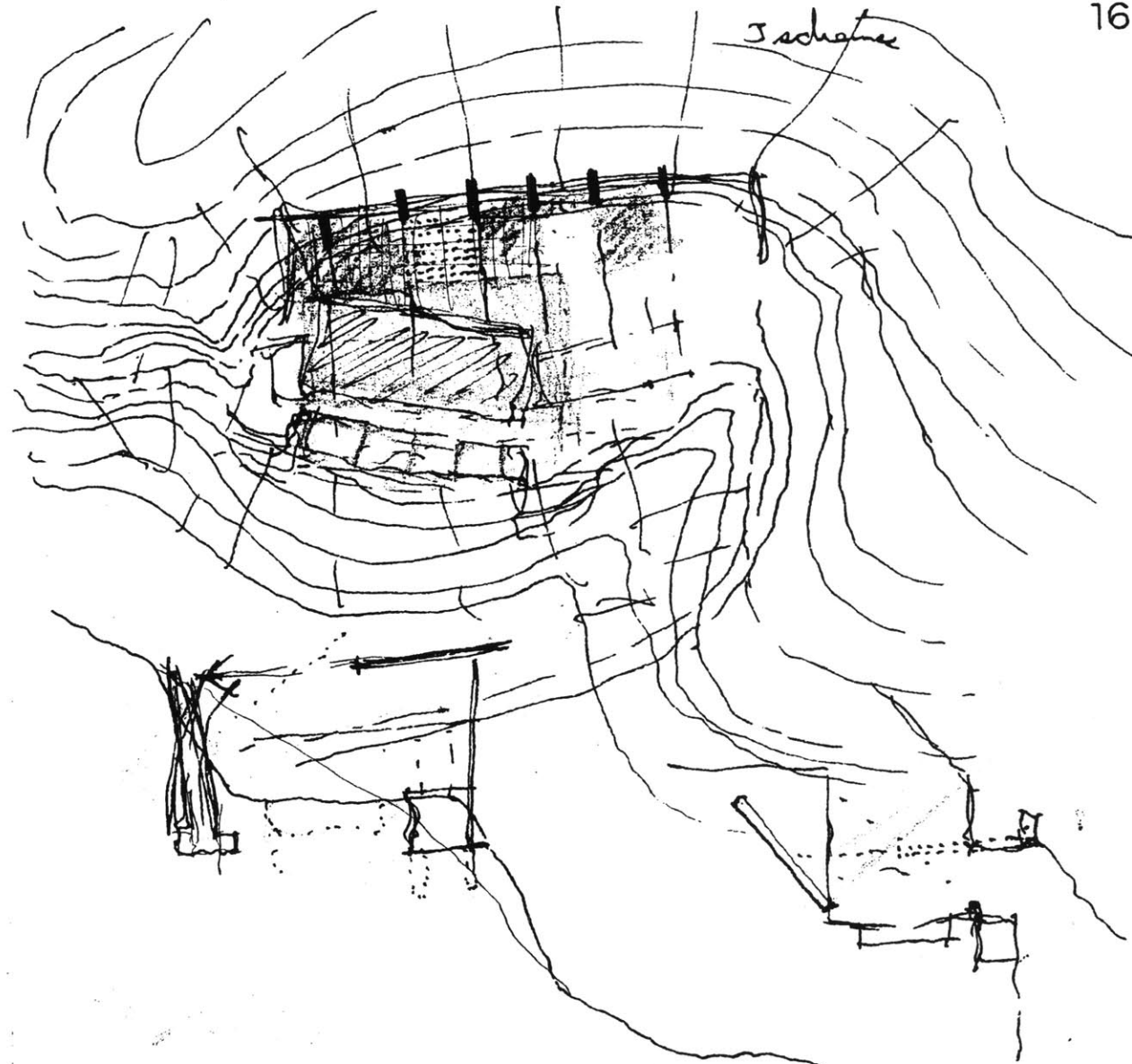
CONSTRUCT  
BUILD MEDIATION  
EDGE  
JOINT  
L  
LANDSCAPE ELEMENTS  
ARCH



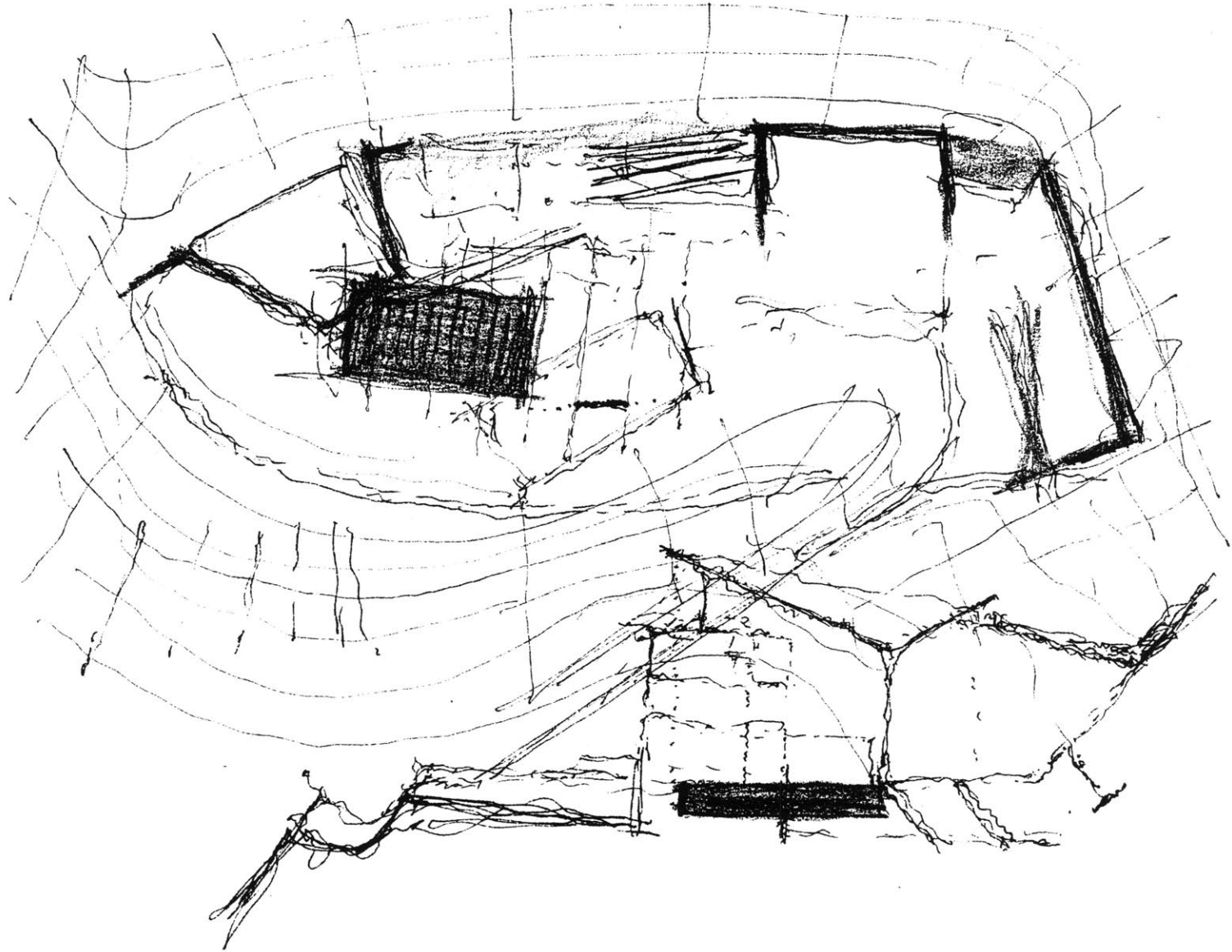




"Contemporary modernist fiction, in fact, requires more coherence than traditional fiction does. For one of the things this new fiction does is bare its own structure. (How long a novel would Pale Fire be in the hands of Thomas Mann?) This fiction sees that the formal relationship among parts is the essential value of all works of art, so it strip the narration of inessentials: like Hugo's excursions into history of all aspects of human culture, like the unities of time, space, and action, like emotion. It bares instead its structural bones, as Pale Fire does, and Invisible Cities, and Ficciones; it bares its structural bones, brings them to the surface, and retires. Those bones had better be good. If a writer is going to use forms developed by intelligent people, he should use them intelligently. It does not do to mimic results without due process. Traditional fiction has the advantage here, I think. In a conservative work well fleshed, we may not notice at once that the joints do not articulate, nor the limbs even meet the torso. There may in fact be so much flesh that the parts cohere as if were bonelessly. But it is easy to see, if we look, taped joints on a skeleton. " \_\_\_\_\_ Annie Dillard. *Living By Fiction*

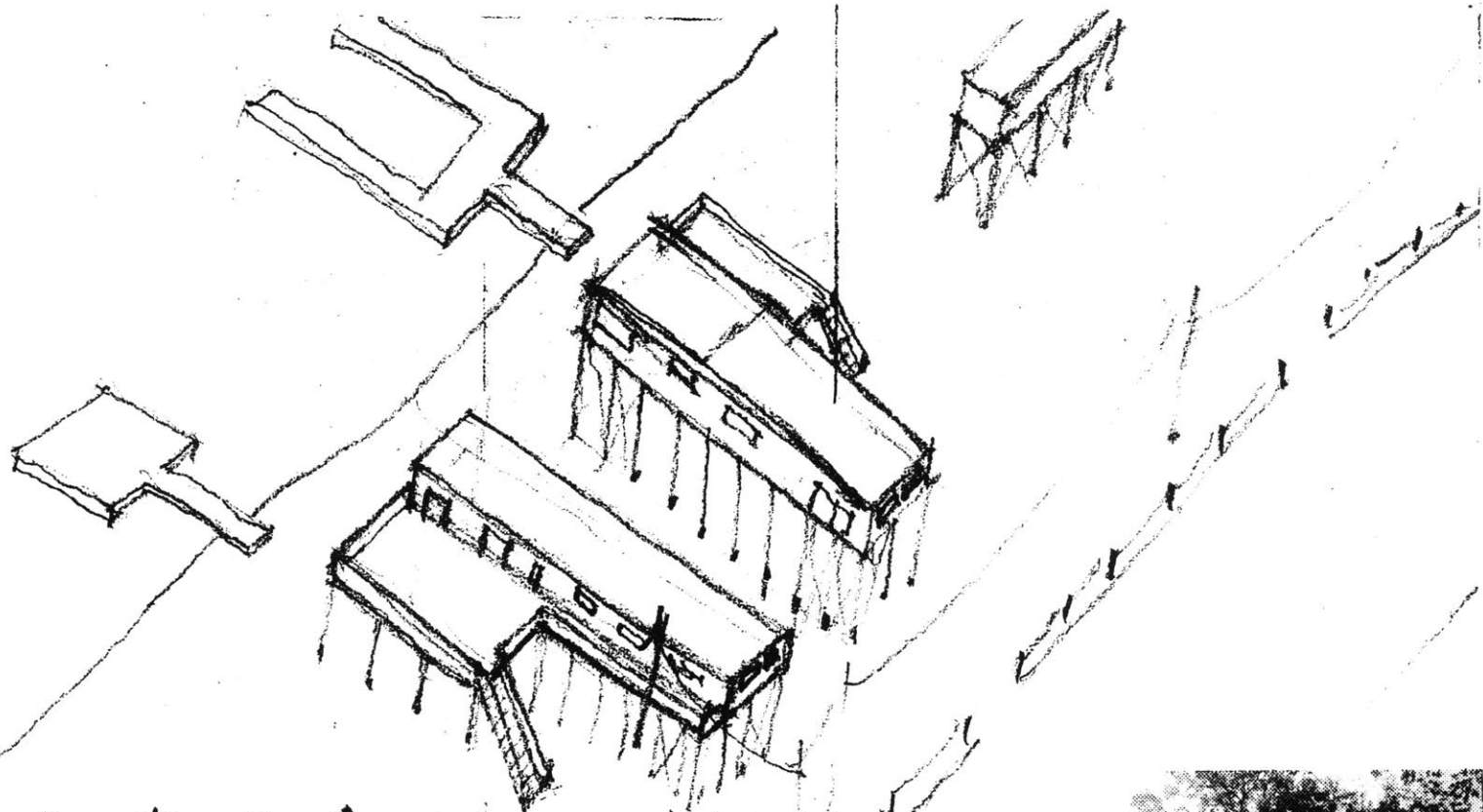


"ART RUNS PARALLEL TO NATURE AND HAS LAWS OF ITS OWN" Cage

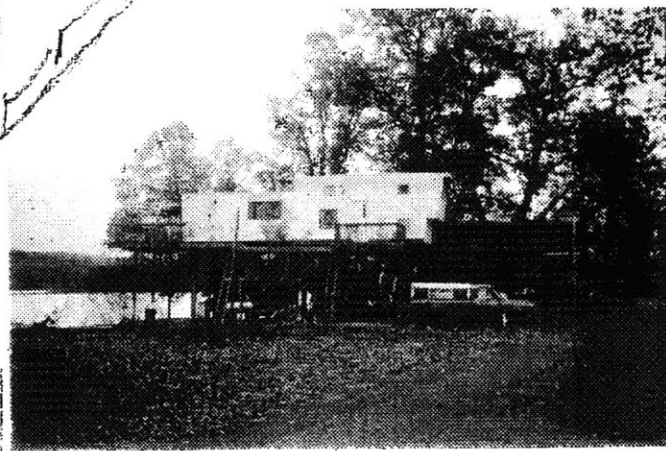




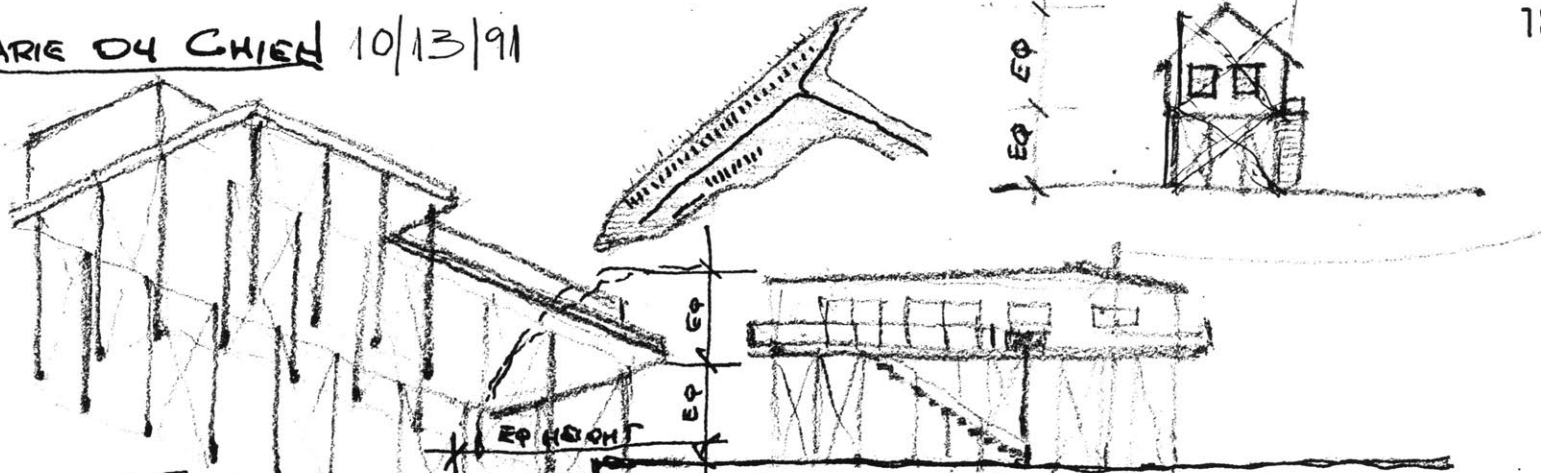
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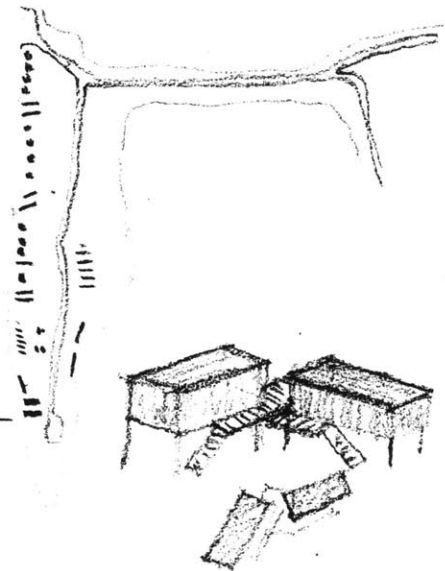
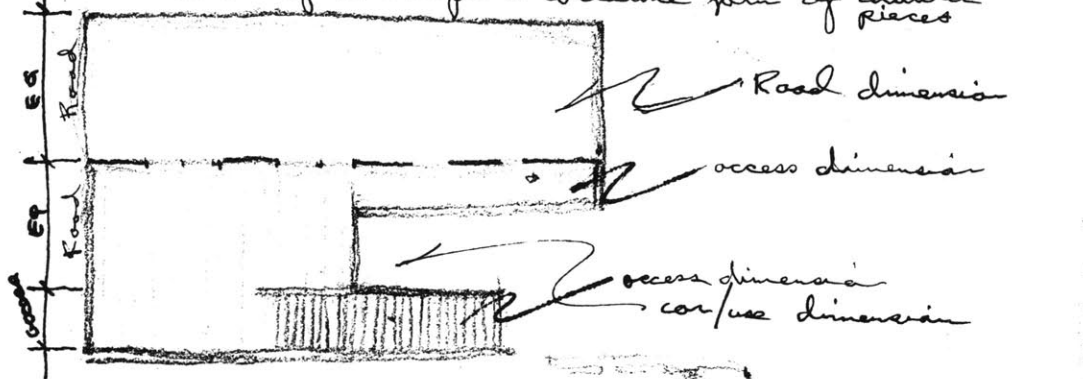
zone of water front with edge of docks  
zone of structures below trailers  
zone of access beside trailers  
zone of street/access @ large bridge  
What is relationship to landscape?  
nature



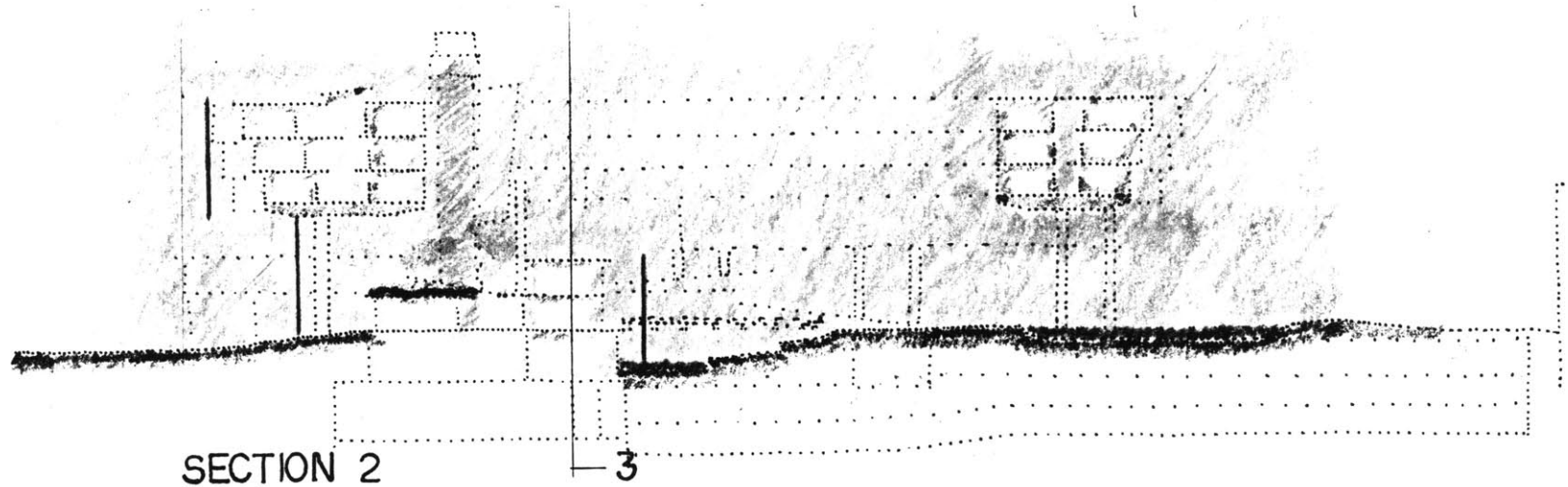
PRARIE 04 CHIEF 10/13/91



Trailers all counter to accept landscape direction  
 60' lot so long & thin build direction of landscape = collective form of counter pieces  
 So relation to landscape is one of dimensional self stability like Behnisch Bundesbank

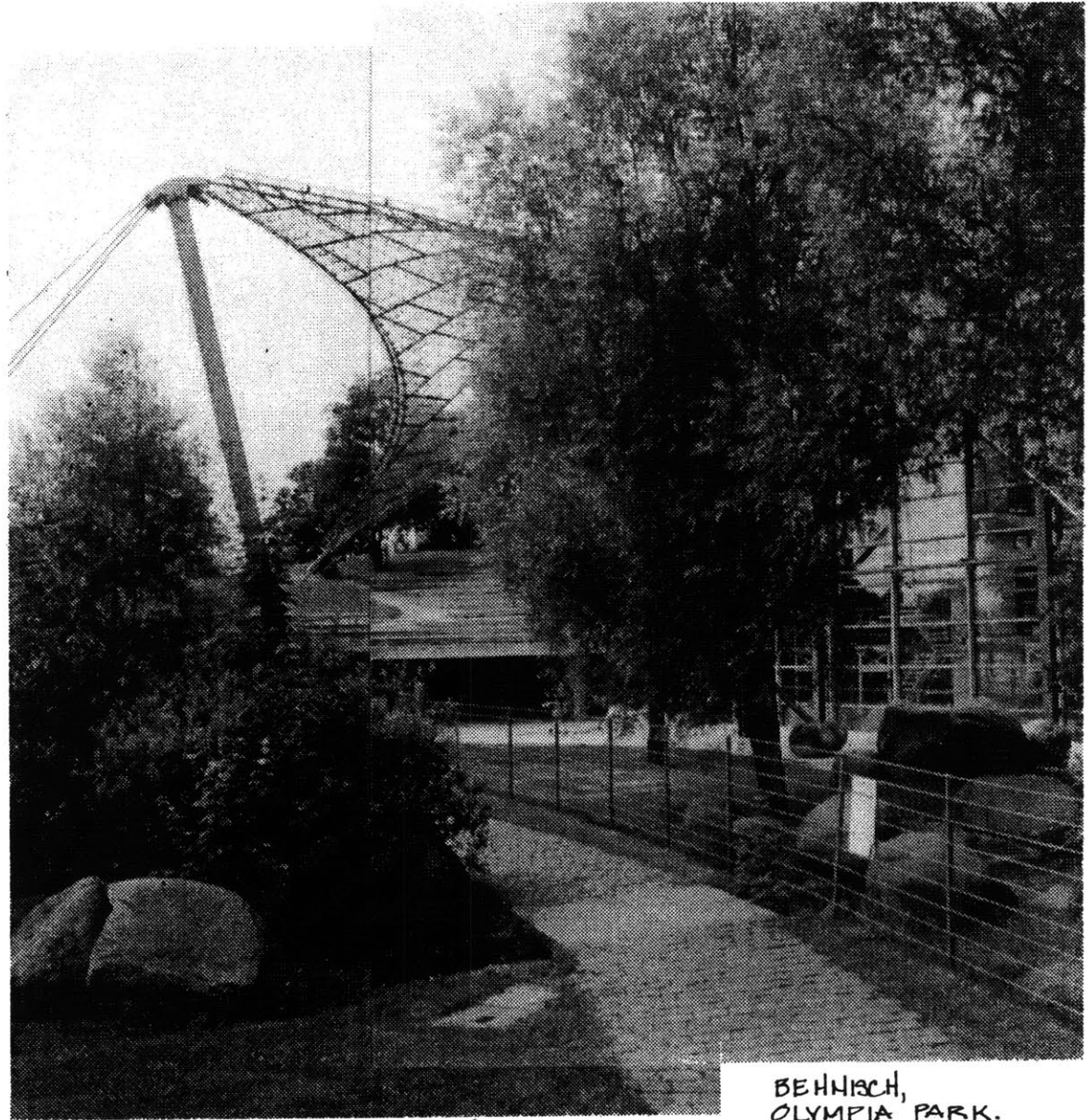


Estimated trailers & small cabins really great because of screens/props holding up trailers & the use territories they start to generate.  
 Trailers displaced by their own dimension from ground dimension of deck equal to trailer and compact dimension becomes one of use

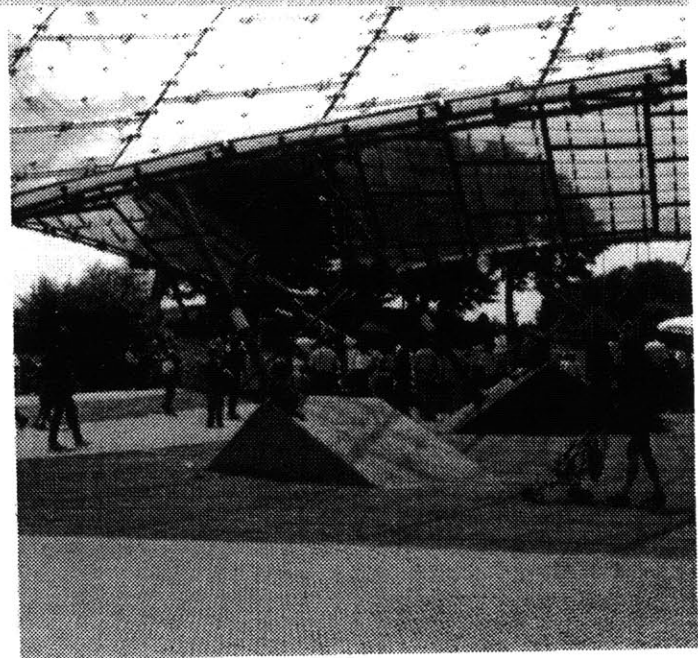
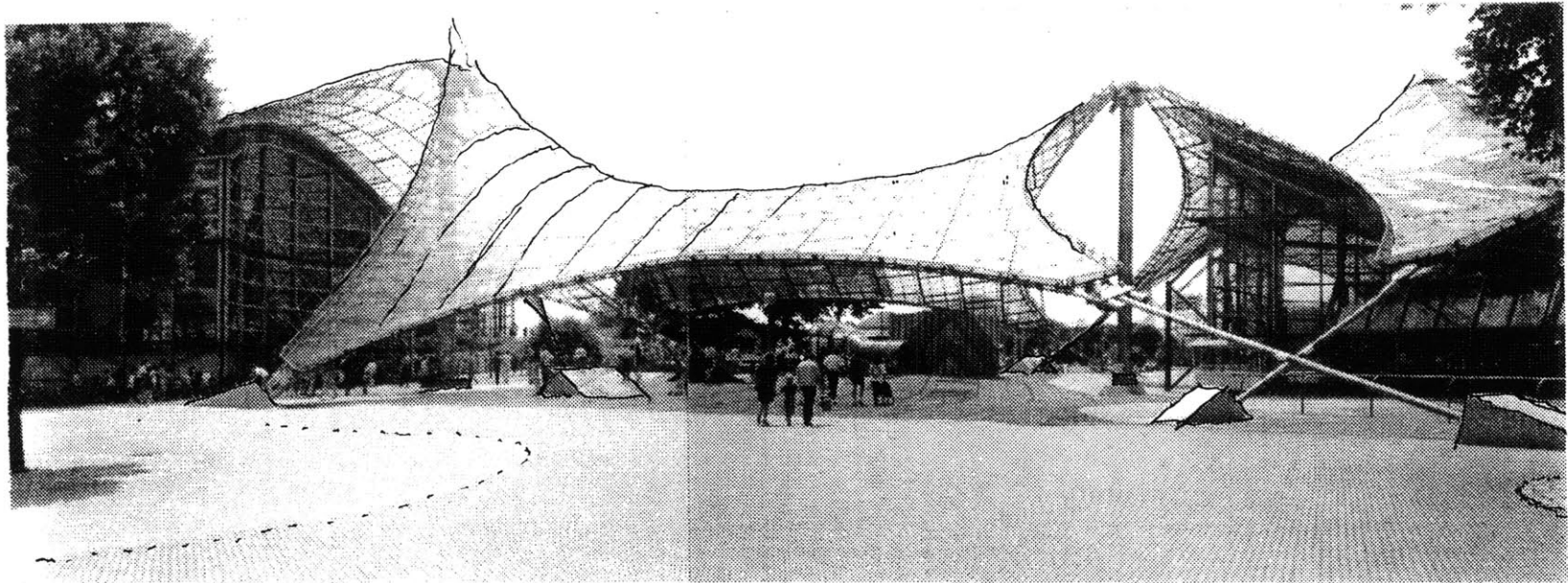


BEHNISCH, OLYMPIA PARK.

Dimensions - as in falling water and the trailers here are dimensions measured off the landscape that repeat and build relationships. These are often self stable as demonstrated on page 56 in Mr. Smith's studies. Here the "ring" of the Behnisch Bundesbank is its own dimension from the ground and that same dimension is the height of the building section that is let into the ground. This dimension is one of the first you experience as you cross the bridge from right to left as you span the dip and enter building



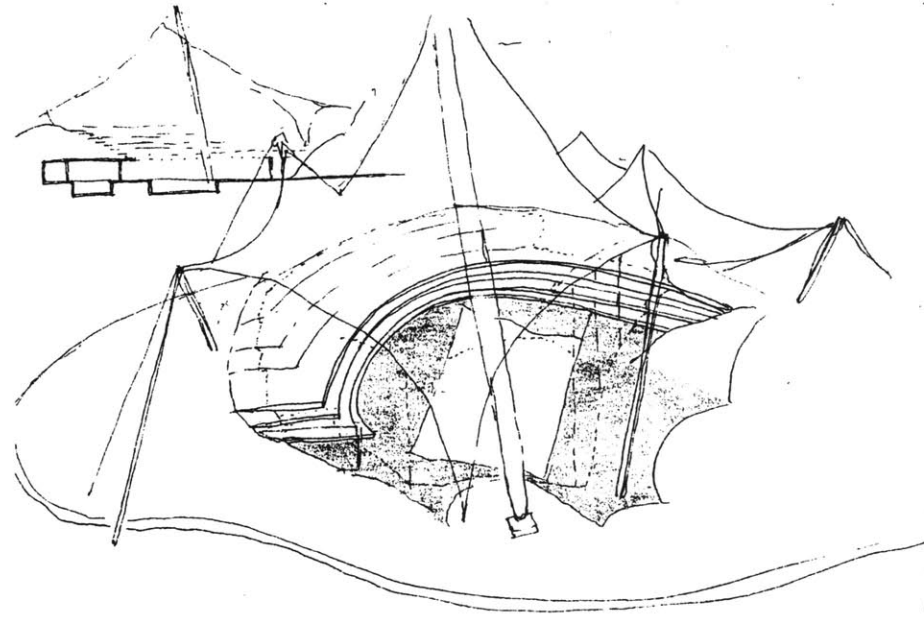
BEHNISCH,  
OLYMPIA PARK.

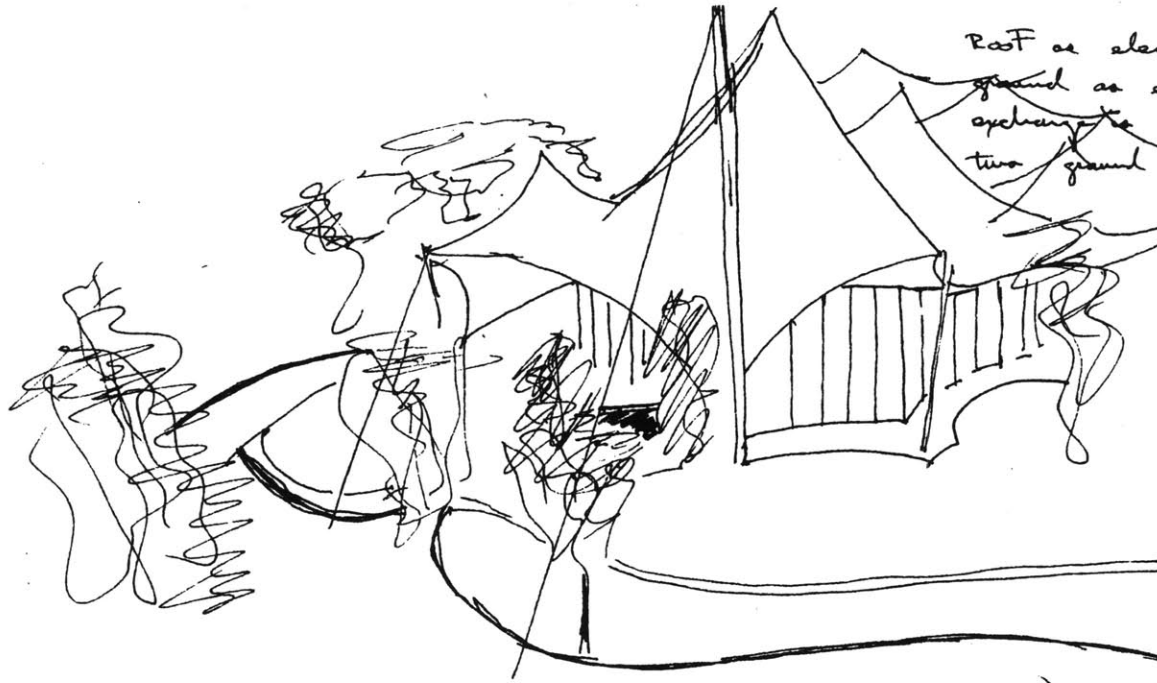




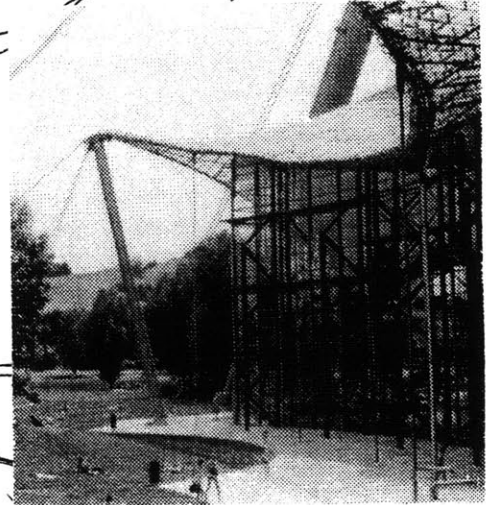
## OLYMPIC PARK

Whether one approaches the "Olympia Gelande" (Olympic Landscape) from the train, by car, or on foot the first experience is with the landscape. All modes eventually lead one to multiple foot-ways traversing the landscape in the direction of the complex. The first association with architecture on the site is large and singular steel columns sticking up trunk-like above the trees. The trees begin at the station in alley fashion and lose their linear ordering as they are more distant from the station. Being a tensile structure hung from these columns, there is at first no sign of building or closure. As the angle of perspective widens around the park, more of the hanging roof structure appears above the trees. Below the trees, rolling grass mounds enfold the traveler along the granite edged asphalt foot ways. Side paths join the footways like tributaries guiding people to swimming, concerts, sunbathing, picnicking, walking and enjoying the park. The sectional experience expands beyond the height of the trees as the roofs of the stadium/swim-hall blossom like inverted lilies in a tropic response to the earth. The enormity of the project becomes tangible as the hills of the background provide comparison, for both size and form. The limits of habitable section are revealed as cables strike through the air and amorphous transparent roofs grid an amorphous collection of low hills. Underfoot the asphalt is broken into the texture of fist-size granite cobbles molded to the rolling paths that lead to the concentrations of structure ahead. The granite cobbles form in rings, truncating the spanning cables; as do the watery rings at a ship's anchor chain.



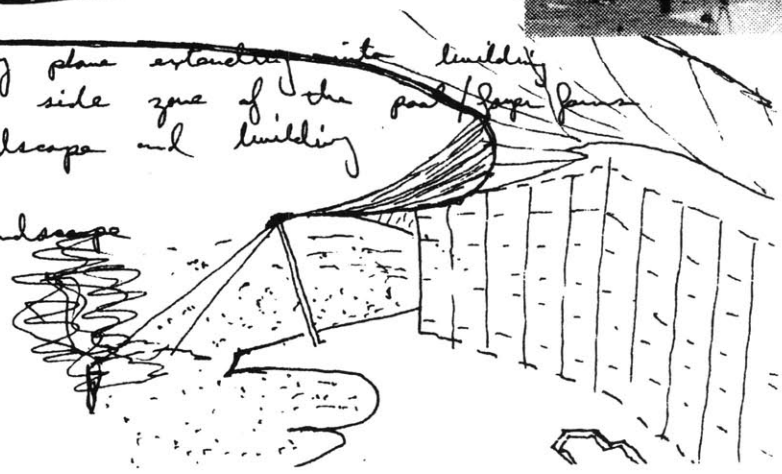


Roof as element to restrain  
ground as element of section  
exchange to restrain  
two ground planes / is exchange



Olympic park as in Birkbeck for entry plane extending into building  
with view out through the other side zone of the pool / large form  
the zone of exchange between landscape and building

Pool deck extends out into landscape

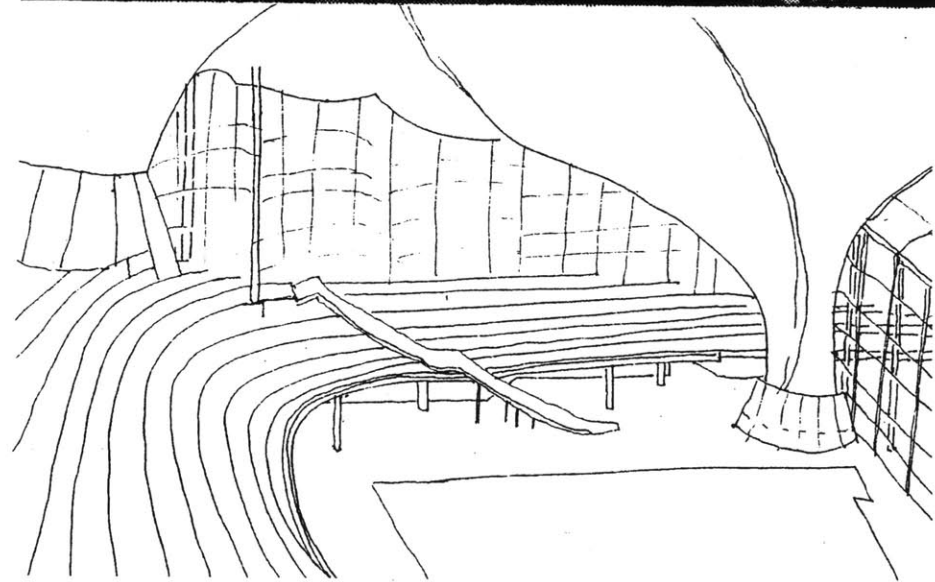


The cobbled ground plane moves one confidently into the tenuous section of bicep-sized cables and trunk-sized columns. Human size belies the vast catenary distances traversed. Roofs spring pointedly from cables to form the outreaches of shelter. Spidery spans gather the crowds as they move between buildings. Underfoot, the asphalt has turned to cobbles and carries, unbroken into/through the closure of the sport-halls. The topography carries also unbroken into the halls. Moving up the hill and into the swim stadium one is surprised to be on top of the hill. One is not on a podium or scalped plane, one is standing on the knoll of the gentle hill rising with the site/section.

Overhead the roof slopes down; suspending you in the space of the section, somewhere out over the pool. Looking out over the stadium, the plane of the pool glides underfoot. The exchange between the plane of the valley ( pool, floor, earth) and the hill (stadium, roof) all takes place in the surrounding architecture/section. This exchange becomes spatially more tangible when one moves from the public/stadium into the private/changing areas.

Reversing back onto the path of entry, the steps lead down through the plane of the landscape. The feeling is of moving through the thin edge of hammered metal; cobbles beaten into the thinness of molecules. Molecules of the landscape run unbroken into the building. One descends to the locker rooms in the manner of Brownian motion, hovering in a zone between landscape and building.

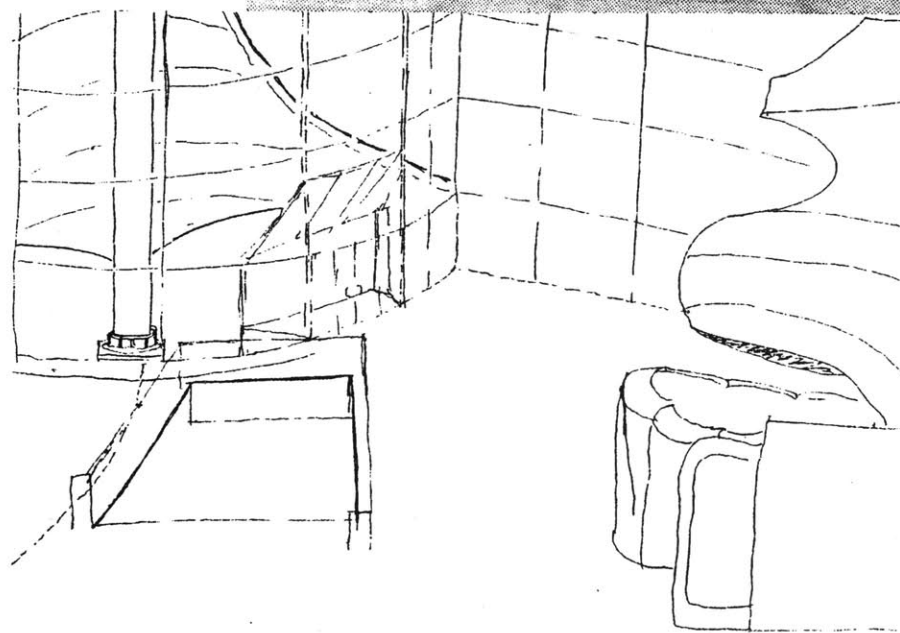
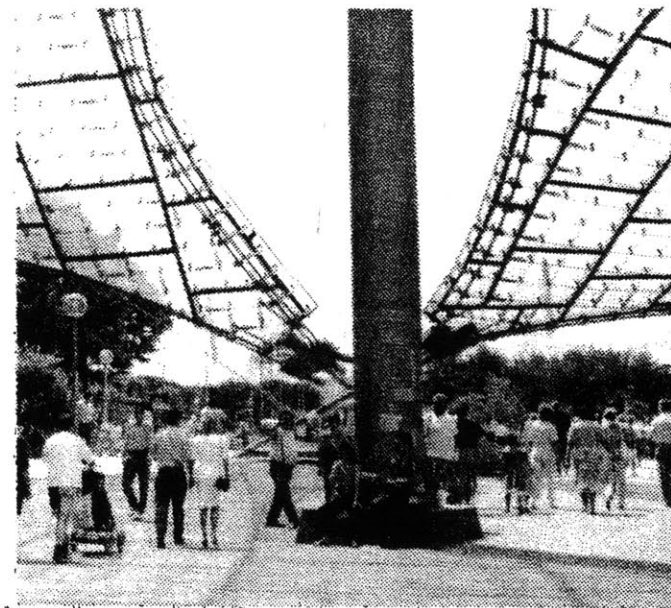
The thinness is further revealed by the ease with which a large tent column pierces the landscape, holding it for view, like a giant dragon-fly under



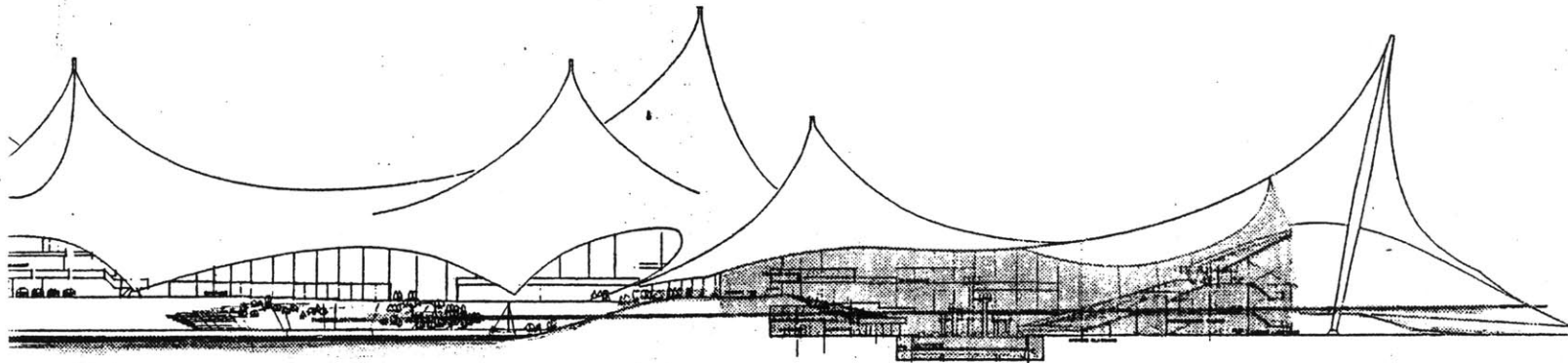
glass in a specimen drawer. Upon reversing the entry direction, the column is viewed very clearly in front as one descends through the cobbles. Off-center of the stairs, it is quite clear that the column is not anchored in solid ground but merely pierces the landscape on the way to it's footing below. As one had associations with the column above the landscape, one also moves past it and associates with it below the landscape. The movement around the column has been in plan and section. The treatment of the ground plane is too tactile, too tangible for one to be unaware that one is moving about on/through it, creating the section.

Once down on the tile surface of the locker room area, the direction is again reversed and one is headed in the direction the of entry. Before one, through the open risers of the stairs, and to either side, the tiled surface of the pool-deck runs unbroken through the facade and onto the plane of the valley landscape. The plane of the hill/stadium floats overhead. Similar to surfing; the rider remains suspended between the two surfaces; hanging ten in the tube of the section. The pool runs out before, like the waters on a gently sloping beach. In the background the green hills rise again; the last wave of the Bavarian Alps.

At the size of the landscape, the planes are quite evident. On the hilltop level, cobbles cover the gentle mound which changes to the stadium seats. The curve on the seats originates like an arm from the shoulder of earth that rises from the belly plane of the pool. The valley/terrace/pool plane slides under the hill/stadium/seat plane; the exchange is in the section of the stadium. Always the movement on the plane is uninterrupted by the movement of a higher or lower plane, and the



exchange/overlap occurs in the space of activity; the space of the spectator. The space is active because an exchange of two planes has been built in it. On the plane of the hill, one is aware of the ground /valley plane sliding under; on the plane of the valley, the hill/stadium curls above. In between the space/the viewer becomes a participant in the exchange, and landscape becomes part of the section, rather than a tabula on which sits a pedestal on which is placed a building.



SPORTHALLE

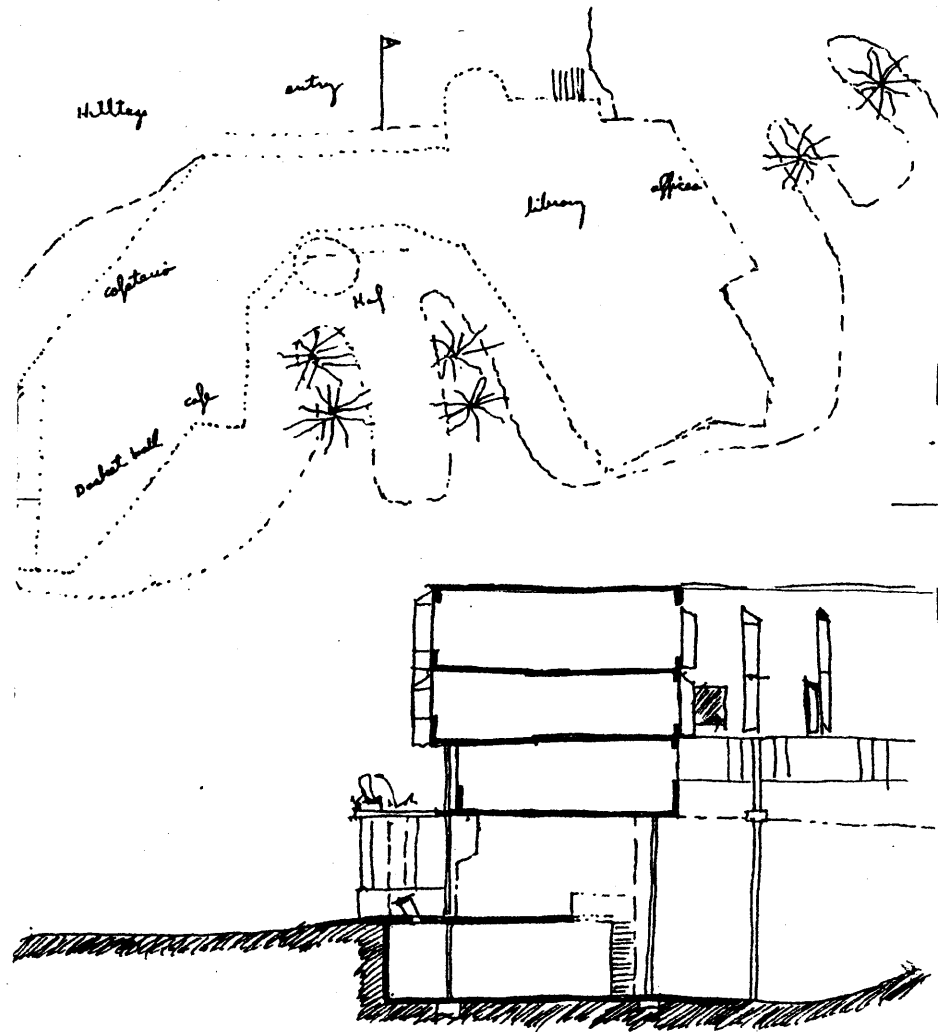
SCHWIMMHALLE QUERSCHNITT

## BIRKACH

The cobbled walk rises gently toward the protective overhang above the entry of Birkach Lutheran Study Center. Shortly before the door, a large matted grill bridges the junction of the cobbled outside and the polished travertine inside. The fuzzed texture of the grill occupies a place in the span between the rough granite and the polished travertine; making dull a place in the shine of polished stone. Light floods in through a large double-height glass facade that drops below the rail before one. Standing at the rail, the polished surface runs to the left and right, leading into wings that enfold the courtyard in front and below.

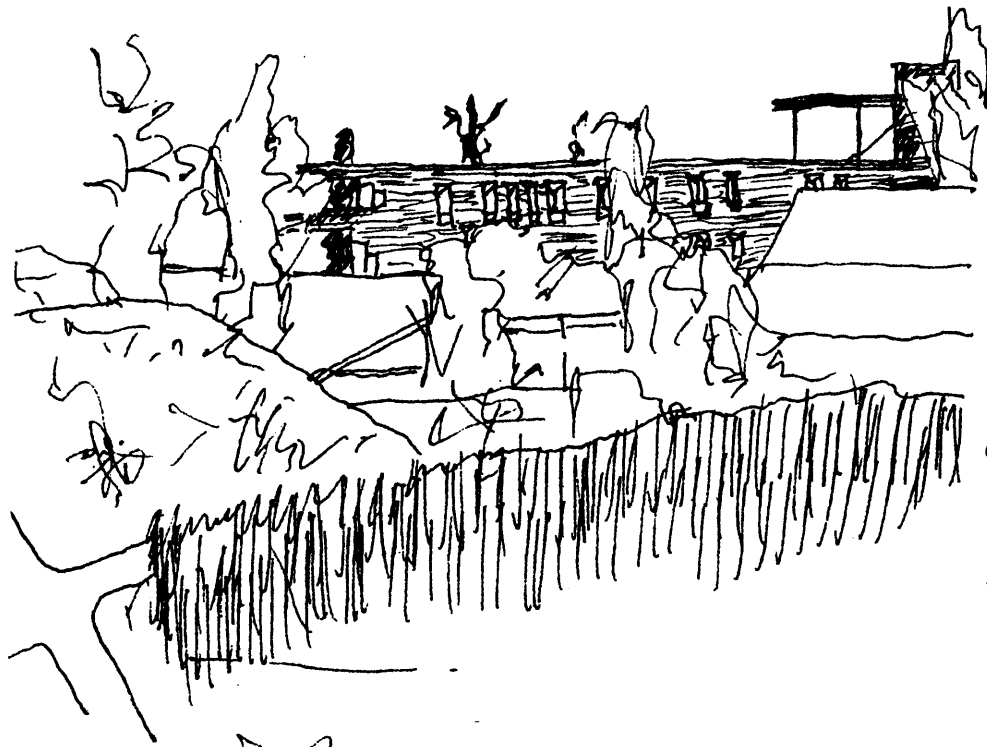
The experience of approach from below is a duplicate. The plane of the ground slopes gently (now down) to the facade. The juncture of the cobbles is again bridged by the fuzz of the grill and the travertine shines ahead. The rail marks the edge of the floor above, which has been held back from the facade by several meters, creating a double-height space. At the back wall, under the entry floor, light beams down through a large, short concrete tube that pierces through from the cobbled entry above.

In both entry sequences the movement is on a slope toward the building, the entry is covered by an overhang and underfoot are cobbles. The building is narrow enough so that light pulls the gaze through into the space beyond. As in the Olympia Swim Hall, the exchange between the two planes is in the section. In both cases the two planes, valley and hilltop, slide unobstructed over/under each other to build an exchange in the section. At the



both ground planes extend into the building & create a zone of exchange in favor of height space

A

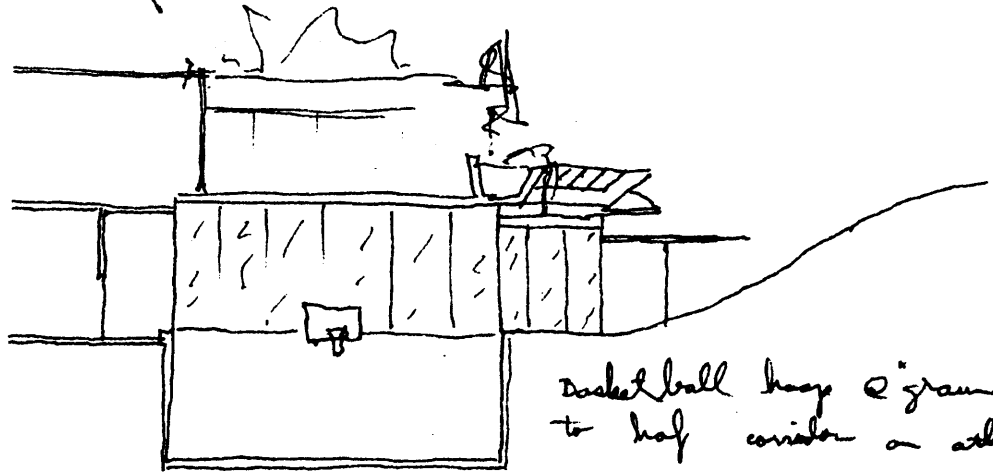


MÜNCHEN  
 association of form & landscape  
 association of structure & landscape  
 association of color

stairs turn under landscape  
 column

BIRKACH

as you approach from main entry  
 @ top of hill you see through  
 building down into hof scooped out  
 in the back so section of hill is  
 exposed immediately on entry.  
 dbl height columns @ entry  
 ground plane stays open

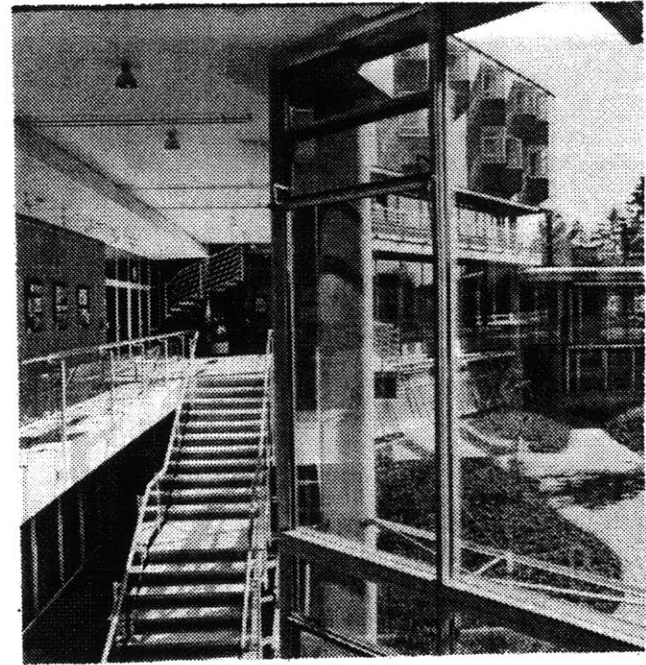


basketball hoop @ "ground" level looking into cafe & out  
 to hof corridor on other side open/glass to court

Lutheran Study Center it is in the space of the foyer above and the lounge below. The two pieces of landscape exchange in the space of the section.

The lower landscape which is the court is in actuality the bottom of a space that is scooped from the top of the hill. If one extends the curvature of the upper entry plane, it clearly completes the arc across the court to the swelling landscape on the opposite side. This carries the visual association of the upper entry plane even further into the space of the section. The landscape/court is in the territory of the section. Also similar to the Olympia Park, the thinness of the plane is demonstrated by its easy penetration (in this case by the light tube). Though the movement around this penetration is not so dramatic as in the swim-hall, it is still viewed directly on the stair descent through the sectional space of the foyer lounge. The approach is not one of reversal but one of a quartering tact. Again the landscape is made tangible.

Sectional experiences also occur at other entries to the building. Transparent bridges span deep vegetation-covered landscape cuts that allow light into the lower levels of the building. The cuts allow one to see the full section of the building and the bridges allow one to enter into the middle instead of the bottom of the section. The cuts allow light to penetrate from one side of the building to the other. Looking into the building the gaze is often out the other side, trapped by the landscape. The most dramatic situation is the gymnasium area. Looking from the terrace or the cafeteria into the building, the view is across the space of the playing floor. (The gym is below the grade of the courtyard and cafeteria level). The view continues through the access and the offices out to the sloping

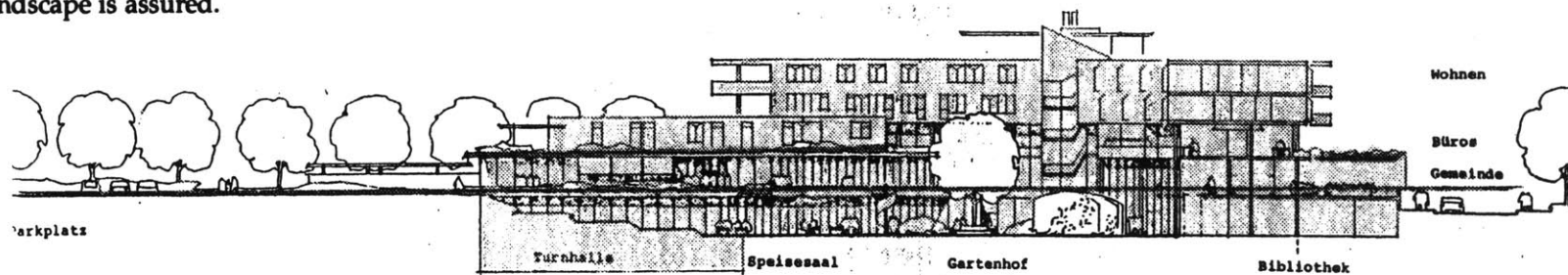


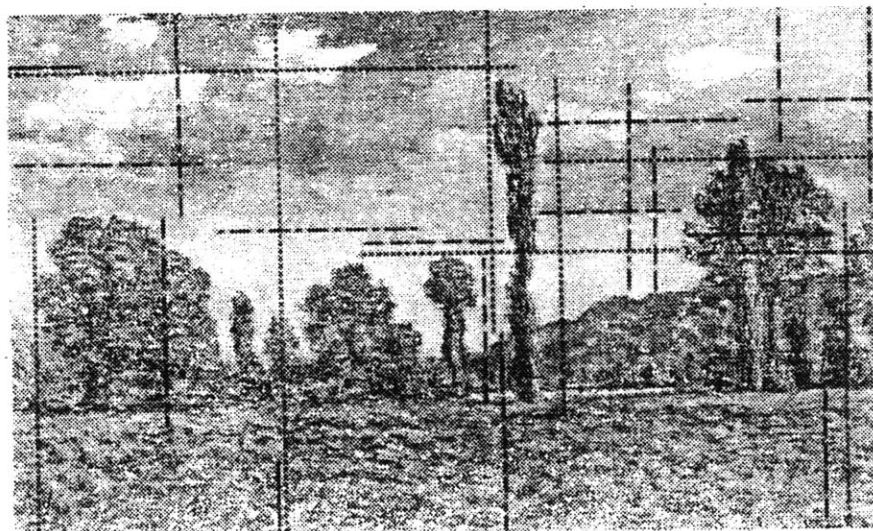
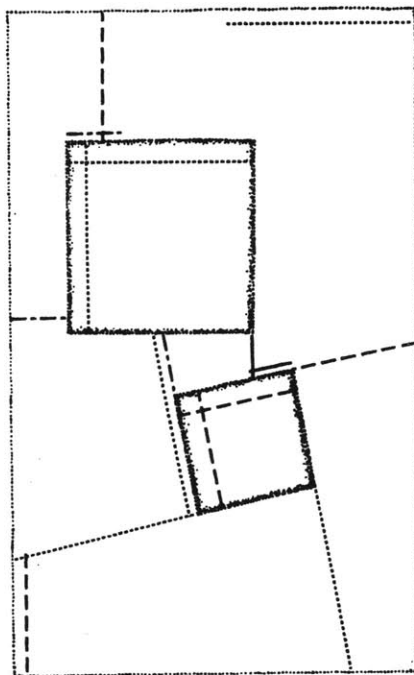


cut of the land near the building edge. This is a visual relation with the landscape and not a built one, however, it reinforces the ones that are built. The vision is always one of the land moving in section; either up or down from the position of view.

In the same section of the building is a strange built relationship with the landscape. The gym floor is let down into the land and in the area of high risk damage (the area at the level of the playing surface) the walls are all block or cast. At the upper levels though (the level of the landscape) the walls are glass; looking either to the garden or into the cafeteria. Either by coincidence or design the basket ball hoop is at the horizon; which means that one is always shooting to the level of the garden and thus always making contact with the light and garden/landscape. The pun is haut kitsch: score with the landscape!

Looking at the landscape size, the top of the hill was scooped out, and the building was placed within. The building was not placed so as to completely fill the space. It was built in such a way that it binds the landscape and section together. Through devices such as reference levels, roof-top gardens, the exchange of the two planes in the building, and dimensional relationships, the success of the tie between architecture and landscape is assured.





**Claude Monet: Poppies near Giverny, 1890**

"Double-directionself-stabilities and displacements demark major definitions-tallest poplar both by its own height from right-hand boundary, and by "frame's" height from left edge, etc... The (picture) "frame" remains a participant in the "landscape" field."

Similar structural relationships/displacements are observable in almost evdery work illustrated in Albert Skira's 1949 History of Modern Paintilng!

**Kasimir Malevich**

**Caree Rouge et Caree Noir, 1915**

"Each square is finitely boundary-positioned as shown--by its own dimension, the other's and / or the displacement (length) in extension of left-hand side of (small) rotating RED square which bisects lower side of (large) orthographic BLACK square Even "passings" from BLACK to within RED (full tape) are self-stable/equal and the whole is "solidly"/completely constructed" .

Dimemsional Self-Stability and Displacement in Field-Ordered Directional Alternations

Maurice K. Smith Places Volume 5, Number 2 Page 72 MIT Press 1988 Cambridge, Ma

ALVARO SIEA Pool

WATER is displaced by its own dimension  
from the registration/wall  
Dimension of large pool appears  
over & over again in access and  
other containments  
This dimension is also the size of  
the main rock outcrop A.

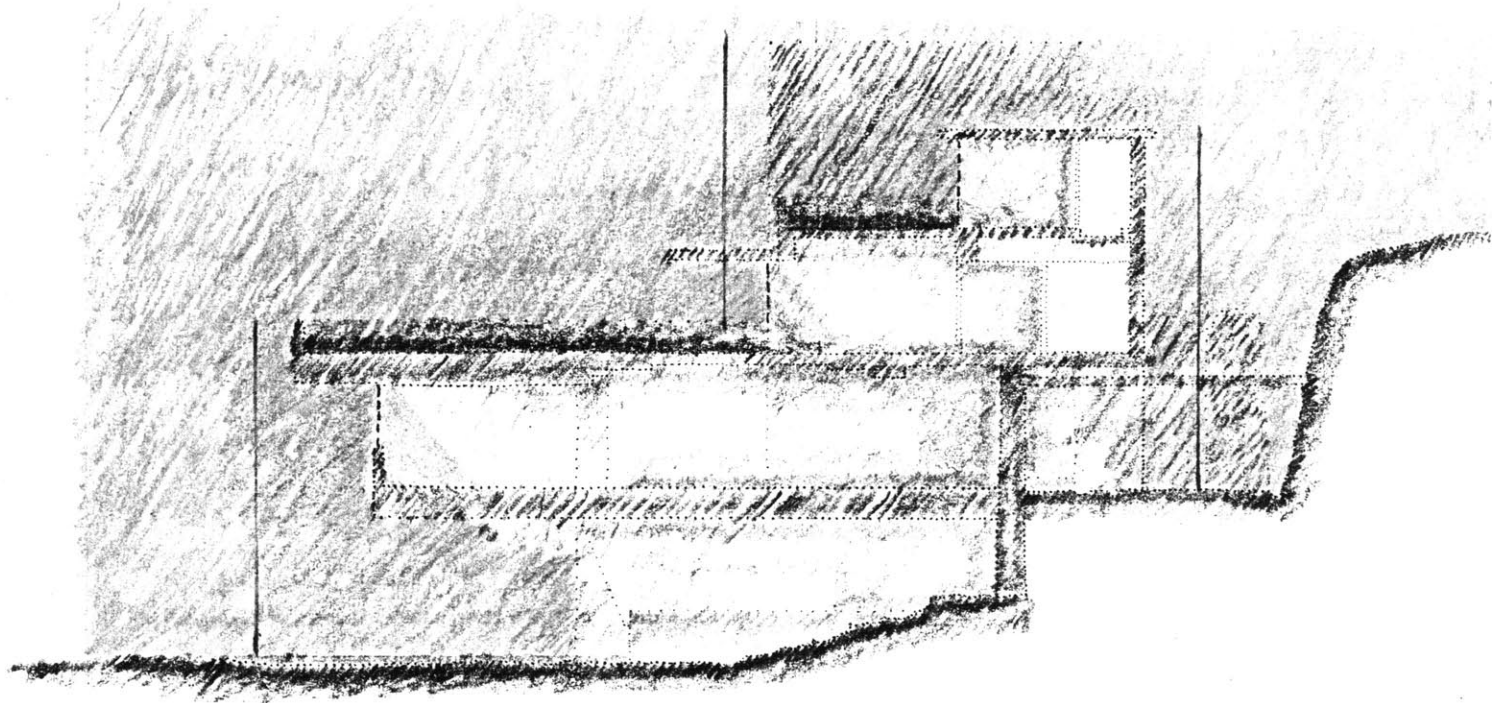
Pools are also very good for  
their associative connections = the  
landscape in texture form of real  
rock land form and built associat-  
ion of pools and ocean natural &  
man made.





58

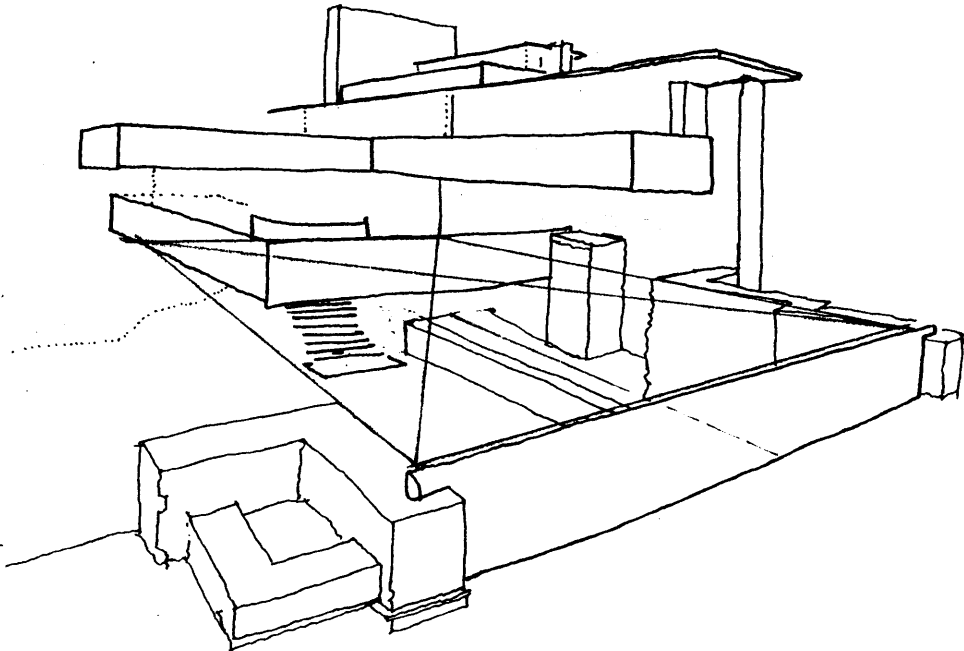
DOROTHEA LANGE, TRACTORED OUT (CHILDRESS COUNTY, TEXAS), 1938.

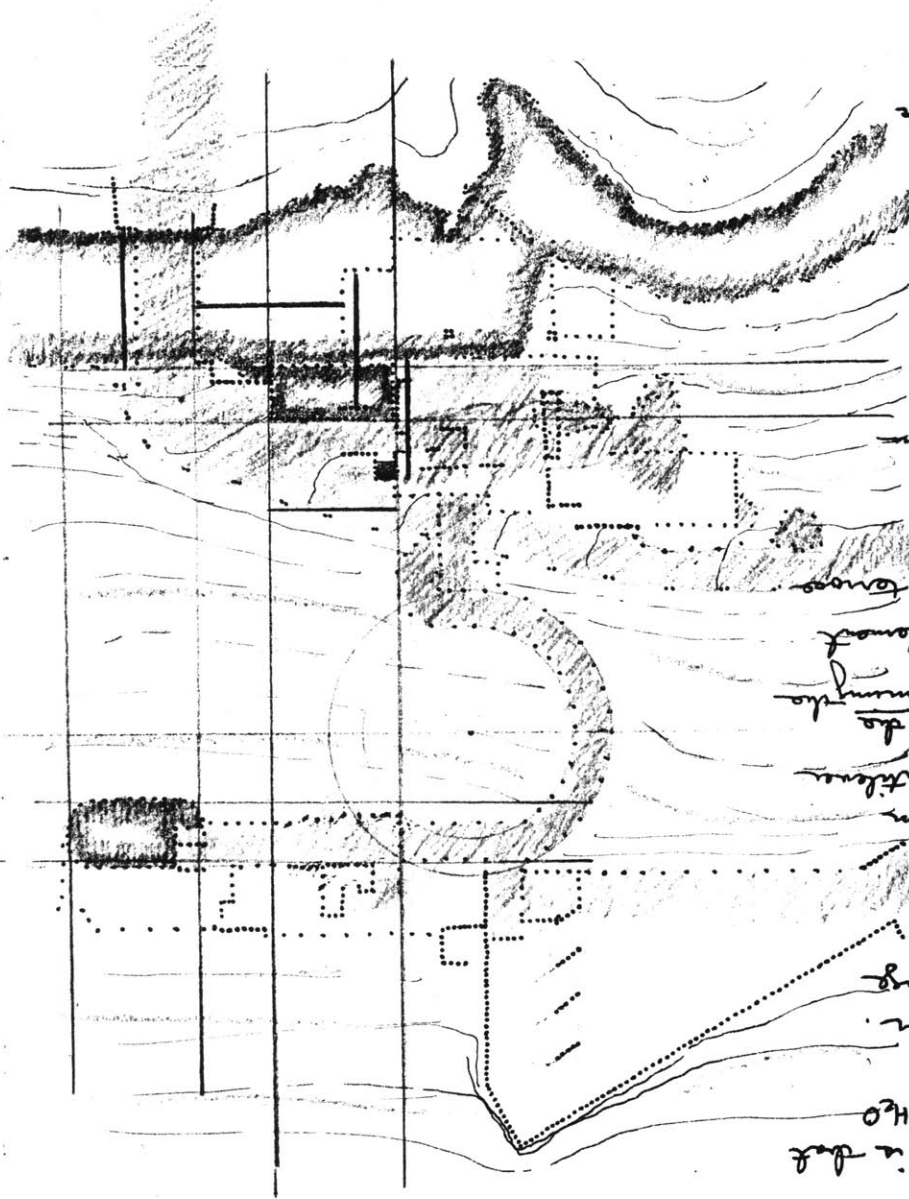


Falling Water dimension study showing repetition of dimension from water/landscape to largest tray. Repeated in masonry mass and "house" size for "real" ground.

Dimension and pure geometry  
square @ entrance bridge  
of falling water.

Dimension of bridge is  
equal to dimension of  
river which makes a  
square  $\pm$  first tray & is  
also dimension of the  
first tray. This is also  
the dimension of the plunge  
pool below which is  
river transformed toward  
building. So space is constructed  
with  $\pm$  landscape dimension,  
building the volume between bridge  
and house. One of the first things you  
experience as you approach the house.





Built association of water @ spill H<sub>2</sub>O is that  
 1) as you cross bridge looking down to H<sub>2</sub>O  
 the plump pool is bounded by  
 masonry - solid but is H<sub>2</sub>O over river.  
 so third change in section the plump  
 pool is a gathering of the river  
 and thurst material is part  
 of the water/walk/structure  
 2) length of bridge is same dimension  
 as span a pure geometric form in the  
 landscape/H<sub>2</sub>O  
 Also length of bridge tower element  
 is the same length as the main tower  
 tall/tower element which is  
 spanning - direct association  
 this is also the same dimension  
 as the plump pool: bridge  
 very water it appears all have  
 the same dimension which is  
 also the same width as the  
 River H<sub>2</sub>O! Also same dimension as  
 the distance covered in land walk  
 pool to plump pool along through  
 this is also change in section

## PROGRAM

The program for this thesis is an athletic training center which has canoe/sport as it's main activity. This means that one of the requirements is an enclosed swimming pool. Indeed the pool already exists and the idea will be to take the existing cut in the land and examine the slope, landscape, and the behavior of the section. The program will also contain such ancillary facilities as locker rooms, a small gym, and perhaps a class room or two. I'm sure there will also be a need for boat storage and mechanical rooms but much of this will be determined in interviews with the client this summer

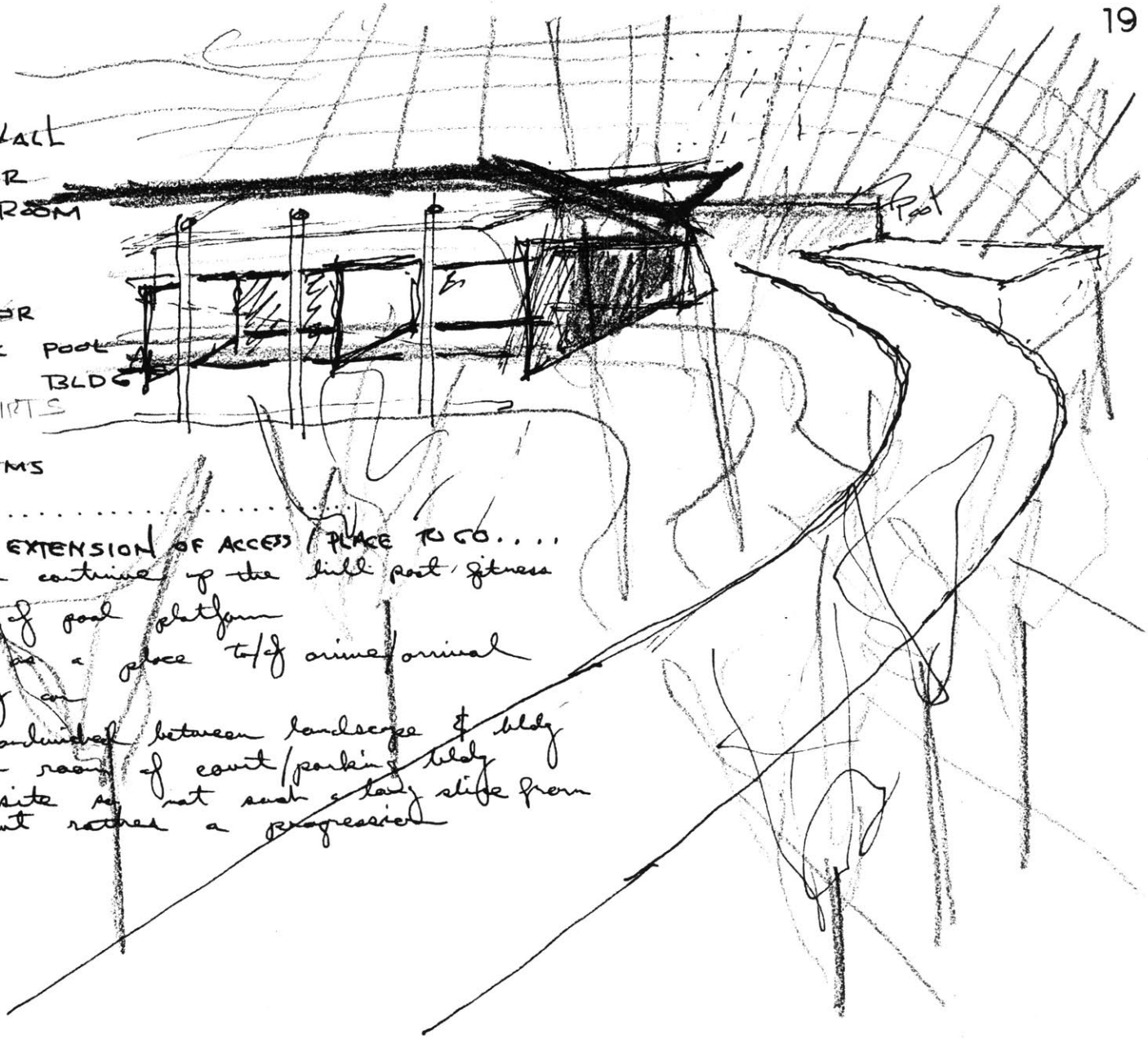


# PROGRAM

- Pool
- CLIMBING WALL
- GYM FLOOR
- MEETING ROOM
- OFFICES
- PARKING
- COURT FLOOR
- MECHANICAL POOL
- " TBLDG
- SQUASH COURTS
- WEIGHTS
- LOCKER ROOMS
- MASSAGE

TERRACE AS EXTENSION OF ACCESS PLACE TO GO....

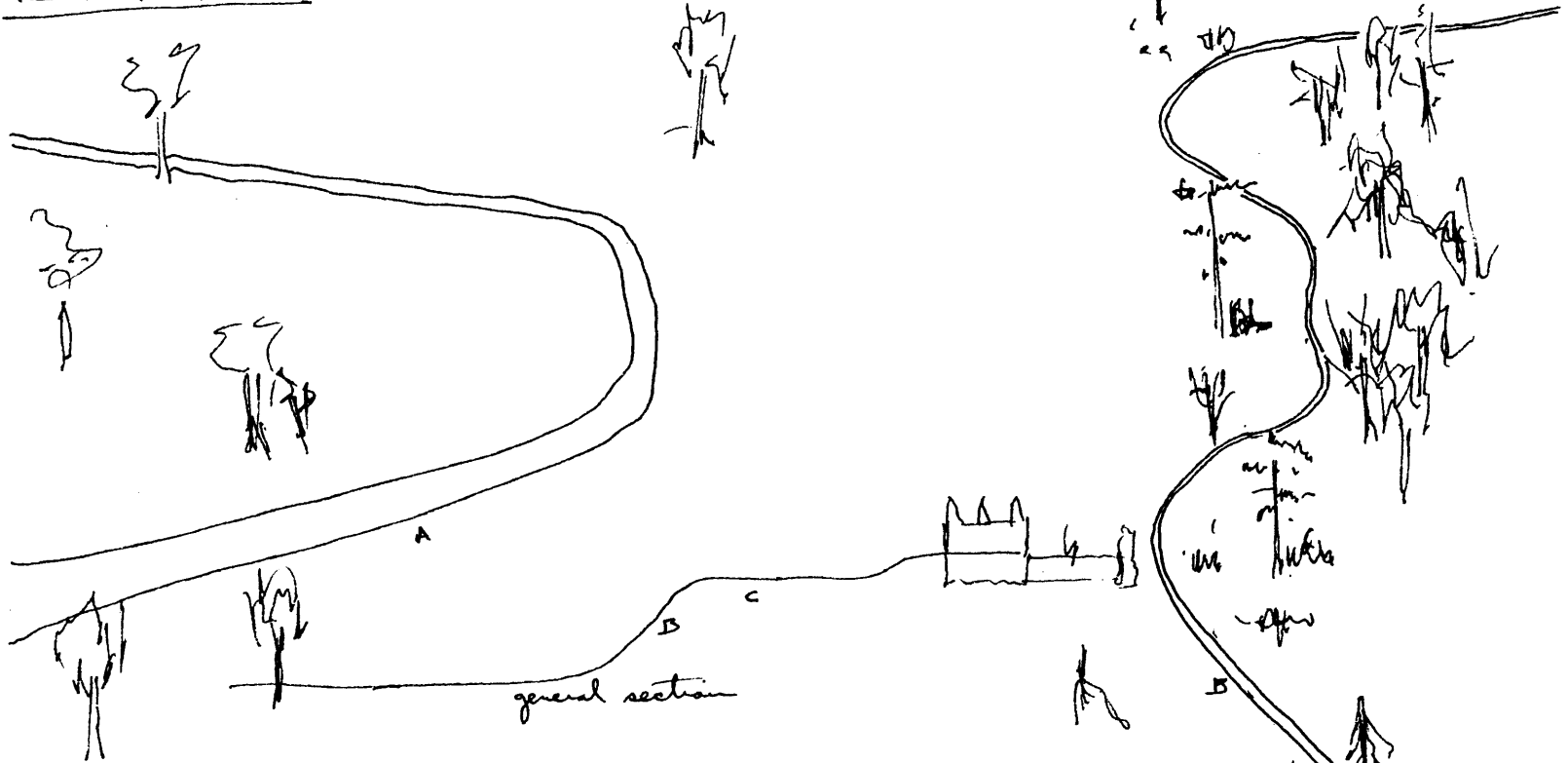
As you continue up the hill pool, fitness  
 split level of pool platform  
 Pool as a place to arrive/arrival  
 not by an  
 Pool sandwiched between landscape & bldg  
 outdoor room of court/parking bldg  
 divide site so not such a long slide from  
 hill but rather a progression



# BILTMORE

10/3/21

9



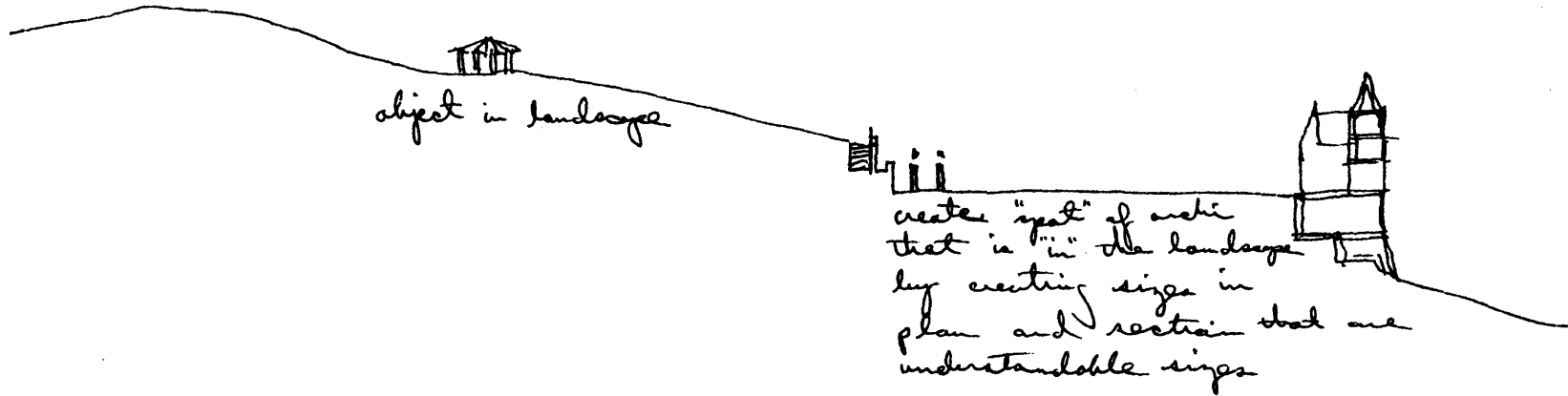
beginning of approach sequence is thru open landscape - few big trees @ big intervals across rolling to level ground as the road heads uphill then turns yet closer together and the vegetation comes closer to the road. Then the road levels off and straightens a bit, then a few feet turns and a slight rise to the ellie perpendicular to house. View opens to landscape. Move in section is level to slight rise to steeper. Steady uphill to steeper then level again and final gentle rise to house level. Landscape "wins" as it rises to house @ right

BILTMORE

10/1/91

11

SECTION OF HOUSE LANDSCAPE



Biltmore does not though build any relationships in section & the building size. It creates a place in the landscape but in the building itself it does not need (nothing) to make the building sectionally understandable. Sure it has the stairs @ entrance of balcon that have large vertical dimensions but it is experienced really only by using the stairs. It is not really an understandable dimension except in the exterior signs it generates reinforce condition of edge

ZIMMERMAN

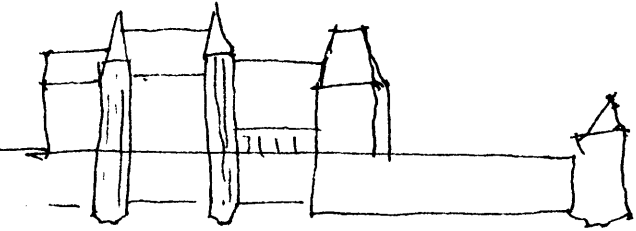
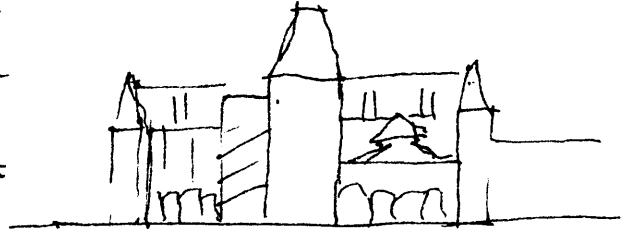
Section / containment  
window planter section  
section beam  
landscape signs / lot  
materials  
patio 4x4 block condition  
view  
no mullions / on ceiling  
color / after image

Sequence of departure is reverse of arrival, tight winding turns through espalen garden and by the base pond. genius of the design then cut onto flood plane of the French Broad and rolling fields of farm. Up over low hills and out. With views of house far below \*

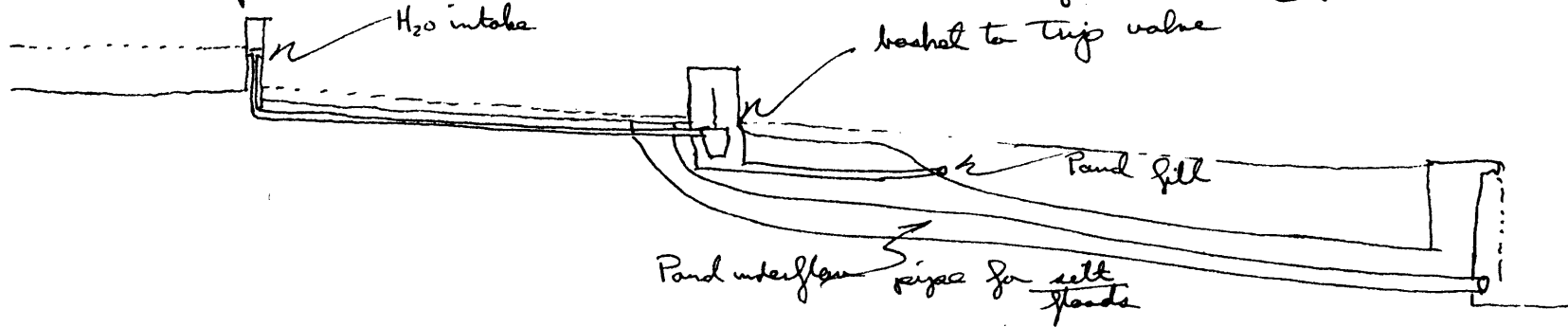
- sizes of house relate to size of landscape @ point smaller sizes that are to scale of view from

@ view of landscape size and distance the sizes of the houses are much larger - several story heights and sizes that go larger than the height to roof height corresponding to the large size of the landscape. Also can see the promenade from this side which builds larger dimension of the house

- Base pond is drain to take large flow of water below pond to avoid silting up and to avoid flooding. H<sub>2</sub>O flow in from above and fill perforated basket, when full this would trip valve and shut off intake of H<sub>2</sub>O under pond.



\* So what happens is that @ the first landscape engagement you move @ the size of the landscape - LARGE & as you reach the edge you begin to move @ the size of the terrain which is the smaller turns and sizes of distance to vegetable matter

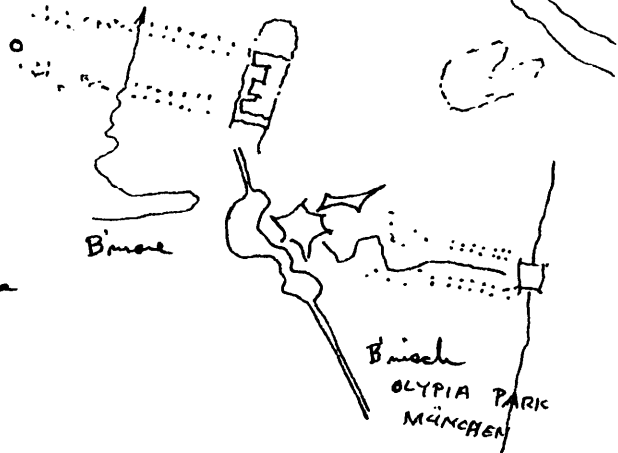


# BILTMORE

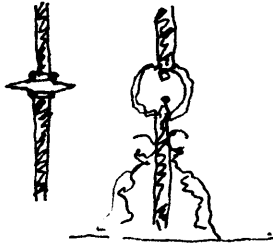
10/3/91

7

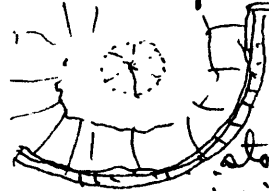
- Top of hill left open over = small people off of top
- main access in landscape
- informal to formal in allée/reverse of Belmisch
- enter house with lite on both sides stair green house
- cross access of allée - landscape view
- light reverse in collars
- Drive brings reminiscence to Gannoy
- mostly made toward the light
- light all the way through house



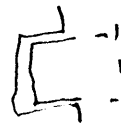
light elevates  
light stairs



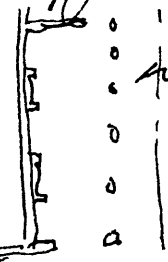
access = light



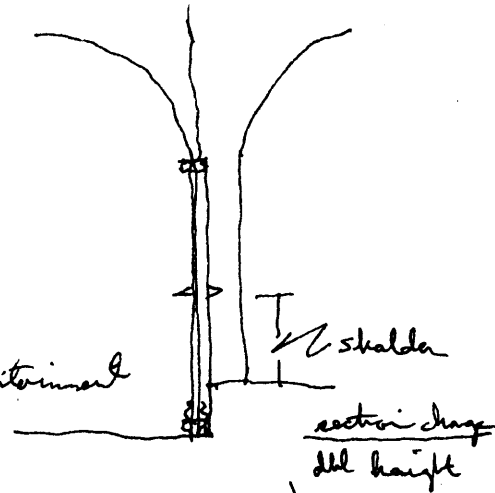
stairs doubled  
inside/outside  
landscape



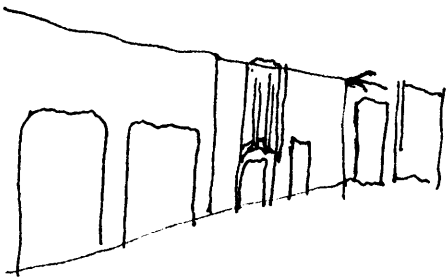
maids room  
topology



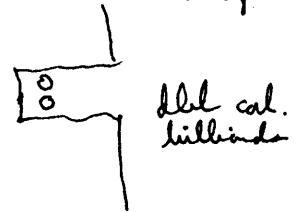
terrace  
access of light / contained



section change  
dbl height



alternates light / dark  
small step opening bellsonia



dbl col.  
bellsonia

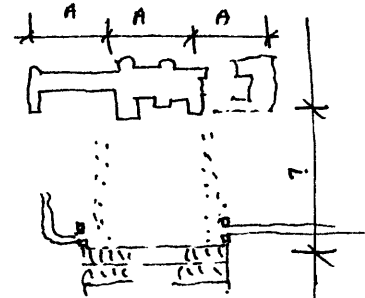
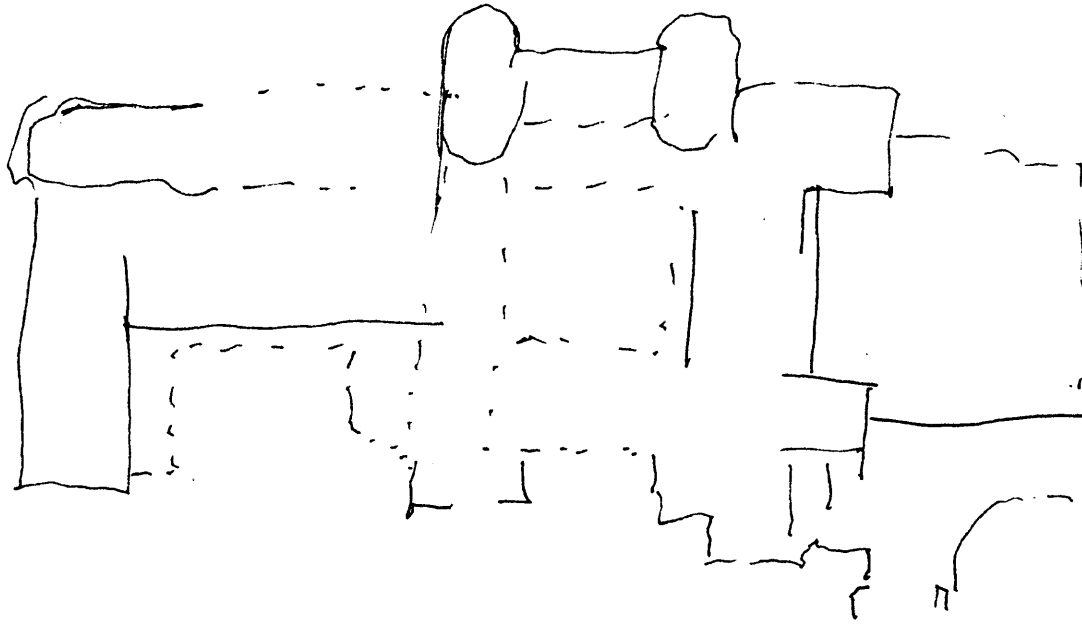


BILTMORE

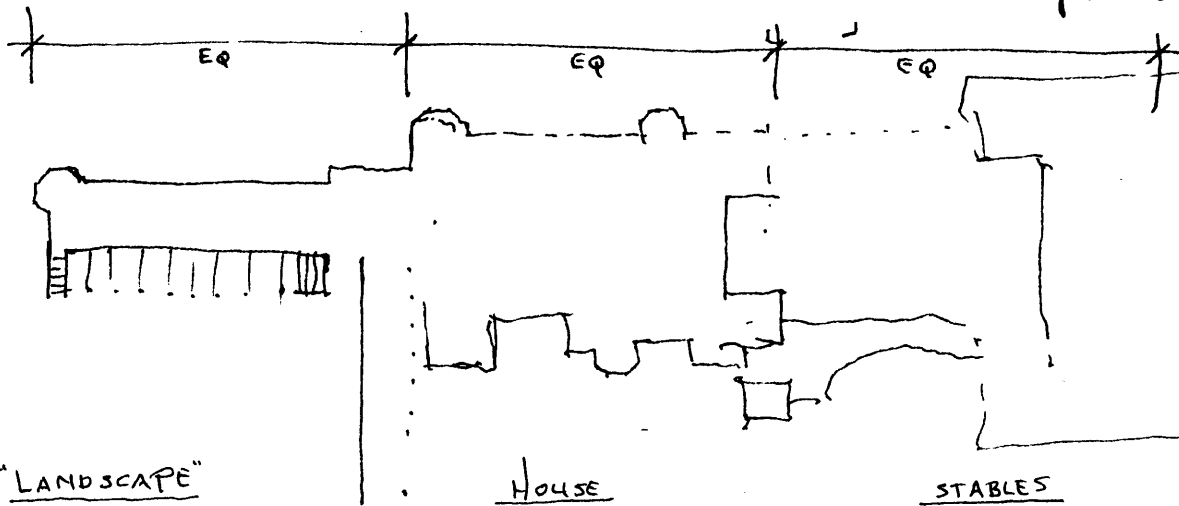
10/3/71

exercise room 27x30

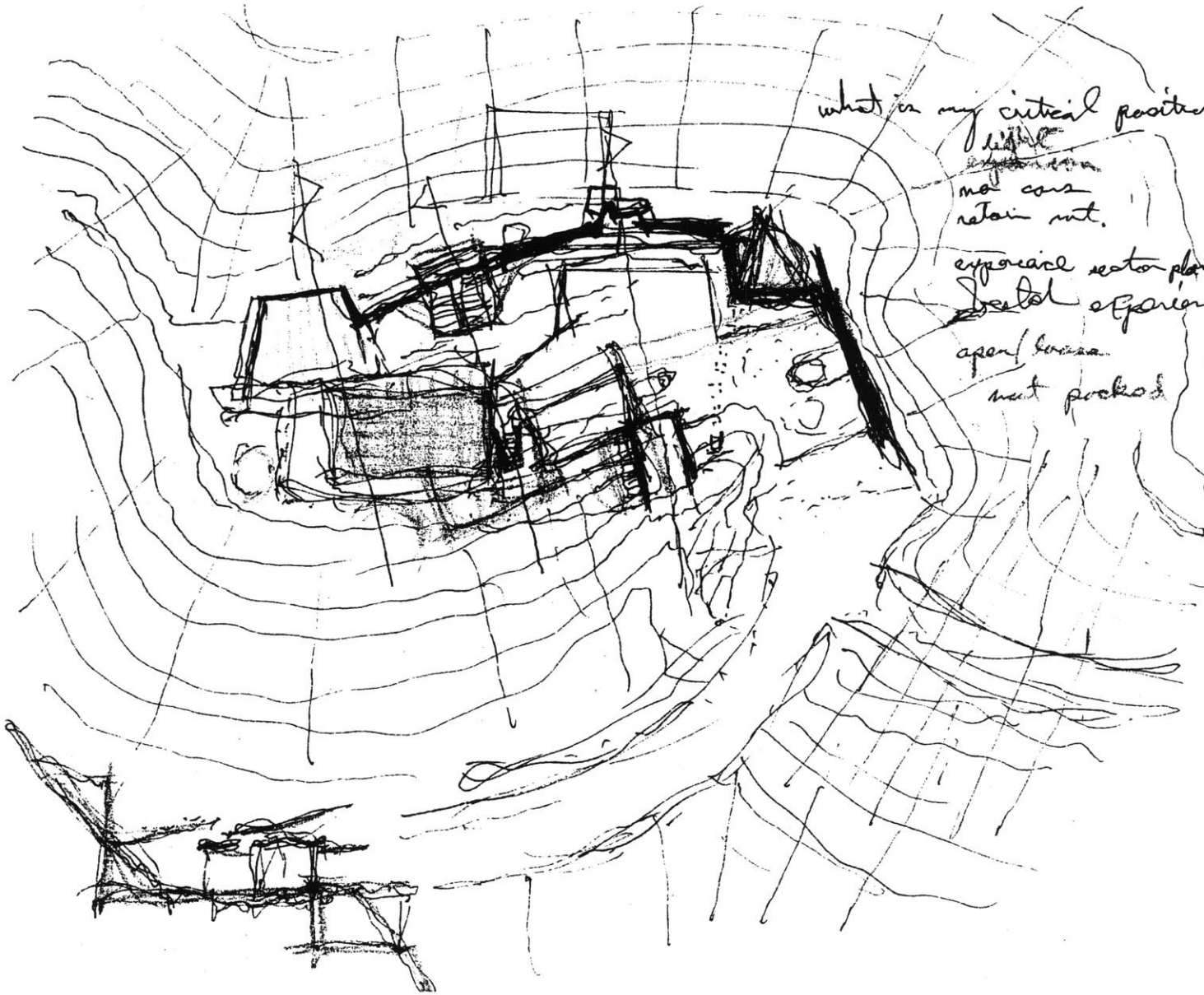
8



I suspect that there are strong dimension relations between the size of the landscape & the size of the bldgs. I also suspect these same relationships exist in the bldg sizes; such as promenade and length of allée and length of "natural" allée



great hall  
72'x45'x75' high  
section = plan 1:1



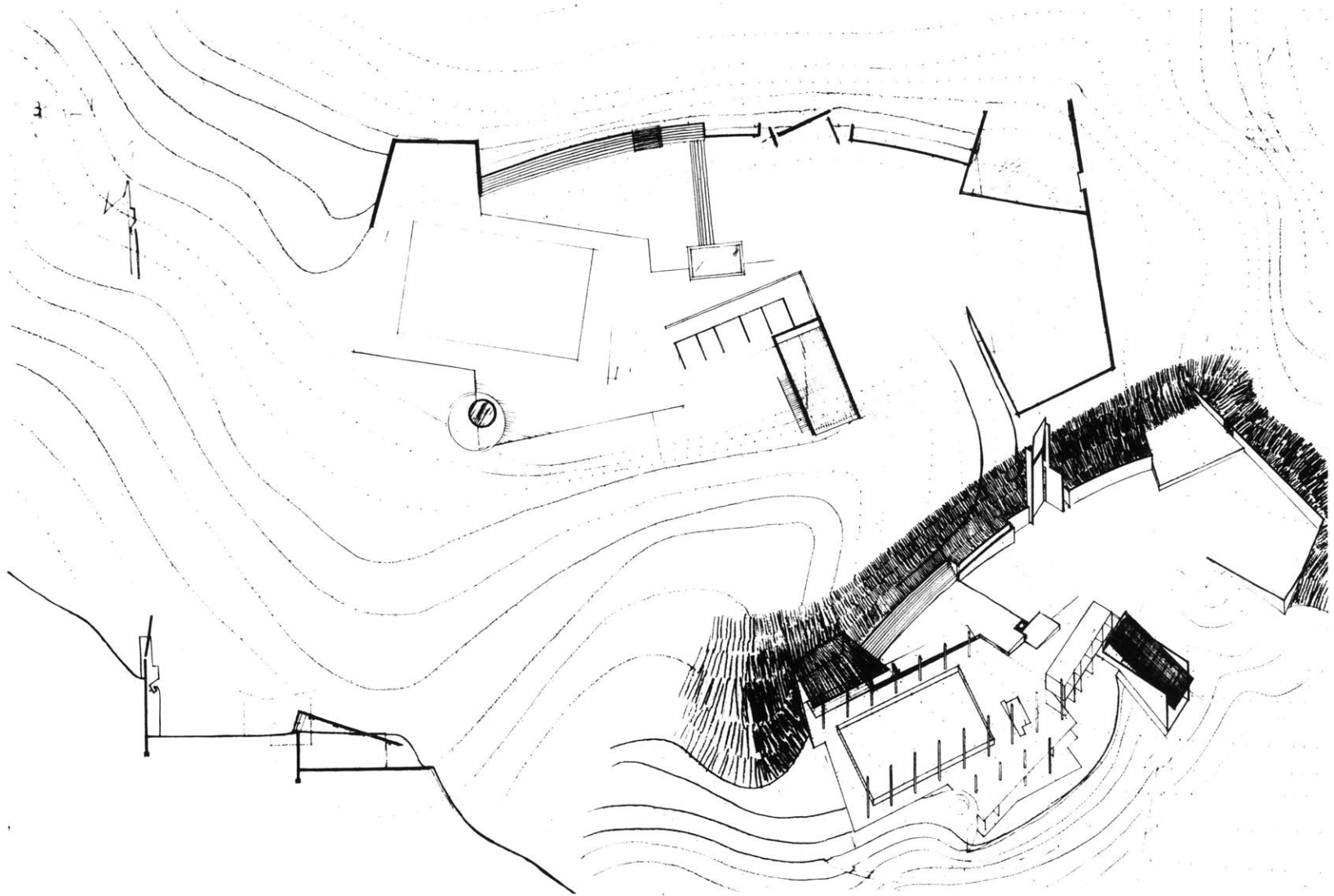
what is my critical position?

little  
more  
retain mt.

experience sector plan  
local experience  
open houses  
most packed

Geoffrey Brown - Sir Lancelot architect

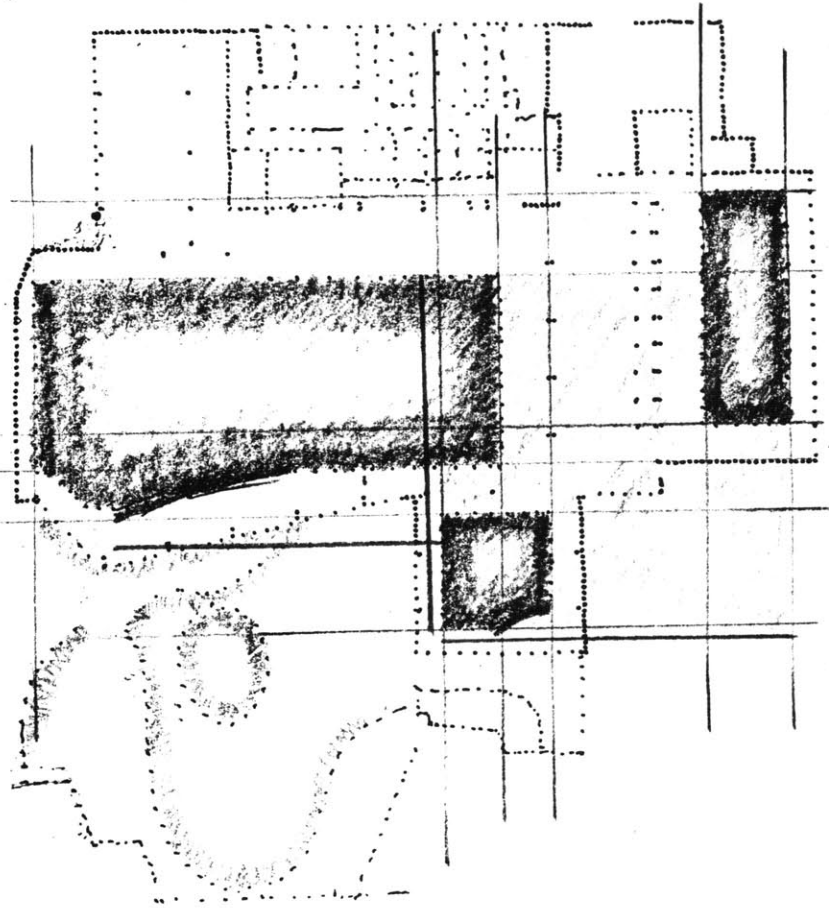




PRELIMINARY PLAN SECTION AXON

## AAATO Pods @ JYVÄSKYLÄ

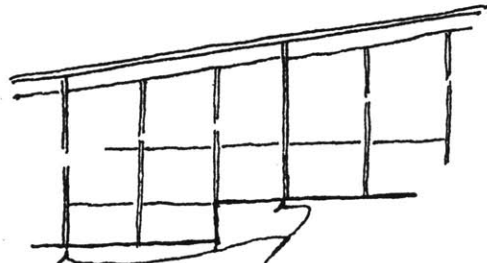
Diagram of AAATO Pods showing edge to edge dimensional similarities of the pods. The dimension is also repeated from edge of small pod to outermost point of facade. The correlation is perhaps tenuous but as in all of these it is ~~as~~ as Eisenstein says there should be a system but the system is subservient to higher ideals/principles. I don't think this was a generative system but it rather one of many layers of systems.



Behrisch and Aalto keep many of the natural forms and let the bldgs move around them or rebuild them into these bldgs  
Also the bldgs move in the lndsc farms and not vis/via as in JYVÄSKYLÄ pool



10.30.91



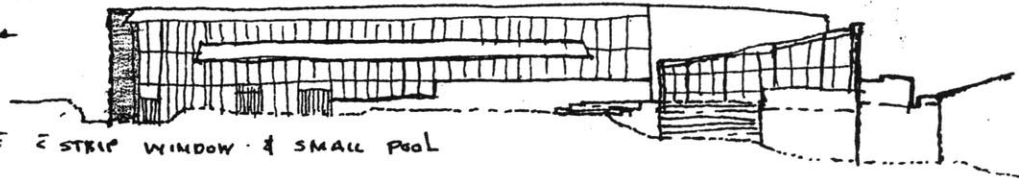
INDEPENDENCE OF FACADE & GROUND FORM



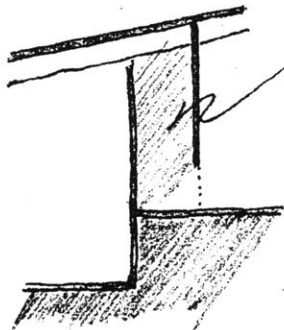
LONG FACADE OLD POOL

NEW POOL

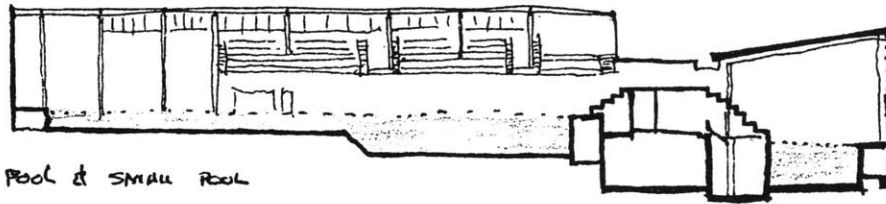
Ground form exchange takes place in the facade/section and becomes special



LONG FACADE & STRIP WINDOW & SMALL POOL

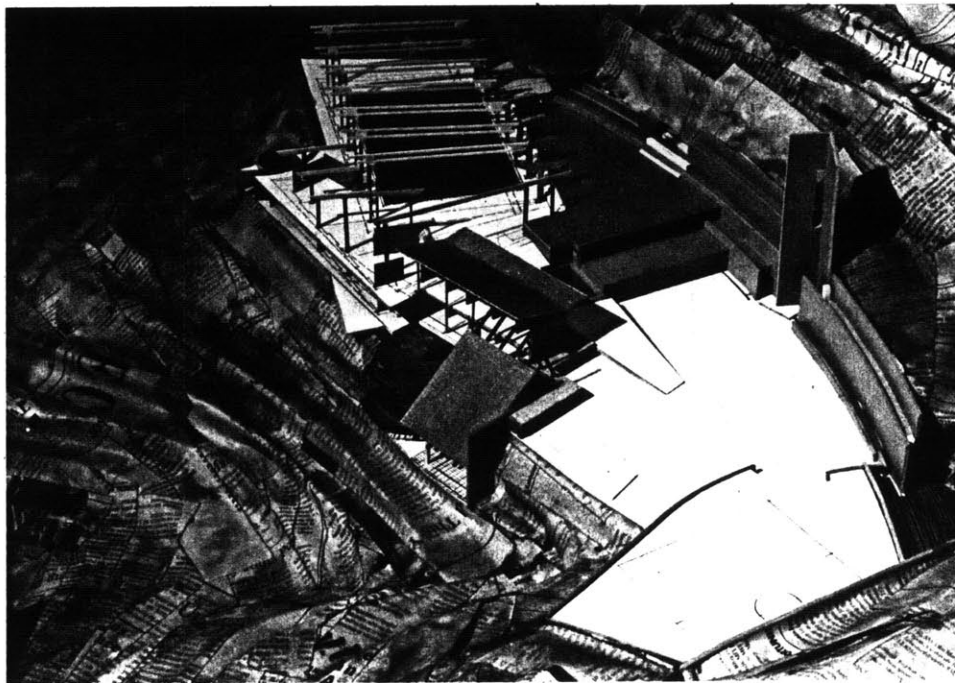


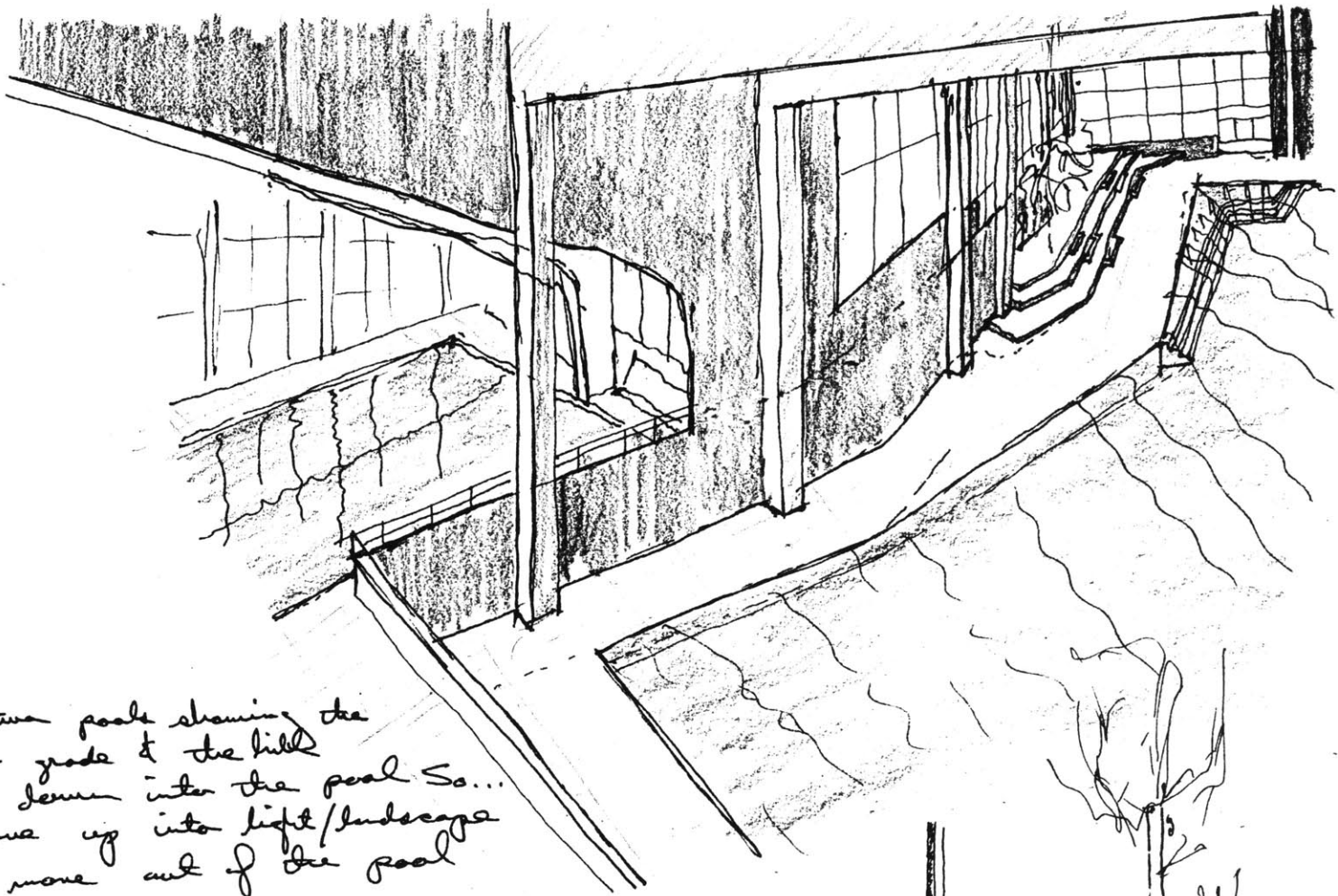
exchange



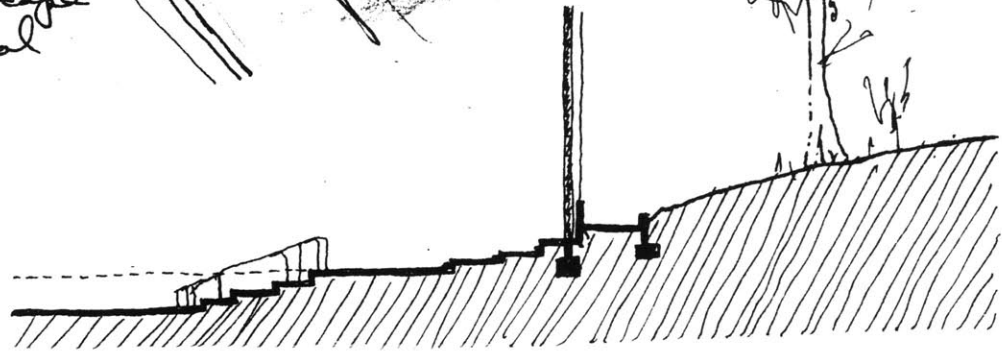
SECTION OF LARGE POOL & SMALL POOL

EXTENSION OF INDOOR POOL  
UNIVERSITY IN/OF JYVÄSKYLÄ  
1967/68 1973/75 AALTO





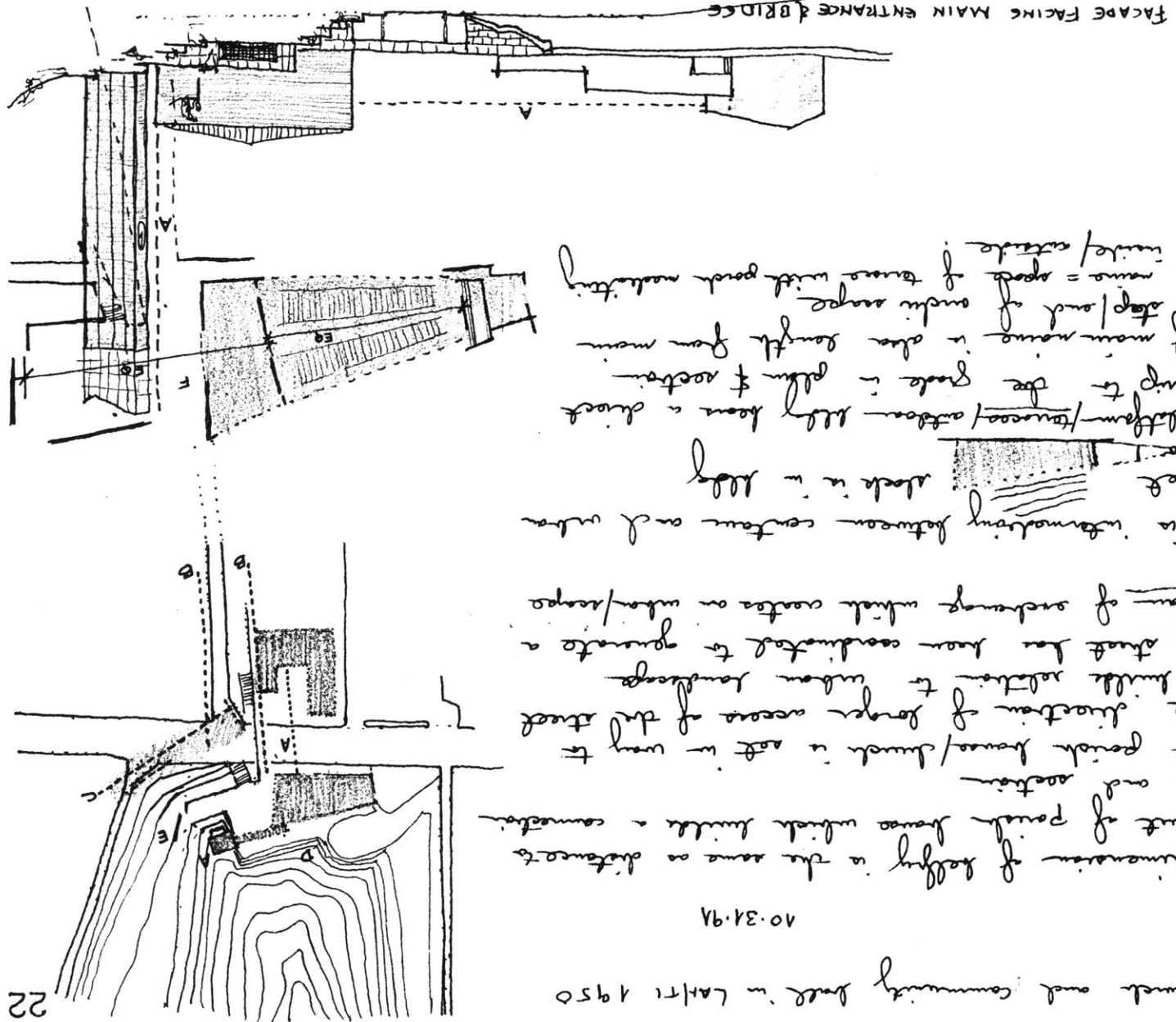
View of two pools showing the  
change in grade & the hill  
rolling down into the pool. So...  
you move up into light/landscape  
as you move out of the pool



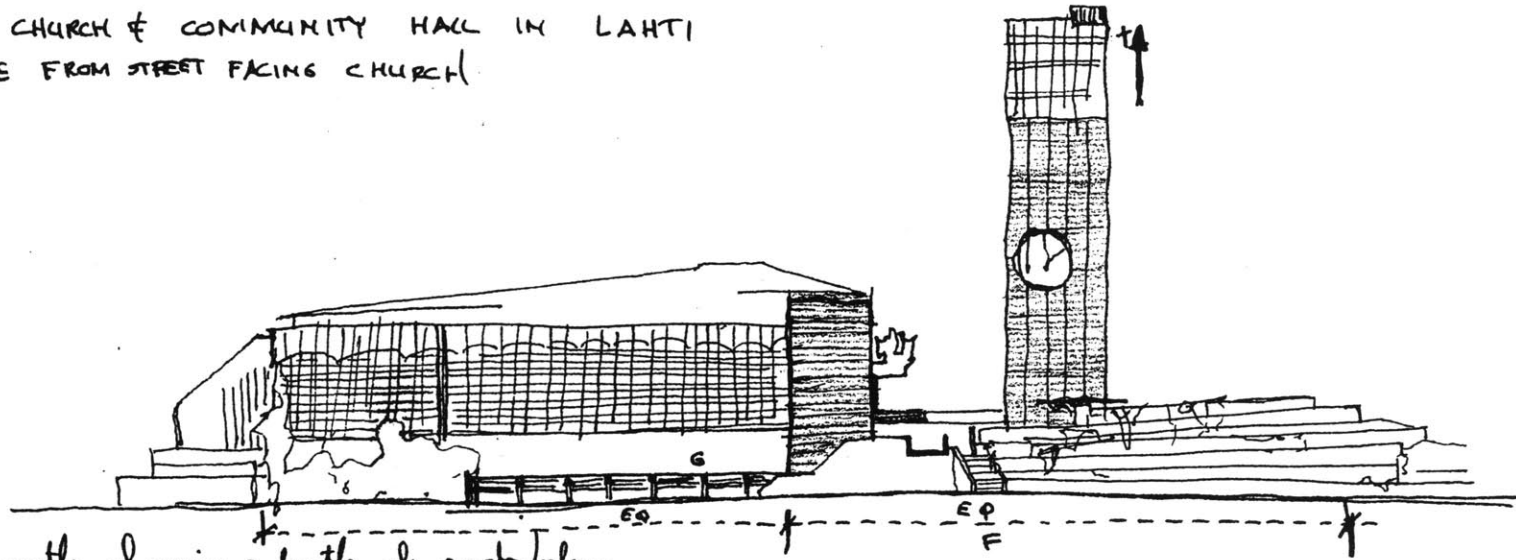
AATO - Church and Community Hall in LAHTI 1950

10.31.91

- A) Height dimension of lobby is the same as distance in/ of court of porch house which builds a connection in plan and section
- B) Bridge to porch house/ church is set in way to reinforce direction of longer access of the street which builds relation to urban landscape
- C) Slope of street has been coordinated to generate a dimension of exchange which creates an urban/ keeps air
- D) Lobby is interlocking between certain and urban on street side in lobby
- E) Lobby platform/ terrace/ stairs lobby have a direct relationship to the grade in plan & section
- F) Length of main room is also length for main room to stop/ end of order scope
- G) Space of main = space of terrace with porch making between inside/ outside

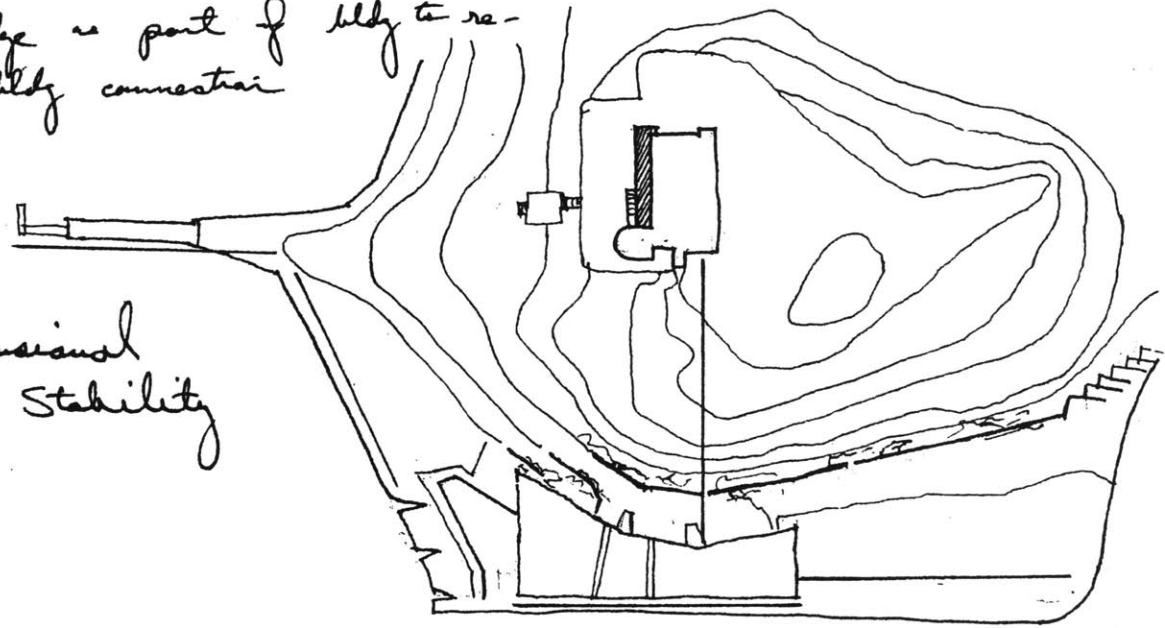


23 CHURCH & COMMUNITY HALL IN LAHTI  
 FACADE FROM STREET FACING CHURCH



- f) length of main = length of post/playa
- g) covered street edge as part of bldg to re-  
 infuse the street/bldg connection

AALTO Project Dimensional  
 Self Stability



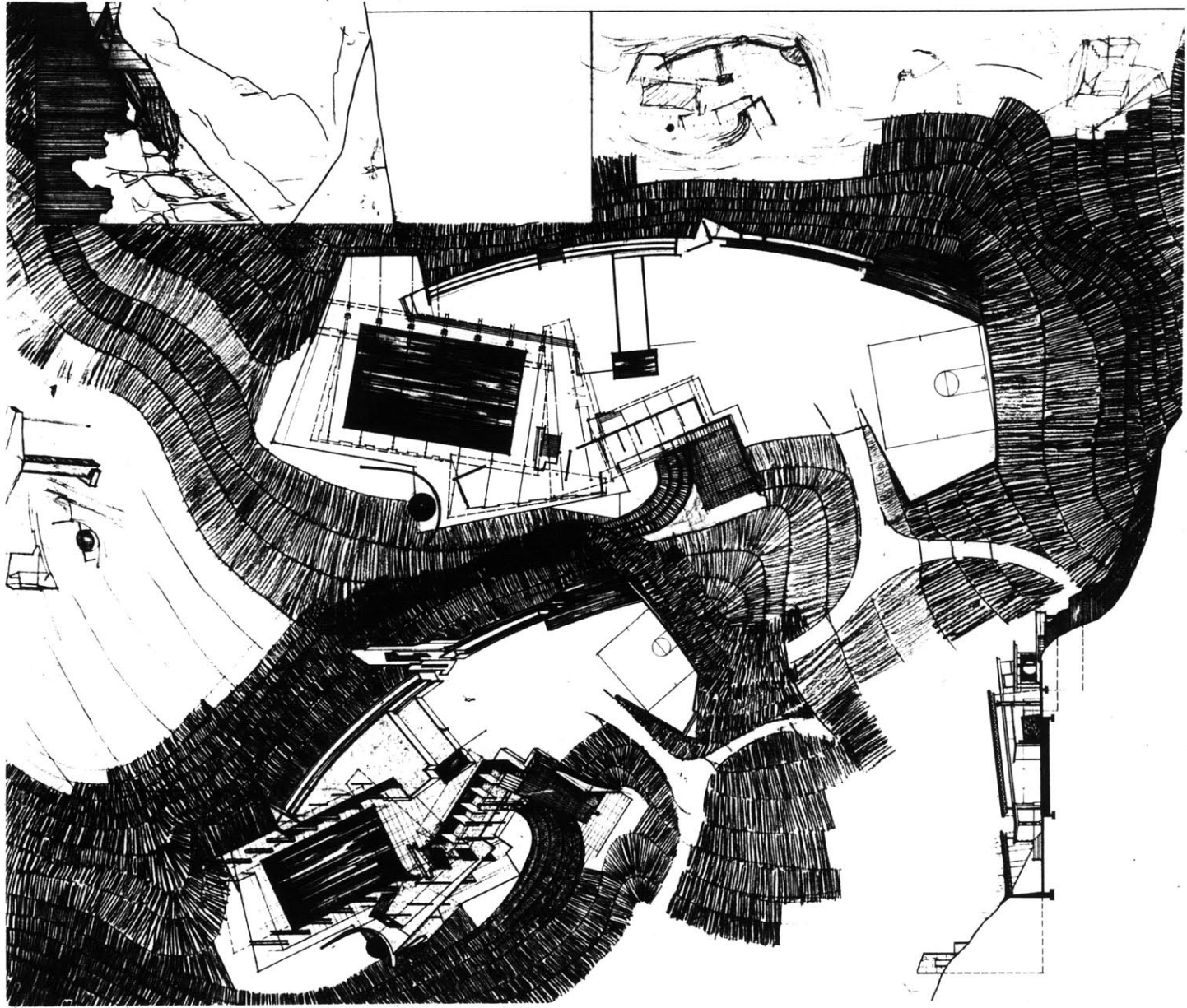
DESIGN

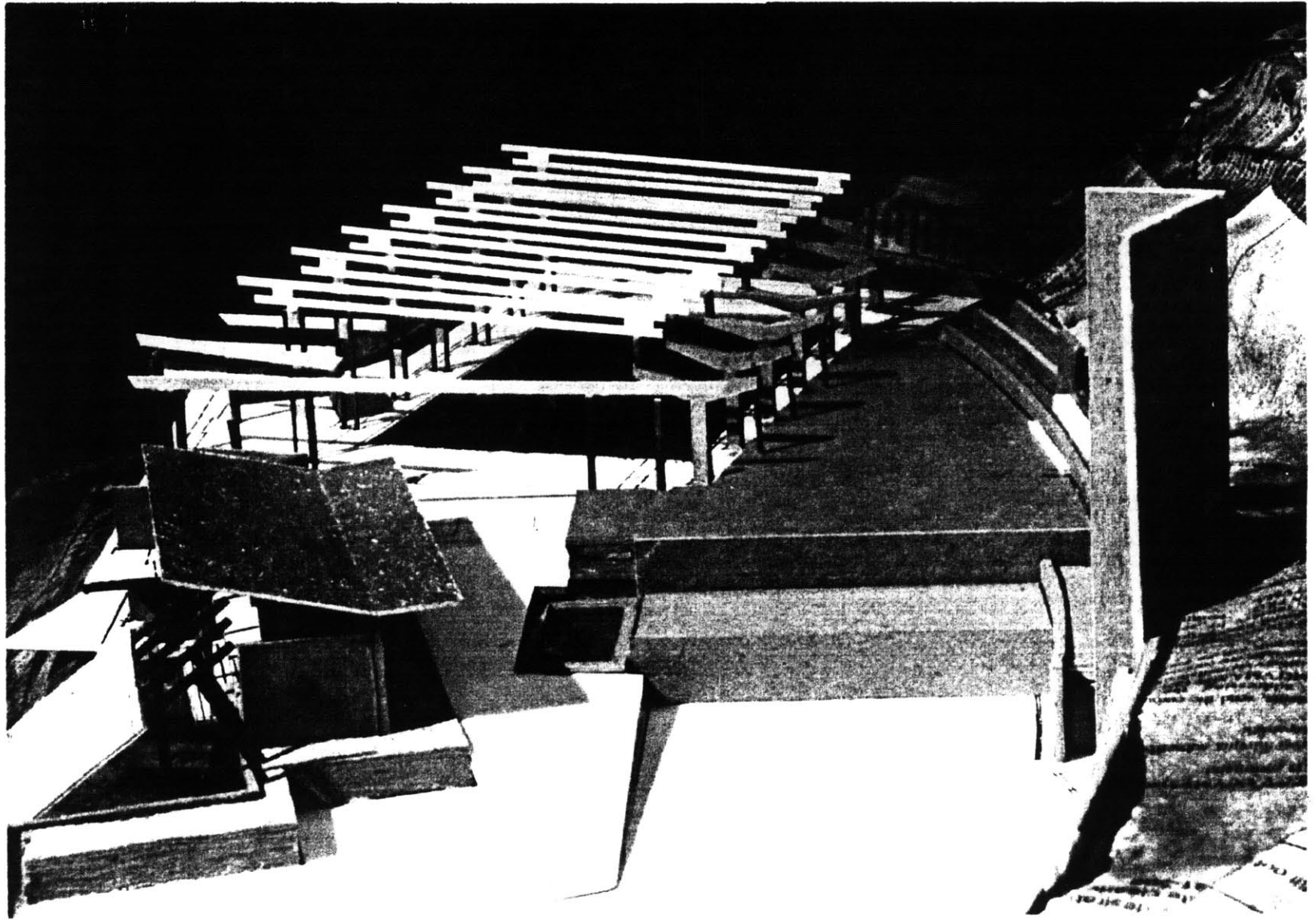


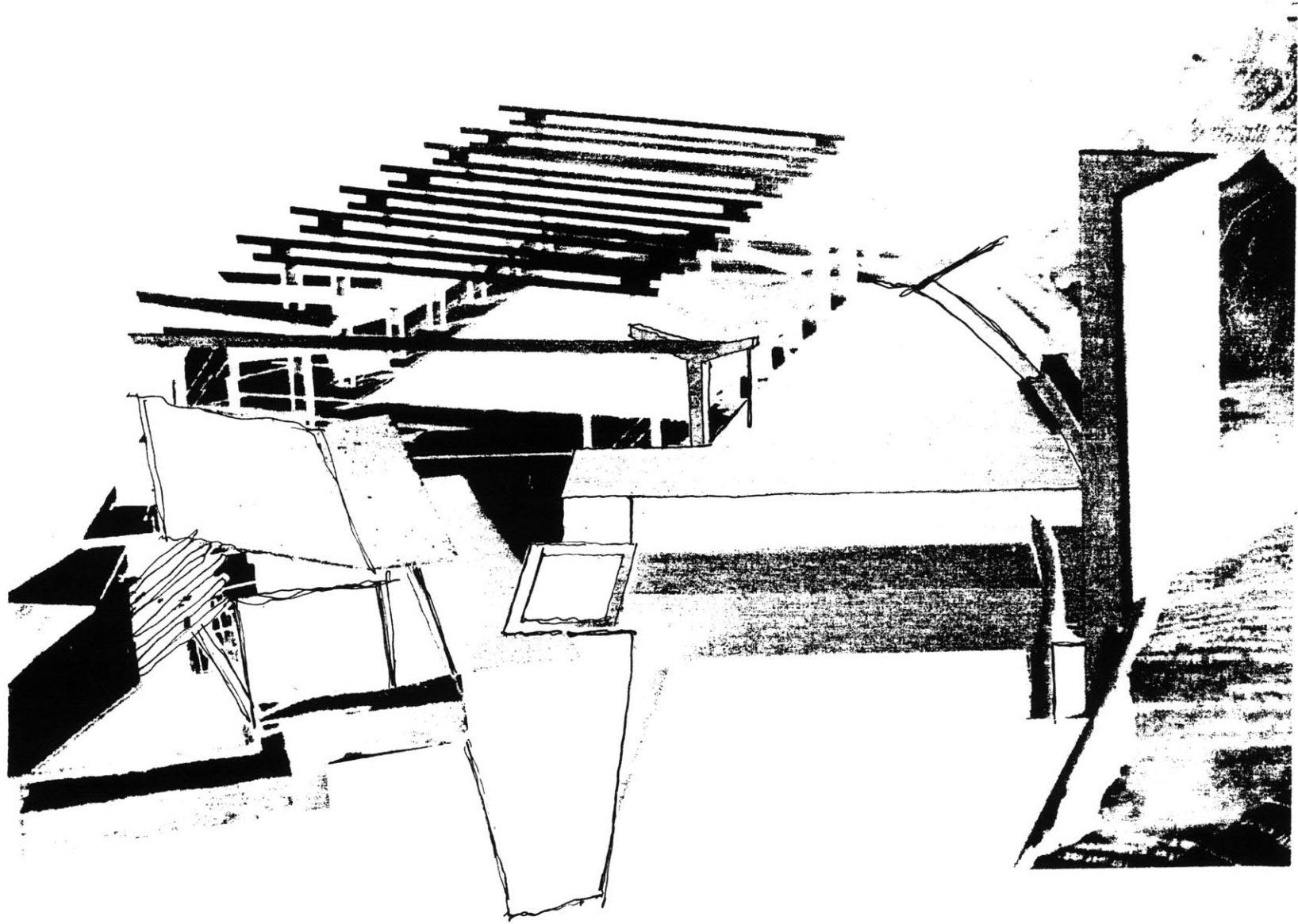
78

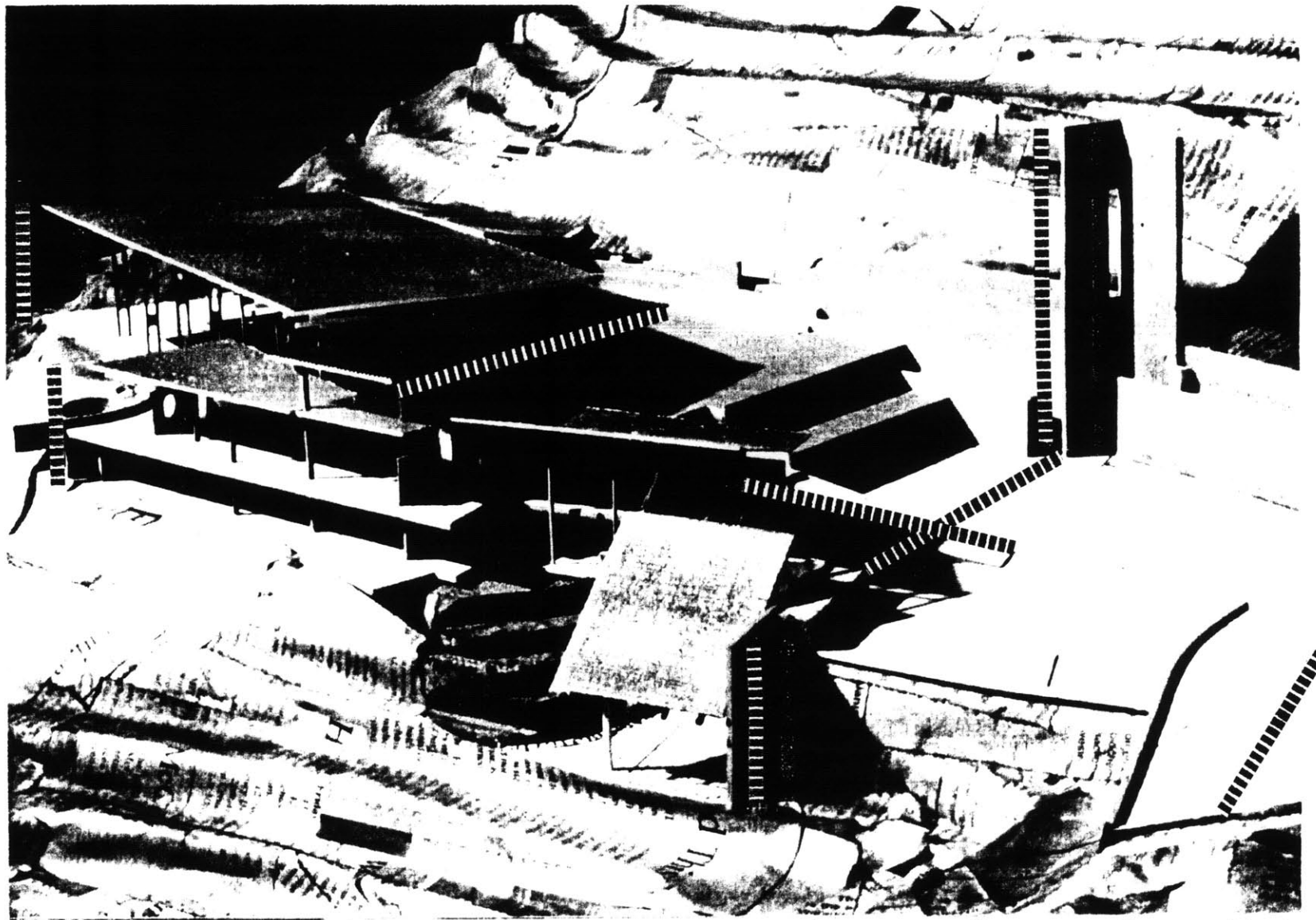
FINAL MODEL AND DRAWING  
1/4/92





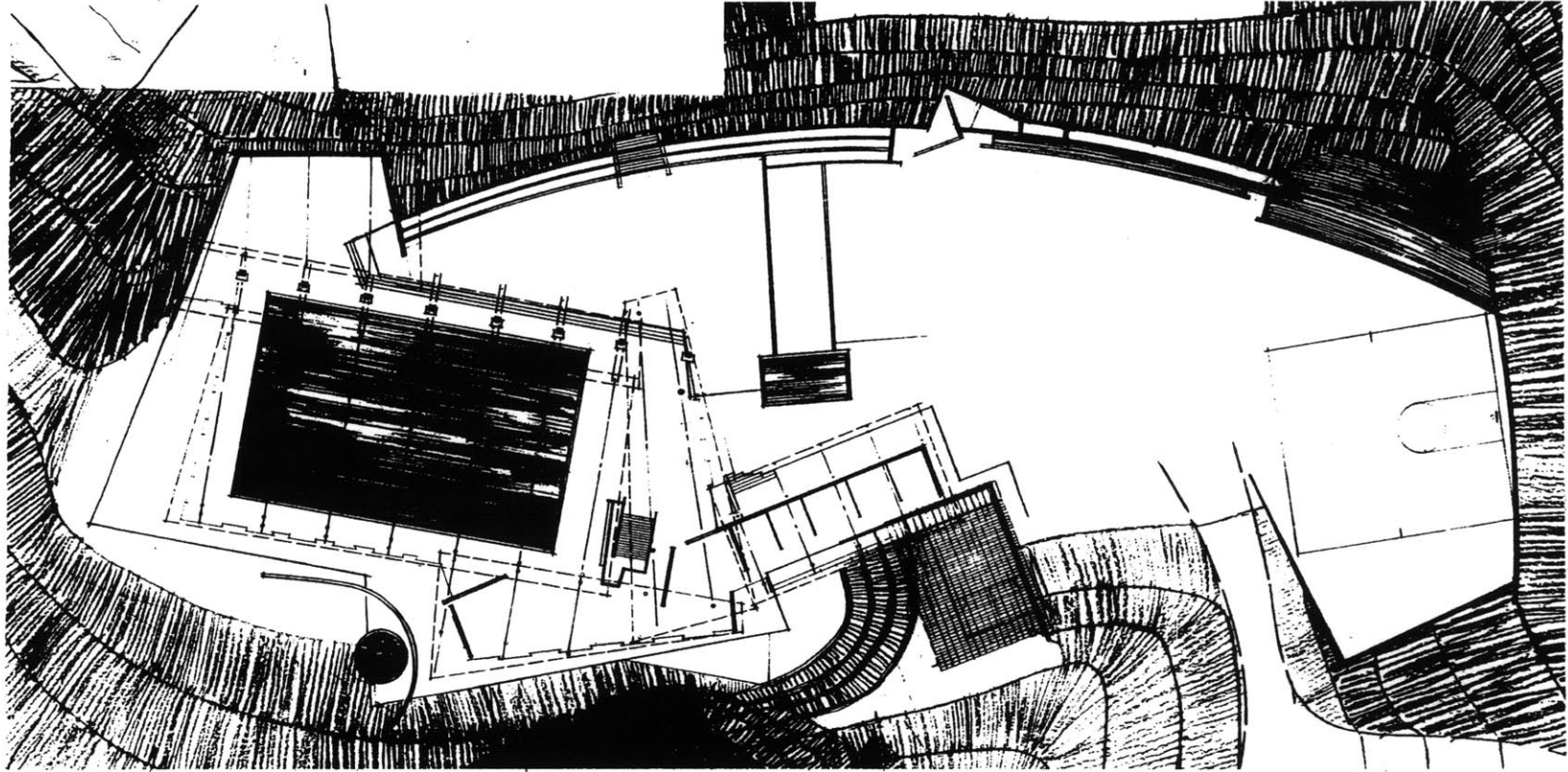




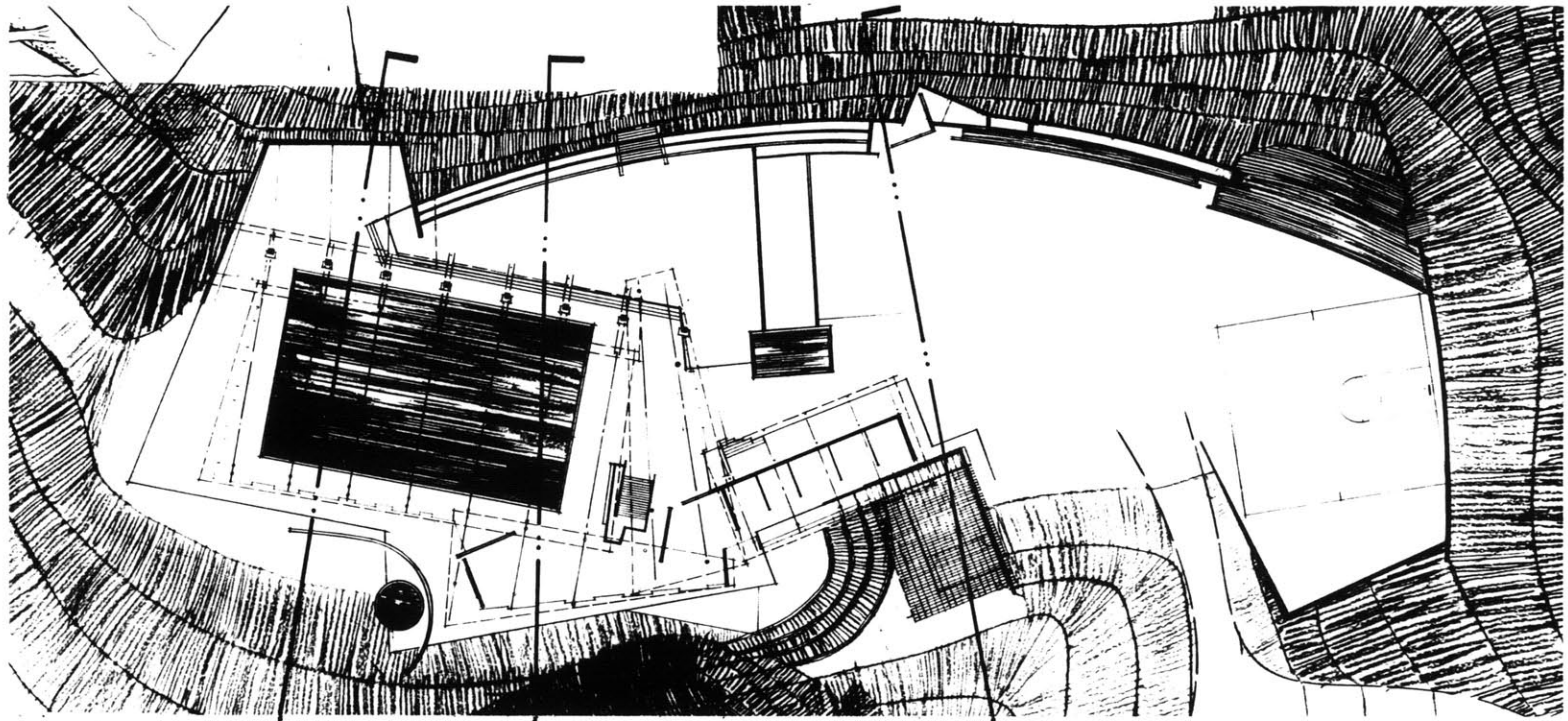


82

Dimensional self stability and repetition tower is its own dimension from building  
is the same length as pool & entry ramp, count. Squash court same height as pool & locker wing.





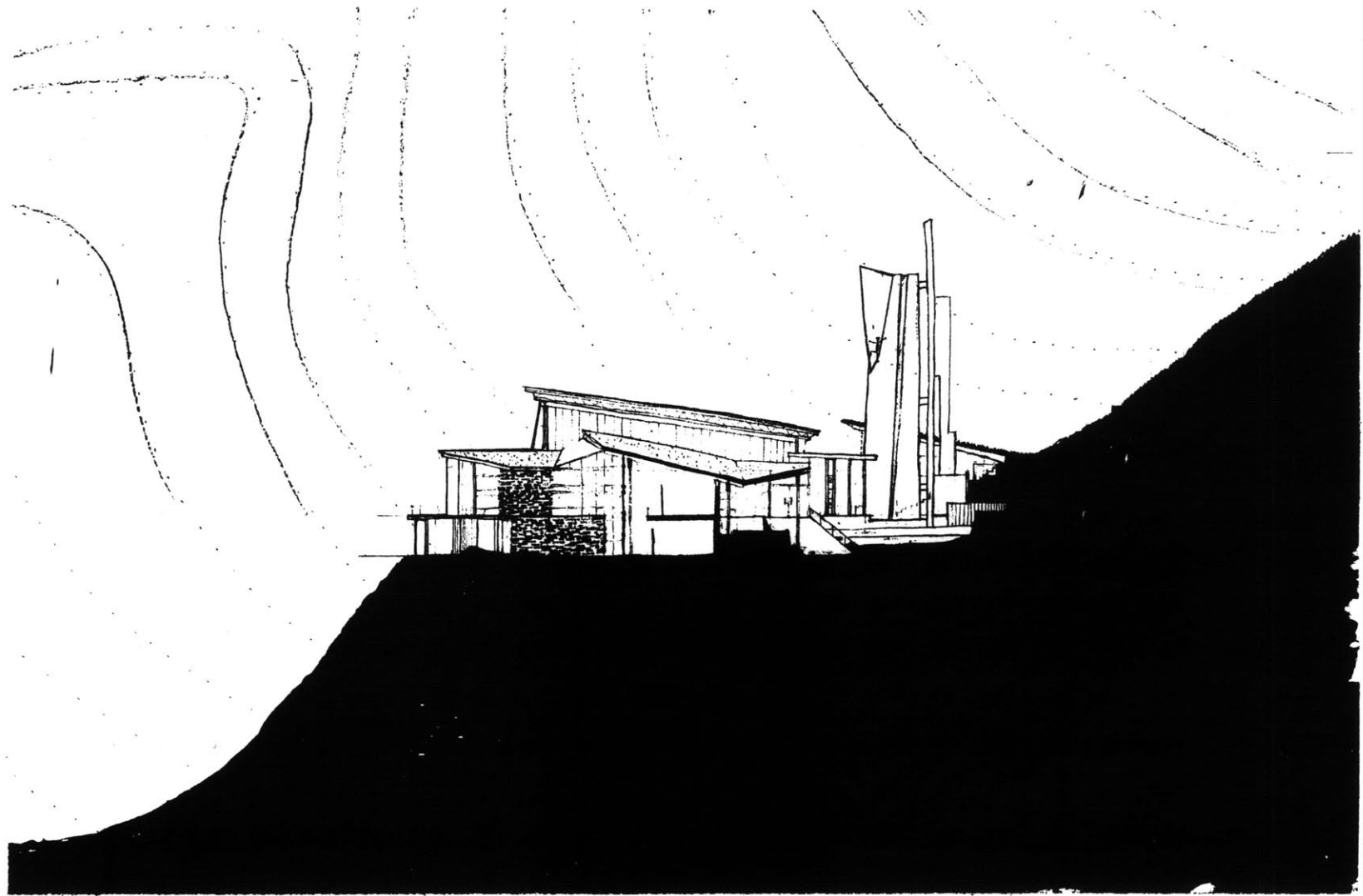


PLAH

S

I

Z

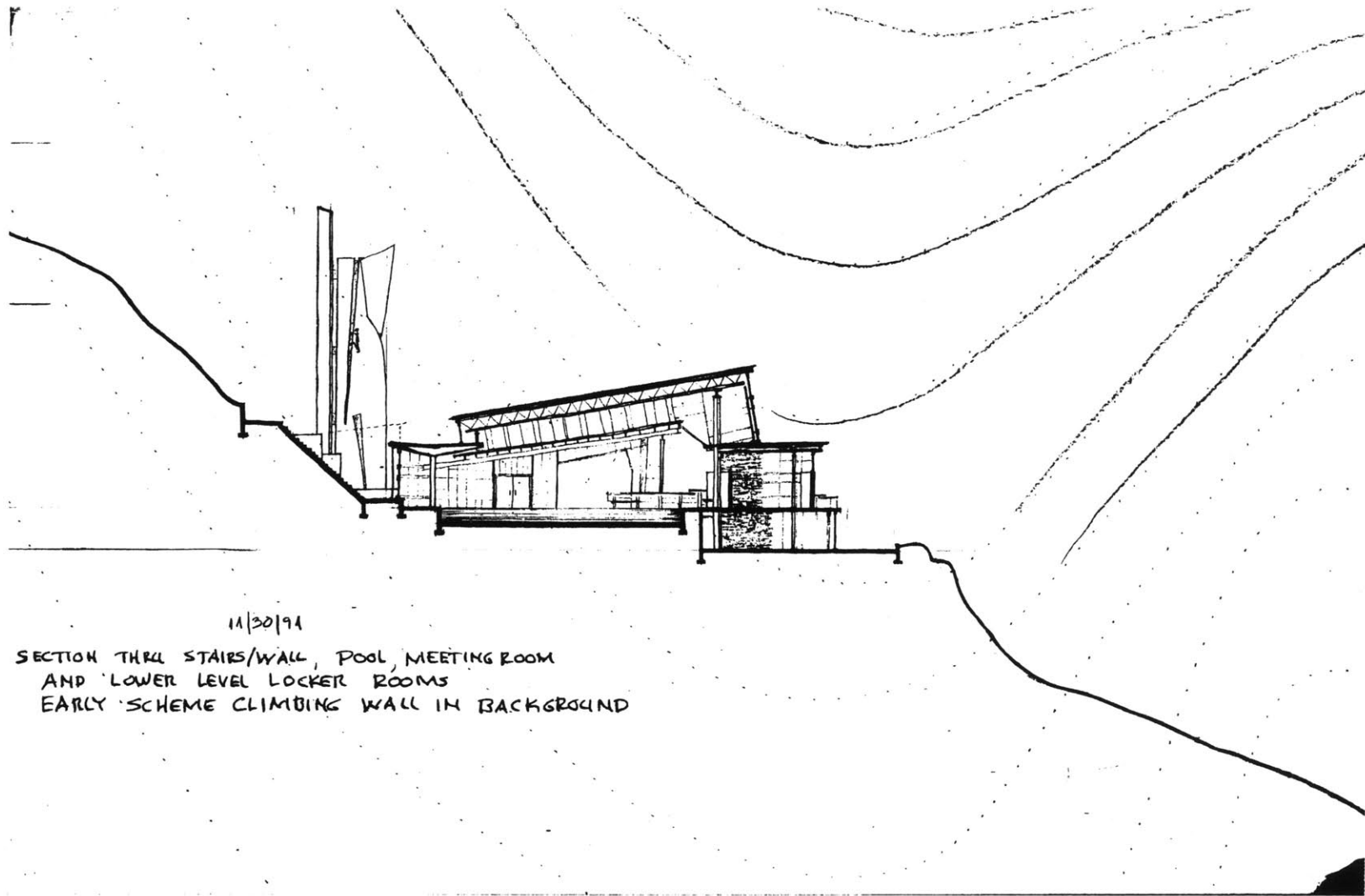


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PROCESS SECTION 11/30/91

CUT THRU OFFICE SECTION AND BOAT STORAGE PORCH AND ENTRY RAMP  
SCHEMATICS OF CLIMBING WALL

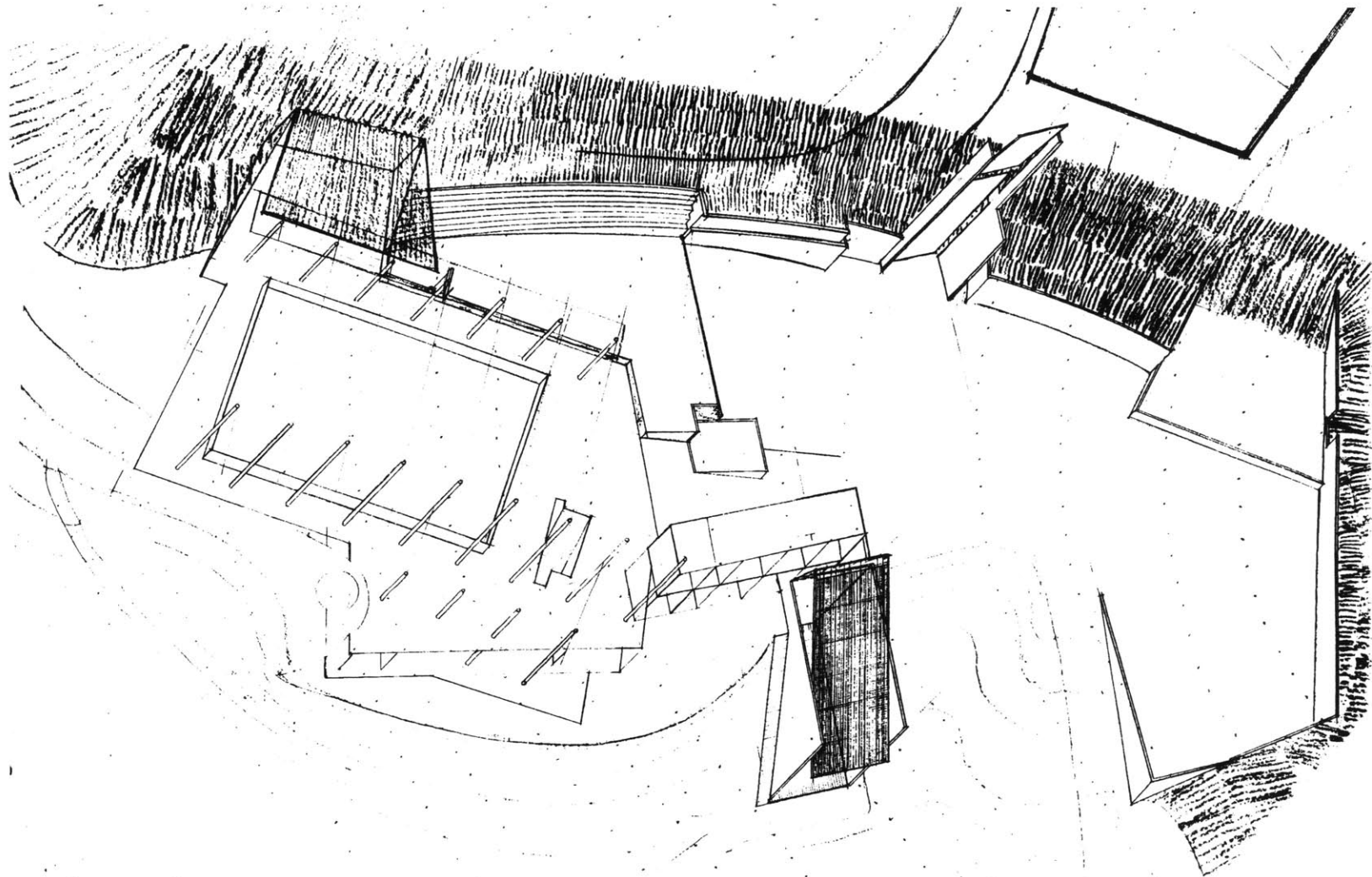




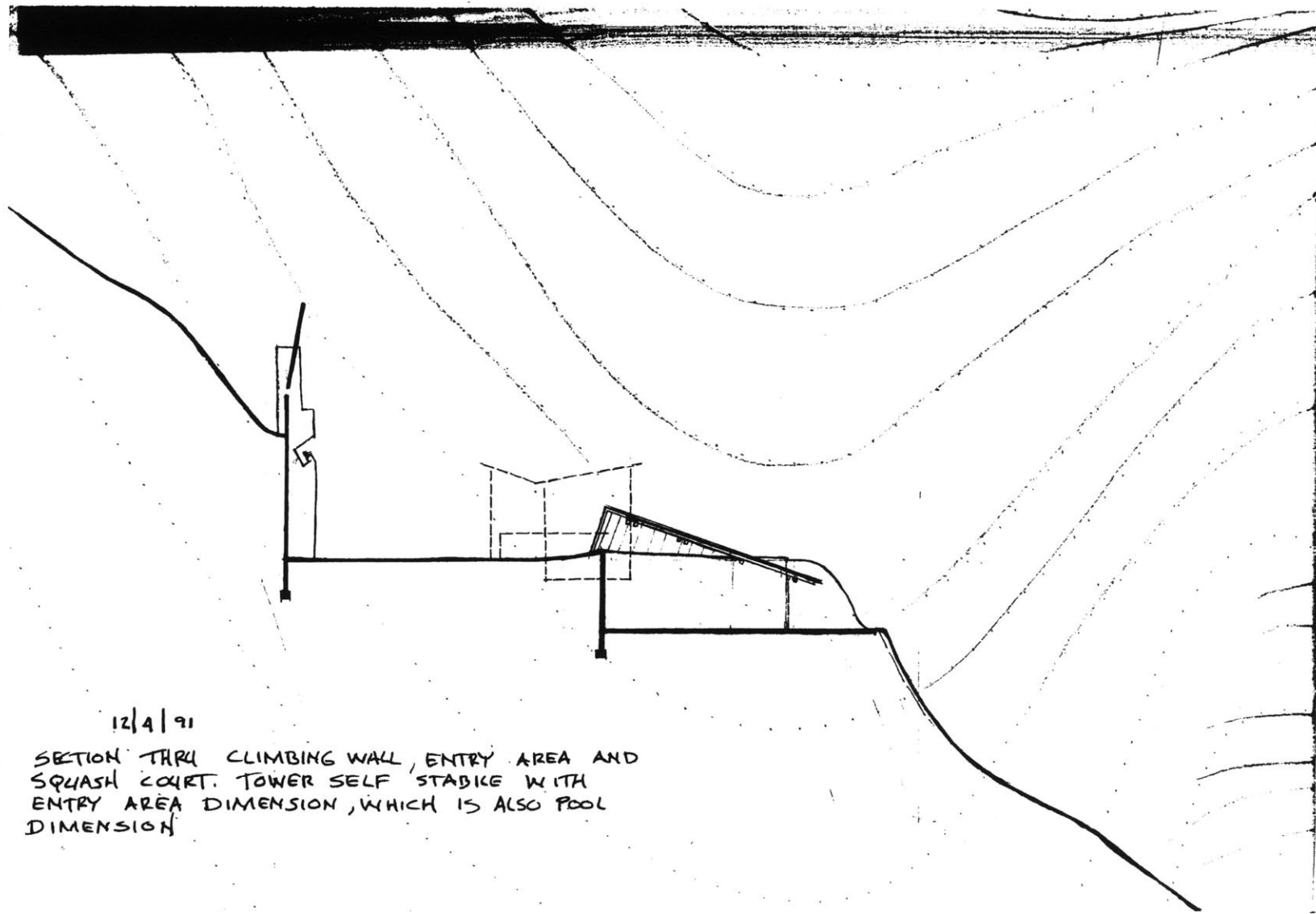
11/30/91

SECTION THRU STAIRS/WALL, POOL, MEETING ROOM  
AND LOWER LEVEL LOCKER ROOMS  
EARLY SCHEME CLIMBING WALL IN BACKGROUND

SECTION #1



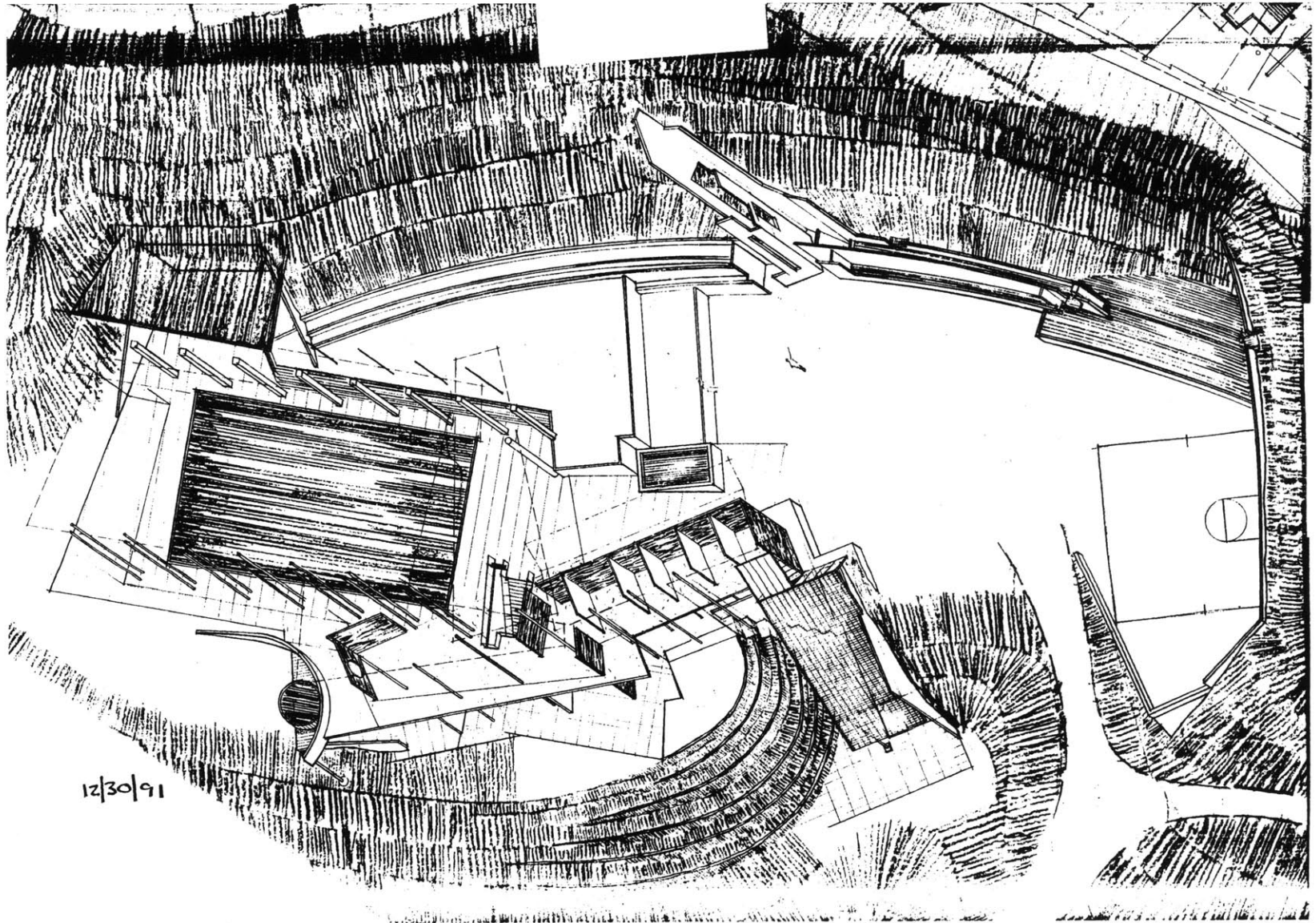
12/4/91



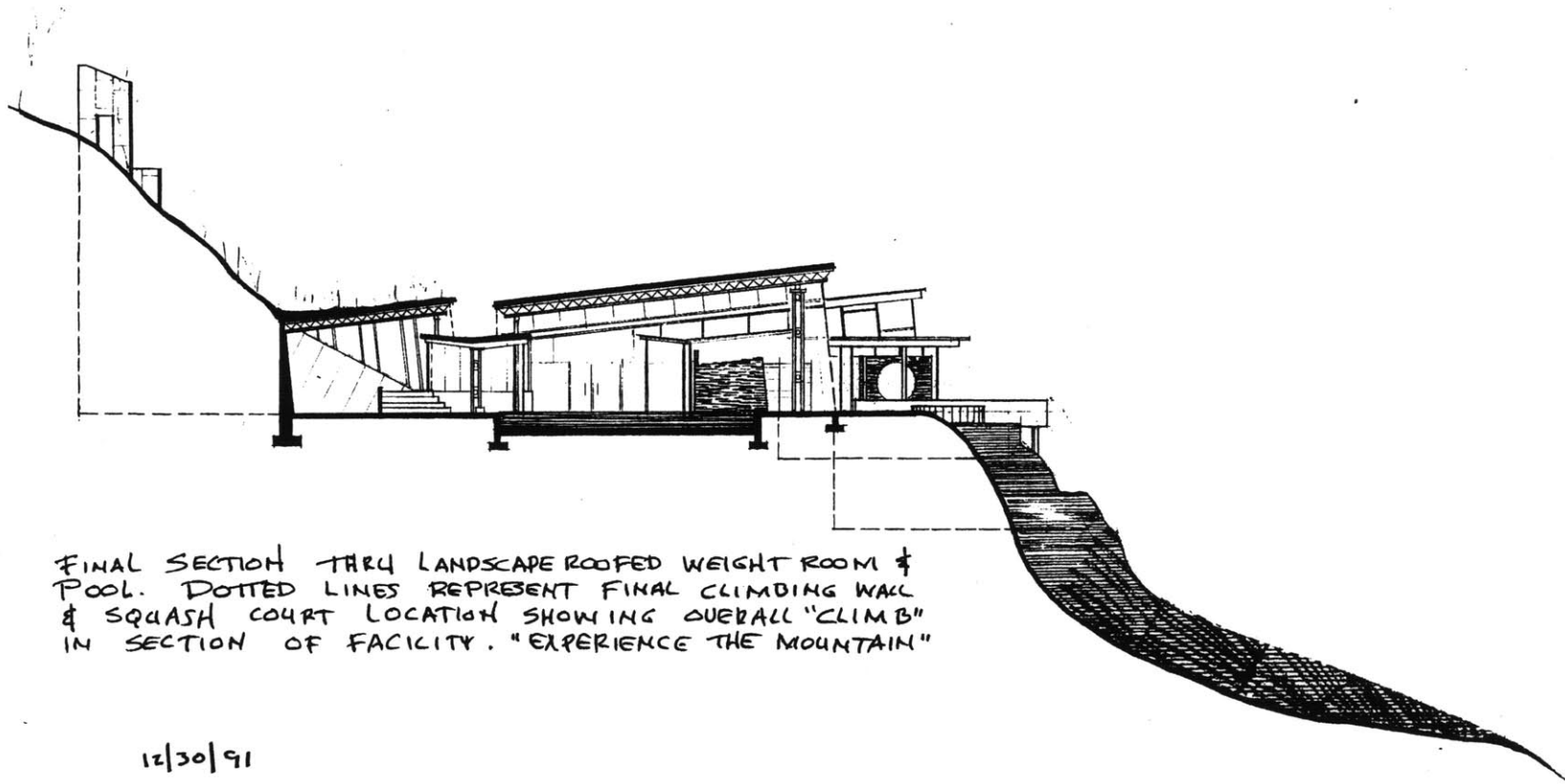
12/4/91

SECTION THRU CLIMBING WALL, ENTRY AREA AND SQUASH COURT. TOWER SELF STABLE WITH ENTRY AREA DIMENSION, WHICH IS ALSO POOL DIMENSION

SECTION #2



12/30/91



FINAL SECTION THRU LANDSCAPE ROOFED WEIGHT ROOM & POOL. DOTTED LINES REPRESENT FINAL CLIMBING WALL & SQUASH COURT LOCATION SHOWING OVERALL "CLIMB" IN SECTION OF FACILITY. "EXPERIENCE THE MOUNTAIN"

12/30/91

SECTION #3



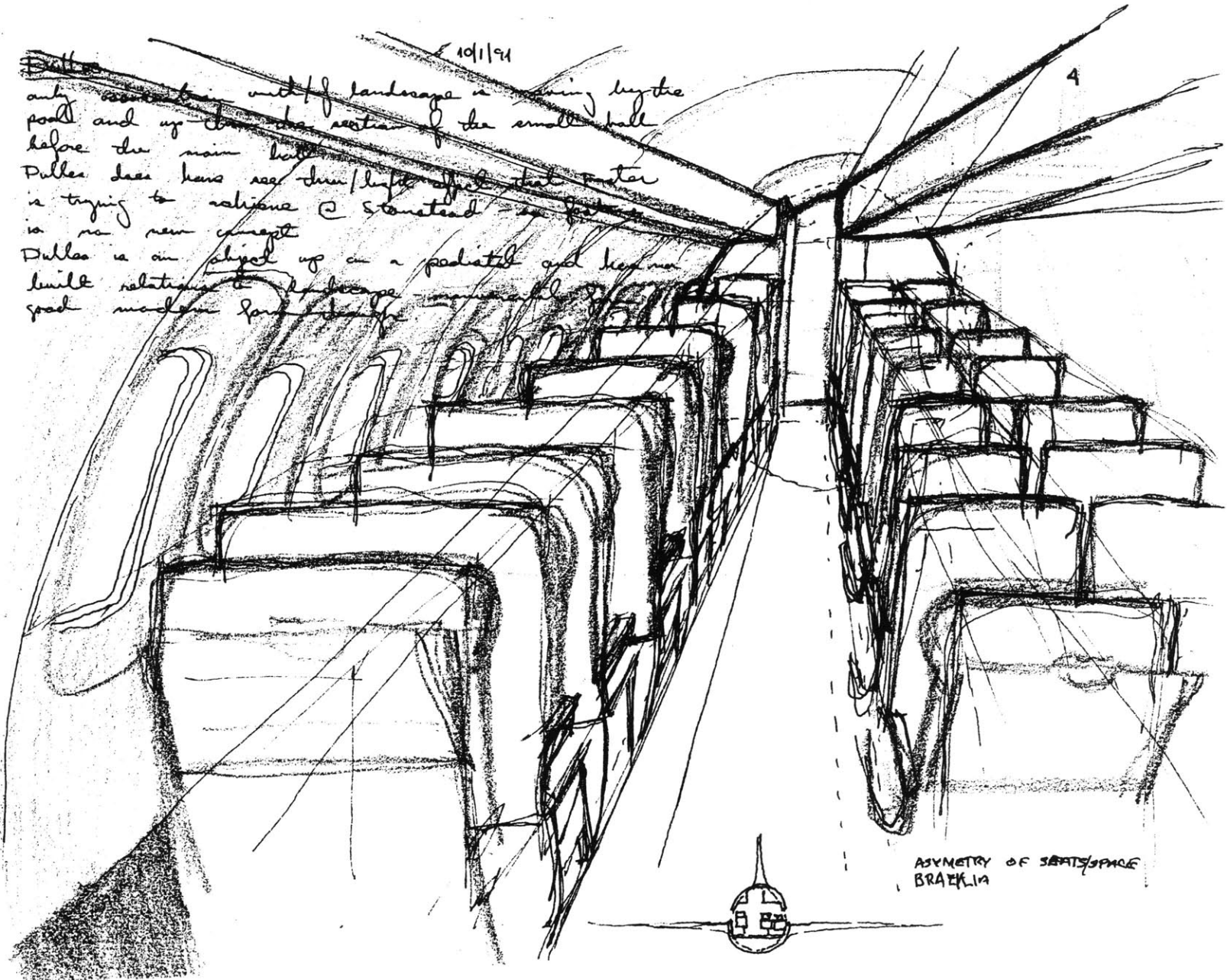
WYNN BULLOCK, "CHILD IN WOODS", 1951.



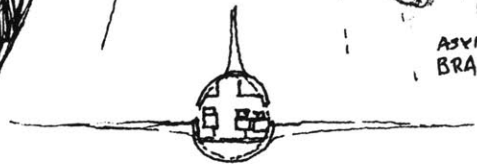
10/1/94

Dullas  
only connection with landscape is swimming by the  
pool and up the section of the small hall  
before the main hall  
Dullas does have sea view/light effect that water  
is trying to achieve @ standard - as for  
is no new concept  
Dullas is an up on a pedestal and has no  
built relationship to landscape - monumental  
good modern form

4



ASYMMETRY OF SEATS/SPACE  
BRAKIA







WALKER EVANS, HITCHHIKERS, 1936.

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