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RESIDENTIAL NEIGHBORHOOD STUDY

SUMMIT-UNIVERSITY

ST. PAUL, MINNESOTA

BY ROBERT BAIRD

Under-graduate Thesis for the partial
fulfillment of requirements for a
Bachelor of Architecture Degree

Montana State University

June 7, 1975

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INTRODUCTION

I chose "urban housing" for my thesis because of it's complex and intricate interaction of architecture, spaces, and people in their most basic and primary form, the home. I intend, in this thesis, to study the architecture of housing from a sociological approach. This is not to say I will totally ignore the other aspects of urban housing such as technology, economics, politics, etc., as they are so tightly inter-related and cannot be separated entirely from the whole housing system. However, my emphasis, for this study, will lie with residential architecture and it's possible implications and the resulting effect on human livability in the urban environment.

When an architect is designing for "city dwellers" he is not necessarily designing for a definite class of person. He is not involved with just the rich or the poor, the young or the old, the educated or the uneducated, the single or the family, but rather he is dealing with a composite of all these groups and their sub-groups, which make up the highly complex social class of the "urbanite" or high density city dweller. People of diverse personal backgrounds live closely together for many complex socio-economic reasons, and the human inter-

action element is intense yet impersonal. It is here where the architect must be sensitive to the needs of the group without over-compromising the needs of the individual.

Since residential architecture is the core of a person's family and personal social life, it should provide for privacy as well as development of the individual through association with others. Therefore, the relationships of spaces which constitute the feeling of a "neighborhood" or community are essential to achieve an environment which is beneficial to the total human experience.

Providing architecture which is conducive to human life patterns does not guarantee optimum livability, as other personal and political-economic factors can produce unpredictable social problems which are beyond the architect's control. However, through sensitive arrangement of shelters, services, recreational and circulation space, the architect can try to provide a physical base for the residents to work from, and aid them in evolving their environment to meet their social needs as circumstances dictate.

It is my goal, through my studies, to try to understand these basic architectural and residential needs which are common to all people and then apply them more specifically to the additional needs of a chosen site.

When dealing with intangibles such as aesthetics and socio-psychological needs, it is difficult to

establish definite architectural answers. Therefore, in my thesis, it is not my primary goal to find answers to housing needs, but rather, through my studies, and by using my architectural design proposal as a tool for discussion, I hope to develop an awareness and sensitivity to the problems of housing.

THESIS STATEMENT AND DESIGN PHILOSOPHY

"Housing should be an evolutionary system; which must respect the experience of the past, acknowledge the restraints of the present, and anticipate the challenge of the future."

In analyzing this statement by it's parts, "experience of the past", means that the architect must be knowledgeable of what has happened in the past, not only through his personal experiences, but through the experiences of others in this field and more importantly, the experiences of the "users". By analyzing what has taken place in the past, the architect is better able to deal with the present and it's resulting future. "Acknowledge the restraints of the present", suggests that the architect must be aware of the current needs of his client, the "user", plus the limits that today's society places on him in terms of technology, political/economic functions, sociology, etc., and how they influence his "creativity". Not only must the architect be knowledgeable of the past and aware of the present, he must also "anticipate the challenge of the future", or be able to apply that which he knows, and that which he must work with, to not only satisfy the immediate needs

of the present, but through his sensitivity and insight, he must make "educated guesses" as to what will be needed in the future, and design this into his present work in such a way as to enhance, not detract from, his primary goals.

> We shall not obtain the best insight into things until we actually see them growing from the beginning.
>
> -- Aristotle

The evolution of housing does not necessarially mean pure technological progress, but it must be the right kind of housing suited to the needs of the user and the requirements of the site.

The Federal government requires public housing to be decent, safe, and sanitary. "Safe and sanitary" are more definable terms, and by using accepted standards, can be directly observed and measured, but what is "decent"? Is it aesthetics, livability, functionalism, or what? In my thesis I want to study the concepts of neighborhood and what brings people of diverse backgrounds together as a unit or unique social class of urbanites. I want to provide a spacial arrangement and mix of housing elements to give this sense of sub-neighborhood groups, but not force the residents into constant social interaction with the other residents, as there is a need, at times, in the city, to mentally and physically isolate oneself from others. The city creates a need for distance, being human creates a need for

people.[1] Abraham Maslow compiles basic human need into five evolutionary groups, where, as an individual achieves each level, he progresses on toward self-actualization, or to an understanding of oneself. Different people reach different levels of Maslow's scale according to their own personal development. Maslow's list of basic human needs, in progression of obtainment are:[2]

1. physiological needs
2. safety needs
3. belongness-love needs
4. esteem needs
5. self-actualization needs

Alexander Leighton breaks human needs down further into ten basic strivings:[3]

1. physical security
2. sexual satisfaction
3. expression of love
4. expression of hostility
5. securing of love
6. recognition
7. expression of spontaneity
8. orientation to place in society
9. securing a place in a definite group
10. belonging to a moral order - being right in what you do.

SITE SELECTION

My choice of this site was mainly due to my familiarity with the neighborhood and my awareness of the sense of community which must have been prevalent at the turn of the century.

[1]Walter McQuade, ed., Cities Fit to Live In (New York: Macmillan Co., 1971), p. 29.

[2]Ibid. 50.

[3]Ibid.

The site is in one of the oldest residential areas of St. Paul, and was predominately white middle-class conservative families. With the development of the suburbs, there occurred a resulting deterioration of the architecture as a result of this outward migration of residents and their ensuing replacement by low-income minority families. These individuals were less able to maintain the facilities and were subject to non-resident landlords, who for economic advantages, felt little need to improve the property. Therefore, the area evolved into a slum-like environment. But due to the urban renewal programs in this area and a current desire of society to move back into the city core, (to save commuter time and energy) compiled with the realization that there exists extensive significant architectural complexes worthy of rehabilitation and restoration, the people are starting to fix up the area and return it to a community which is very desirable to live in. Therefore, I became interested in what type of new housing and services should be incorporated on this site to best reflect the aspirations and needs of the new and existing residents. In analyzing these needs, coupled with the requirements of preserving the natural features of the site and respecting the surrounding areas and neighborhoods, I located lower density housing to the south, with the transistion to medium density occurring as one move down the slope of the site to the northeast, where

the three-lane one-way (east bound) Concordia Avenue and the Interstate 94 provide a physical barrier from housing to the north.

By turning the pedestrian activities inward to the site and linking them with the existing pedestrian bridge across I-94 leading to the recently completed Martin Luther King Community Center, I developed a common focal point in the center of the site. Here I incorporated recreational and small-scale commercial shops, that will attract the residents of the three major sub-neighborhoods into another level of neighborhood or community, thus achieving a hiearchy of territorial spaces.

My initial concept was to allow only residential architecture on the site, but through sociological readings, I became aware that the needs of the neighborhood were more diverse than just residential and recreational. To bring people together I needed to provide common service functions and commercial areas. Sociologist Jane Jacobs advocates bringing back the old system of the commercial shops on street level with the shop owners residing above, as a means of promoting a diverse community participation,[1] but upon analyzing the economics of scattered commercial enterprises throughout the site, I felt the stores needed to draw from more than just the local site residents. Therefore, I chose to

[1]William Michelsen, Man and His Urban Environment; A Sociological Approach (Reading, Mass.: Addison-Wesley Pub. Co., 1970), p.20.

consolidate them into a more desirable central location at the focus of the major pedestrian circulation paths. By placing them at the point where the three sub-neighborhoods of the site meet, and on the path of the pedestrian freeway bridge, it makes it accessible to the residents from the neighborhoods north of I-94, who pass by it on their way to the Martin Luther King Community Center. Also, this additional natural draw of the Community Center will attract patrons from surrounding neighborhoods, thus making the commercial area accessable to a wider cross-section of people and therefore economically practical. The commercial area should be very low-key shops which provide small-scale services to the surrounding community, such as a small mom-pop grocery/drug/hardware store, shoe and appliance repair services, dry cleaning and laundry services, small-scale prepared food establishments such as delicatessens, restaurants, ice-cream stands, local taverns, etc., and possible craft shops reflective of the local residents.

The buildings should be unpretentious and at a scale that is harmonious to that of the residential area. They should be conducive to a passive atmosphere and provide street furniture and amenities that encourage the shoppers to sit and/or stroll about, and casually participate in the community activities. The mix of stores and services should be geared to allow for both daytime and nightime activities, to prevent the area from

becoming a deserted and potentially dangerous location after dark. By providing evening use, it allows for surveillance of the area by the frequent use of the residents and deters crime and vandalism that could result from an inactive area.

The arrangement and design of the individual units is proposed as a means of achieving surveillance of the neighborhood and an awareness of the activities that are occurring in their sub-neighborhoods, thus allowing the residents to participate as he or she chooses. With dual egress in most of the units, the residents have a choice of methods in which to relate to the functions of the area and their own personal feelings. They have the system of pedestrian circulation, which is at a slower pace and is more conducive to human interaction, or the system of individual vehicular travel, which is more rapid and less socially interactive.

At the unit level I provide a defined entry or "porch" area to allow for a transition from the more public spaces through semi-public areas and then into the personal private zone of the unit, thus avoiding abrupt confrontation of activities. This allows for the psychological and physical adaptation of the residents through various forms of "locks" or transition nodes.

Basic function goals I strove for in my units were; cross-ventilation, different orientation for both psychological and climatic needs, additional space and

storage facilities to allow the unit to be less cluttered and more adaptable to different life styles, a desirable proportion and arrangement of interior and exterior semi/private space to complement the interior and exterior public spaces, and to promote the concept of hierarchial public/private and interior/exterior spaces enabling the resident a diversity of activities, which is necessary for human development.

The initial concept of my apartment building was to terrace the first two floors back to allow for yards for the children to play in, and then build the remaining three to four floors vertically. These floors would contain elderly, studio, one and two bedroom units without children. But upon re-evaluation I felt that the concept of high-rise apartment living was contradictory to the needs of children and their direct access to exterior play areas. This, coupled with the extreme structural expense of terracing, was prohibitive when compared to the advantages to be gained. Therefore, I designed the apartment building to incorporate only elderly, studio, one and two bedroom units for singles or married couples with no children, or only those under the toddling age. By placing the building at the northeast corner, it is located on the major vehicular routes of the site, and it is some distance from the single-family homes of the area. It is also closer to the central business district of St. Paul, and the Vocational

Technical School, where a larger proportion of singles and young married couples would be working and attending school. I still raised the building up one floor to allow for parking and the steeply sloping hillside to flow underneath, and also raise the unit above the street level to obtain a relief from the activity of the street and freeway.

Within the apartment building I am proposing a communal living unit of four bedrooms, each with an attached bath, and then shared living and cooking facilities. Two of the bedroom areas can be separated from the unit and are accessible from the corridor and could be rented as sleeping rooms if desired. This arrangement allows elderly or student groups to economically share facilities, yet still obtain a higher degree of privacy than is provided in conventional two to four bedroom units.

I propose the apartment to be a cooperative venture to provide an additional form of tenent interaction. Through group renter meetings in the community room at the main entry level, the building obtains a hierarchy of neighborhoods within itself; from local circulation pods, to separate floors, to the building as a whole. The unification of the apartment residents creates a sub-neighborhood relationship to the lower density neighborhoods in the community.

By providing for families in three and four bedroom,

two-story townhouses with fenced yards and garages on the southern edges of the site, I am allowing direct access for children to the ground, which eases parential supervision. In grouping these family patterns on one side of the courtyard and grouping elderly (on ground level), studio, one and two bedroom units (on levels up to three stories), on the other side of the court, I am providing physical separation of childless groups from the families, while still allowing for interaction through mutual use of the common courtyard.

The materials of the complexes should be of a durable, low maintenance nature. It should give a sense of permanence to the neighborhood while also being warm and psychologically attractive to residential use. I feel brick is a desirable material for these purposes. It is also a prevalent material in the area and acts as a unifying architectural material in character with the community.

By incorporating entry "porches" and balconies with planters externally, I am not only enabling the individual to express himself on the exterior of his unit, but I am also allowing the building to take on a sense of life. For as the seasons change, so will the character of the building. The landscaping will provide a natural decoration of the facades and a softening of the architecture, thus humanizing the neighborhood. In a sense, the buildings and site will evolve with the

people within them, as time effects the natural process of growth and change.

CONCLUSION

Throughout this thesis I tried to research and analyze - what are human needs, and how much do architectural spaces reflect and influence a person's behavior? Winston Churchill said: "We shape our buildings and afterward our buildings shape us."[1] But how permanent is this change? It is very difficult to answer this question, as people are an unpredictable group with individual needs and desires. One can generalize, through observation and personal experience, as to what is a common reaction to some architectural form by a majority of a specific group of people. I limited my sociological architectural study of housing to urban dwellers and their needs of privacy versus human interaction.

Since these needs are so varied at the individual level, I chose not to organize my spaces too specifically. I wanted to create a variety and mix of private and public spaces, so as to allow for the flexibility and adaptation of the users. I felt spaces that were designed for unspecified events would develop their own

[1]William Michelsen, Man and His Urban Environment: A Sociological Approach (Reading, Mass.: Addison-Wesley Pub. Co., 1970), p. 168.

identity and become naturally special to the user in his own personal way. For example, common courtyard areas of trees and paths become leisurely, passive realms for the strolling elderly, while also providing unlimited play activities for the imaginative child.

By designing variety into the types of units and their arrangement with each other, I provided for different levels of family and life cycle patterns. This allows the residents the choice of moving to different dwellings in the site as their life styles change and their spatial requirements vary. Therefore, as family patterns evolve, the residents are not forced to move out of the neighborhood to satisfy their changing needs. Sam Bass Warner, Jr. has said:

> The goal of planning is not to promote one particular style of urban living (it)...is to create human enviromnents which will widen the choices open to individual city dwellers and which will enrich the many cultural styles that now exist.[1]

By creating a pleasant living environment I am enhancing social welfare, and the spaces and architecture can blend harmoniously on the site. With the natural landscaping, resident gardens and balcony planters, the site will evolve with the seasons and develop character as the environment and the people themselves change with time.

[1]Serge Chermayeff and Alexander Tzonis, Shape of Community (Baltimore, Maryland: Penguin Books, 1971), p. 193

By providing areas of personal identity and privacy, with spaces for social interaction of varying degrees and levels, one can develop, to only a certain degree, a community that is conducive to urban living. Much of urban social problems are due to political/economic variables that are out of the architect's control. For example - he can only design units that have the flexibility of being rented or owned, but it is the system that dictates the economic level of ownership. Yet ownership helps to instill a personal pride in one's property and psychologically encourages personalization of, not only the interior, but also the exterior, as an expression on one's identity to others.

In re-analyzing my thesis statement: "Housing should be an evolutionary system; which must respect the experience of the past, acknowledge the restraints of the present and anticipate the challenge of the future", I feel my project does respect this evolution of, not only architecture, but also human needs. It is not an architecture of progressive, technological forms, but rather, it is an architecture conducive of a pleasant St. Paul urban neighborhood. I created spaces (within the dictates of the site, housing requirements of this area, and the feasibility of economics), suited to, not only the past, and the present, but they also incorporate the basic concepts that can be beneficial

to urban development in the predicted future.

Transformation and adjustments in technological society is so rapid that past, present and future melt into one, thus giving the systematic prediction of the future events equal weight with the interpretation of the past.[1]

Through the development of my thesis I have increased my awareness of what people want and need. I didn't find answers to all the questions, only a few. Between what is factual and what is speculation is a fine line. But this project has re-awakened a sensitivity in myself as to what effects my architecture could have on the lives of other people. My hope is, if I get only one thing from my thesis it is, that my future work will be reflective of this awareness. To some yet unknown degree, I will be imposing life patterns on people through my physical forms.

It is my desire that I will not force the user to totally adapt to my architecture, nor that I will totally adapt my architecture to the user, but instead, I wish to create architecture that will evolve with the user, and through the uncertain course of time, my architecture and the needs of the user shall be reflective of each other's purposes.

> Ours is a vision, and an activity together...as we think the past preserves itself in the future

[1] Ibid. p. 193

...we are a culture of living change...what we are changing is the division of life. We are making a unity - a complete culture.

-- J. Bronowski[1]

[1] Ibid. p. 190.

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SITE RESEARCH

Location:

The site is located just south of Interstate 94, approximately one mile west of the St. Paul central business district and adjacent to the north and east sides of the Martin Luther King Community Center. It is comprised of three residential blocks, approximately 8.2 acres (excluding streets and right-of-ways.)

Buildings:

The area has been under urban renewal programs since 1967, and 50% of the buildings are classified as substandard or in need of major repairs. The majority of the buildings were built prior to 1900, very few later than 1940. Less than 15% are single-family residences.

Number of Units per Building

1	8.2%
2	5.2%
3-4	8.2%
5-49	77.9%
50+	0.5%

Average cost of dwelling in neighborhood: $17,500
Average cost of dwelling in St. Paul $20,000

Architecture of Area:

Virginia Street Church (by Cass Gilbert)
St. Paul Cathedral
State Capitol
Summit Avenue - notable architecture includes Govenor's mansion, museums, and other large residences

Population (1970 census):

1950 - 40% Black; 1970 - 74% Black
General population decline - 32% mainly from construction of Interstate 94 and deterioation and removal of substandard buildings.

Ages of Residents

Under 5 years old	4.2%
5-14	5.8%
15-24	15.7%
25-34	8.0%
35-44	9.2%
45-54	11.1%
55-64	15.7%
65-74	30.2%

Family Types:

Area vs. St. Paul

	Area	St. Paul
Husband and wife		
no children	59.8%	82.0%
with children under 18 years old	40.0%	52.0%
3 people or less per dwelling	88.0%	70.6%

Area Only

Husband and wife - no children	70.9%	with children	29.1%
Male head - no children	51.3%	with children	48.7%
Female head - no children	40.8%	with children	59.2%

Total husband and wife	59.8%
Total male head	9.3%
Total Female head	30.9%

Income:

Median range	$ 4,000 - 4,999
Area average	5,933
St. Paul average	10,455

Incomes Below Poverty Line

Families	31%
Individuals	27%

Density of Units per Acre:

Average = 22 units per acre

Number of Persons per Unit:

1	56.4%
2	24.0%
3	8.6%
4	4.8%
5	3.3%
6+	2.8%

Median total - 1.4 persons per unit
Owner occupied units - 1.9 persons per unit
Rental occupied units - 1.4 persons per unit

Homeownership:

Owner occupied	6.5%
Rental occupied	93.5%

General:

Many over 55 years old
Very few small children
Majority single
50% of families below poverty line
33% of individuals below poverty line
50% of units occupied by one person
Majority of units are rentals

Following are maps of the area showing locations of existing and proposed facilities and circulation in relation to the site.

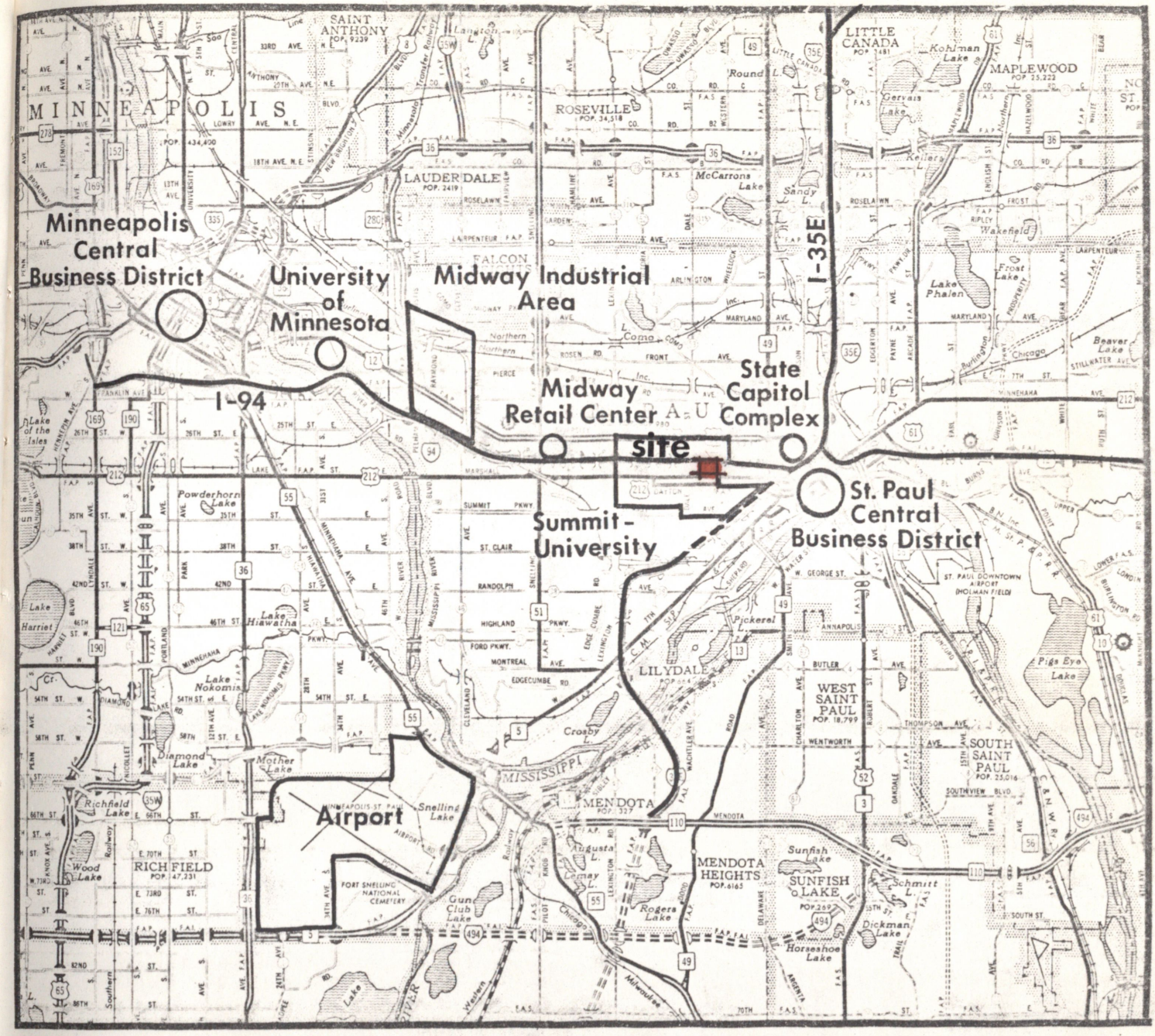
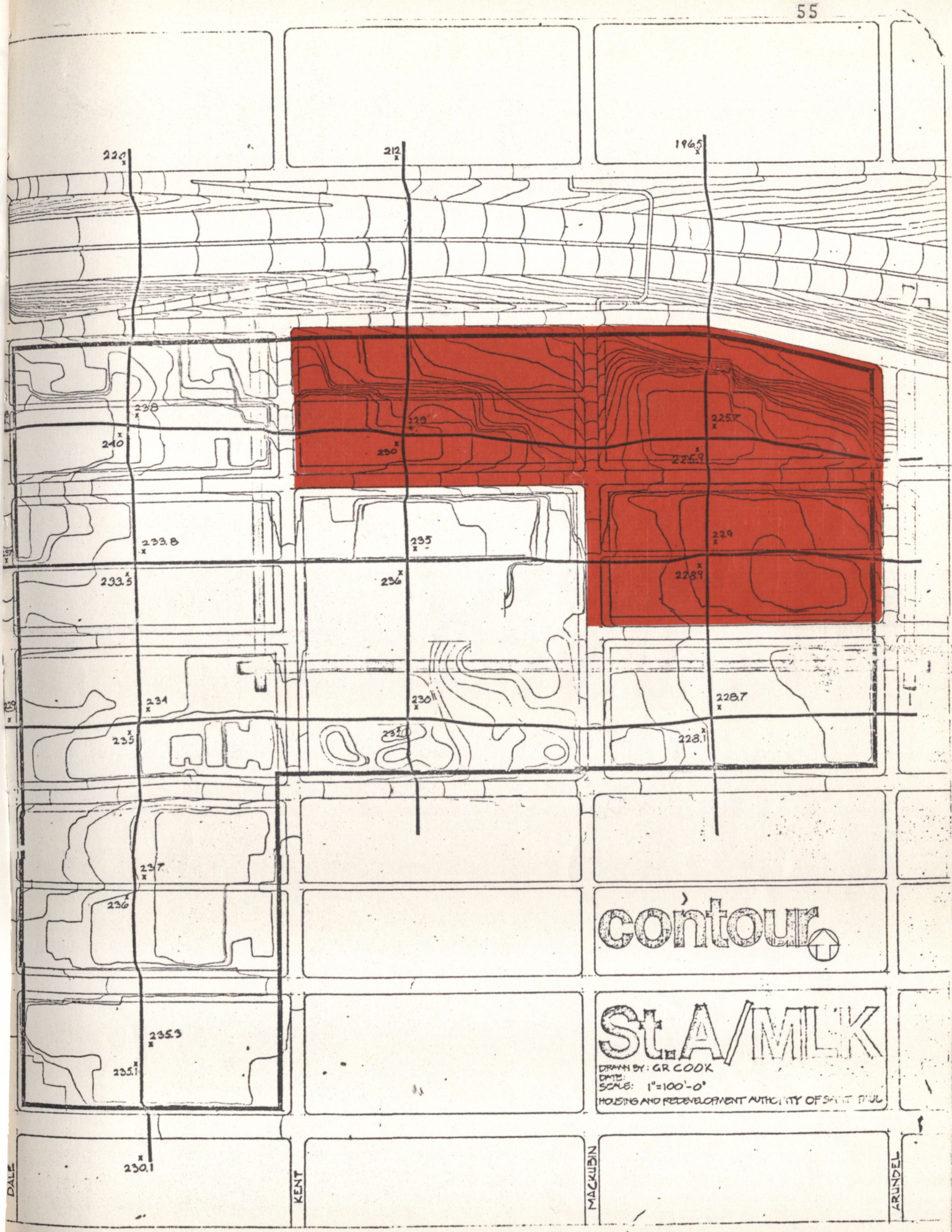


FIGURE 2

Location of Summit-University Renewal Area

SOURCE: Economic Research Corp.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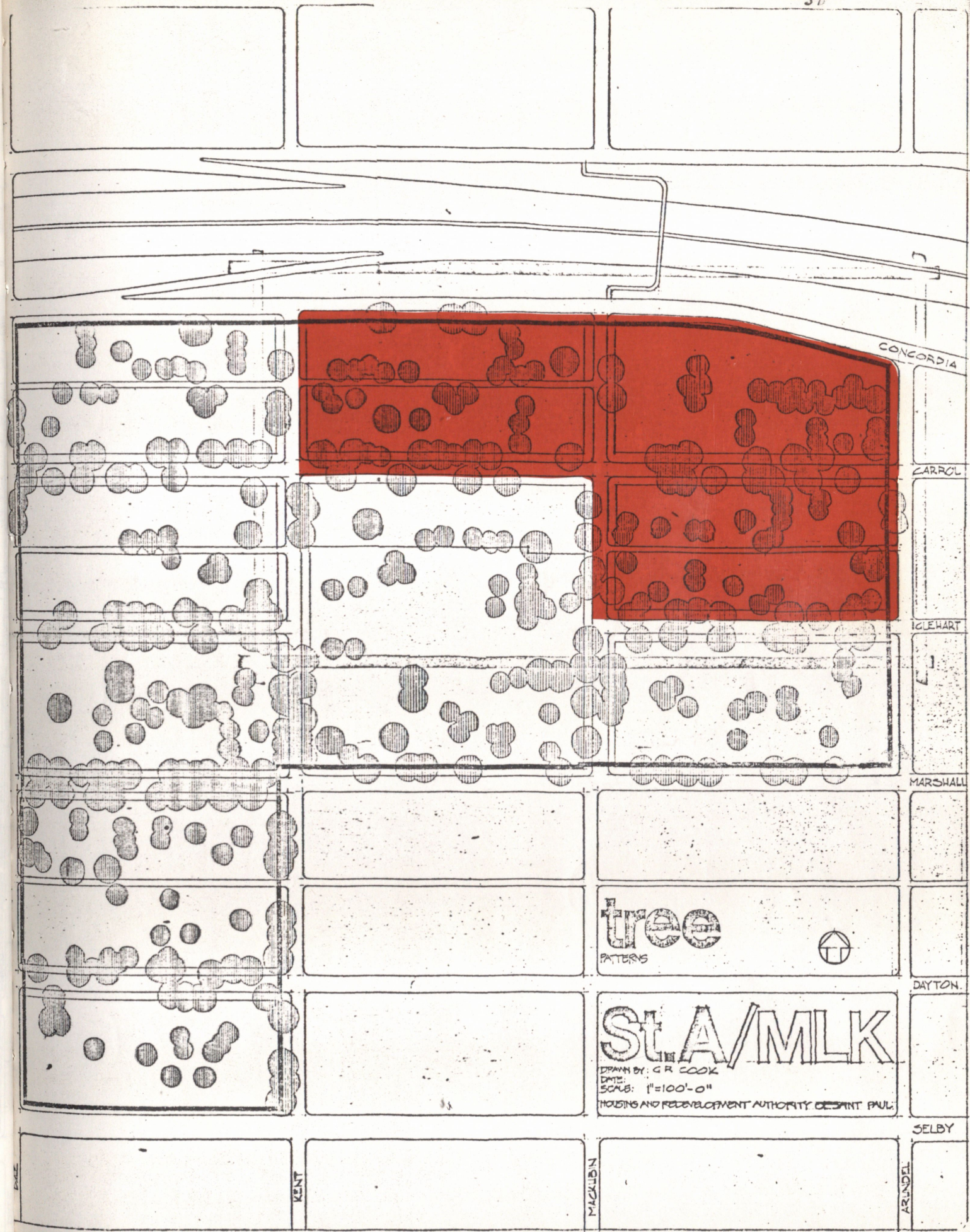
HOUSING AND REDEVELOPMENT AUTHORITY OF SAINT PAUL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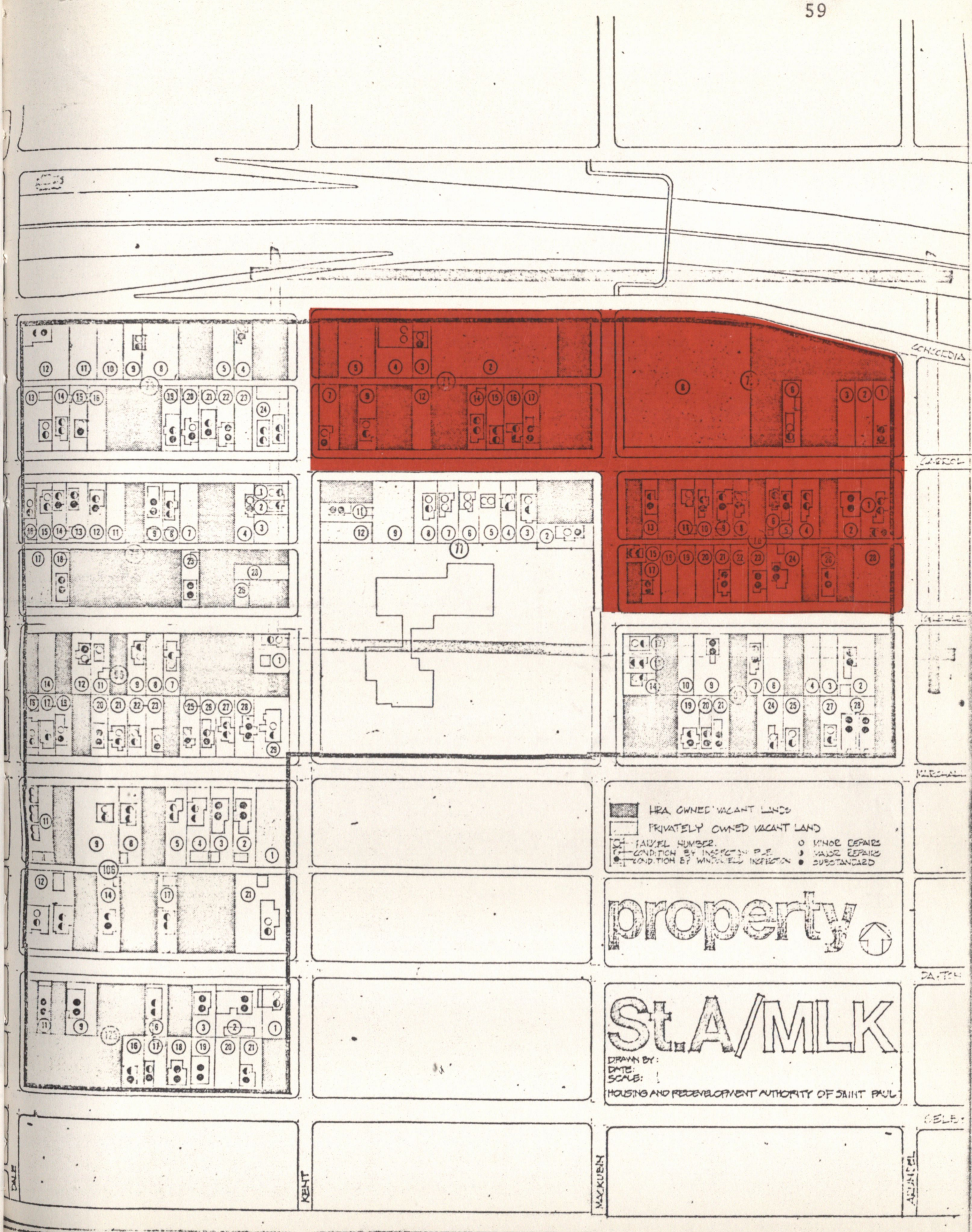
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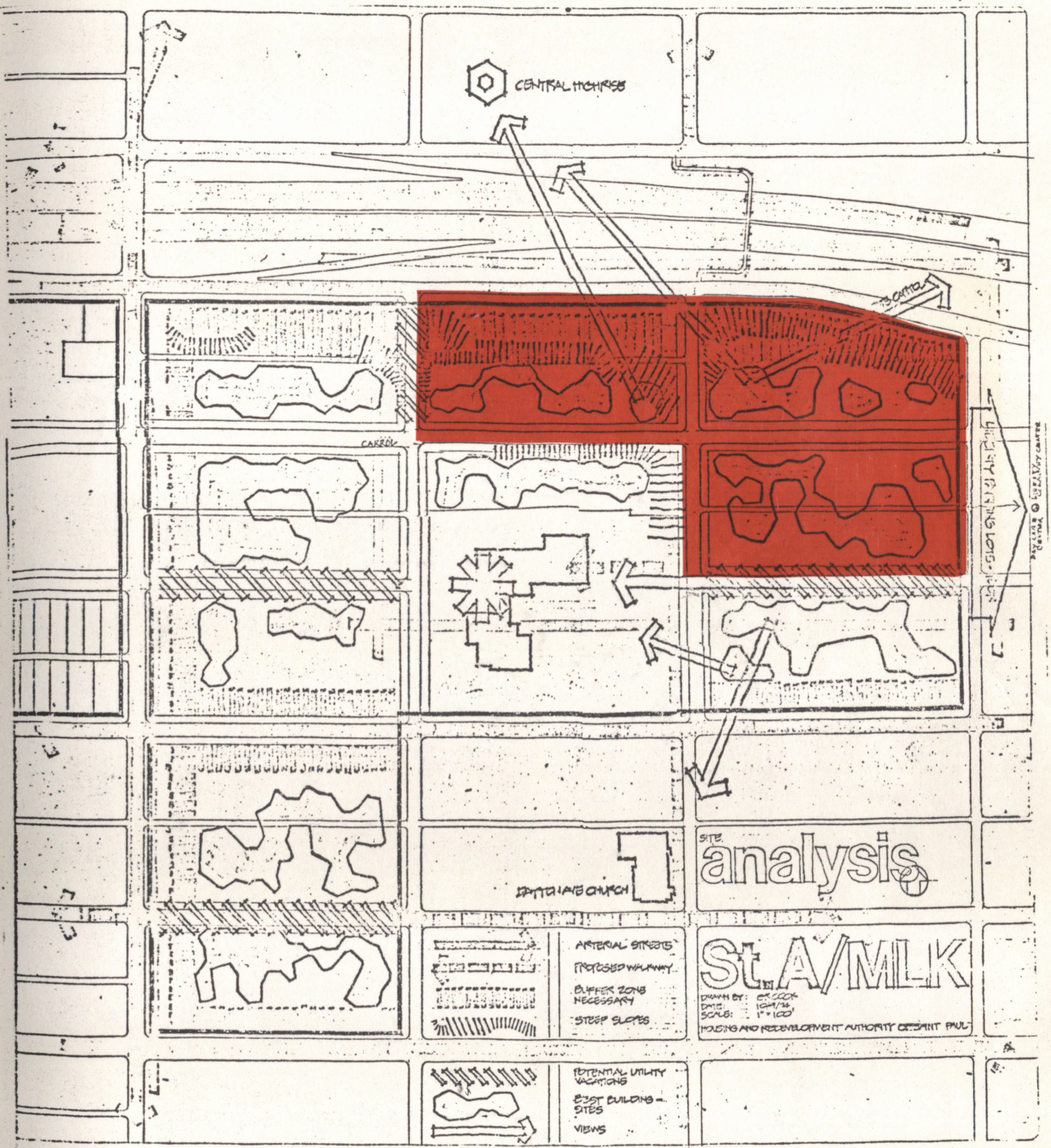
HOUSING AND REDEVELOPMENT AUTHORITY OF SAINT PAUL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TO CAPITOL
CARROLL
SITE
analysis
ARTERIAL STREETS
PROPOSED WALKWAY
BUFFER ZONE NECESSARY
STEEP SLOPES
St.A/MLK
DRAWN BY: CR COOK
DATE: 1974/75
SCALE: 1" = 100'
HOUSING AND REDEVELOPMENT AUTHORITY OF SAINT PAUL
POTENTIAL UTILITY VACATIONS
BEST BUILDING SITES
VIEWS

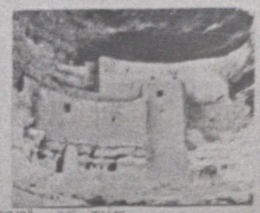
program

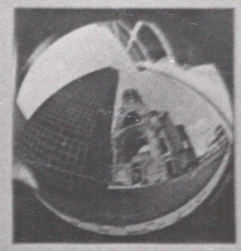
THESIS STATEMENT :

"HOUSING SHOULD BE AN EVOLUTIONARY SYSTEM :
WHICH MUST RESPECT THE EXPERIENCE OF THE PAST,
ACKNOWLEDGE THE RESTRAINTS OF THE PRESENT,
AND ANTICIPATE THE CHALLENGE OF THE FUTURE."

PROJECT :

RESIDENTIAL NEIGHBORHOOD STUDY –
SUMMIT-UNIVERSITY AREA
ST. PAUL, MINNESOTA





evolution

THE FUNCTION & "CHARACTER" OF THE BUILDING SHOULD PROVIDE THE USER WITH A PHYSICAL & SOCIOLOGICAL TRANSITION FROM THE PAST TO THE FUTURE





sociology

"THE CITY CREATES A NEED FOR DISTANCE. BEING HUMAN CREATES A NEED FOR PEOPLE." - ARCHITECTURE ETC.

PROMOTE HUMAN INTERACTION. ENCOURAGE WALKABILITY. MASLOW'S EVOLUTIONARY SYSTEM OF HUMAN NEEDS - PHYSICAL NEEDS, THEN AFFECTION, FINALLY SELF-ACTUALIZATION. LEIGHTON'S 10 BASIC STRIVINGS.

CHILDREN LEARN FROM ASSOCIATION.
HIEARCHY OF PUBLIC/PRIVATE SPACE, IDENTITY, COMMUNITY/NEIGHBORHOOD

technology

"THE ART OF PROGRESS IS TO PRESERVE ORDER AMID CHANGE AND TO PRESERVE CHANGE AMID ORDER."
- ALFRED W. WHITEHEAD



AUTOMOBILE IS A DISPERSING AGENT - SCATTERS URBAN COMPONENTS



A LOT OF PERSONAL TIME IS SPENT IN TRAVEL WITHOUT HUMAN INTERACTION - MORE EFFICIENCY IN TRANSPORTATION. SHAPE TECHNOLOGY TO HUMAN NEEDS

40% OF RESIDENTS OWN AUTOMOBILES
PARKING - 1 to 1½ SPACES PER UNIT



BUILDINGS

MOST BUILT PRIOR TO 1900, VERY FEW LATER THAN 1940
50% SUBSTANDARD OR MAJOR REPAIRS - GENERAL AREA

NUMBER OF UNITS PER BUILDING

1 - 8.2%
2 - 5.2%
3 & 4 - 8.2%
5-49 - 77.3%
50+ - 0.5%

LESS THAN 15% SINGLE FAMILY

AVERAGE COST OF DWELLING - $17,500 "CITY" - $25,000

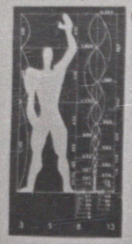
BUILDINGS IN AREA - HISTORY

VIRGINIA STREET CHURCH - CASS GILBERT
ST. PAUL CATHEDRAL
STATE CAPITOL
SUMMIT AVENUE - NOTABLE ARCHITECTURE - GOVERNOR'S MANSION, MUSEUMS, LARGE MANSIONS

— ROBERT BAIRD







"MEASURE OF MAN"
MEASUREMENT OF HUMAN PHYSICAL FORM - FINITE, MEASUREMENT OF EMOTIONAL NEEDS - INFINITE AND UNCERTAIN.

needs

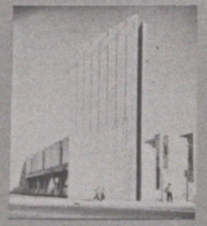
"NOT CREATING NEW PARTS, BUT REARRANGING EXISTING CONFLICTING PARTS"

- ACCOMMODATION ↔ LAND USE - SPACES FOR GROUP OCCUPANCY
- PROBLEMS OF PROTECTION - SECURITY, SAFETY SANITARY
- RESPONSIBILITY - OWNERSHIP ↔ MAINTENANCE ?
- CLIMATIC CONTROL - HOW MUCH ?
- ILLUMINATION - SAFETY ↔ PLEASURE
- ACCOUSTICS - TRANSITION PUBLIC ⇒ PRIVATE
- CIRCULATION - AUTO ⇔ PEDESTRIAN,
- EQUIPMENT ↔ UTILITIES

scale

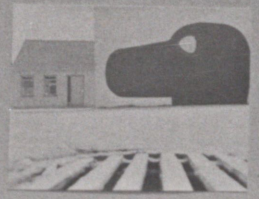
ORGANIZATION OF SPACES AND FORMS AND THEIR RESULTING SCALE TO DEFINE DEGREES OF ACTIVITIES, USES, IMPORTANCE, INTIMACY.

PLAY SPACE - FLUID/CHANGING/UNPREDICTABLE, YET CONTROLLED THROUGH: SCALE, VISIBILITY, SPATIAL LOCATION, DISTANCE ↔ ACCESS.



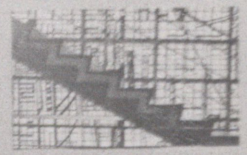
PROBLEM IS NOT SHORTAGE OF SPACE - BUT RATHER PROPER USE OF SPACE — "EFFICIENCY OF SPACE"

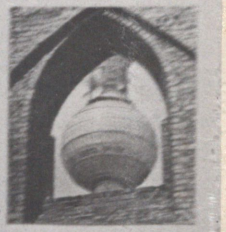


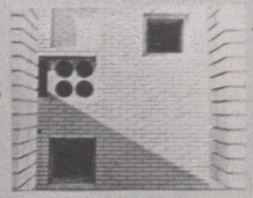


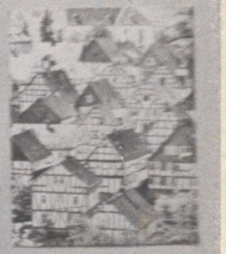
PERSONALIZATION/IMAGERY - NEED FOR SELF-EXPRESSION, CONVEY IDENTITY OR IMAGE TO OTHER.
LARGE PERCENTAGE OF RESIDENTS OF PROJECT RENT HOUSING, THEREFORE THEY EXPRESS "PUBLIC IMAGE" THROUGH CLOTHING AND AUTOMOBILES - THAT WHICH THEY "OWN"

complexity

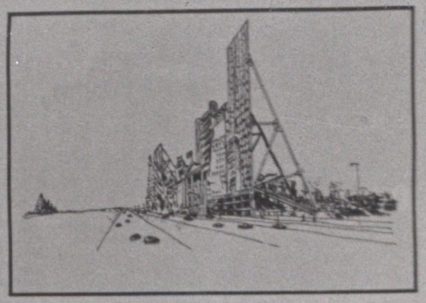








GEOMETRY, FORM, VARIETY, COLOR, TEXTURE, RHYTHM, MATERIALS; ARCHITECTURAL COMPONENTS WHICH UNCONSCIOUSLY AFFECT EMOTIONAL ATTITUDES AND STRONGLY INFLUENCE BEHAVIOR.



imagery



SITE AREA = 356,625 ft² = 8.2 ACRES
RESIDENTIAL II - MEDIUM DENSITY
DWELLING UNITS -
DETACHED SINGLE - 12 DU/ACRE
DUPLEXES - 14 DU/ACRE
TOWNHOUSES - 16 DU/ACRE
GARDEN/WALK-UP - 24-44 DU/ACRE
MULTI-FAMILY/HIGH-RISE
- 60-72 DU/ACRE
MAXIMUM OVERALL - 24 DU/ACRE
MAXIMUM NUMBER OF UNITS ≈ 200

UNITS - PROPOSED ——— ≈ 200 UNITS

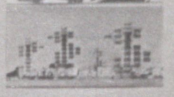
ELDERLY	≈ 400 ft² ———	≈ 25 "
STUDIO	≈ 450 ft² ———	≈ 30 "
1-BED	≈ 600 ft² ———	≈ 75 "
2-BED	≈ 900 ft² ———	≈ 40 "
3-BED	≈ 1200 ft² ———	≈ 20 "
4-BED	≈ 1600 ft² ———	≈ 10 "

density











spatial definition

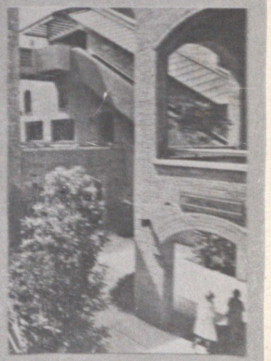
AVOID AMBIGUITY OF SPACE, QUIET ⅓ ACTIVE SPACES
MULTI-USE SPACE - AVOID UNCOMFORTABLY FULL AND DANGEROUSLY EMPTY SPACES, 50 ft²/CHILD,
1¼ ACRES/1,000 PEOPLE, DEFINE SPACE - IDENTITY/SECURITY/MAINTENANCE

proposals

PROVIDE POPULATION MIX - YOUNG/OLD, SINGLES/FAMILIES, ECONOMIC & RACIAL
PRESERVATION OF EXISTING SITE FEATURES - SLOPES, TREES, SOUND STRUCTURES
CLUSTERING OF UNITS - HIERARCHY OF NEIGHBORHOODS
GROUPED ENTRIES - INTERACTION OF RESIDENTS
CROSS-VENTILATION OF UNITS - DIFFERENT VIEWS FROM DIFFERENT ROOMS
PROMOTE INTERACTION OF OTHER COMMUNITIES THROUGH ACCESS TO M.L.K. CENTER
PROVIDE WALKABILITY (UNINTERRUPTED BY AUTO)
TREES - ENVIRONMENTAL FILTERS, PROTECTION, RELIEF FROM BUILDINGS
DUAL ACCESS - PARKING & UNITS, SERVICE









urban relief



people

1970 CENSUS

1950 - 40% BLACK, 1970 - 74% BLACK
POPULATION DECLINE = -32% (FROM 1960) - LARGELY DUE TO FREEWAY & DETERIORATION
HUSBAND/WIFE FAMILIES = 59.8% 'CITY' = 82%
% CHILDREN UNDER 18 YEARS = 40% 'CITY' = 52%
3 PEOPLE OR LESS/DWELLING = 88% 'CITY' = 70.4%
FAMILY TYPES
H/W NO 'C' = 70.9% % C = 29.1%
MALE HEAD NO 'C' = 51.3% % C = 48.7%
FEMALE HEAD NO 'C' = 40.8% % C = 59.2%
TOTAL
H/W = 59.8% MALE HEAD = 9.3% FEMALE HEAD = 30.9%

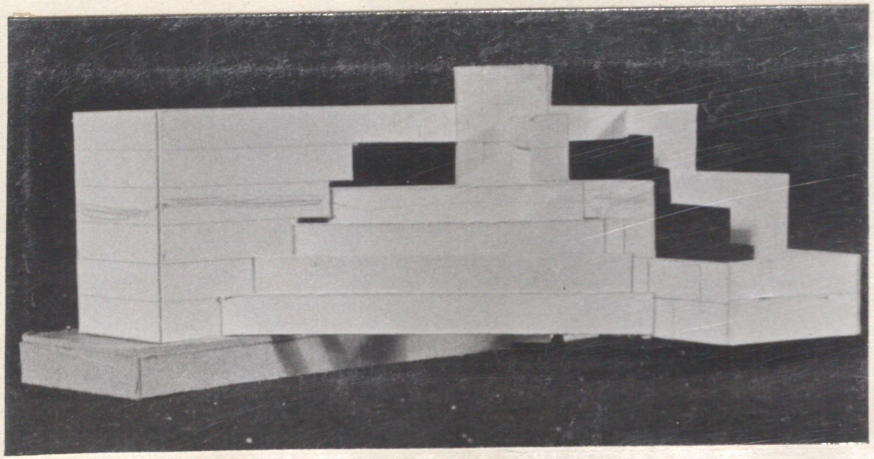
AGES -

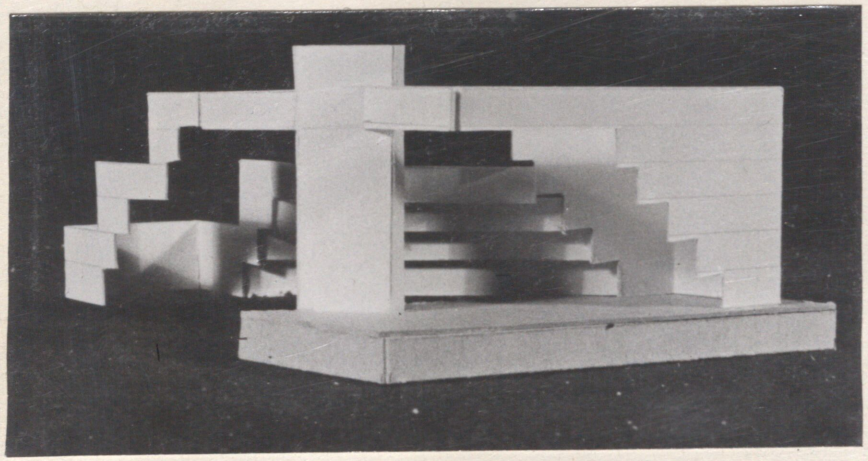
UNDER 5	- 4.2%
5-14	- 5.8%
15-24	- 15.7%
25-34	- 8.0%
35-44	- 9.2%
45-54	- 11.1%
55-64	- 15.7%
65 +	- 30.2%

INCOME MEDIAN RANGE $4,000 - $4,999, AVERAGE $5,955 'CITY' $ 10,455
BELOW POVERTY LINE 31% - FAMILIES, 27% INDIVIDUALS, 'CITY' 6%
NUMBER OF PEOPLE/UNIT 1 - 56.4%, 2 - 24.0%, 3 - 8.6%, 4 - 4.8%, 5 - 3.3%, 6+ - 2.8%
MEDIAN TOTAL 1.4 PEOPLE, OWNER OCCUPIED 1.9 PEOPLE, RENTAL 1.4
HOMEOWNERSHIP - 6.5% OWNED, 93.5% RENTED

preliminary apartment building designs

1





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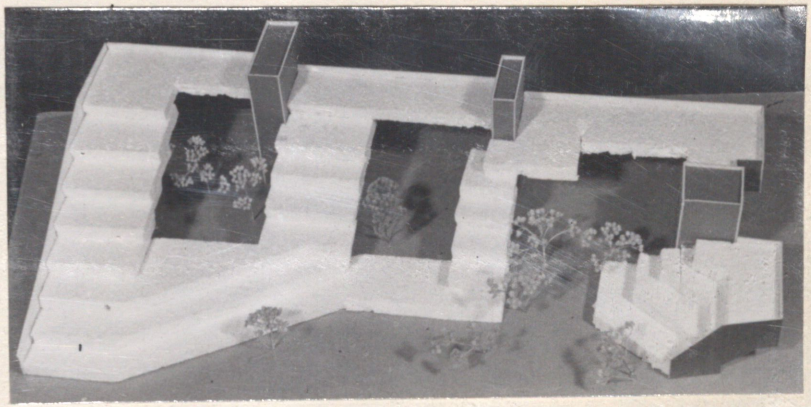
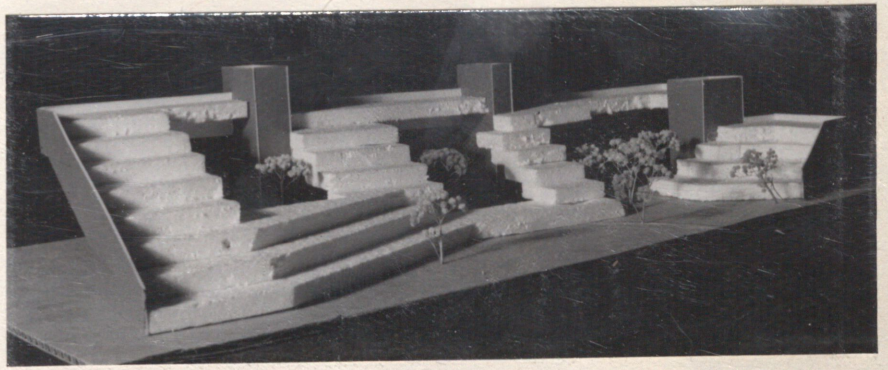
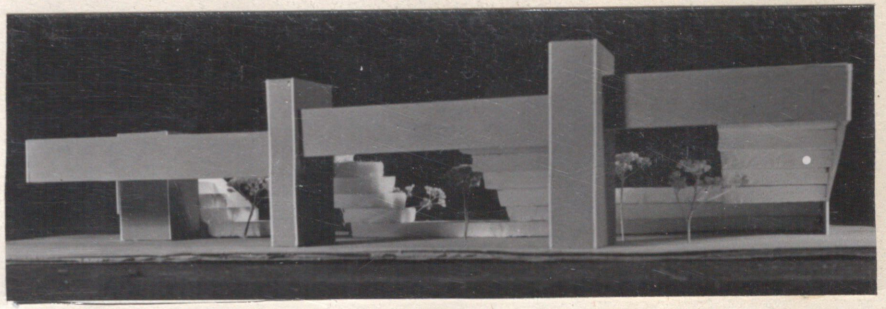
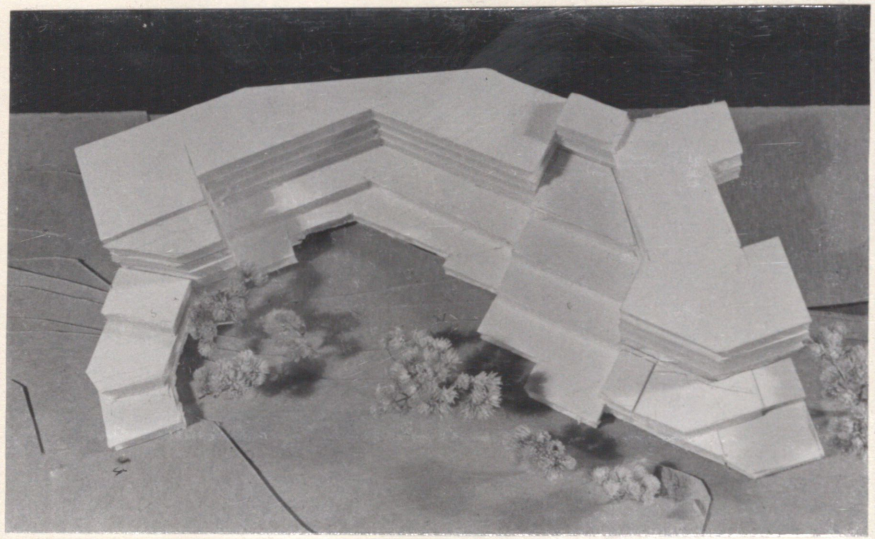
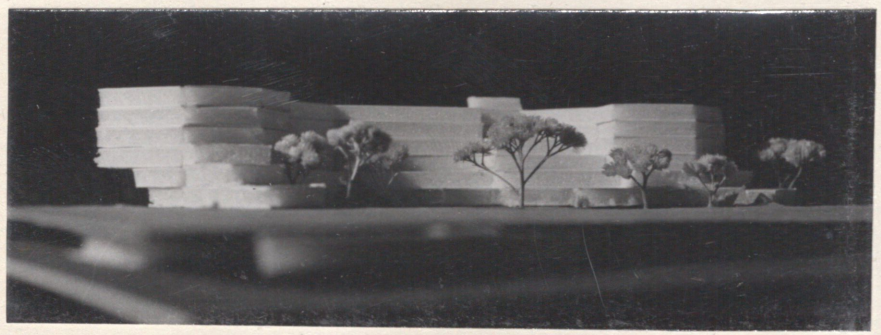


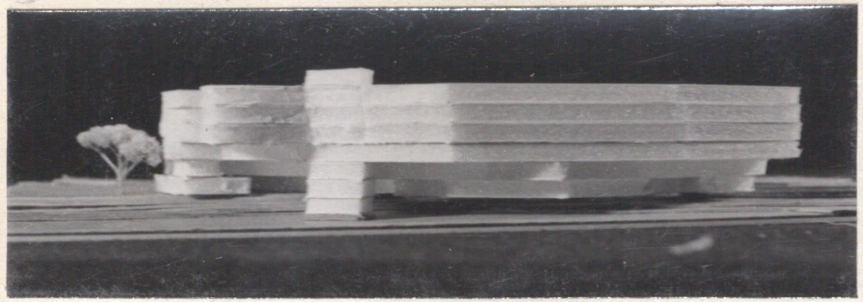






3





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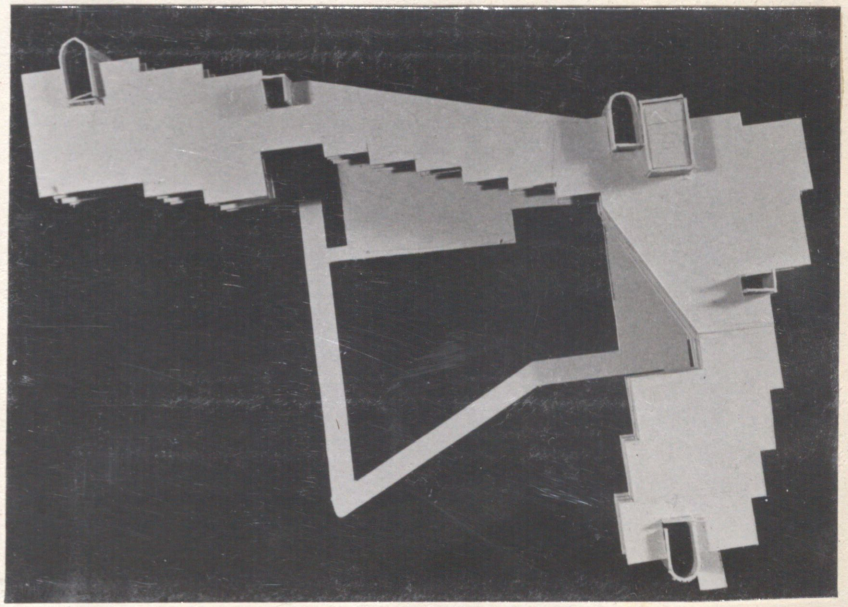
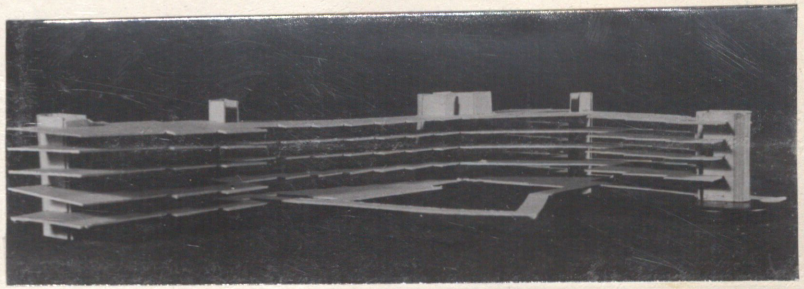
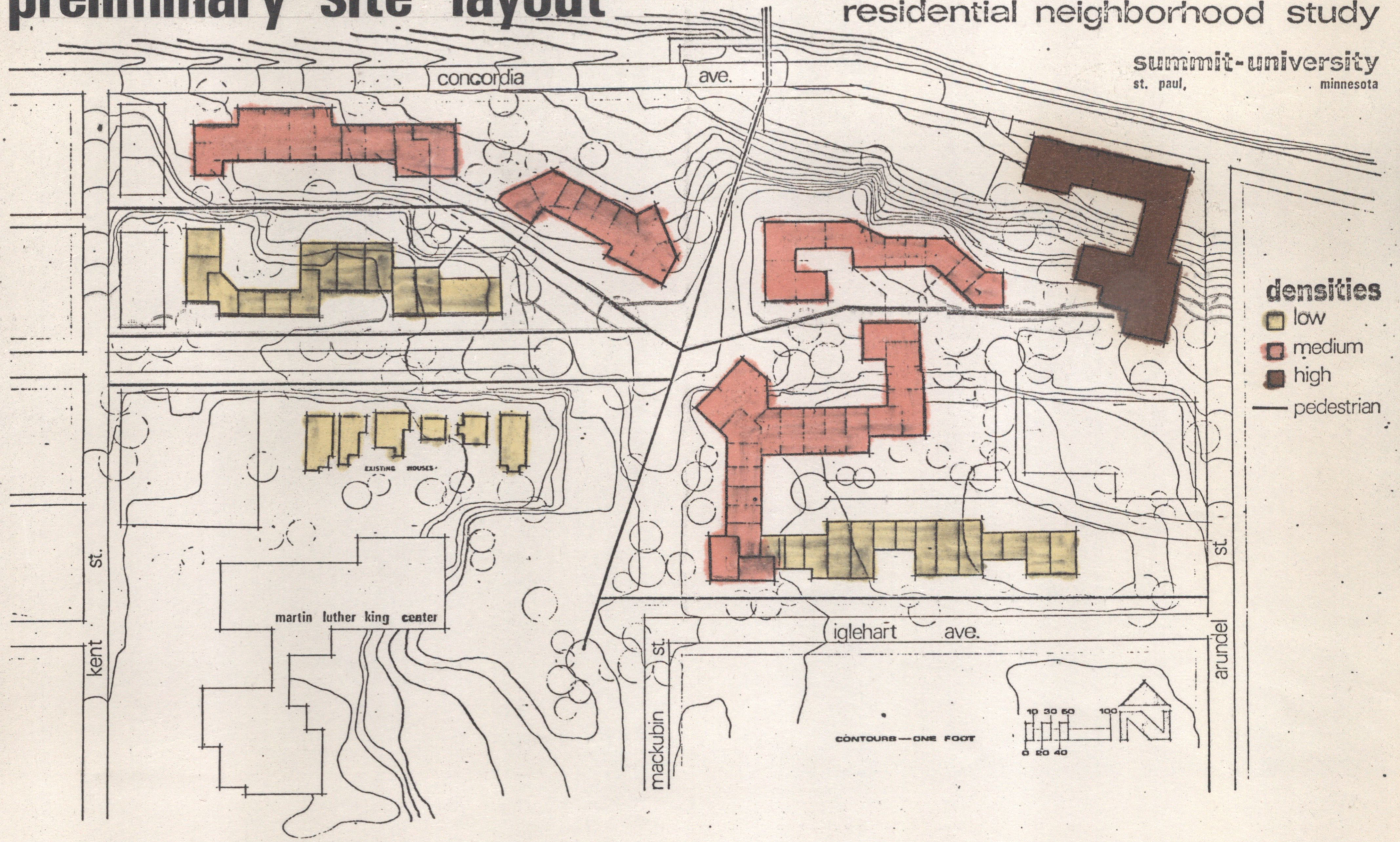




preliminary site layout

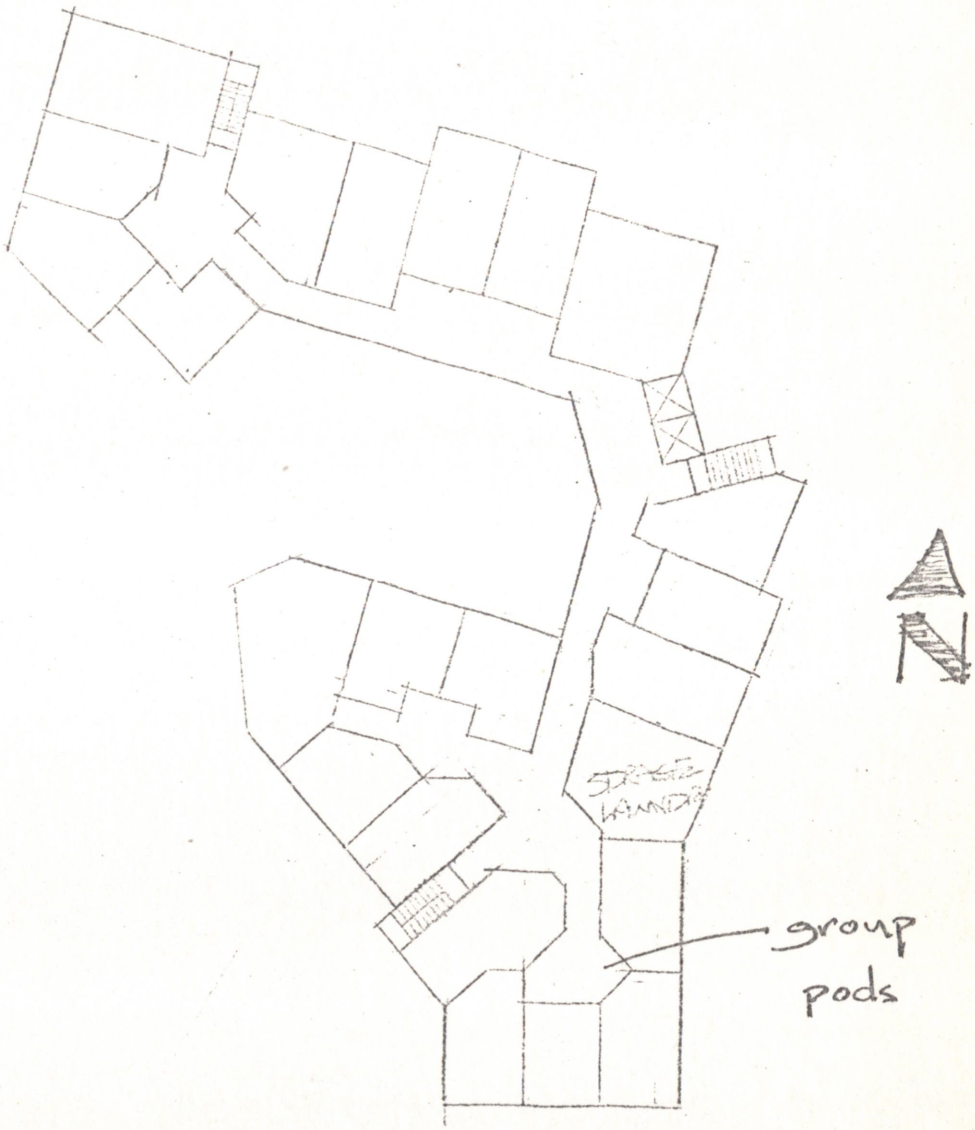
residential neighborhood study

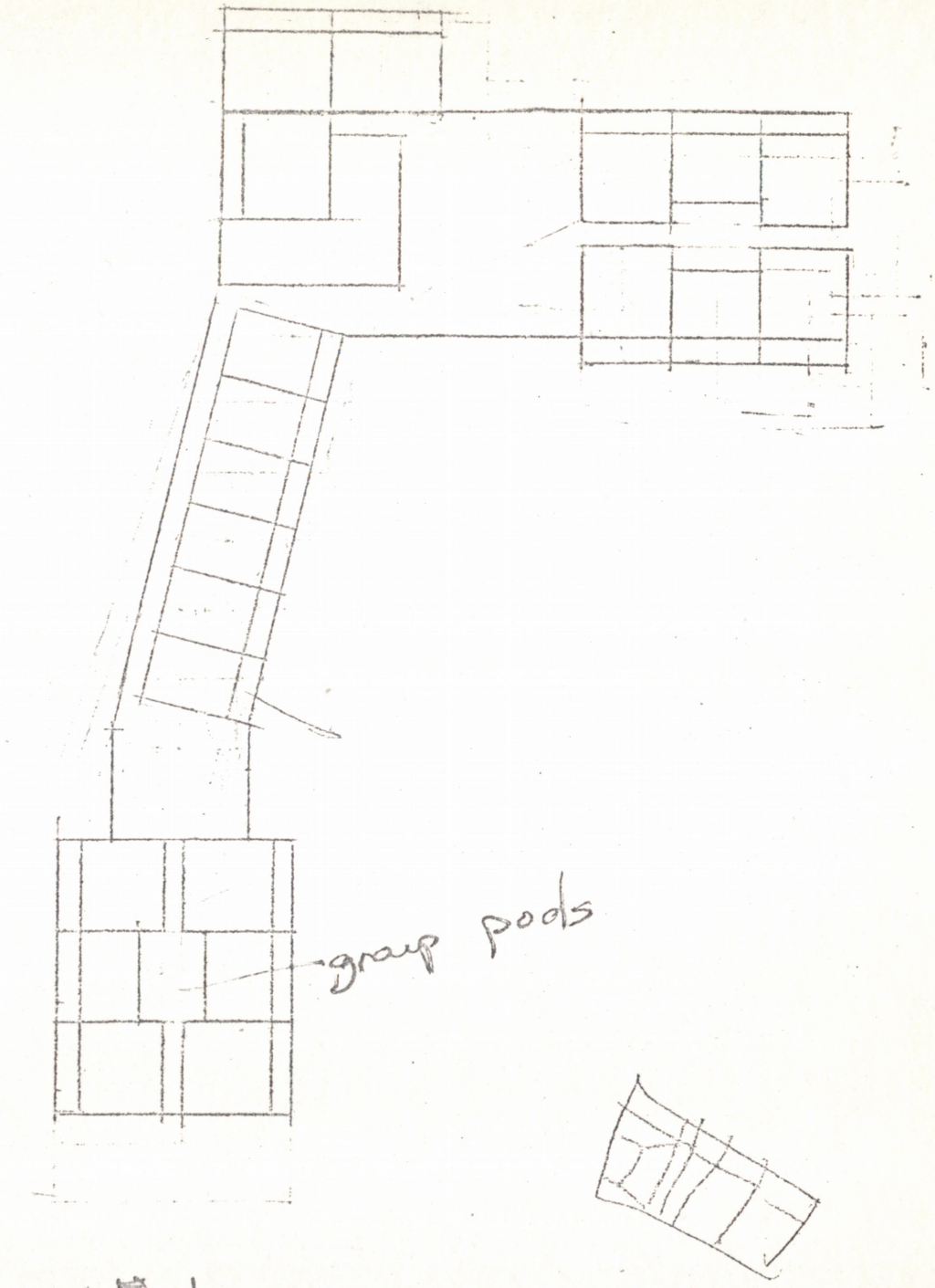
summit-university
st. paul, minnesota



APARTMENT PLAN #1

units too varied – uneconomical



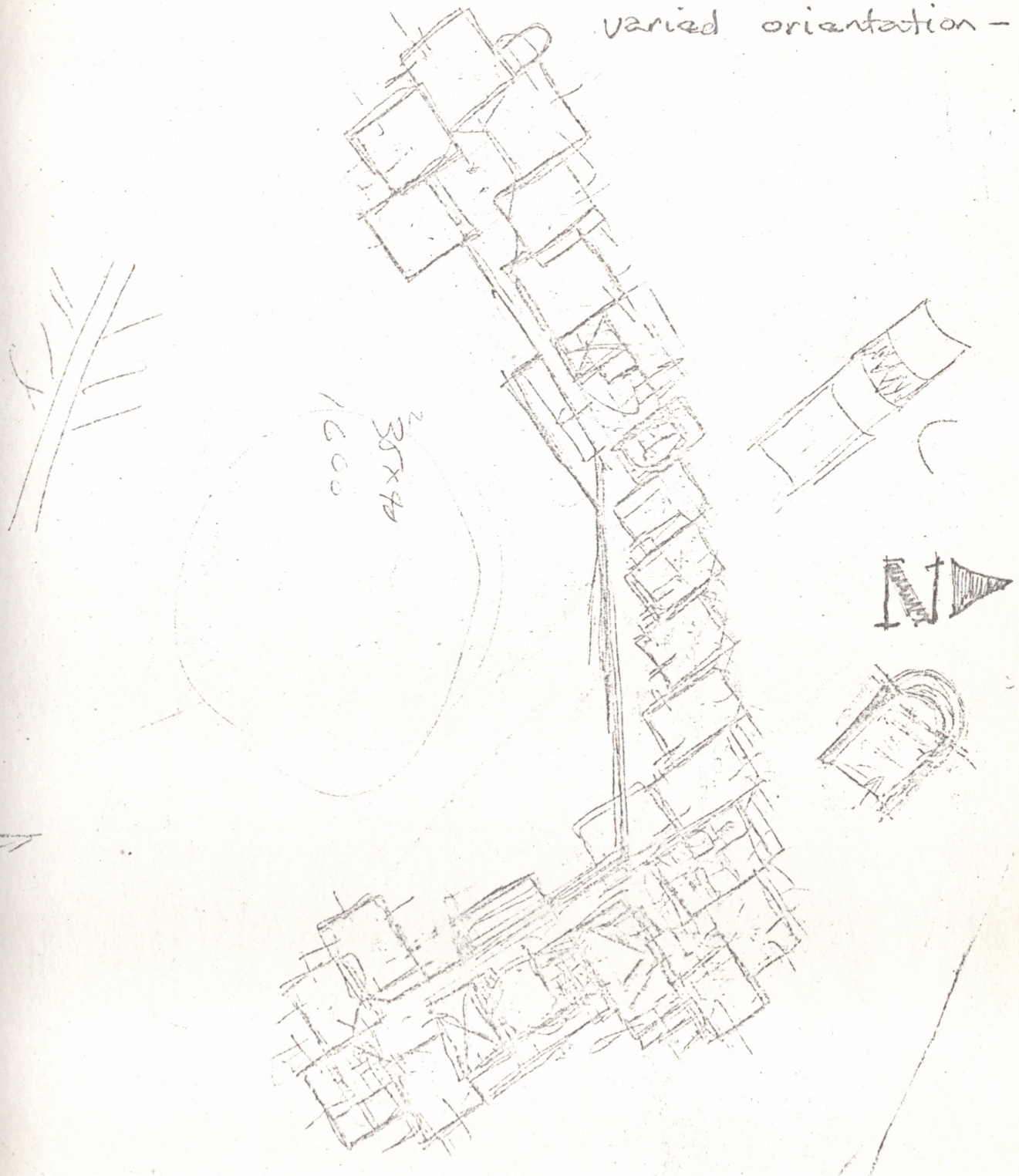


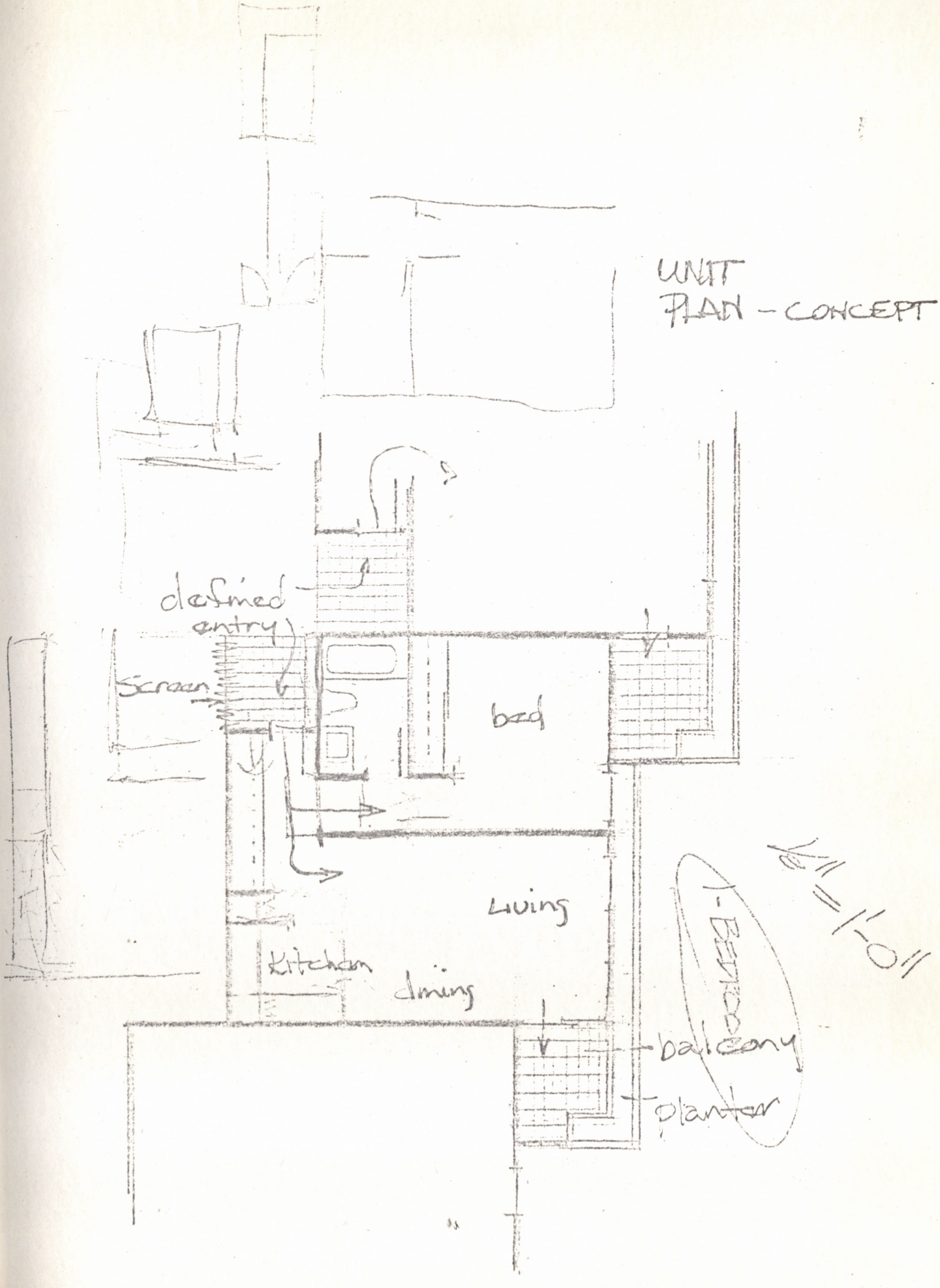
APARTMENT PLAN #2

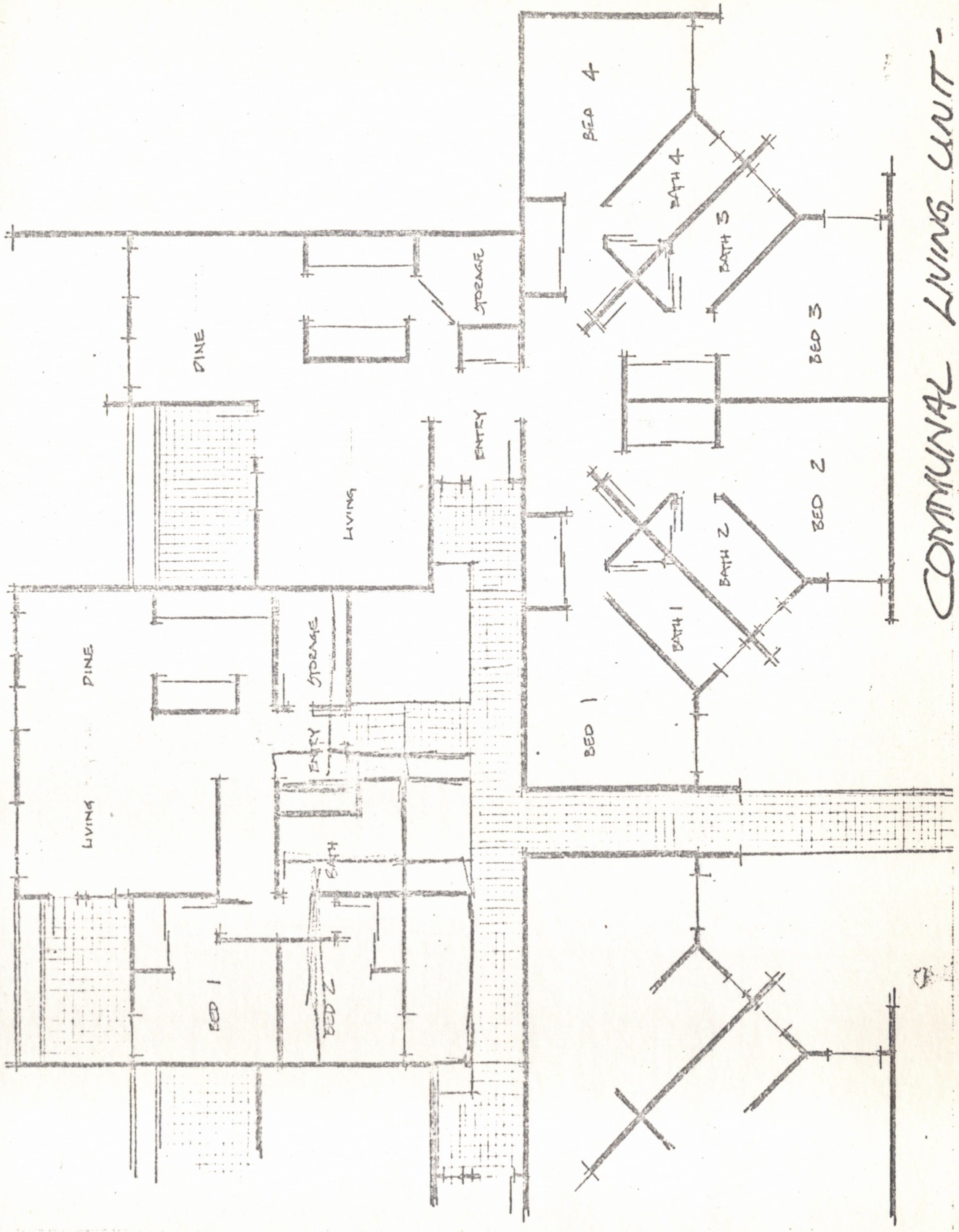
More regular - tight rectulinear grid.

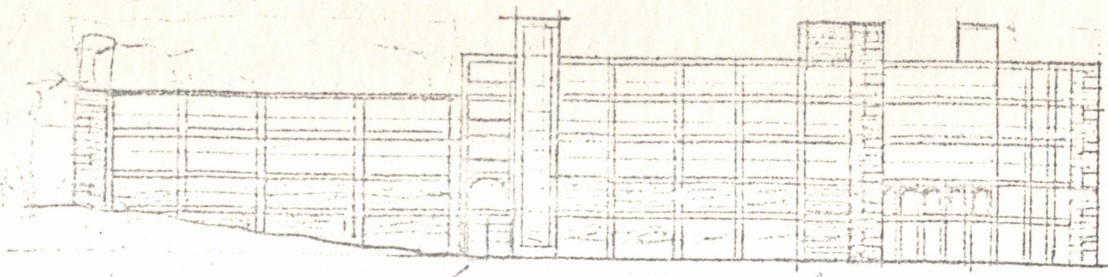
APARTMENT PLAN #3

Less rigid -
still rectilinear -
varied orientation -



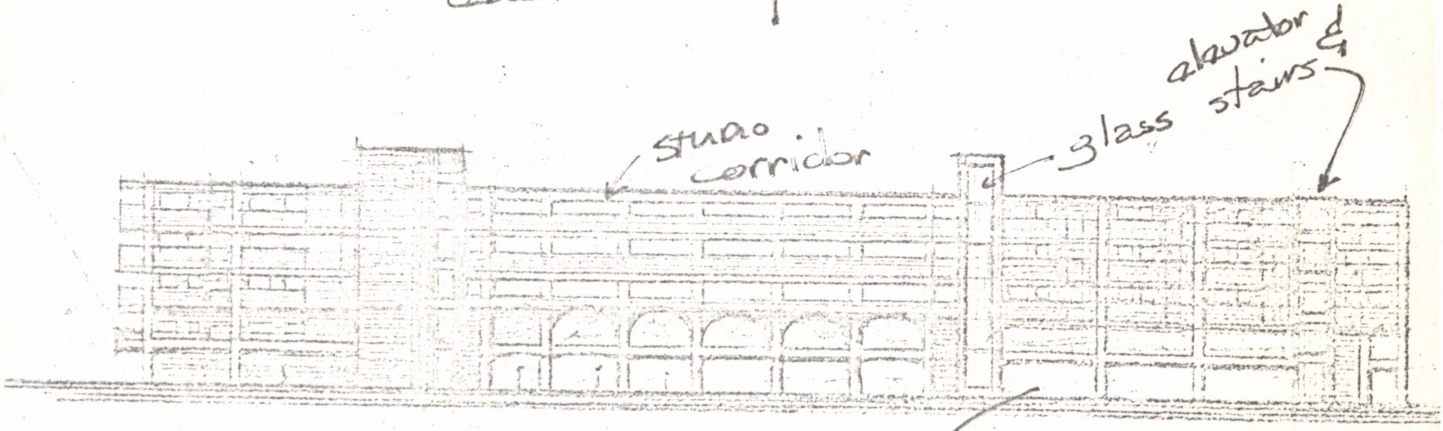

UNIT
PLAN - CONCEPT
defined
entry
screen
bed
living
kitchen
dining
balcony
planter
1/4" = 1'-0"


COMMUNAL LIVING UNIT -
BED 4
BATH 4
BATH 3
BED 3
BED 2
BATH 2
BATH 1
BED 1
PINE
LIVING
ENTRY
STORAGE
PINE
LIVING
ENTRY
STORAGE
BATH
BED 1
BED 2



east entry

EAST ELEVATION



open parking - grand level

arch form
geometry of circulation

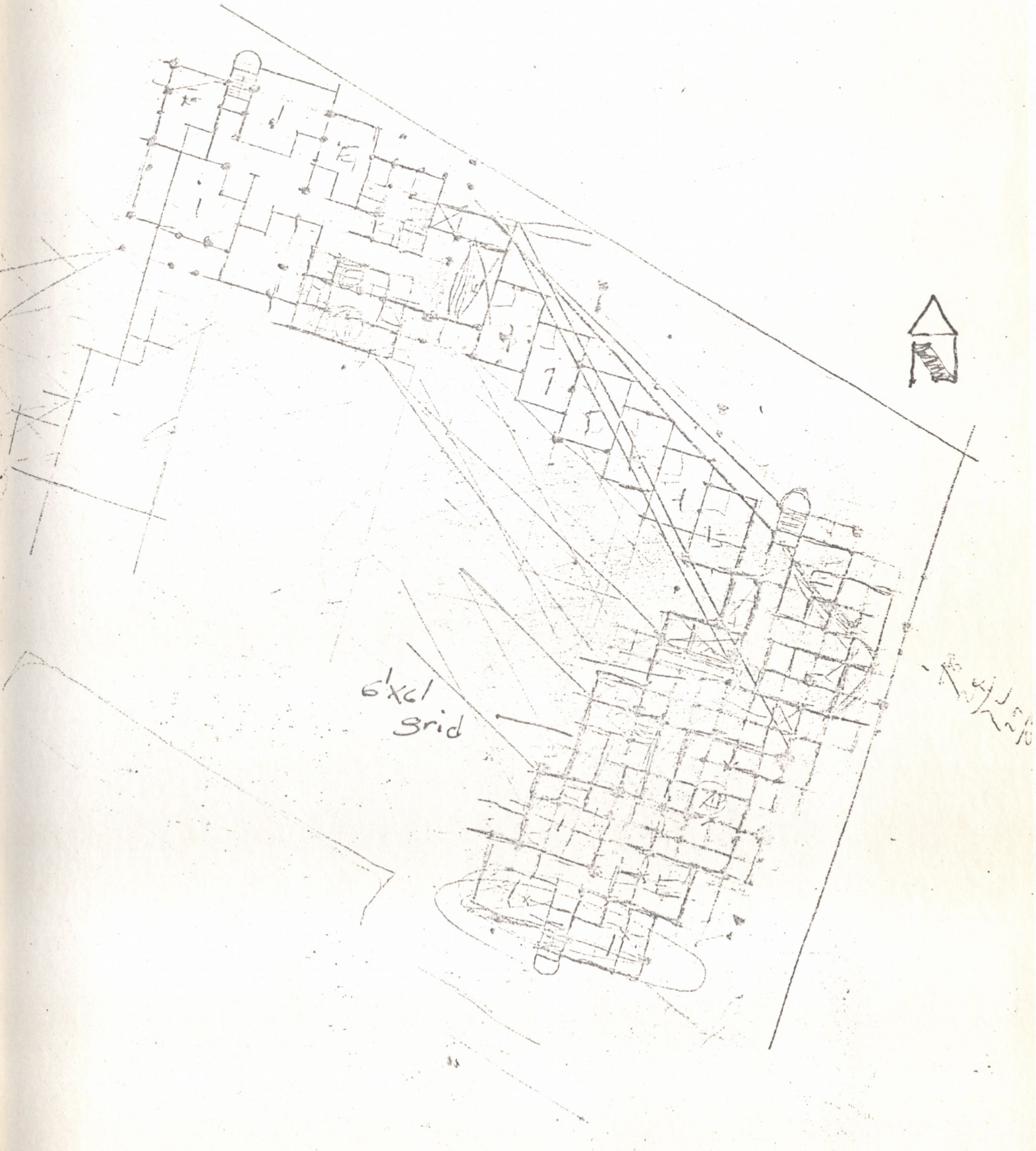
NORTH ELEVATION

prelim- ELEVATIONS

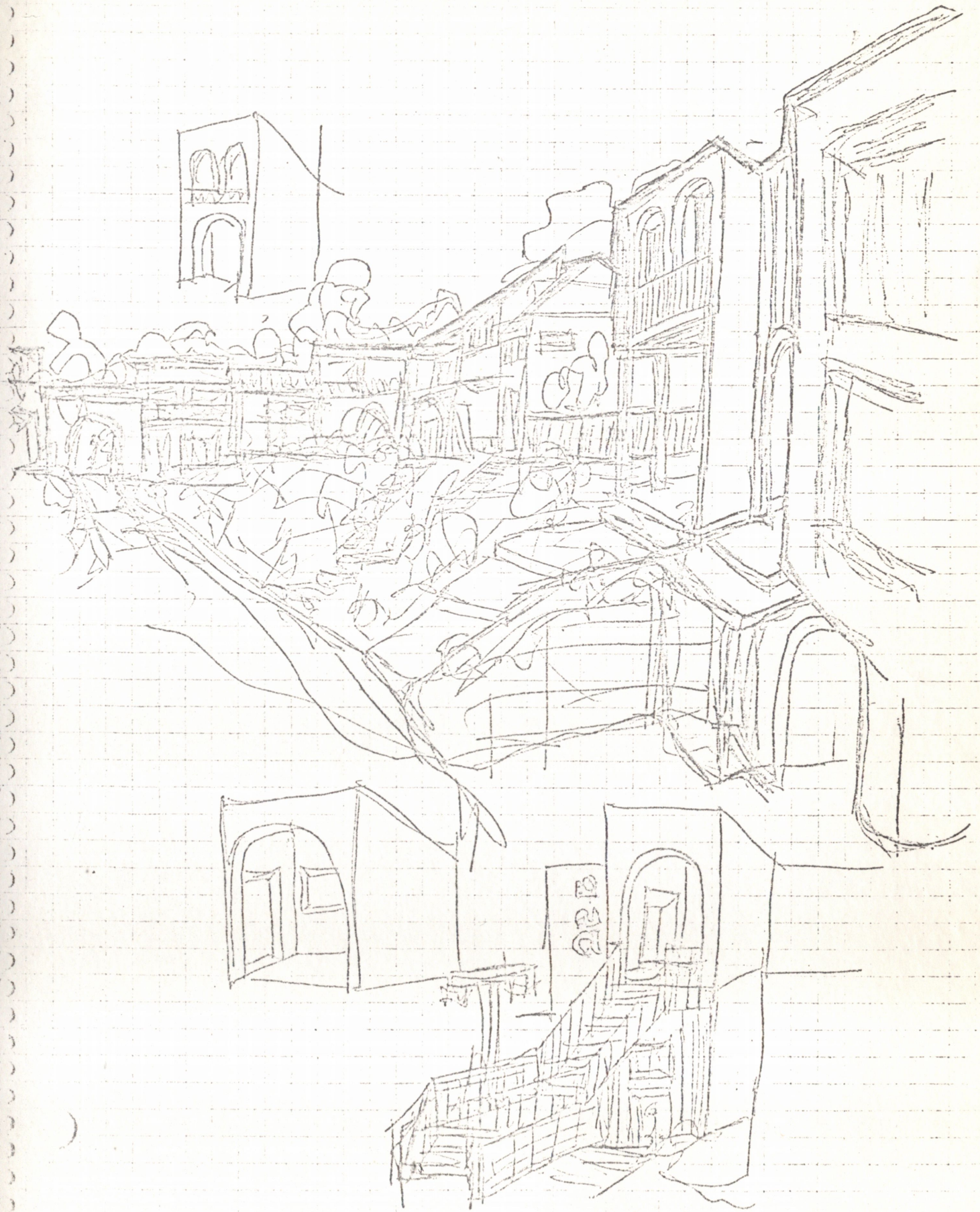
glass in elevators & stairs -
open - natural light
security - surveillance

- glass elevator unfeasible - in final design -
windows in stairs - desireable

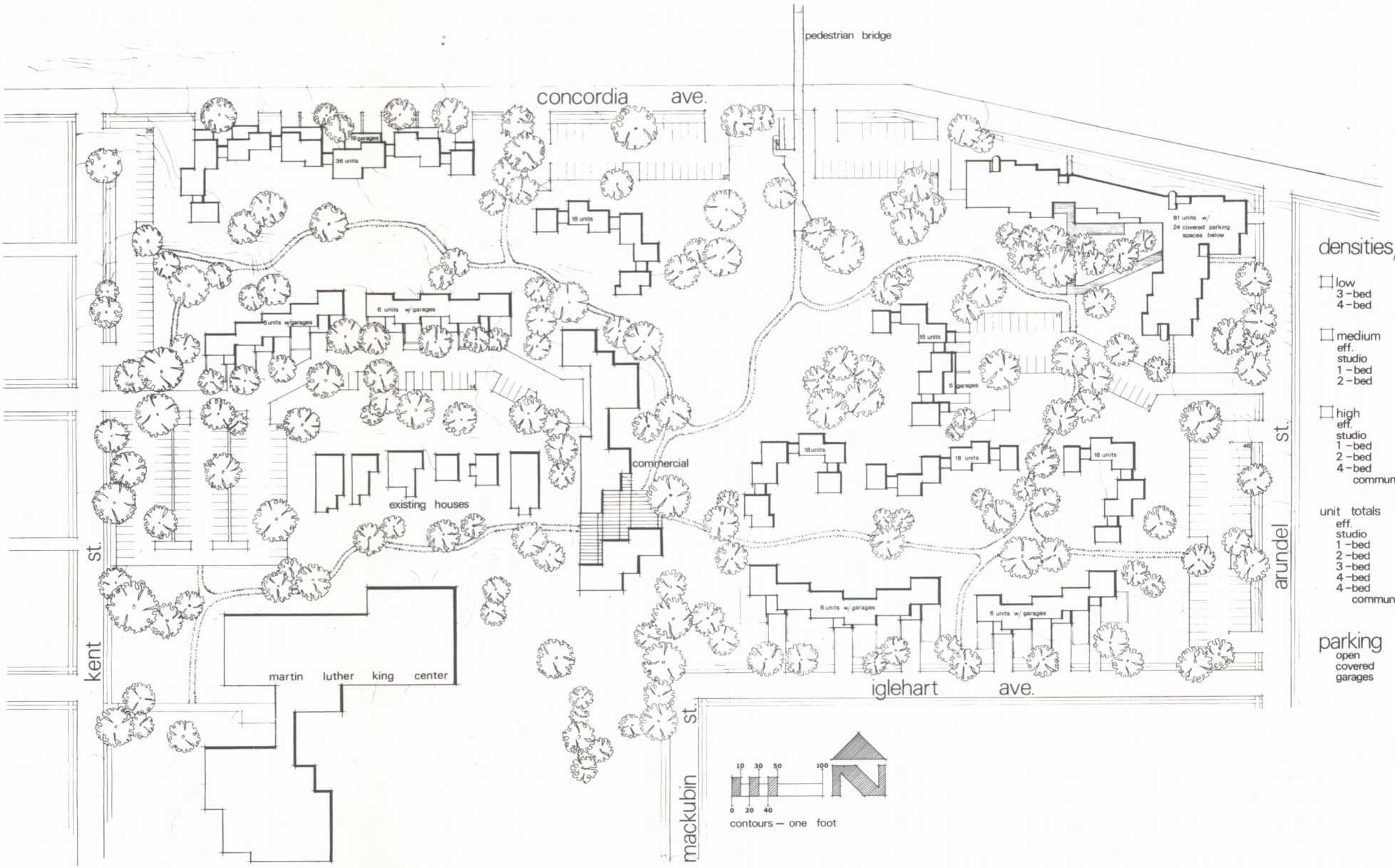
prelim - structural plan of columns in apartment



LOW DENSITY COURT -

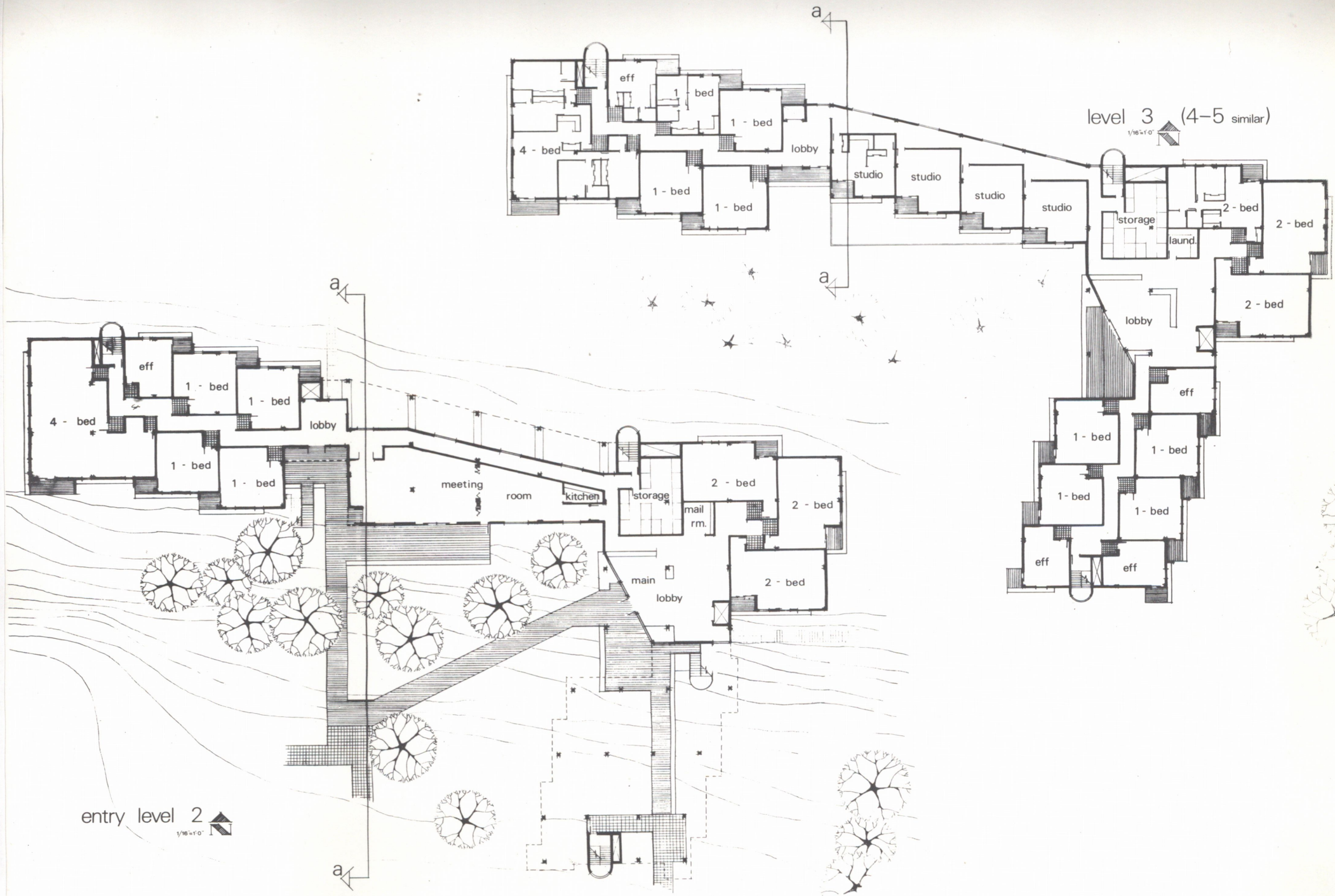


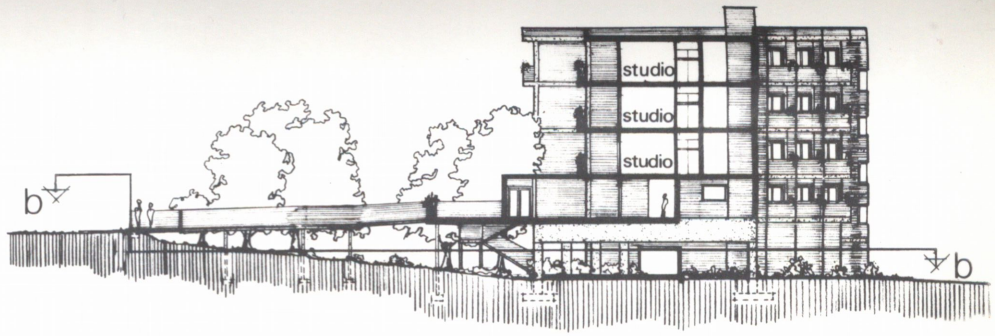




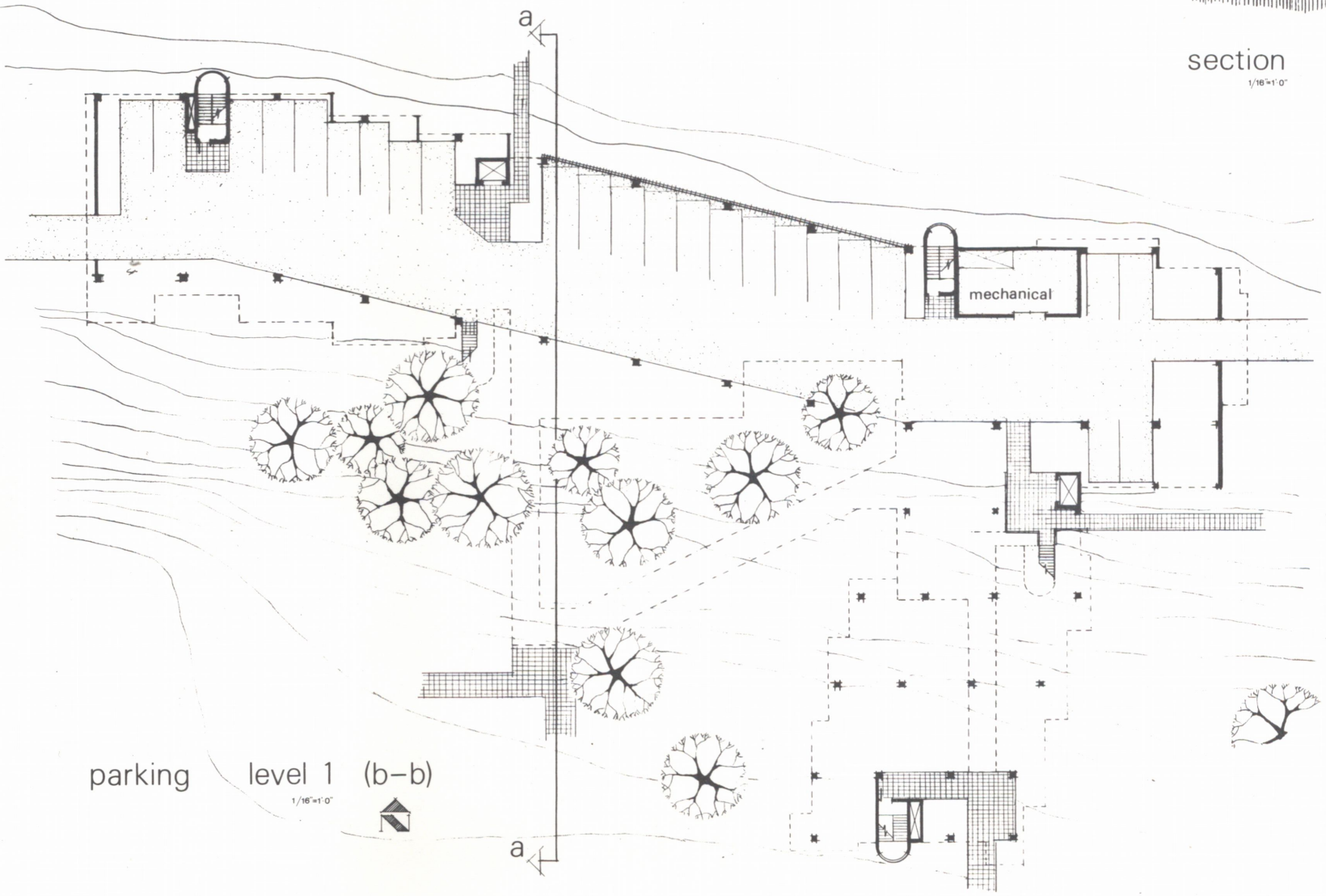
densities/mix

low	
3-bed	14
4-bed	10
	24
medium	
eff.	20
studio	20
1-bed	50
2-bed	36
	126
high	
eff.	13
studio	12
1-bed	28
2-bed	12
4-bed communal 4(4)	16
	81
unit totals	
eff.	33
studio	32
1-bed	78
2-bed	48
3-bed	14
4-bed	10
4-bed communal 4(4)	16
	231
parking	
open	262
covered	24
garages	49
	335

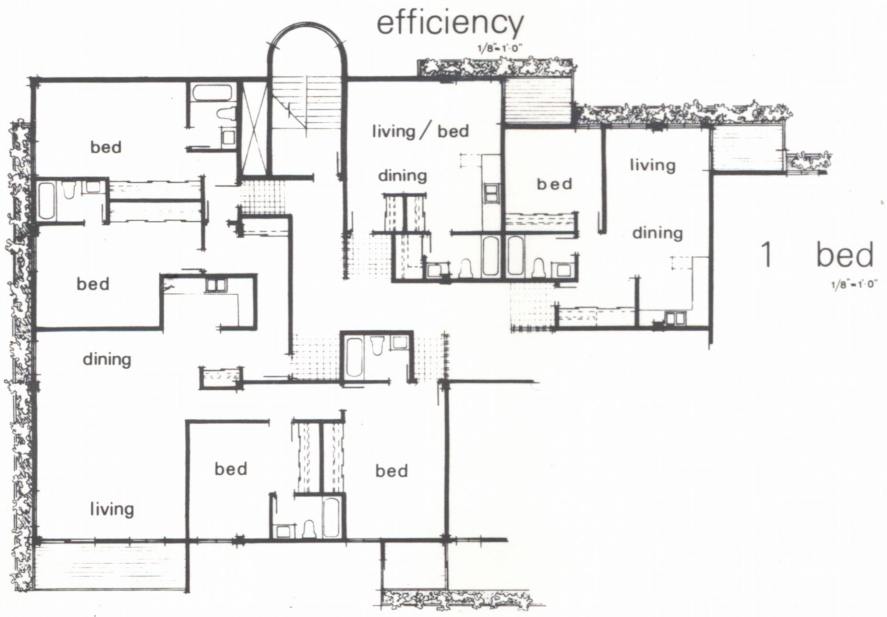

a
eff
1 - bed
1 - bed
4 - bed
1 - bed
1 - bed
lobby
studio
studio
studio
studio
storage
laund.
2 - bed
2 - bed
2 - bed
lobby
eff
1 - bed
1 - bed
1 - bed
1 - bed
eff
eff
level 3 (4–5 similar)
1/16"=1'-0"
a
eff
1 - bed
1 - bed
4 - bed
lobby
1 - bed
1 - bed
meeting
room
kitchen
storage
2 - bed
2 - bed
mail
rm.
main
lobby
2 - bed
a
entry level 2
1/16"=1'-0"



section a–a
1/16"=1'-0"

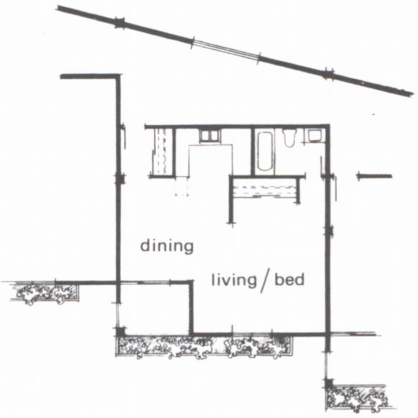


parking level 1 (b–b)
1/16"=1'-0"

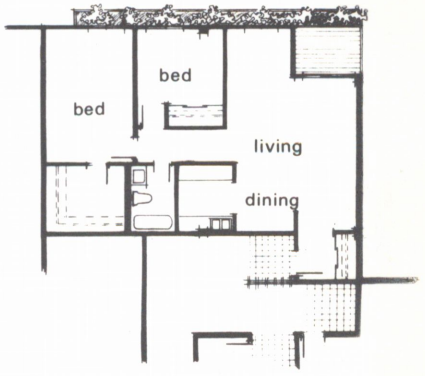


4 bed communal
1/8"=1'-0"

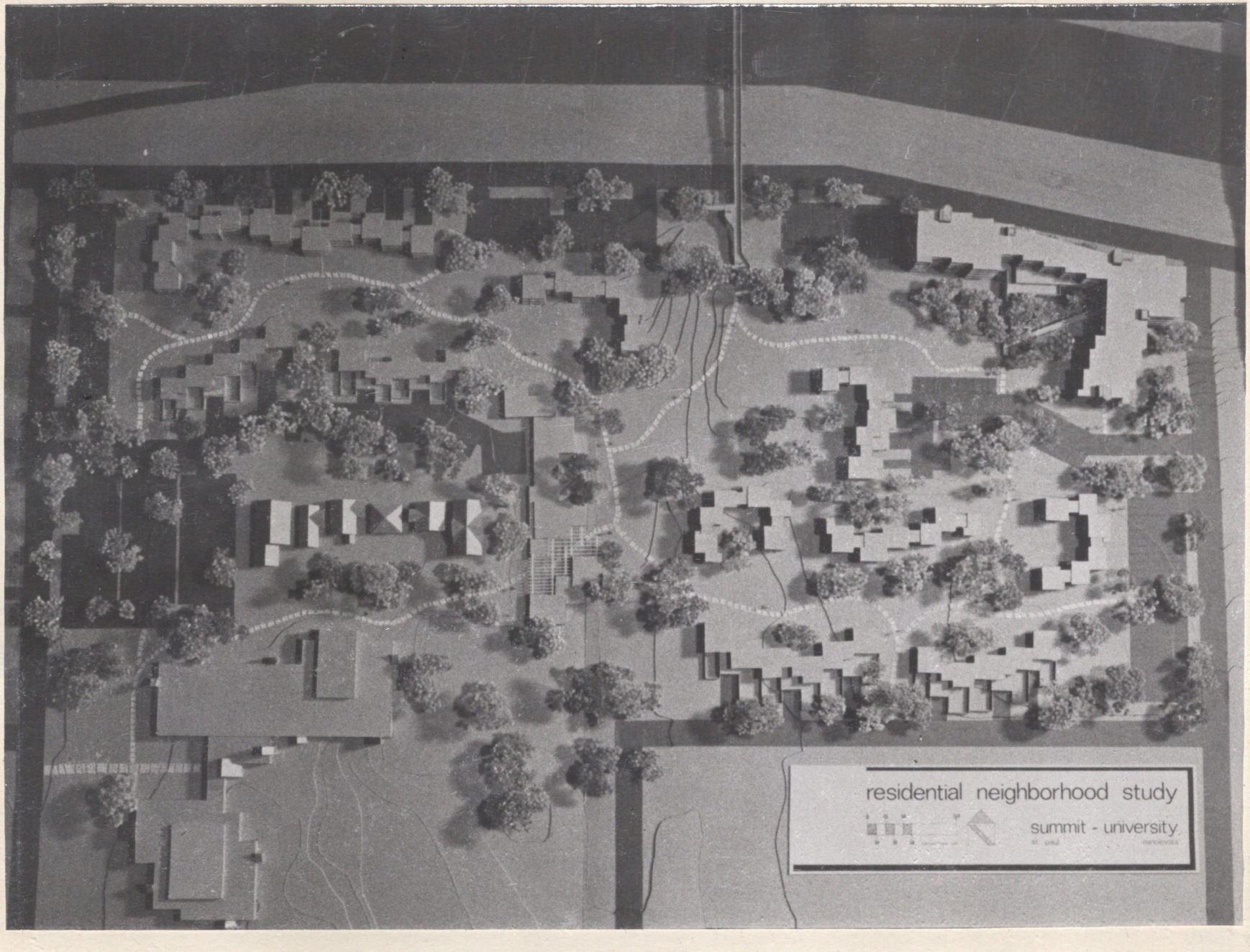
1 bed
1/8"=1'-0"



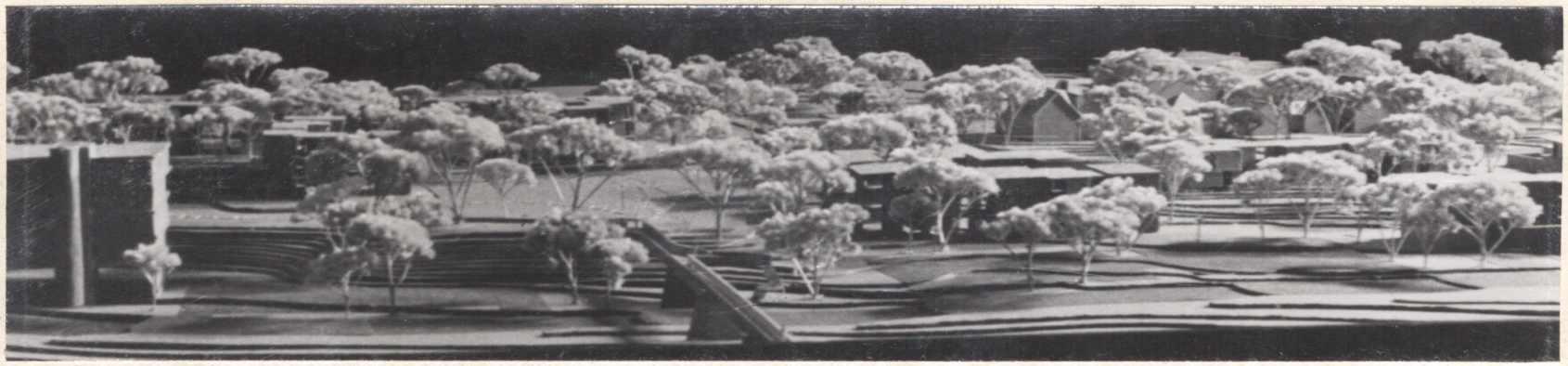
studio
1/8"=1'-0"



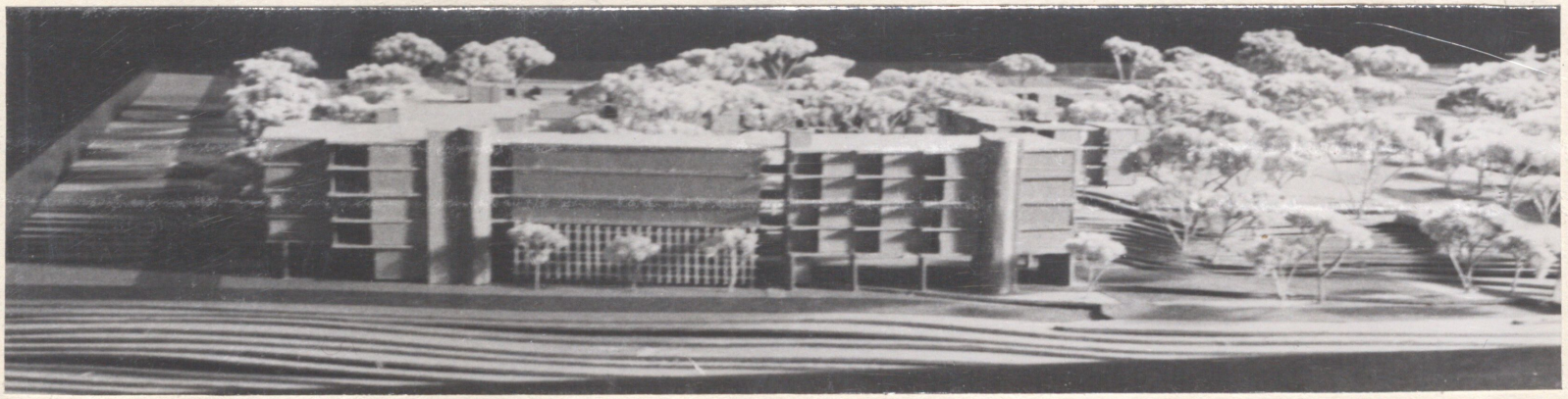
2 bed
1/8"=1'-0"



SITE MODEL



LOOKING SOUTH



HIGH DENSITY – NORTH ELEVATION



LOOKING:

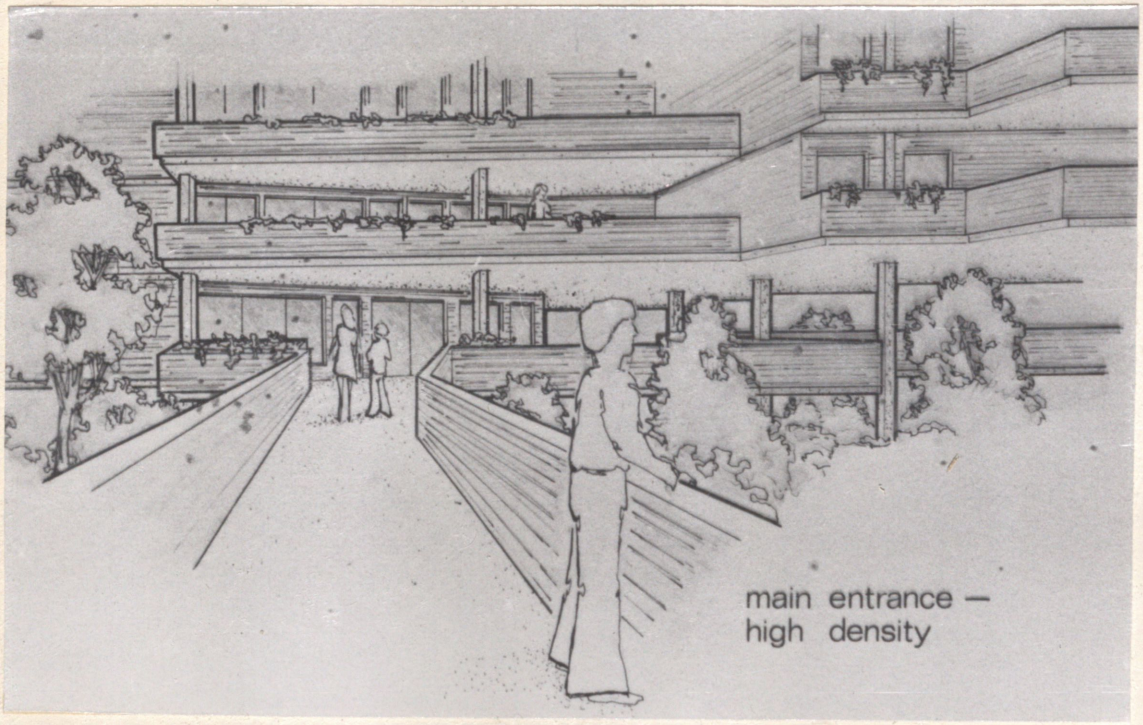
EAST



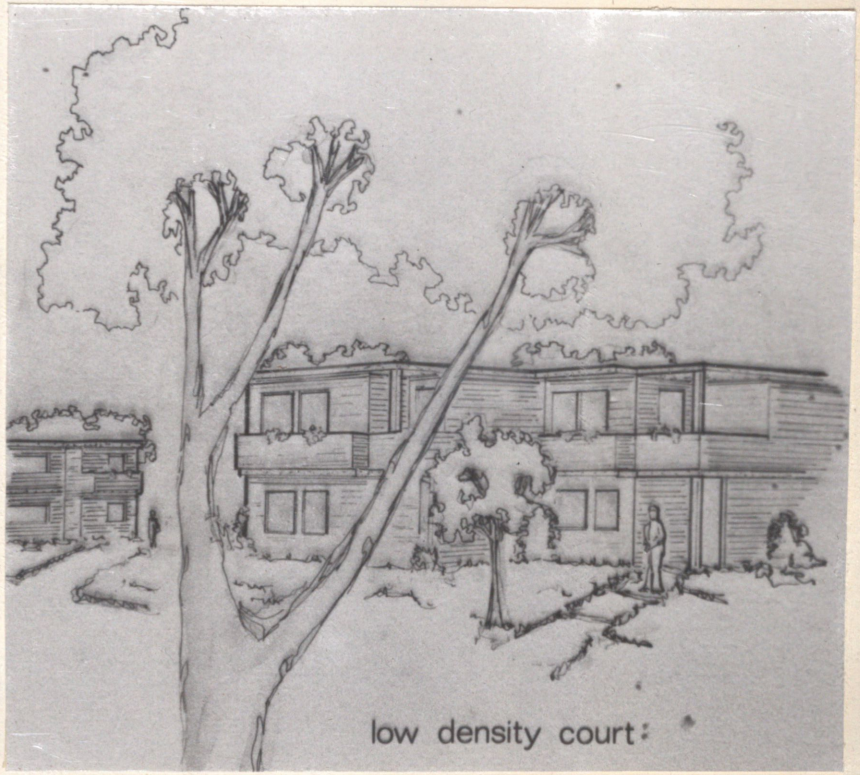
NORTH



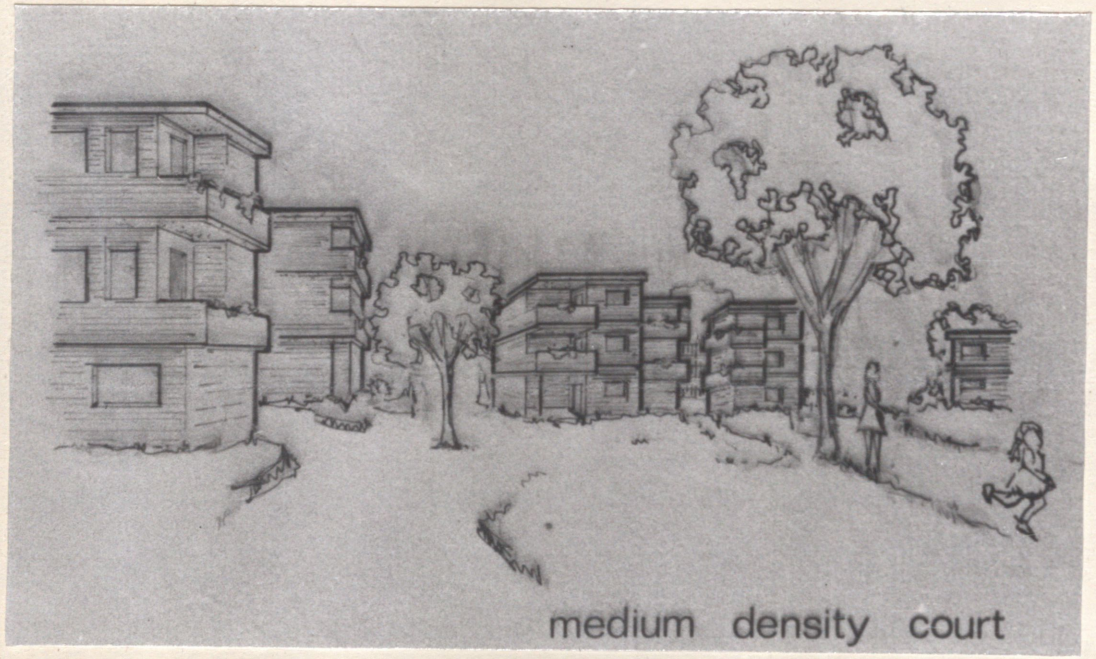
WEST



main entrance —
high density



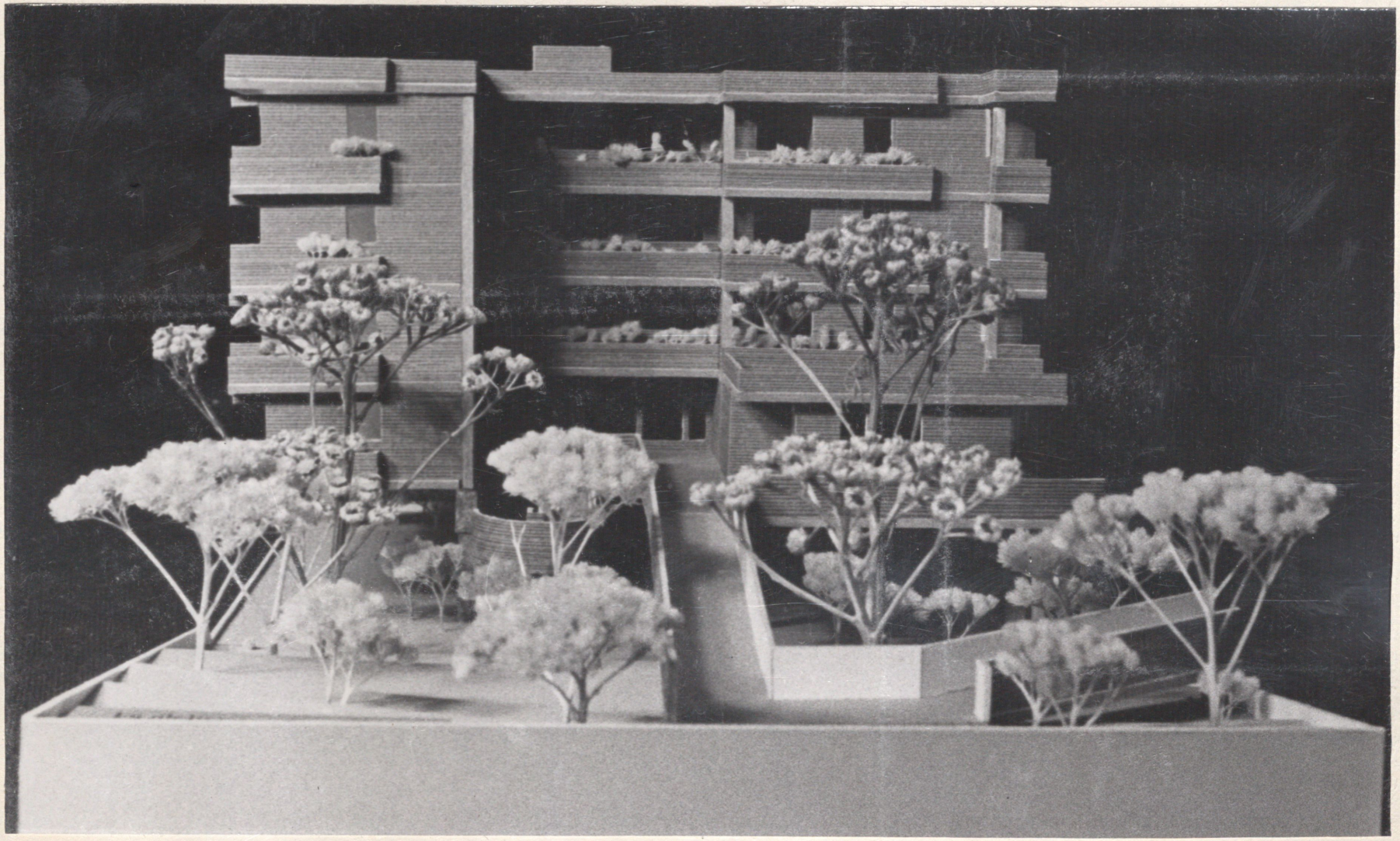
low density court



medium density court

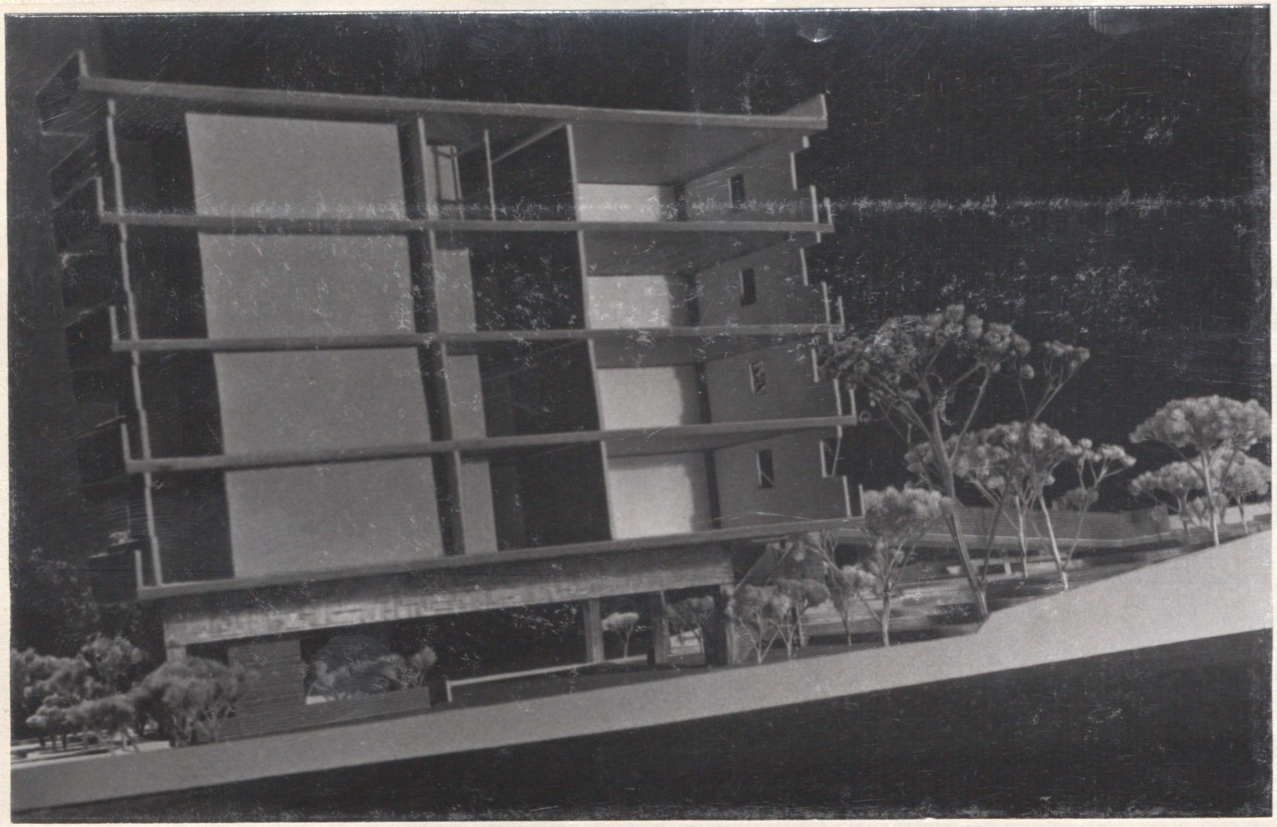
BUILDING SECTION— HIGH DENSITY

SOUTH ELEVATION

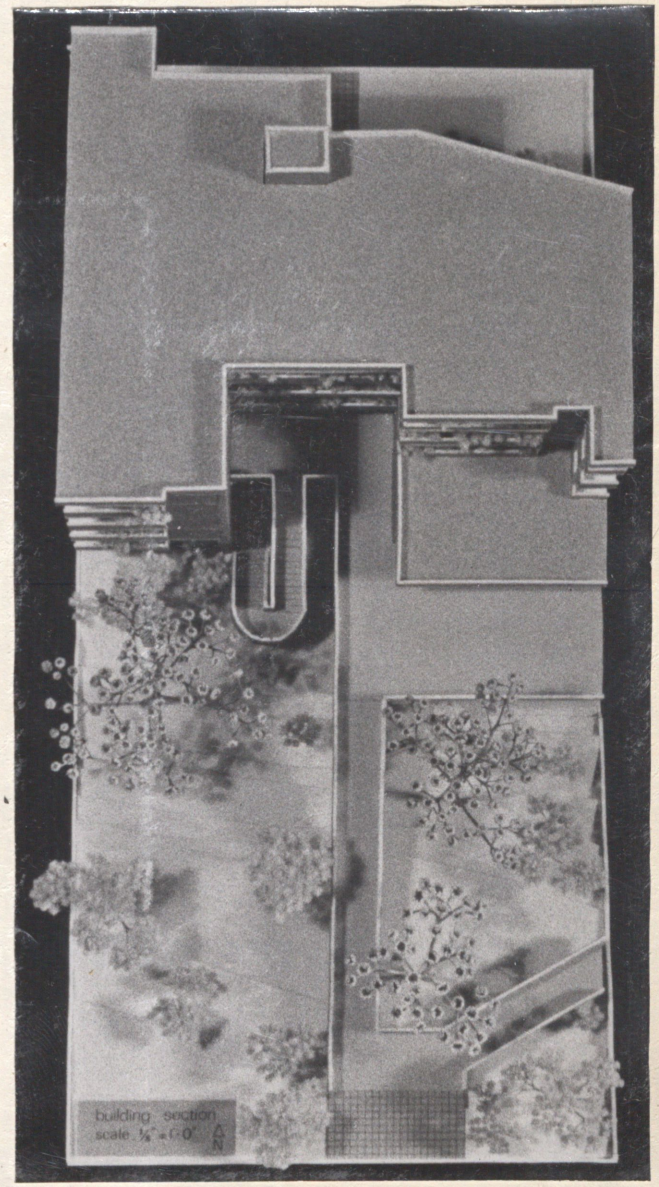




NORTH ELEVATION

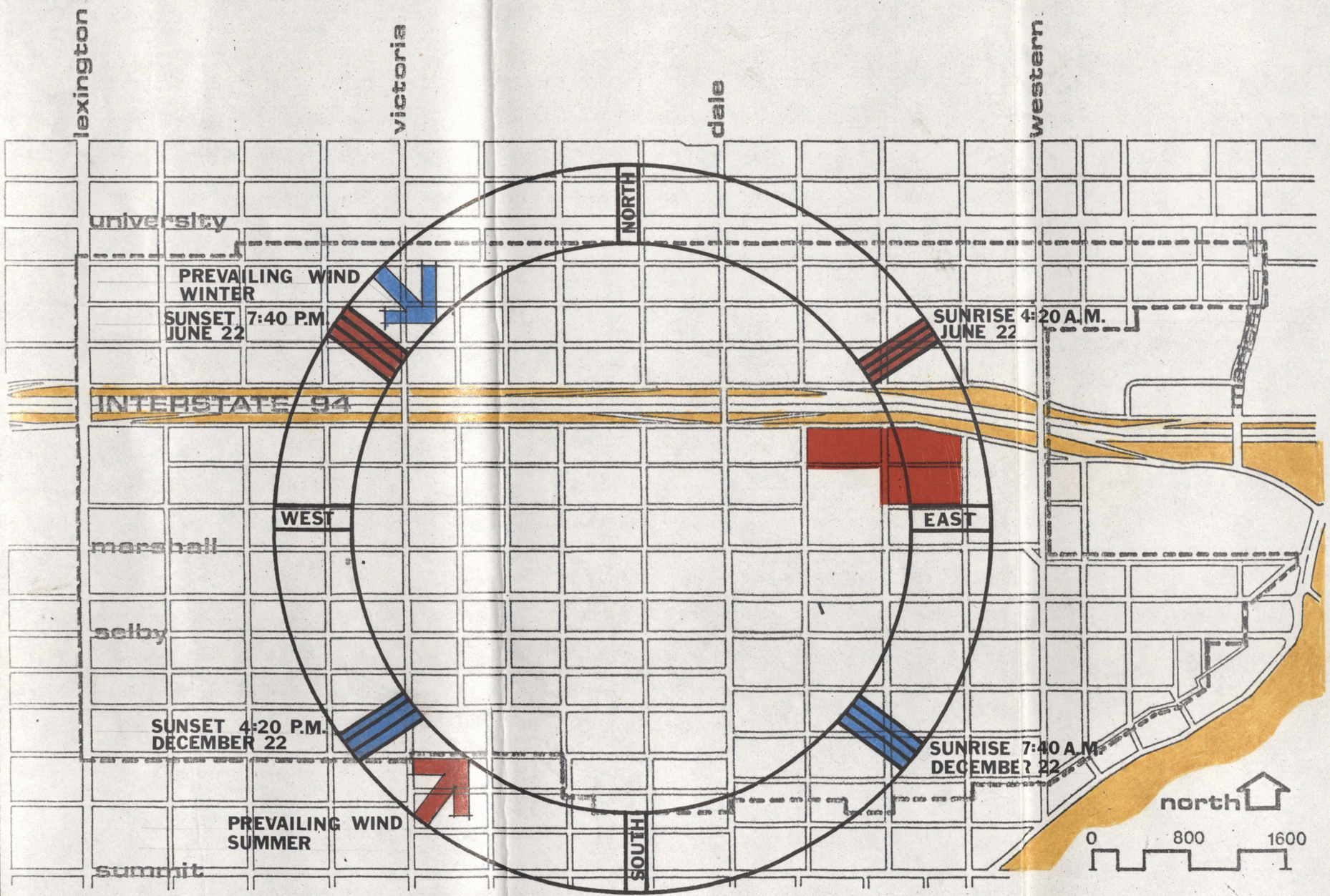


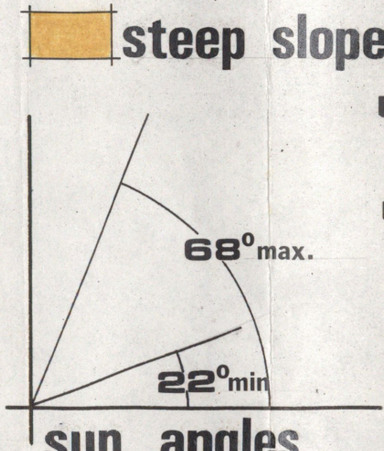
SECTION – LOOKING EAST



ROOF VIEW

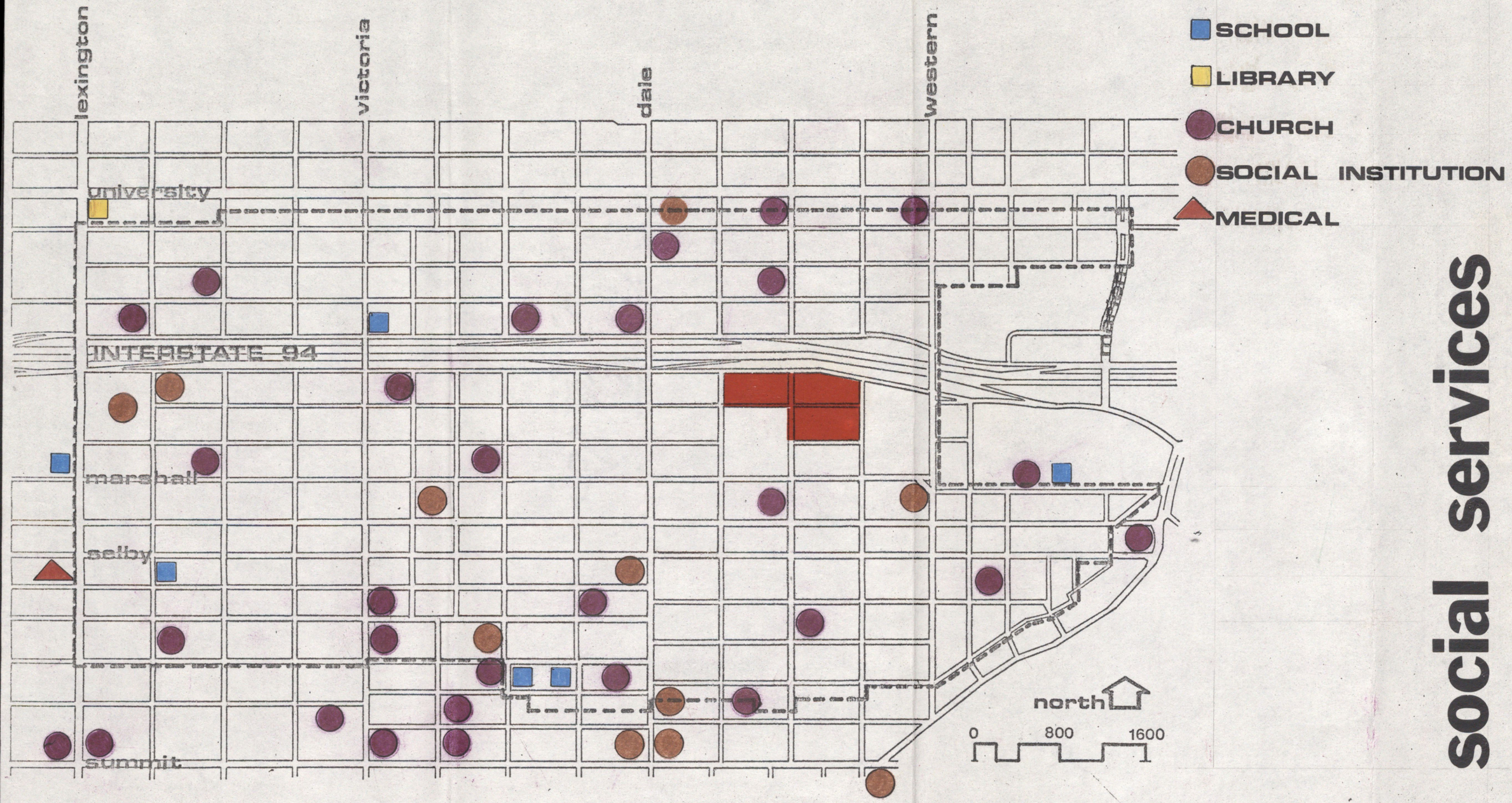
environmental map



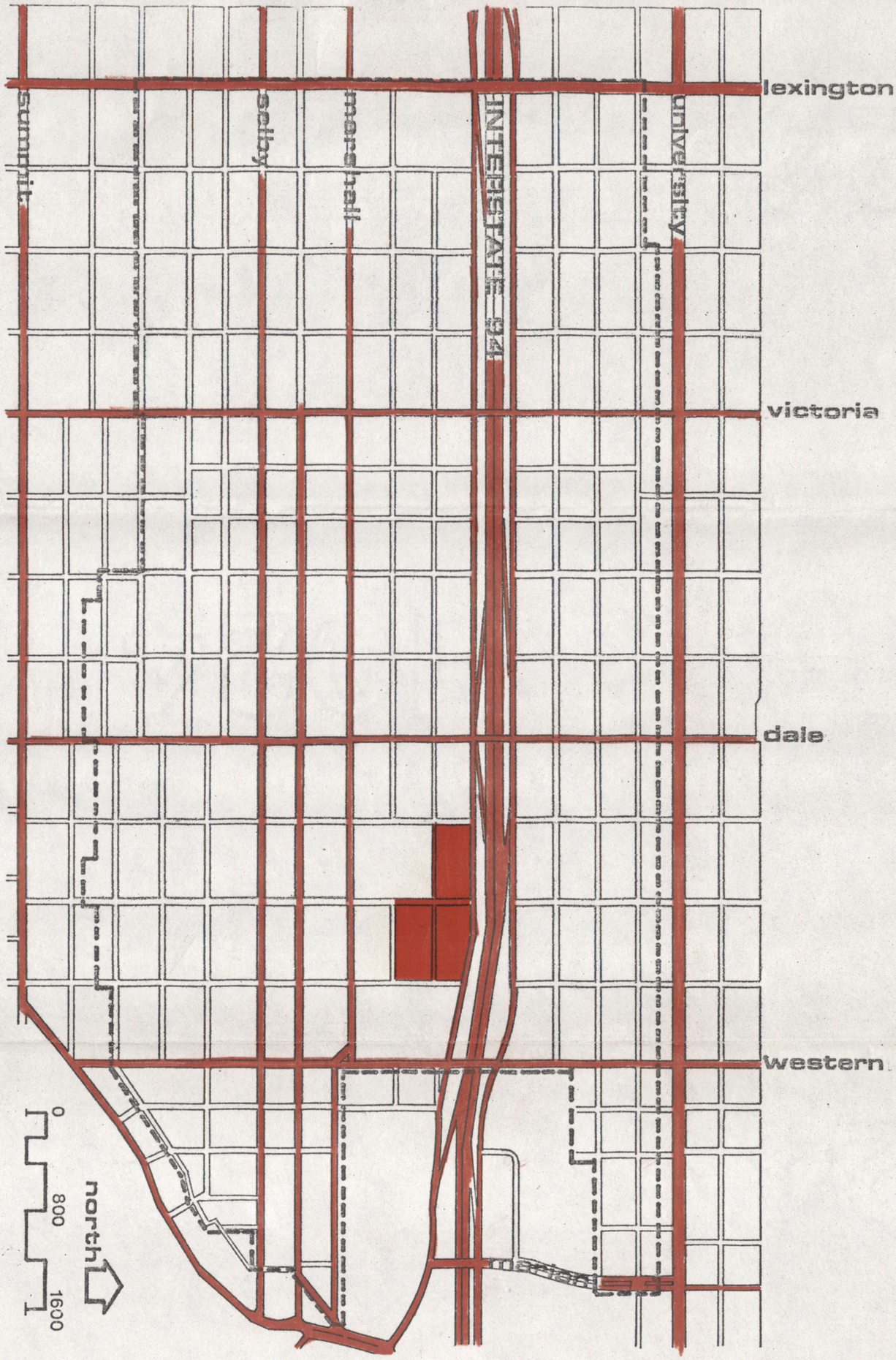


sun angles

LATITUDE 45°



social services

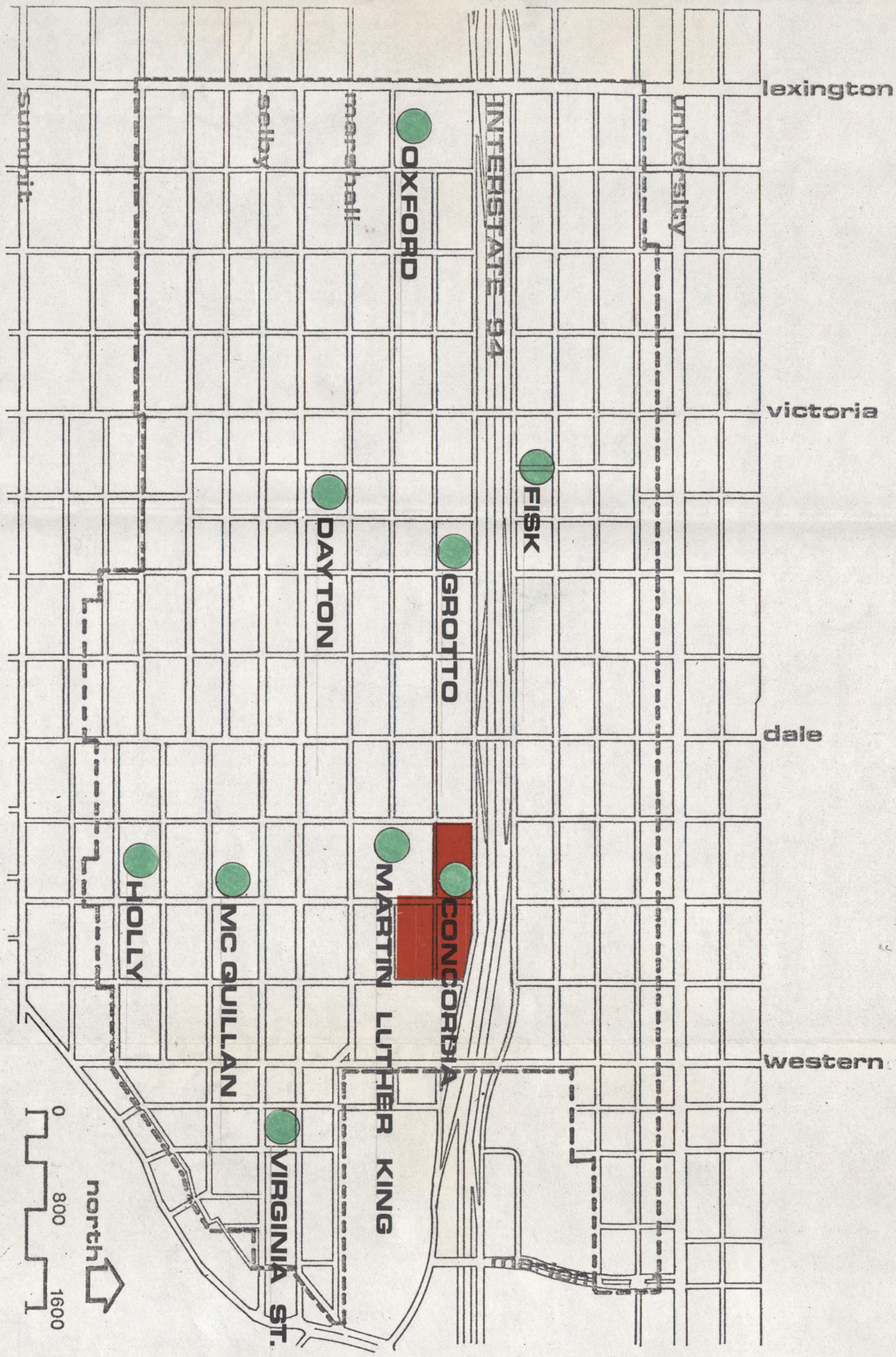


EXISTING
circulation

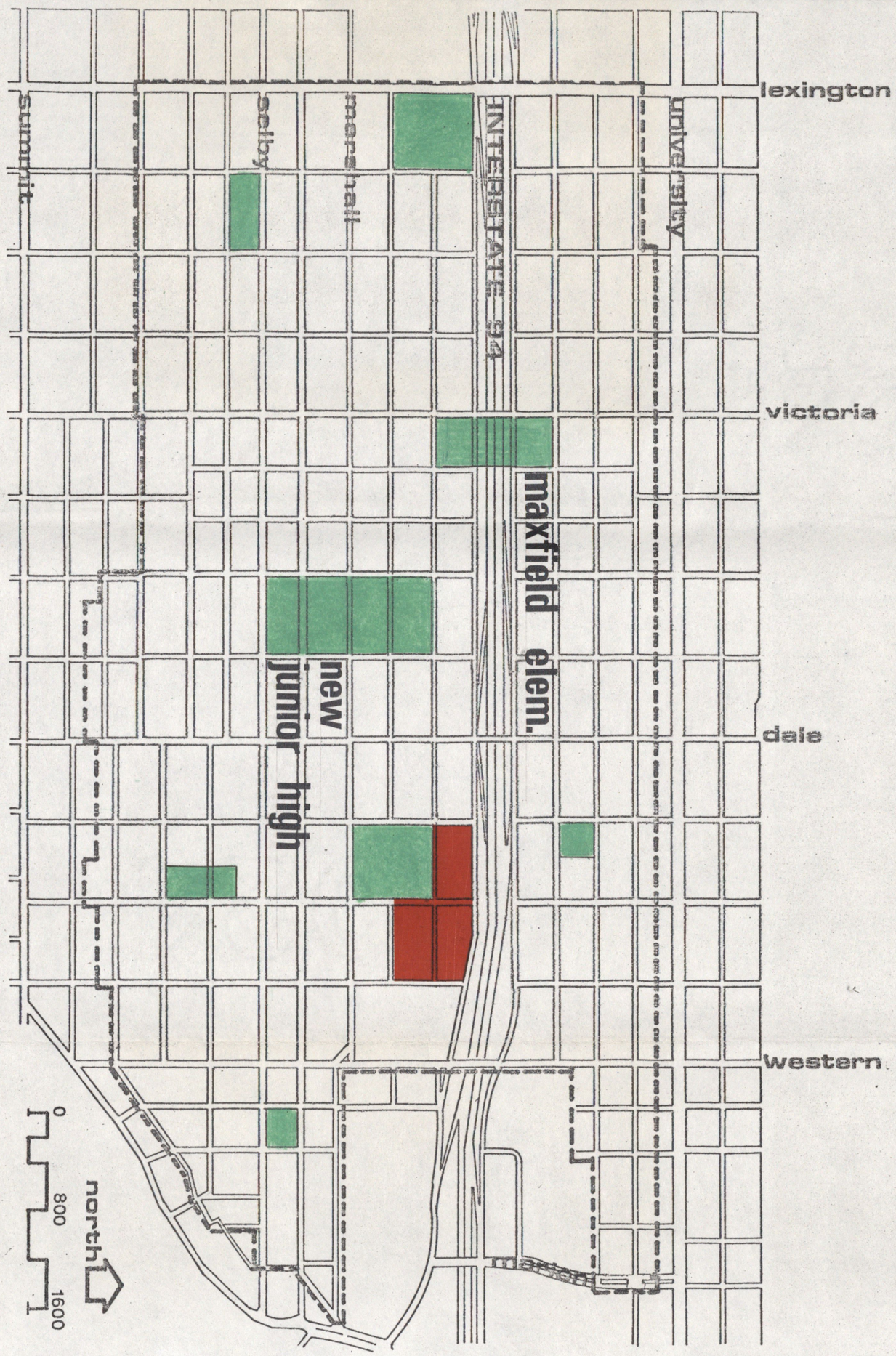
PROPOSED
circulation



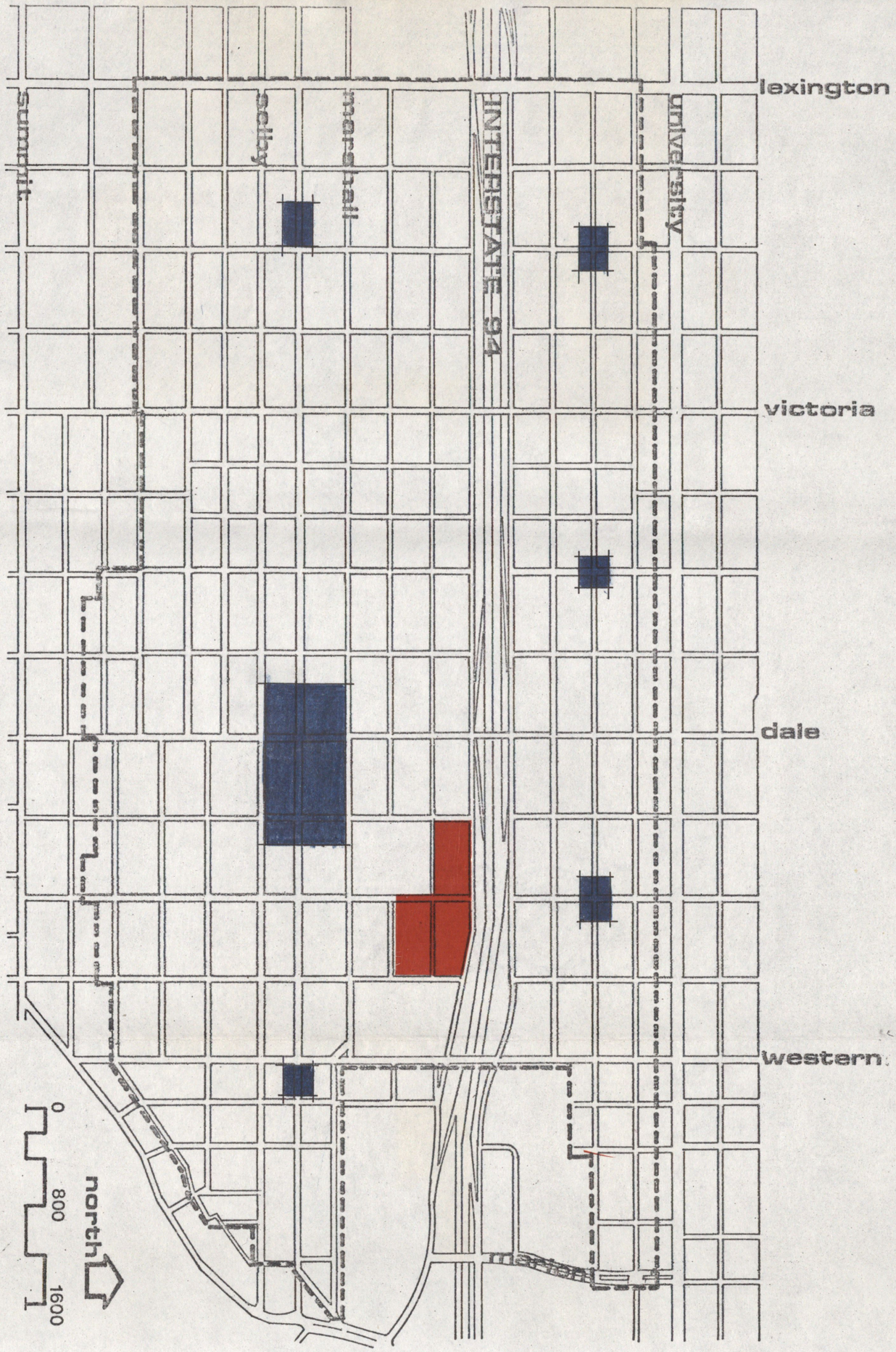
EXISTING schools



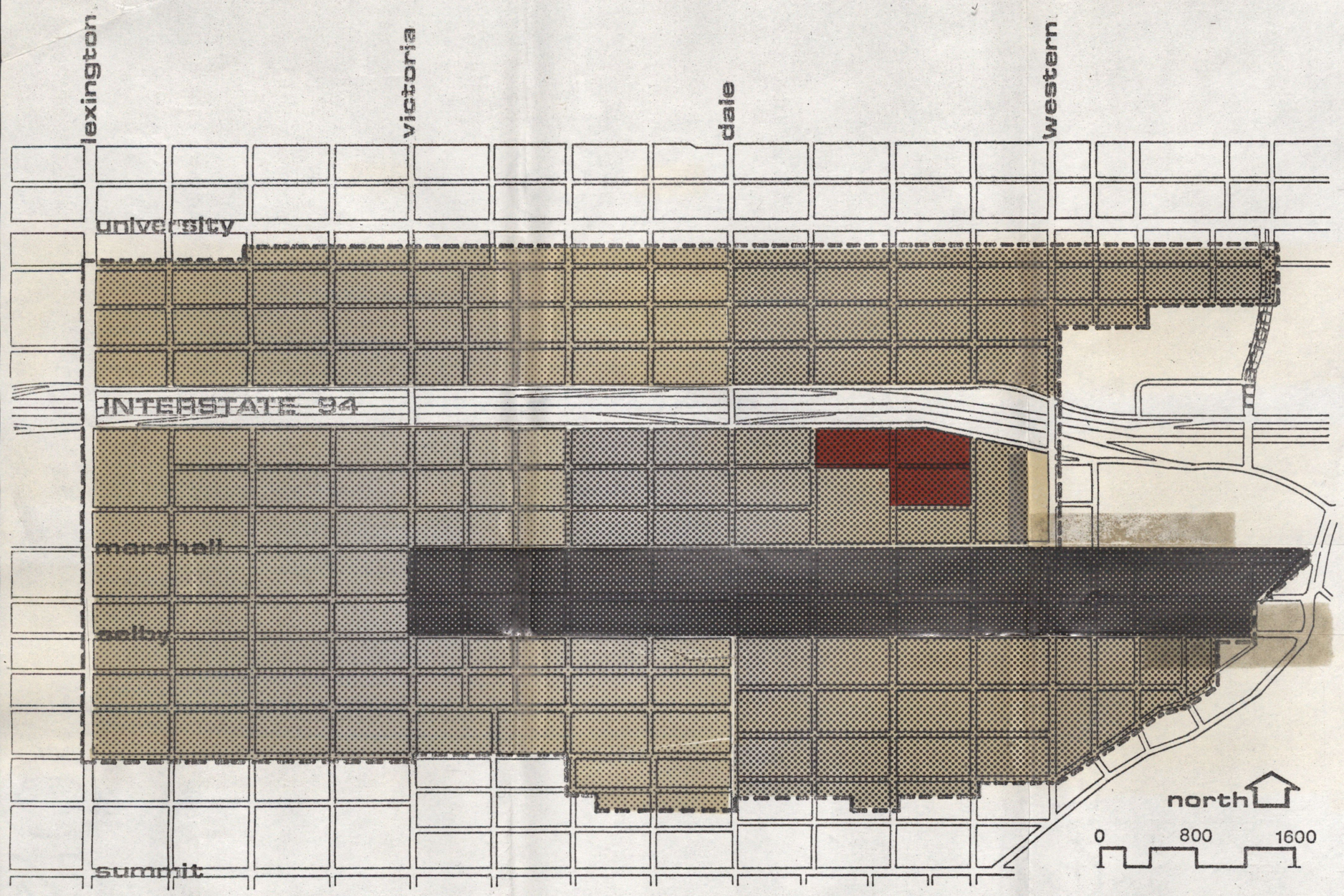
EXISTING
recreation



PROPOSED
recreation - education



PROPOSED
commercial



LOW 5—15

MEDIUM 15—30

HIGH 30—90

PROPOSED densities




or Citizens Program
MARTIN LUTHER




Mackubin St





7up
KENT & RONDO
BAR & GRILL
Kamm's
SNOW EMERGENCY ROUTE
KENT & RONDO BAR & GRILL
Kent
7up





residential neighborhood study

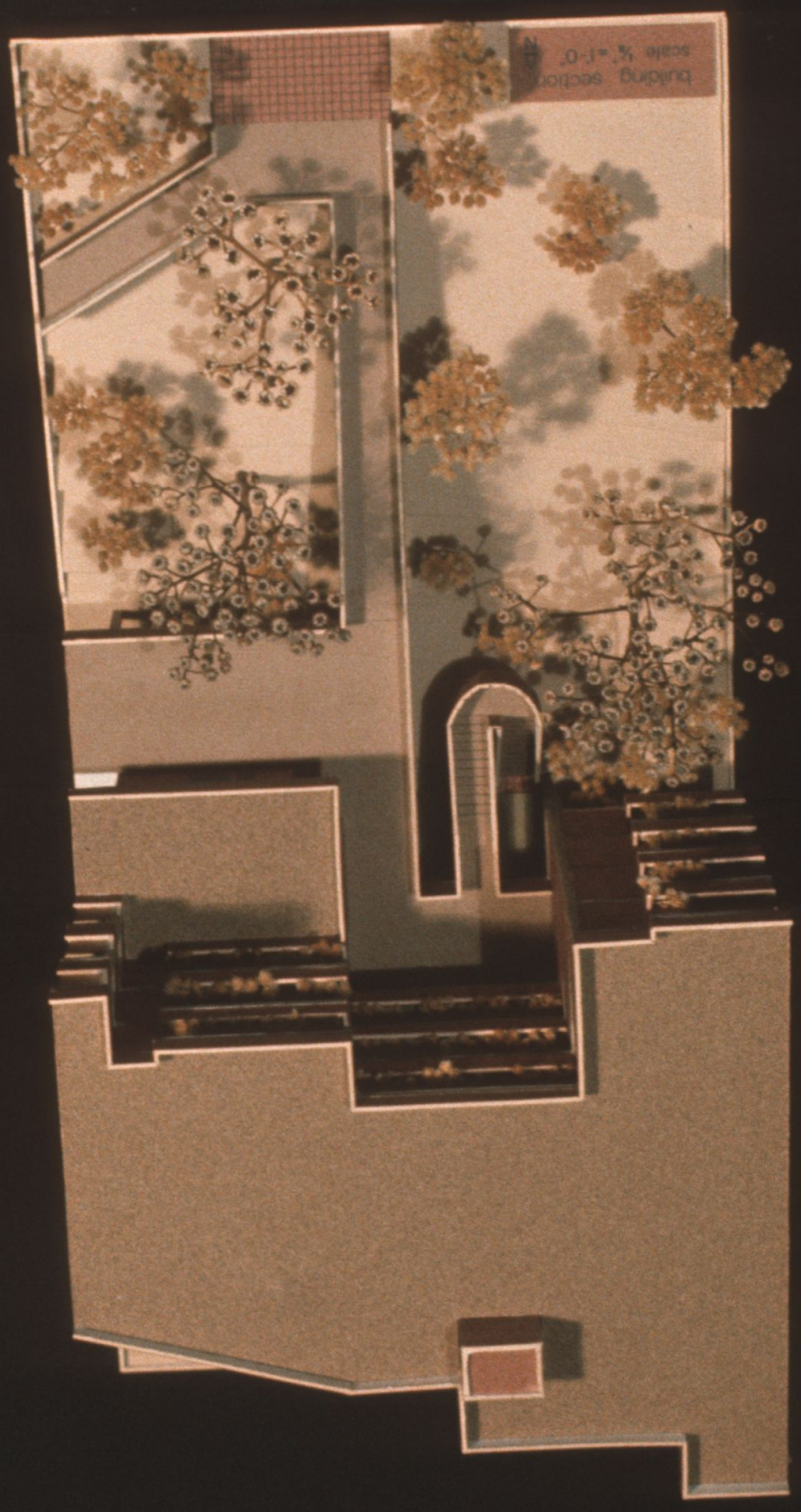
summit - university

st. paul minnesota








building section
scale ¼"=1'-0"



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