

HOUSING AND OPEN SPACE PROPOSAL FOR THE QUARRY

MISSION HILL, BOSTON

by Samuel Whiting Van Dam

A.B., Harvard College, 1971

Submitted in partial fulfillment of

the requirements for the degree of

Master of Architecture

at the

Massachusetts Institute of Technology

January, 1976

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Maurice Smith, Thesis Supervisor,
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Michael Underhill, Chairman,
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Graduate Students



ABSTRACT

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Submitted to the Department of Architecture on January 21, 1976,
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This thesis was produced in conjunction with Richard K. Renner, M.Arch., 1976, whose thesis is titled, Mixed Use Building in Mission Hill. The two theses are proposals for adjacent sites which have common ground in between: an abandoned quarry. The land is owned by Harvard University which is currently negotiating with community groups to dispose of the parcel. The joint proposal is based on a land use plan agreed upon by a federation of community groups. The housing uses a program for the current development of nearby Mission Park as a point of departure. The design stresses the separation of structure and essential services from the actual completion of dwellings, providing a framework which could be completed through a variety of different building strategies.

Advisor: Maurice K. Smith, Professor of Architecture

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The Hill: Pre-History

Mission Hill divides Brookline from the heart of Roxbury and is roughly bound by Huntington Avenue, Tremont Street, Columbus Avenue, Heath Street and the Jamaicaaway. (F.1) Its peak is 210 feet above sea level and it is one-half mile wide at its broadest base section: an oval running ESE to WNW. Spectacular views from the hill allow the observer to recognize that Boston is a network of islands. But unlike most of the other islands, the Hill is not a simple drumlin. (F.2) It is a 10-20° northerly dip in what is otherwise a single, flat, anticlinal fold of rock which underlies twenty square miles of land from Newton Upper Falls to Dorchester. This rock, commonly called puddingstone, was formed in paleozoic times. It is a conglomerate of petrosiliex, quartzite and granite bound with a fine textured pinitite. The pleistocene glacier which is responsible for all of Boston's drumlins, deposited till on the south side of the rock, leaving the hill with its characteristic drumlin form, while on the north side, the rock is barely covered. (R.7,8) Greatest evidence of the latter can be seen on the block bound by Tremont, Calumet and St. Alphonsus Streets, subject of this thesis, where the outcrop runs a thousand feet parallel to Tremont Street with exposures of fifty feet in elevation. Around the western side of this wall is a quarry of approximately 400 feet in diameter, which was cut for gravel as the fens were filled at the turn of the century. (F.3) The quality of the quarry site is rarely discovered by those who, even frequently, pass through Brigham Circle. From Tremont Street and Huntington Avenue rows of triple-decker houses and a supermarket eclipse vertical dimensions and maintain the quarry's seclusion. (F.4)

The Hill: Early Development

The history of the development of Mission Hill is a typical example of a neighborhood subjected to circular metropolitan growth: a commercial nucleus is surrounded by increasing population growth, with the belt immediately around it filled with poor and crowded neighborhoods. When more territory is needed, outlying farms are invaded and disintegrated. Local geographic and economic forces which shaped the events are easy to recognize. First, rugged slope and lack of overburden limited early development and still insure a considerable amount of open space. Roxbury Crossing was an active farmers' market in the late 1700's, and the Southwest Corridor was a natural thoroughfare for incoming produce. (F.5) Wealthy yankees kept farms and second homes on the Hill through the 1860's. The most influential early land owners were the descendants of a merchant named John Parker. (F.6) Parker began his career as a baker's apprentice and lost his father when he was crushed to death by the fall of a barrel of cider he was unloading from a cart in front of his home. (R.9) The Hill is still known to many as Parker Hill, but the Brahmins had all moved out by the 1880's. Central to this exodus was the concentrated growth of the brewing industry along Parker Street because of the free fresh water taken from Stony Brook, now Muddy River. Eleven of the city's eighteen breweries were located there, and although ownership was primarily German, a growing Irish workforce was attracted. The area around the quarry became entirely blue-collar Irish, and as immigration continued, rapidly constructed, wood frame, triple-deckers made their way to the top of the Hill, and remain today. The breadwinners were mostly government employees, foremen, clerks, policemen, firemen and streetcar starters. (R.19) Next to the

breweries, most important in the growth of this tightly knit neighborhood was the building of the Mission Church, a shrine to Our Lady of Perpetual Help, the Virgin Mary. By the turn of the century, the church had become the sponsor of a high school, a convent, sports teams and social clubs. In 1916, active membership was 10,000, and in 1940, as many as 25,000 people attended services on a single Wednesday. Leo Power, 77, resident of the Hill, one of thirteen children, former iron worker and member of the 1929 City Council, recalls:

"The St. Alphonsus Club was the greatest men's club in New England. You couldn't get 15 people today. I remember when you couldn't get into church to masses because of the crowds. No, I don't see anything along the line of the old community that I knew." (R.2)

Factors in the Deterioration of Mission Hill

Today, church membership has dropped to 3,000 and the vestiges of an Irish Catholic community can be seen along Tremont Street: pubs, a travel agency specializing in tours back home and the tired Mission Church enclave. The gradual deterioration of a tight neighborhood fabric can be attributed partially to the growth of the medical institutions across Huntington Avenue and on top of the Hill. (F.5) This began innocuously at the turn of the century, when the fens were filled, the breweries lost their clean water supply and Harvard Medical School moved in. Since that time, a succession of teaching hospitals and support facilities and schools have grown around it. There is nothing pleasant about living between blocks of hospitals, with the attendant noise of sirens and nine-to-five traffic, except the assurance of doorstep medical care. Part of the responsibility for the further decline of the neighborhood belongs to un-

enlightened city government, and more recently, to the Boston Redevelopment Authority. The Mission Hill and Bromley Heath housing projects of the '50s are failures in form, essentially placeless and unrelated to their context. More important, the consumers of mass housing who were moved into units for which they had no responsibility or input, probably cared less about their maintenance than the people paid to maintain them. Deterioration spread and by 1965 most affluent Irish families moved on. In the sixties, the BRA tried to attract some of this affluence back into the area by tearing out a large block of generally deteriorating triple-deckers next to the Mission Hill project, then re-zoning to allow a 200 foot height limit. Mary Kemp, a long-time resident of the Hill, recently recalled:

"What started this whole area going downhill was the building of the high rises on Tremont and St. Alphonsus Streets. The population in the area where they are now was very close knit, in three-deckers and everybody knew everybody else. But the BRA tore it down." (R.2)

While the first high rise was being erected, the BRA was trying to secure federal urban renewal funds for Mission Hill. But the initial moves of the BRA seemed to be such a disaster that a federation of community groups decided to exclude their neighborhood from the urban renewal process. This was undoubtedly a positive decision in the early sixties, when so much was torn down that could have been renovated, and what was torn down was rarely replaced. But, having extricated itself from urban renewal, Mission Hill was left out of all state and federally funded planning areas (F.7), and without any controls, land banking increased primarily by the institutions, and reportedly by underworld connections. Banks refused mortgages, crime increased drastically, and the residential

sector suffered repeated blows. (R.16)

Institutions Versus the Residents

One thinks in the abstract of the expansion of health care and teaching facilities as positive for a city. And certainly hospitals like the Peter Bent Brigham offer outpatient service to the local community. But, in its desire to expand, Harvard and its associated institutions has not dealt with its neighbors candidly. In 1971, after agreeing to consult with the community on a composite plan for the medical area, the Harvard Medical Area Planning Commission hired I.M. Pei to produce a master plan and an area appraisal without community consultation. At that point, all of the local organizations which had interests within a one-half mile radius of Brigham Circle banded together to form the Circle Federation and discuss its own area-wide plan.

The current membership of the Circle Federation includes the following groups:

1. The Delle Avenue Neighborhood Association
2. The Roxbury Tenants of Harvard
3. The Colburn Street Neighborhood Association
4. The South Huntington Neighborhood Association
5. The Back of the Hill Community Development Association
6. The Parker Hill - Fenway APAC
7. The Housing and Land Use Committee
8. The Fenway Civic Association
9. Al-Kev Community Center
10. Puertoriquenos Unidos
11. DARE
12. HCHP Policy Board
13. Fenway Free Health Center
14. MH-PH Health Corporation
15. The Good News, community newspaper.

A general plan was agreed upon, but unfortunately a mechanism for sponsoring an area-wide plan co-authored by the Circle Federation, Harvard and other institutions could not be assembled. The history of mistrust be-

tween the two parties had begun in earnest in 1965, when the BRA granted the proposed Affiliated Hospitals Center (AHC) power of eminent domain over a perfectly decent residential block on Fenwood Road. (The author received his first architectural training in the office which prepared this AHC scheme. Fortunately, it was rejected.) In 1972, a radical new state policy toward health facility expansion forced Harvard closer to dealing seriously with the community. Facing its own student protests in 1974 and the possible rejection of yet another set of plans for the AHC, Harvard began to negotiate with the community. A certain amount of good faith came out of that series of meetings, and Harvard signed a document in which it agreed: not to expand across Huntington Avenue; to admit "public" members to the AHC Board of Trustees; and to give the community \$17,500 to staff the recently formed Mission Hill Planning Commission. Meanwhile, Harvard and the community had negotiated an agreement for a 775 unit housing development called Mission Park, on a twelve-acre parcel between the Riverway and Huntington Avenue.

All of this bargaining seems positive for the Mission Hill community and the development of sites like the Quarry. But one wonders whether the giant AHC, with its sixteen-story, 680-bed tower, will provide decent ambulatory care for the neighborhood. Furthermore, Harvard is pressing forward with plans to demolish a block of residences on Binney Street for a power plant to drive AHC, other local hospitals, and provide free heat to residents of Mission Park. One wonders whether the environmental impact of the power plant might not render Mission Park undesirable before it is occupied. It will certainly destroy the character of Fenwood Road. A

small group of citizens named RUSH (Residents United to Stop Harvard) protested the recent groundbreaking ceremonies for the AHC with white death masks and a dummy labeled, "The Corpse of Mission Hill." (R.4,5) And so the neighborhood of Mission Hill continues to maintain a vigil over the institutional sector which is determined to renew its facilities and develop a comprehensive service and energy plan.

Who Needs the Housing?

The natural boundaries of the Mission Hill community are probably best defined in the 1972 Area Plan by John Sharatt Associates. (F.8) Within those boundaries, there are 3,230 permanent households, or about 18,000 permanent residents. (R.10) Most of the residents are said to support the energy plant project because it will insure the fiscal viability of the Mission Park project. (R.4) It is worth noting that 45 percent of the working citizenry is employed by the medical and educational institutions, so one might say that the welfare of the community depends partially on the welfare of the institutions. Institutional growth brings more jobs. But it also brings more automobiles, more transients and depletes the housing stock. Within community boundaries, the schools draw over 40,000 students to the area. Adding this to the number of faculty persons and patient-beds, the transient character of the area becomes quite evident. The growing student population has contributed to the reduction of the permanent population by 7,000 in the last twenty years, and due to a lack of mobility, the percentage of elderly has risen from 10 percent to 13.5 percent in the same period.

The existing housing stock on the Hill clearly needs to be renewed

and gradually replaced. For whatever it's worth, in 1972 Robert Gladstone Associates of Washington reported that an overwhelming shortage exists of all standard housing in all price ranges in the Mission Hill area. Unless Harvard is willing to provide the amount of backing that it did for Mission Park, growth will have to occur in small increments, for the population is both income and capital poor. With a median household income of \$7,450, versus \$9,150 for the rest of the city, roughly a third of the community is living below the so-called federal poverty level. Of the permanent residents, 44 percent are white, 30 percent black, and 24 percent of Spanish descent -- mostly Puerto Ricans. Curiously, the Mission Church used to concentrate its extensive missionary activities in Puerto Rico. Now, it must welcome its converts home.

The Status of the Quarry Site

The Quarry is the most significant piece of vacant property along the edge of the institutional and residential portions of the community. It has never been developed because of what are described as "attendant foundation and utility costs." (R.3) It is owned by Harvard University, which now considers the property such a liability that one wonders why the purchase was ever made. Under the 1974 agreement made with the community, Harvard is obliged to release the property in some way accordant with the community's wishes. Chain link fencing occasionally protects the public from the fifty-foot ledge drop, and children throw rocks onto the houses which line Torpie and Whitney Streets. The BRA describes the parcel as six acres, but there are two adjacent parcels owned by Harvard which make it closer to nine: a piece on St. Alphonsus Street which con-

tains four units of Harvard financed housing, and a larger, mostly paved area partially fronting on Brigham Circle. (F.9) The latter includes a bank and a dry cleaning establishment, both with five-year leases renewable to 1982, and a supermarket which is currently negotiating a lease extension. A very small piece of property which is not owned by Harvard captures the primary portion of Brigham Circle frontage. John Sharatt has indicated that the owners would be interested in being part of a scheme to redevelop the commercial edge of the site.

The Proposal: Assumptions and Intentions

In the fall of 1975, Harvard stepped up its efforts to resolve the fate of the Quarry with the Circle Federation, but to date, no decisions have been reached. This proposal for housing and open space and Richard Renner's contingent proposal for mixed-use building are in response to the land use recommendations suggested by the Roxbury Tenants of Harvard in 1970. (F.10) Renner's work is based, in part, on a standard city elementary school program. It was undertaken with the understanding that the Lafayette School is, in fact, going to be demolished, and that Mission Park will create a substantial need for a new elementary school facility. I have assumed that housing at the quarry would generally be owned and financed much the same as Mission Park, and have used Mission Park as a yardstick for economically viable density. (Appendix G)

The Quarry housing, then, could be owned by the Circle Federation and Harvard, in a format similar to the 121a corporation, and financed by the MHFA. But, the project would be managed, in the broadest sense, by residents who were affiliated with any member of the Circle Federation

and Harvard. Presumably, there are enough persons associated with Circle who need jobs, including maintenance men and carpenters, who could be hired to build and alter buildings. Certainly, Harvard could find employees in its ranks -- medical technicians, nurses, junior staff officers, who need housing within walking distance of their jobs and could bring a variety of skills -- or spouses with skills to help run the Quarry. These people would be paid with the percentage of rent given to Hunneman and Co. or any other managing agency. Their employment could be overseen by MHFA, in the sense that MHFA would arbitrate disagreements among the Quarry's owners, as in III E.

There are a few controls in the proposal for the framework which are essential. First, each repeated frame is a fire zone (F.15,17) and can only serve to enclose 14,400 SF. The frames are type three construction: heavy timber and masonry. Each frame must provide distribution to satisfy Table 6-2 of the Boston Building Code. Secondary exits are often provided within the 150' egress limit by using potential roof terraces and steel bridges to fire stairs in adjacent buildings. For all practical purposes, the size of the fire zones limits the density of the Quarry housing. One stage of the site plan illustrates eleven frames on four acres. (F.11) Figures 17-22 show provisions for an average of twenty-six persons to inhabit each frame (assuming that each resident has a bedroom on an outside wall) and an average of fourteen dwelling units/frame. This adds up to 78 persons/acre and about 42 du/acre: 168 units and a population of over 300 persons. The figure of 42 du/acre seemed like a good one to maintain, as it was about double the existing density of the Hill (approximately 22 du/acre) and a rough two-thirds of the density

of the economically viable Mission Park (65 du/acre). It is a fair bet that the Quarry will be purchased cheaply and therefore will not need the density of Mission Park to survive.

One of the most attractive aspects of the Quarry site is its location on what could become a node on a well assembled pedestrian network. (F.5) A great opportunity exists to develop the vacant strip of outcrop which runs east-west across the Hill into a continuous open space network and pedestrian path. There is enough lateral dimension in many areas to build-in a good reciprocal relationship with housing, commercial facilities, and the schools which seem to line up on the path. A link from the Southwest Corridor to the Quarry (a 15-minute walk) to Brigham Circle (5 minutes) to the Riverway is practically assembled. Mission Hill residents need a more direct link with the amenities offered by the Riverway. Only Dorchester residents have fewer acres of open space than residents of the Hill. (R.15) Clearly, then, the right of way through the Quarry site is a controlling factor and must not be sacrificed.

As to the actual building strategy, this proposal projects the hope that the Quarry could grow in small increments (frames) on a cooperative basis, with owners undertaking a substantial part of the work and planning. Although Figures 18-22 illustrate multi-family rental and owned units, there are also provisions in the framework for small shops connected to dwellings. Commercial demand may not be overwhelming, but a bicycle or shoe repair shop, or a pub could provide a decent supplementary income for an older or disabled person. Furthermore, there is no reason why other sections of the Quarry housing could not be designed for groups of boarders with associations of age or interest, sharing common spaces and

meals. The advantages to having even this limited variety of housing types within a small area could be effective in stabilizing the community. For it has been shown that changes in life cycle and varying demand for space and amenities is the primary cause for the migration of a household.

(R.17) Hopefully, substantial portions of the framework would be left uninhabited or planted, and would be in a constant state of flux. For, as John Habraken has noted, "building is an impulse which much prefers the act to the finished product." (R.11)

In conclusion, the primary intention of this proposal was to attempt to design a few basic frames, which when repeated, could function effectively in relationship to a strong landscape, and to each other. Variety was to be gained by varying the juxtapositions as much as possible, and by introducing a few curved elements to define the collective, or public. I assumed that, although the individual pieces were often complex, their repetition would greatly reduce costs: a factor which cannot be taken lightly in an area with a median income of \$7,150. Perhaps the frames are not rich enough and need not have been repeated to make the proposal economically viable. M.K. Smith believes that by creating good variety in a building method one need not "potato stamp" to be economical. Perhaps in this scheme, households must rely too heavily on a variety of closure and subdivision to be distinct. But I believe that with the right atmosphere, this framework begins to straddle the fine line between too much and too little.

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UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS

BOSTON SOUTH QUADRANGLE
MASSACHUSETTS
7.5 MINUTE SERIES (TOPOGRAPHIC)

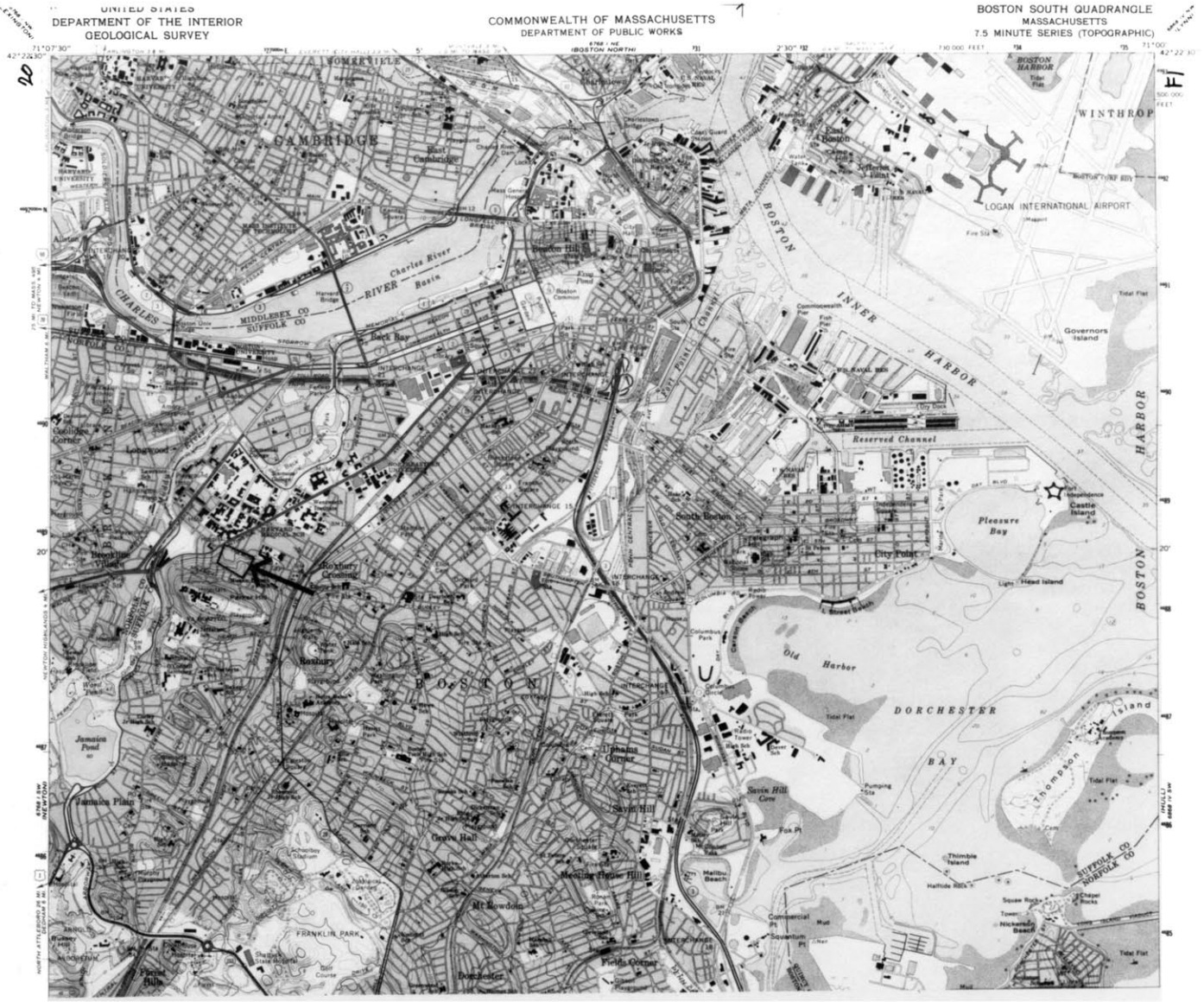




FIGURE 1.—Drumlins of the Boston Basin

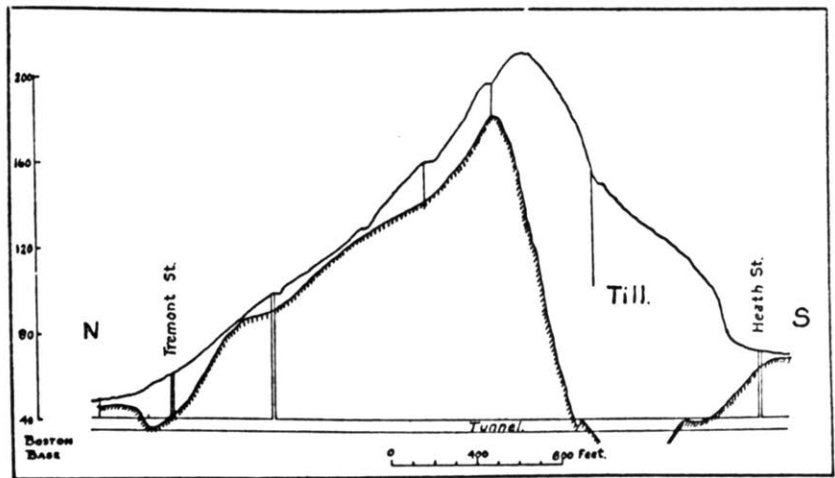
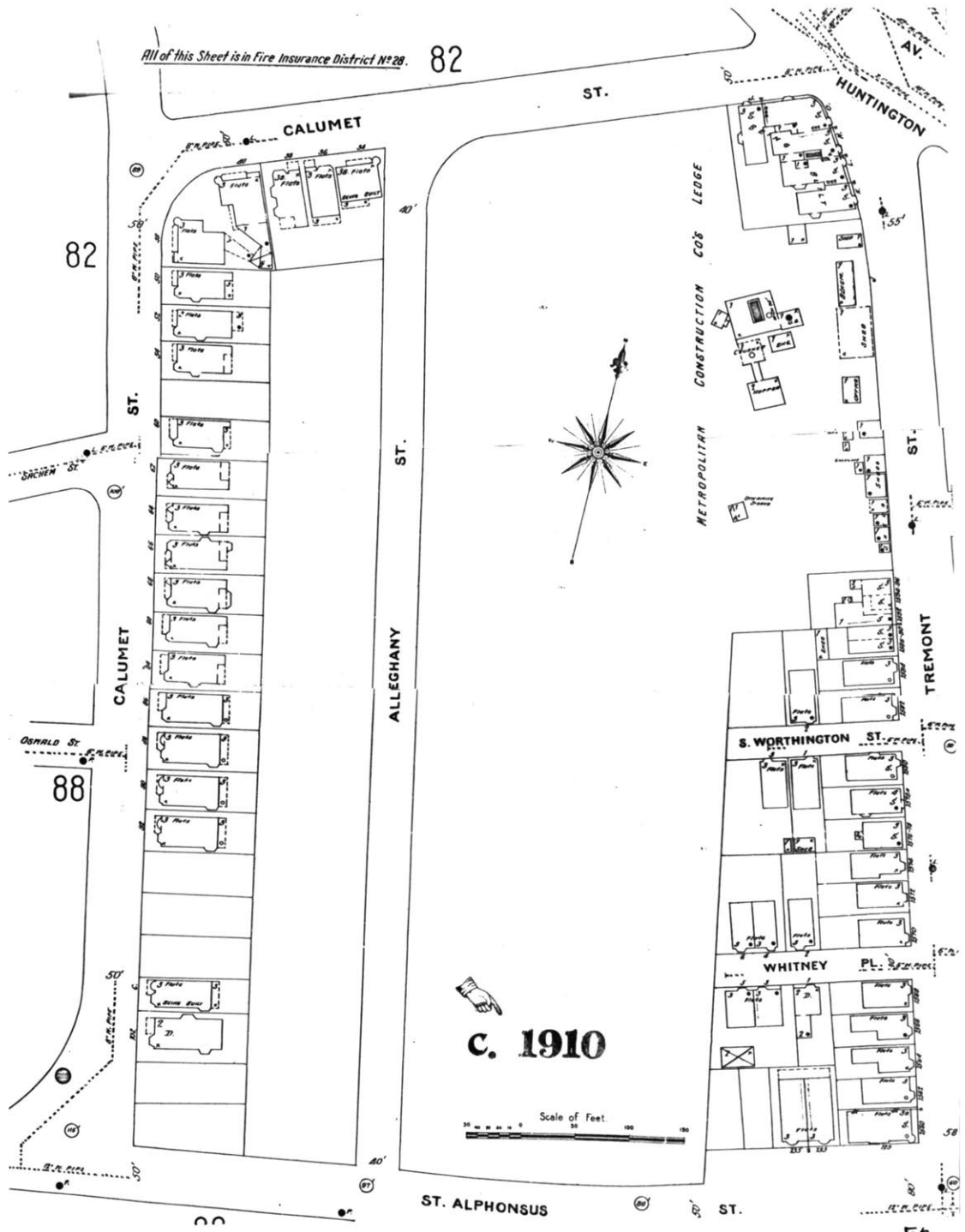


FIGURE 2.—Section through Parker Hill, Roxbury
Showing rock core

All of this Sheet is in Fire Insurance District No. 29. 82



82

88

C. 1910

Scale of Feet

F3

1



7



3



2



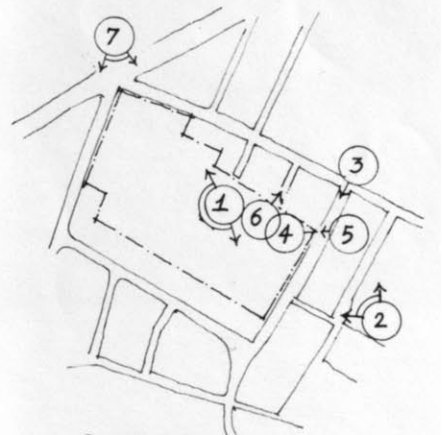
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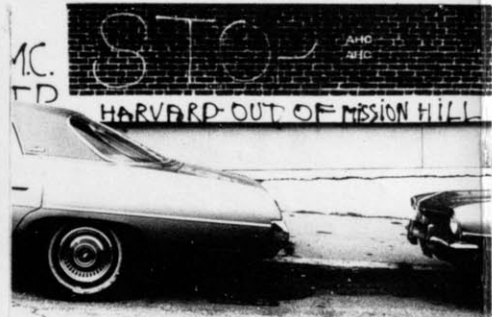
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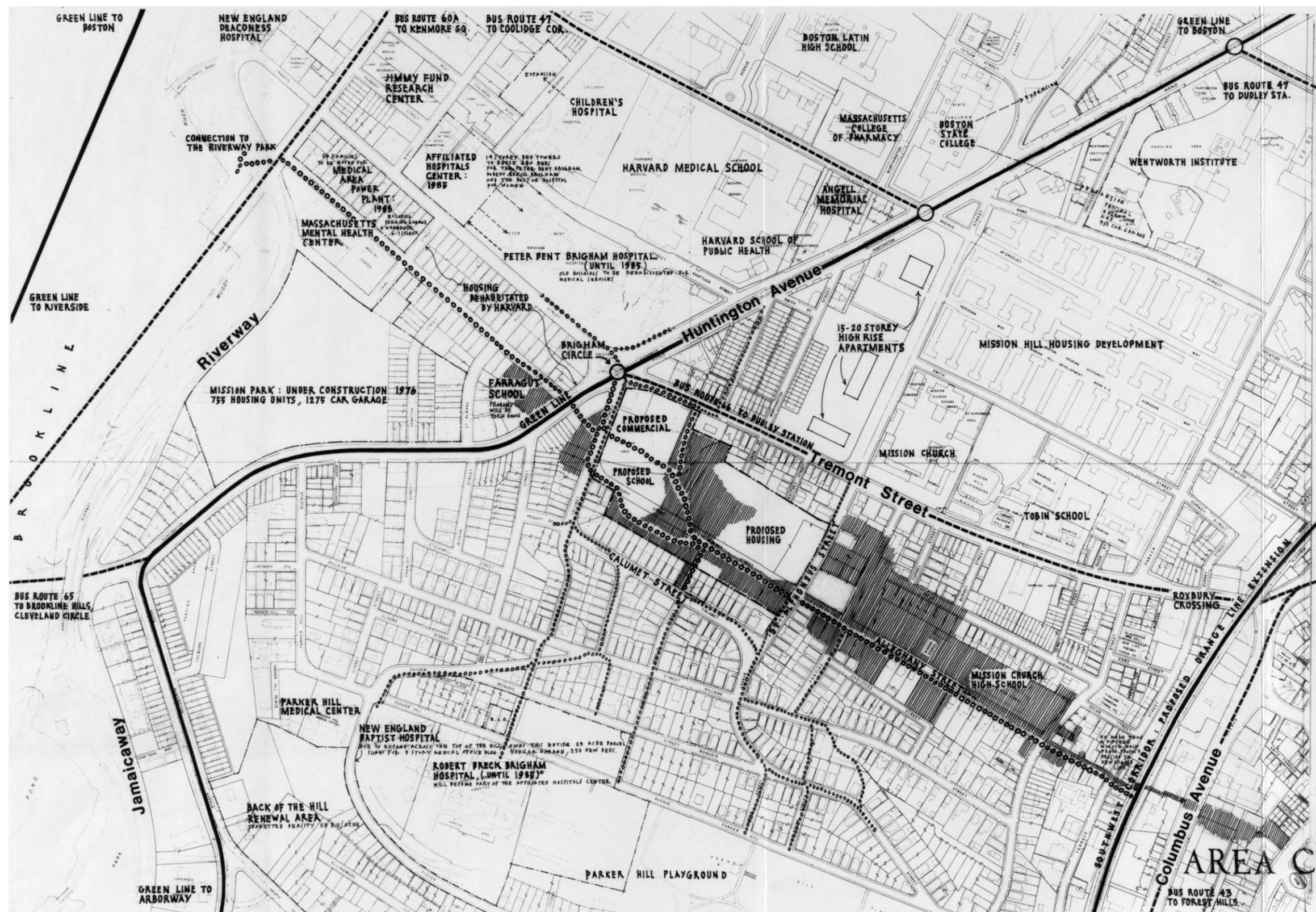
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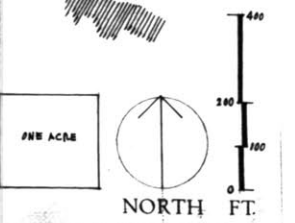
SITE PHOTOGRAPHS



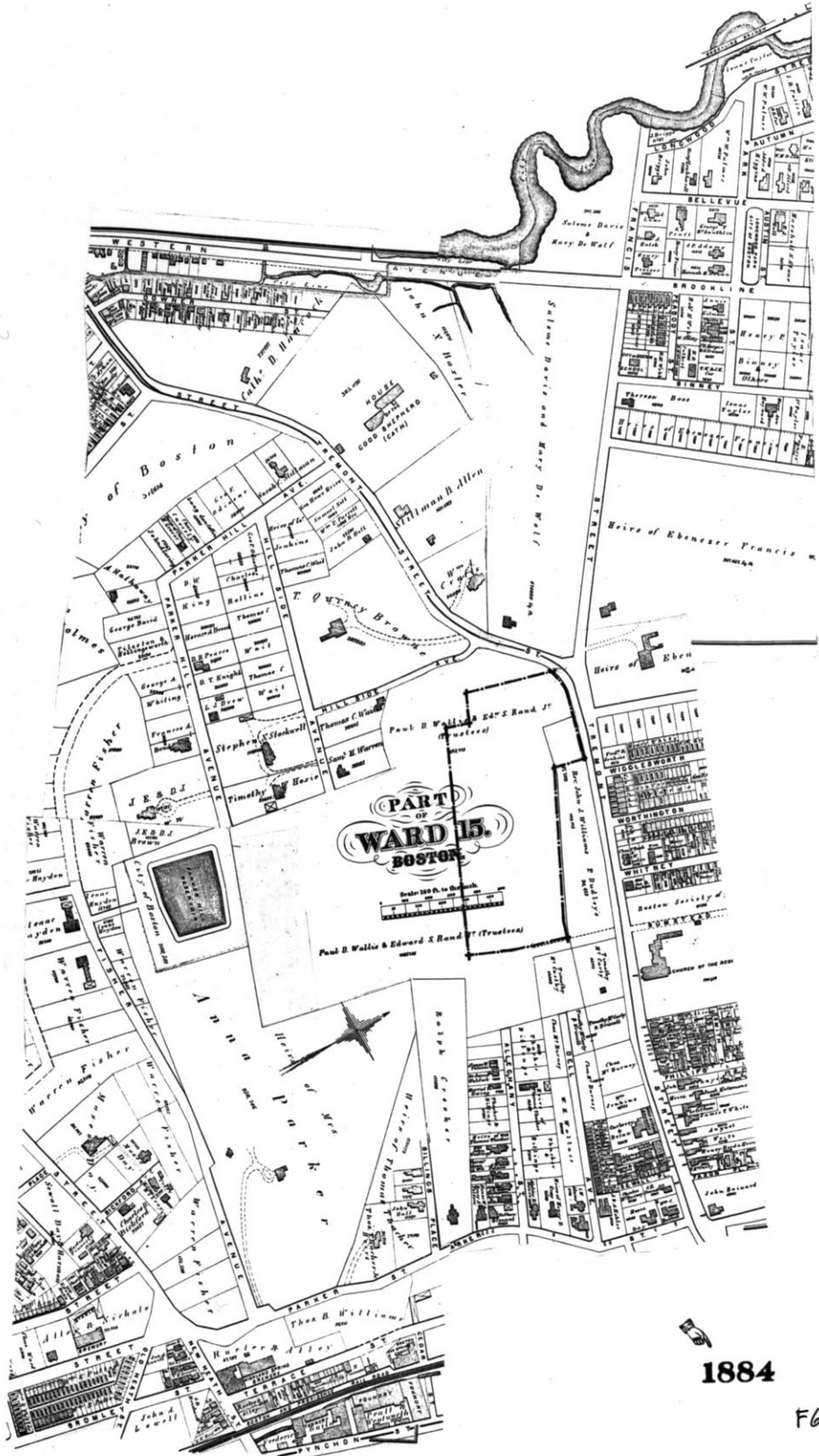
A PROPOSAL FOR THE
QUARRY
 MISSION HILL, BOSTON
 M.Arch. Thesis, M.I.T.
 RENNER and VAN DAM
 JANUARY, 1976



- BUS ROUTES, MOSTLY MBTA
- MBTA TROLLEYS
- MAJOR PEDESTRIAN ROUTES
- PEDESTRIAN ROUTES DOWN MISSION HILL
- OPEN SPACE ALONG A PROPOSED MAJOR PEDESTRIAN RIGHT OF WAY



AREA CONTEXT



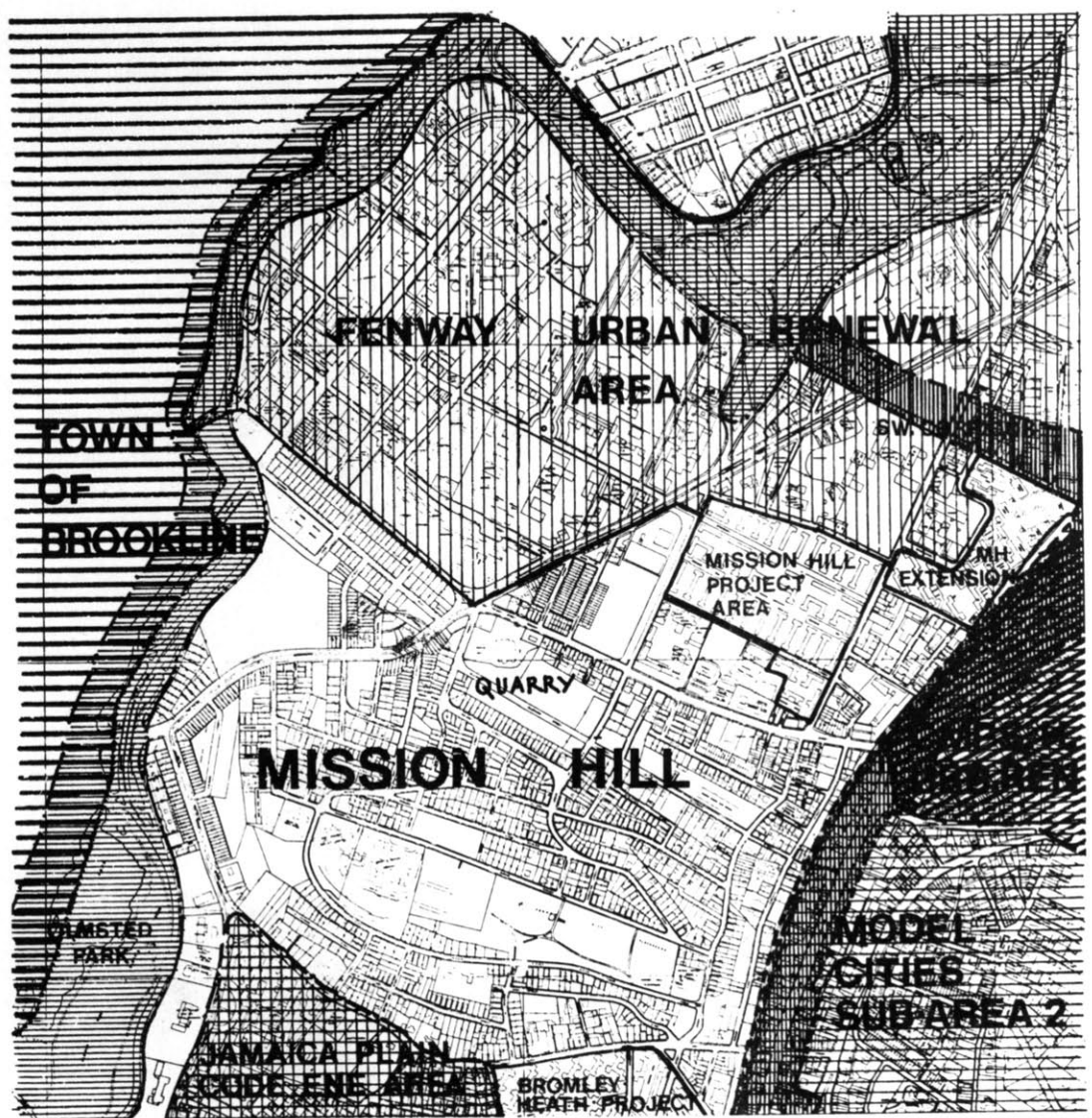


FIGURE 17
PUBLIC PLANNING AREAS
KEY: (MAP ILLUSTRATES THAT MISSION HILL HAS BEEN LEFT OUT OF PUBLIC PLANNING AREAS)

MISSION HILL COMMUNITY
BOSTON MASSACHUSETTS

JOHN SHARRATT ASSOCIATES INC
 ARCHITECTURE AND PLANNING

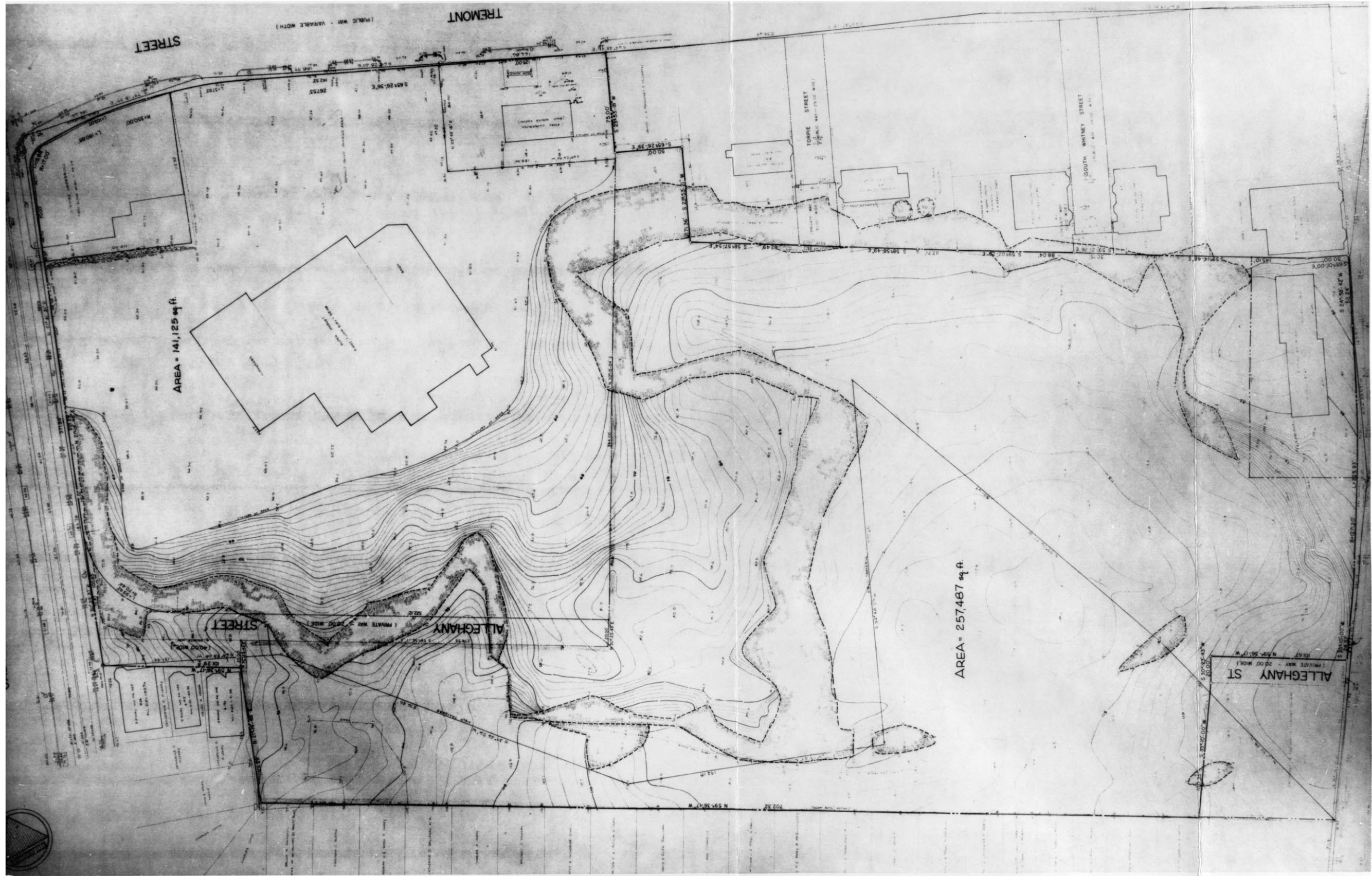


FIGURE 15
BOUNDARIES OF A NATURAL INTEGRAL UNIT

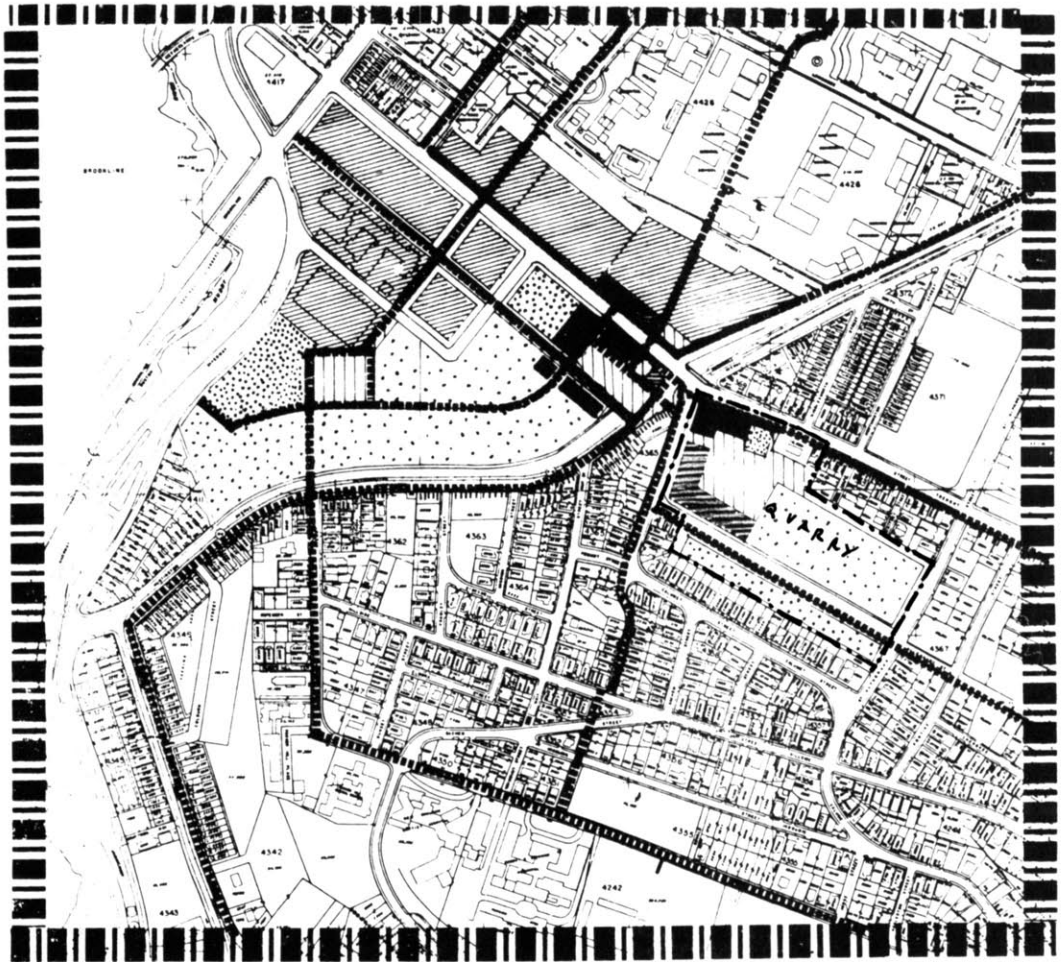
- KEY:**
- 1. NORTH-SOUTH ARTERIALS ...
 - 2. EAST-WEST ARTERIALS ...
 - 3. PROJECT AREA BOUNDARIES ...
 - 4. PROPOSED MAJOR INTERSECTIONS ...
 - QUARRY

MISSION HILL COMMUNITY
BOSTON MASSACHUSETTS

300' JOHN SHARRATT ASSOCIATES INC
 ARCHITECTURE AND PLANNING



TOPOGRAPHIC SURVEY F. 9



LAND RE-USE PLAN, 1970, R.T.H.

- KEY:
- BOUNDARIES : QUARRY
 - COMMERCIAL FACILITIES
 - COMMUNITY FACILITIES
 - INSTITUTIONAL FACILITIES
 - HIGH RISE HOUSING
 - FAMILY HOUSING
 - MAJOR PEDESTRIAN CIRCULATION

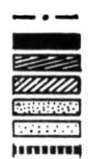


FIGURE 18

MISSION HILL COMMUNITY
BOSTON MASSACHUSETTS

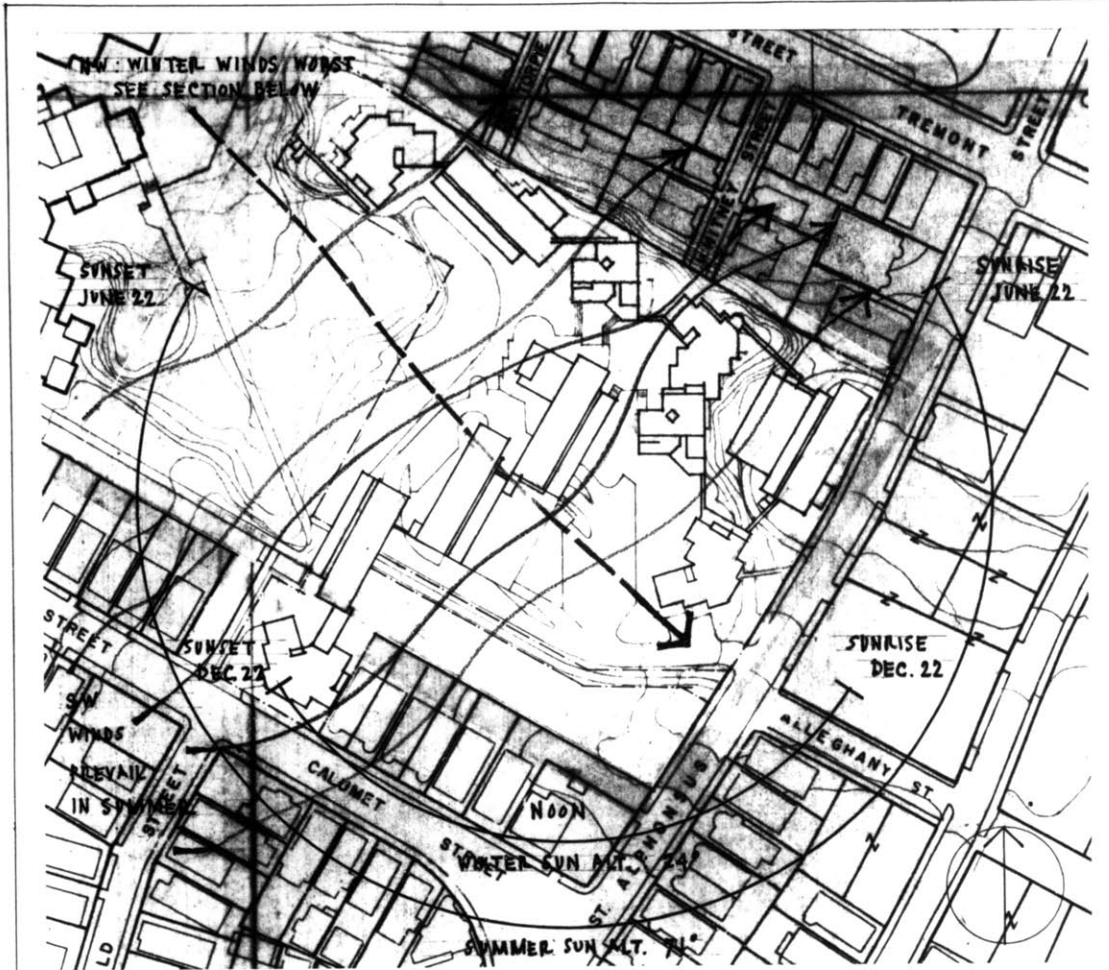


JOHN SHARRATT ASSOCIATES INC
 ARCHITECTURE AND PLANNING

A PROPOSAL FOR THE
QUARRY
MISSION HILL, BOSTON
MARCH, THESIS, M.I.T.
RENNER & VAN DAM
JANUARY, 1976

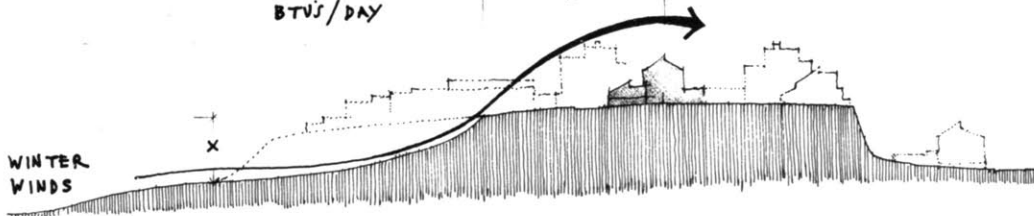


SITE PLAN



57% OF THE YEARLY DAYLIGHT HOURS ARE SUNNY
 SOLAR HEAT: CLEAR DAYS CLOUDY DAYS

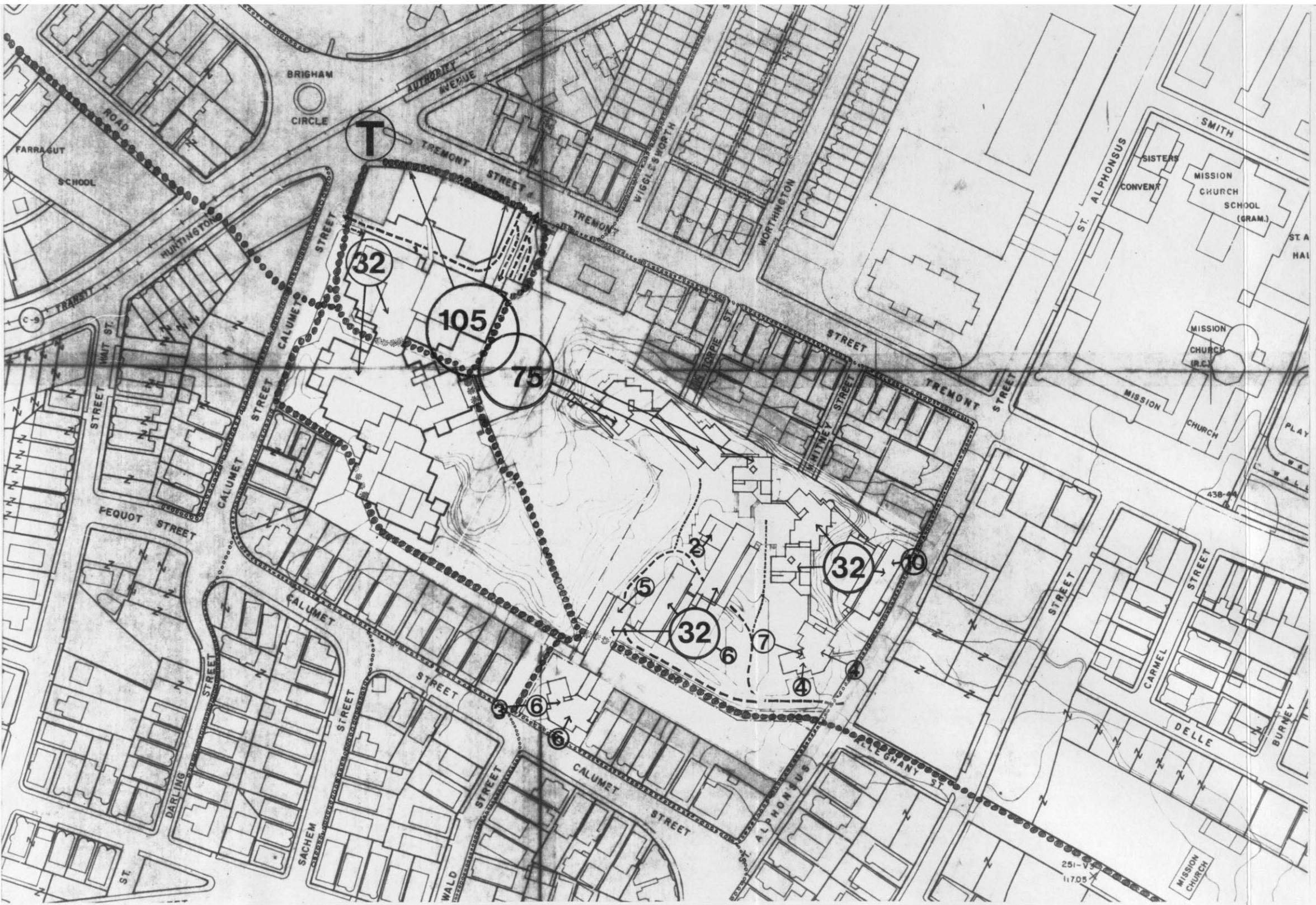
SUMMER	383	—	285
WINTER	165	—	110
	BTUS/DAY		



ANNUAL RAINFALL 43" : 125 RAINY DAYS A YEAR
 ANNUAL SNOWFALL 43" : JANUARY, FEBRUARY 12" EA.
 ANNUAL FIRST FROST : OCTOBER 29, LAST APRIL 13
 GROWING SEASON : 200 DAYS
 9 DAYS A YEAR LIKELY OVER 98°F, 106 DAYS UNDER 32°F

CLIMATIC INFLUENCES

A PROPOSAL FOR THE
QUARRY
MISSION HILL, BOSTON
M. ARCH. THESIS, MIT
RENNER & VAN DAM
JANUARY, 1976



32

PARKING FOR 32 CARS

VEHICLE CIRCULATION

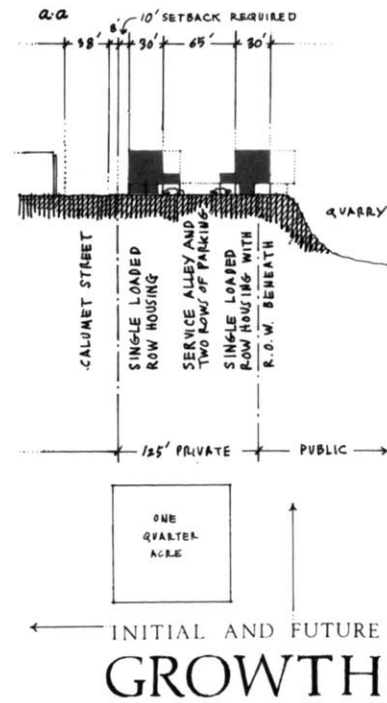
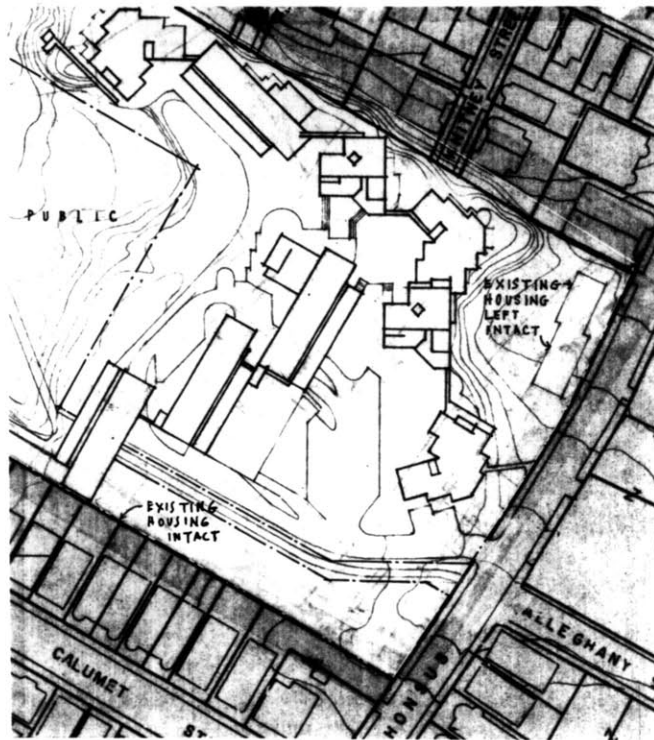
EMERGENCY ACCESS

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MAJOR PEDESTRIAN
ROUTES THROUGH
THE SITE

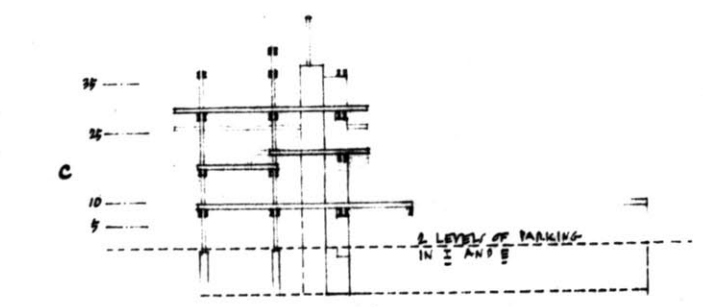
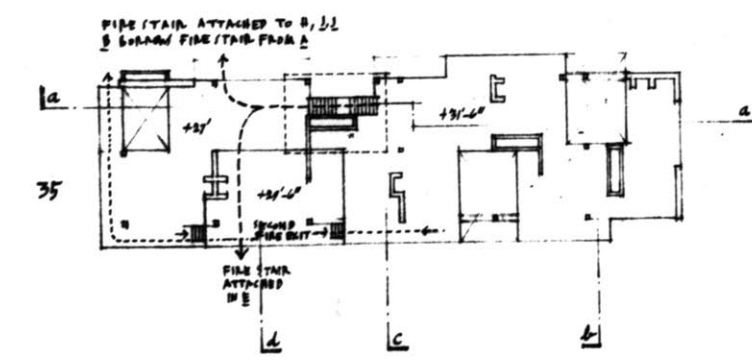
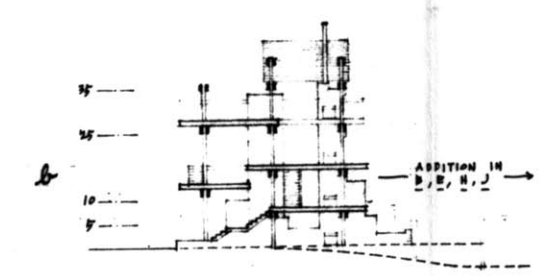
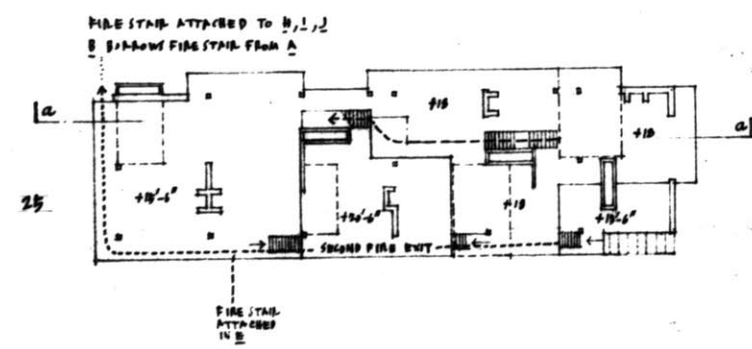
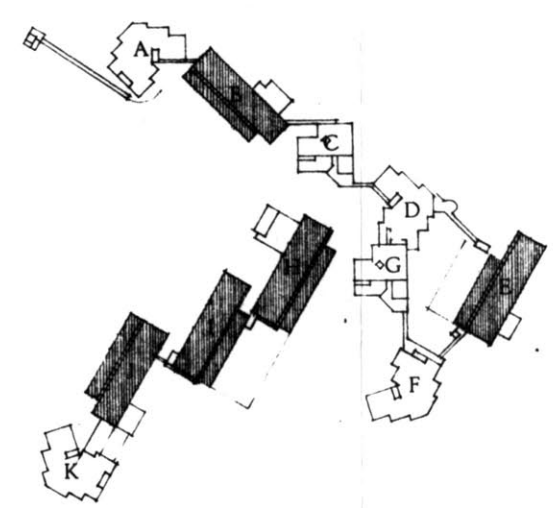
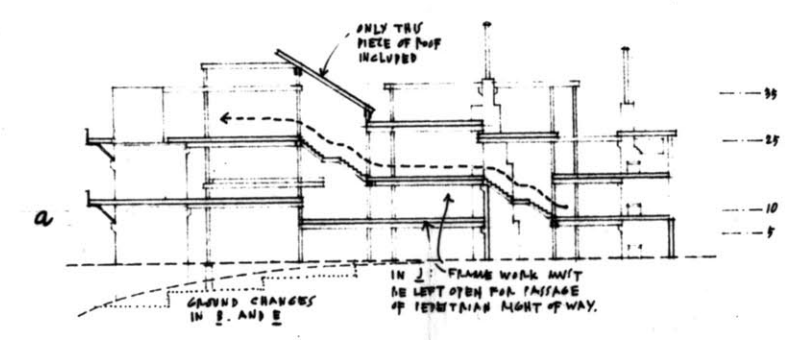
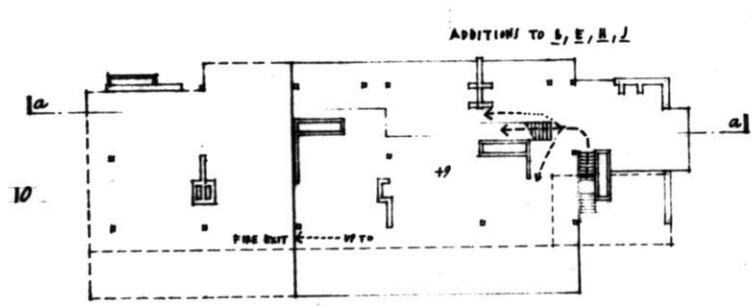
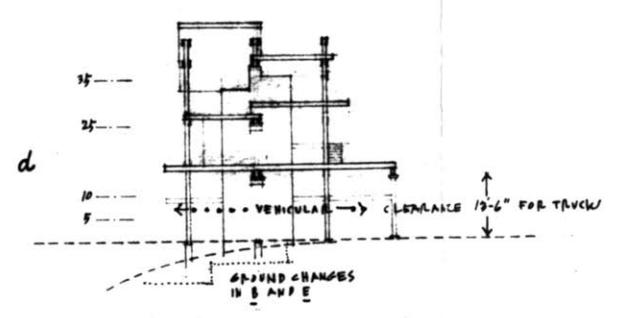
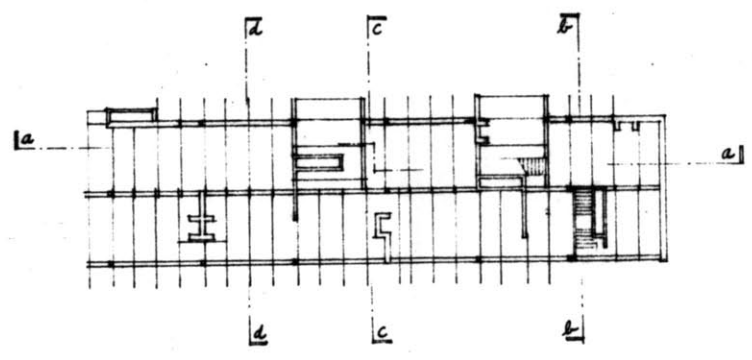
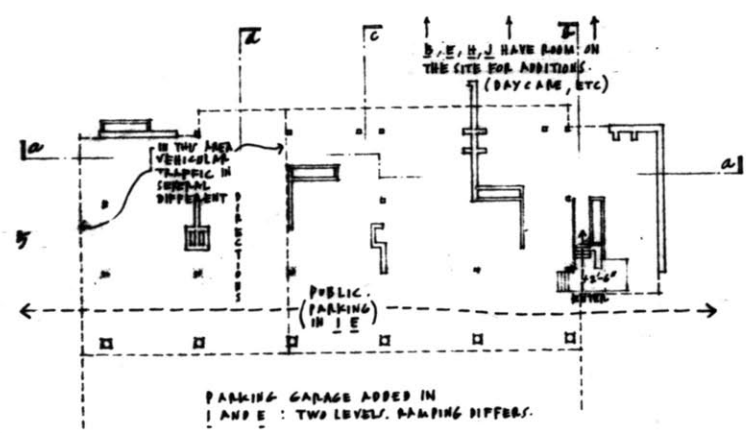
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MINOR PEDESTRIAN
ROUTES DOWN THE
HILL



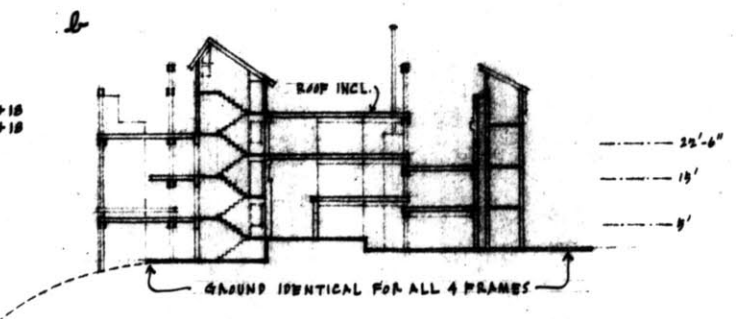
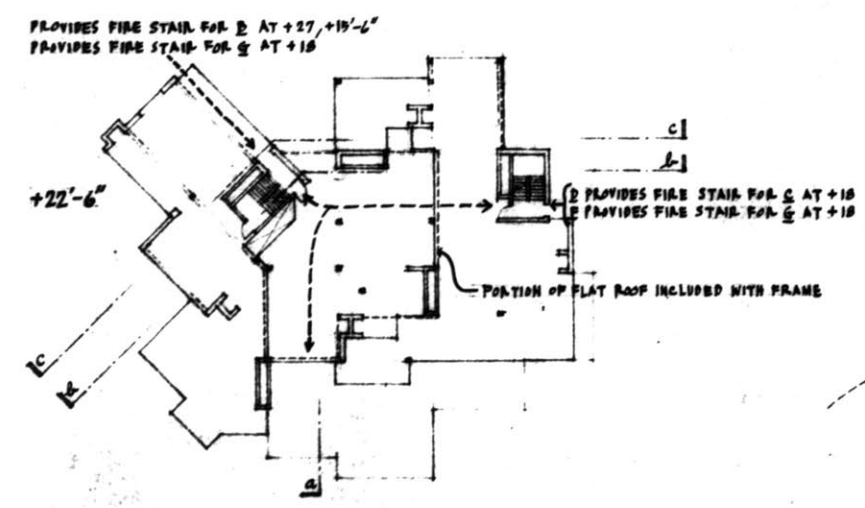
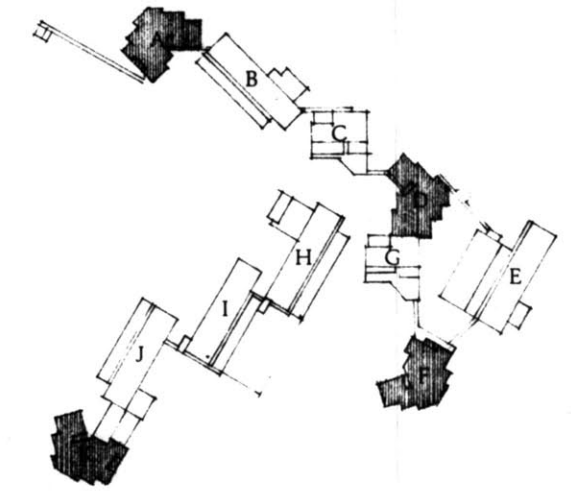
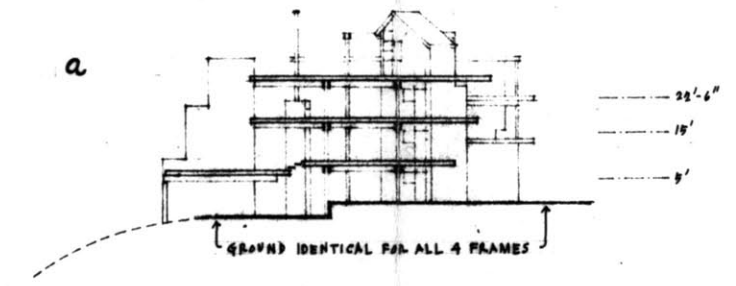
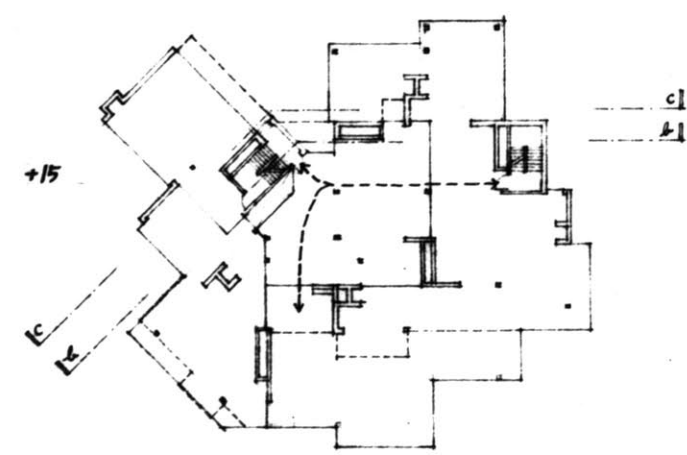
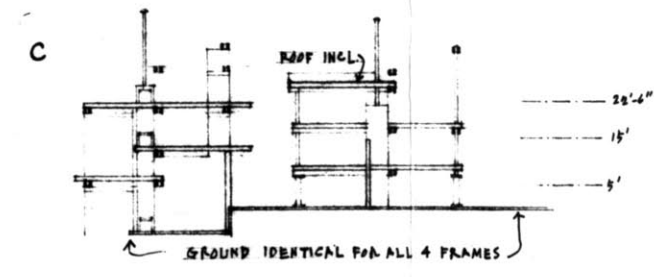
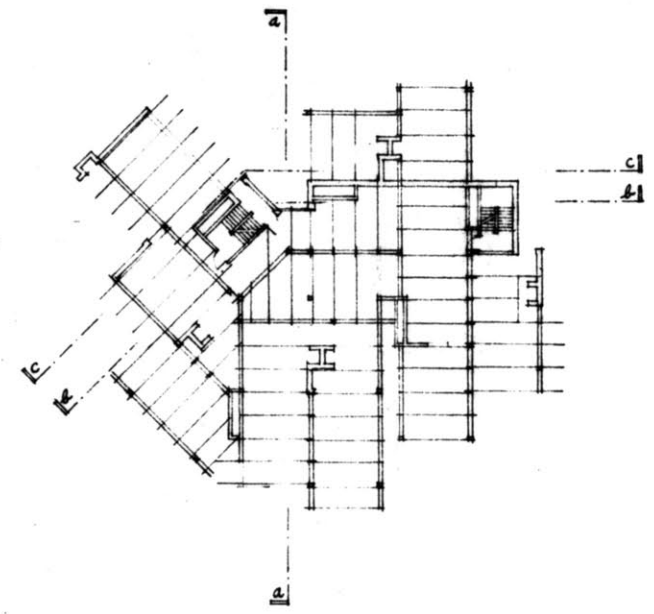
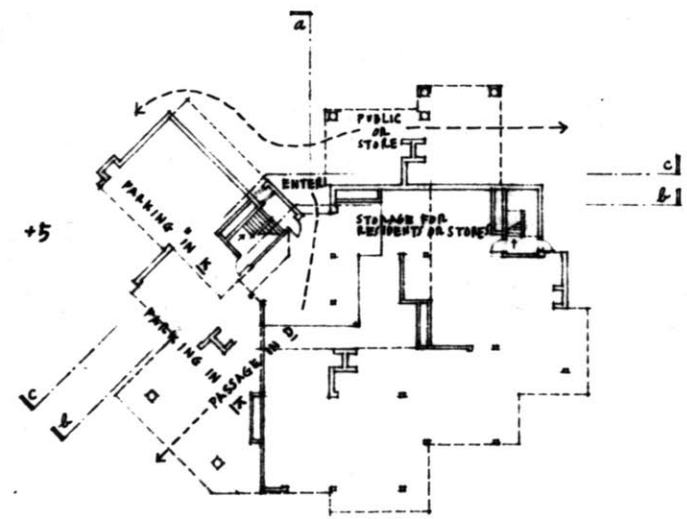
PARKING
DRIVING
WALKING



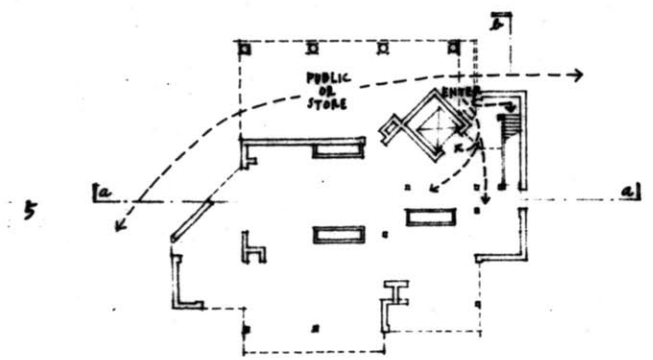
F14.



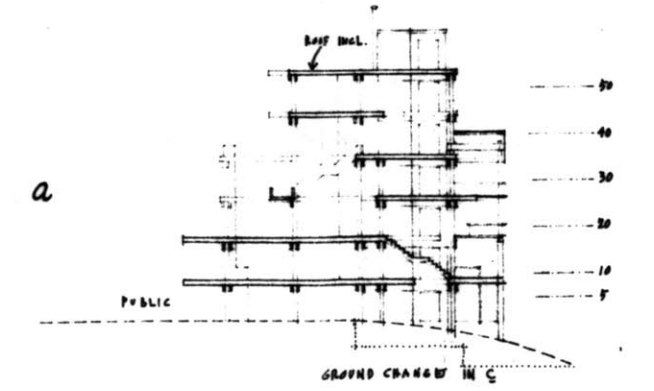
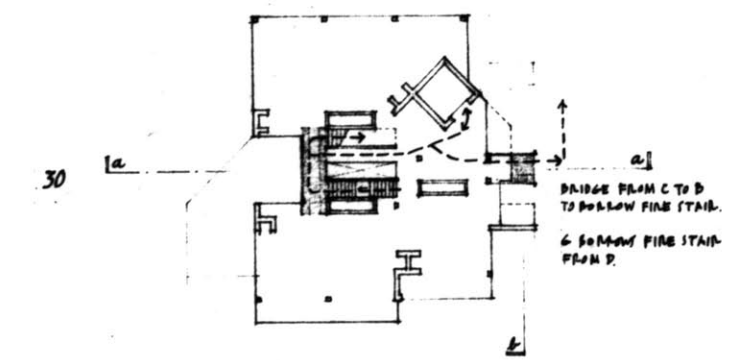
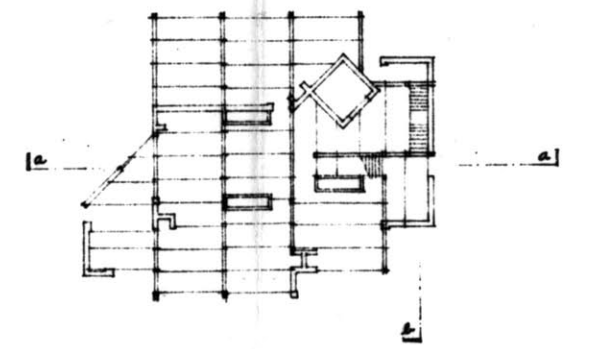
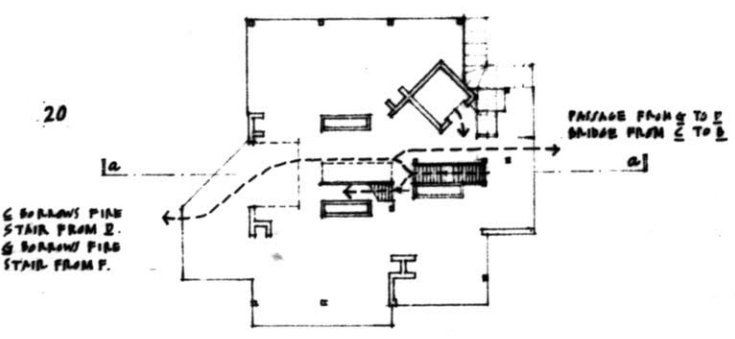
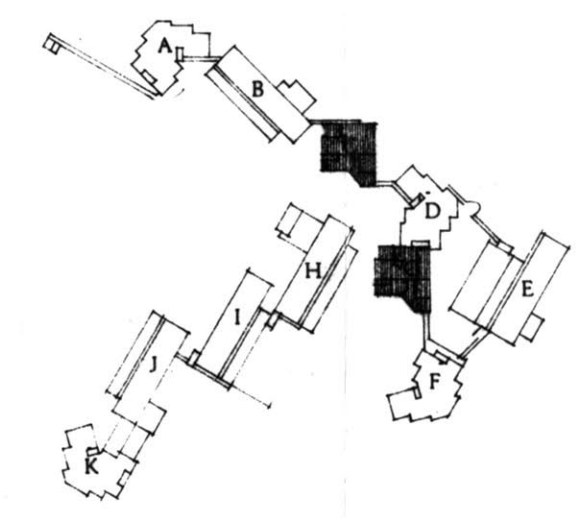
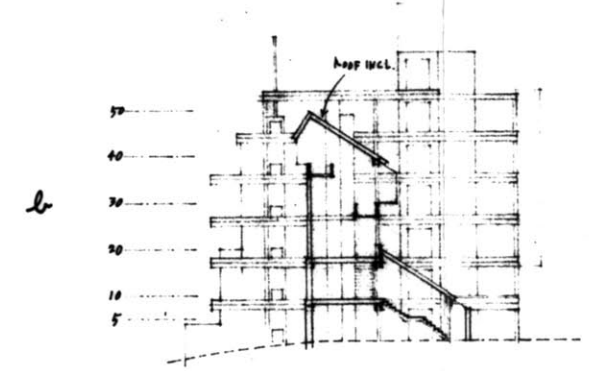
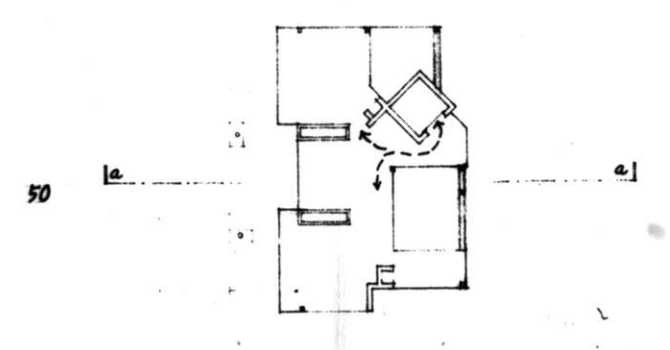
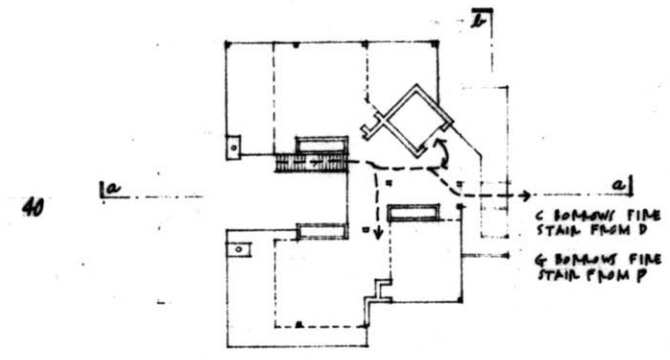
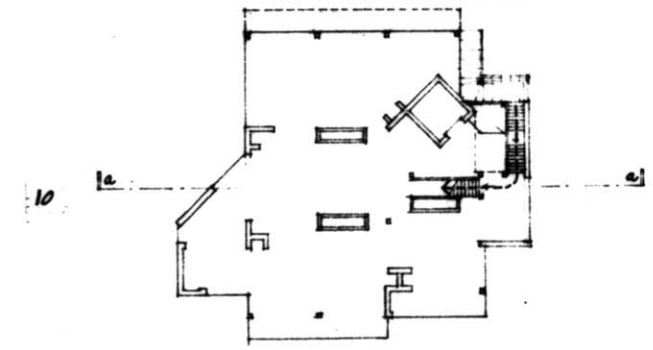
LINEAR FRAME



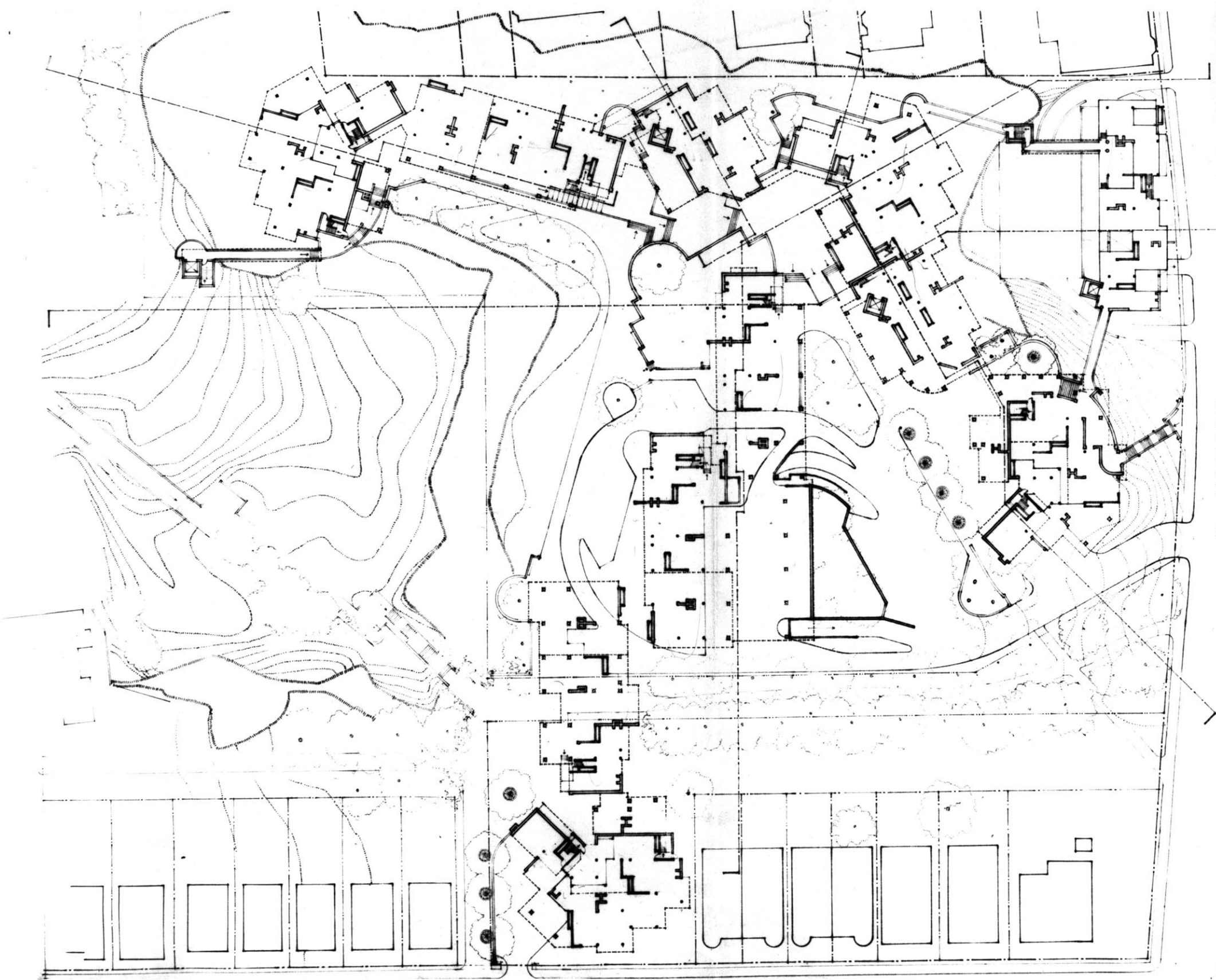
END FRAME



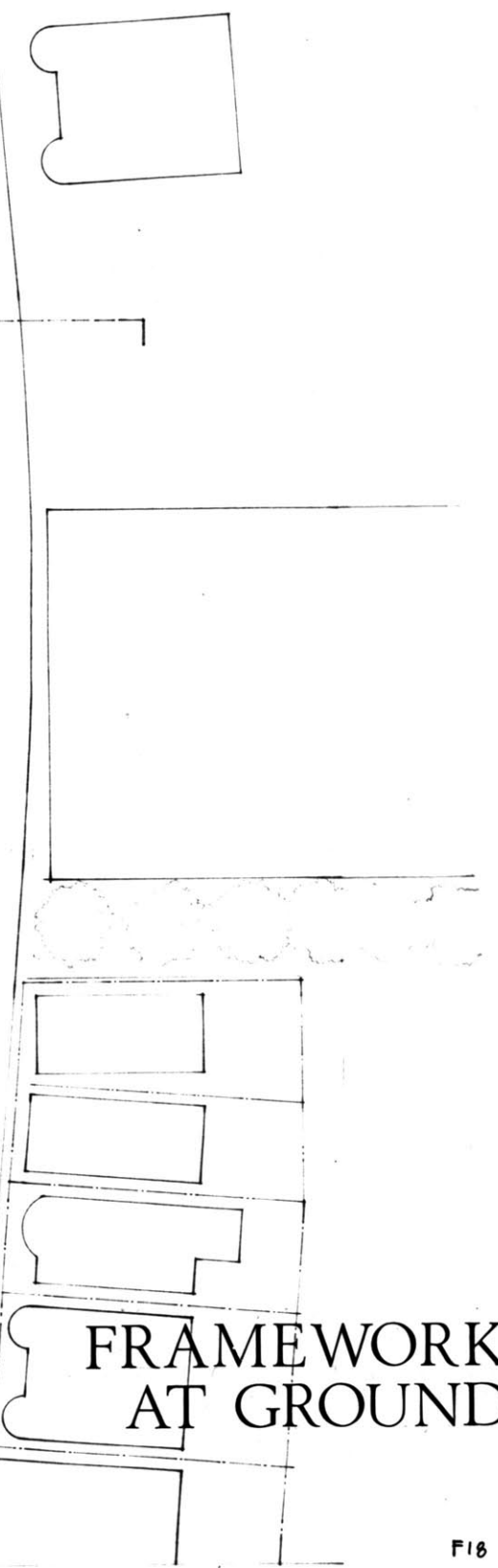
WESTERN EXPOSURE:
VERTICAL SUN BRACK ON ALL
LEVELS OF C AND UPPER-LEVELS OF B.



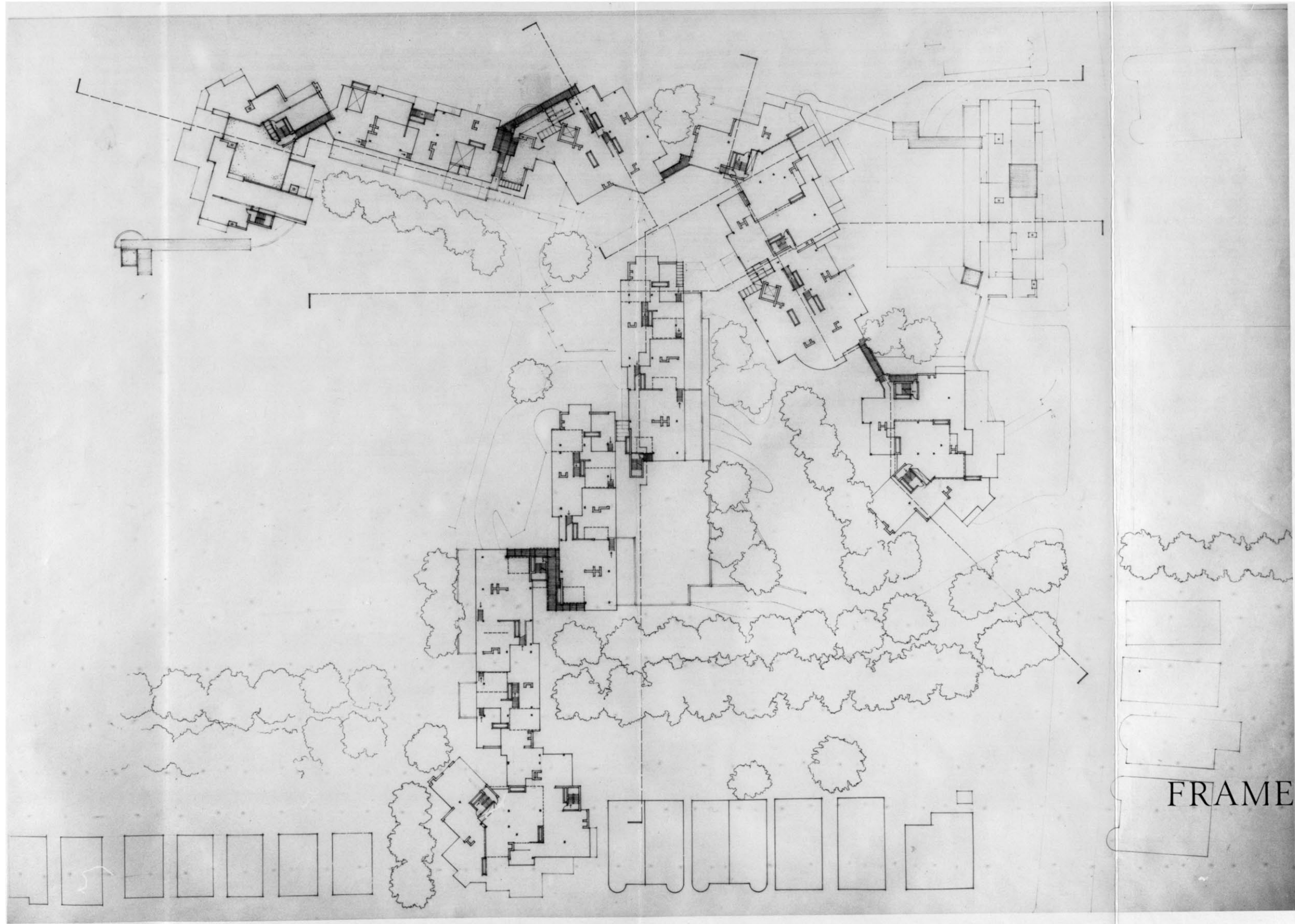
TALL FRAME



ST. ALPHONSUS

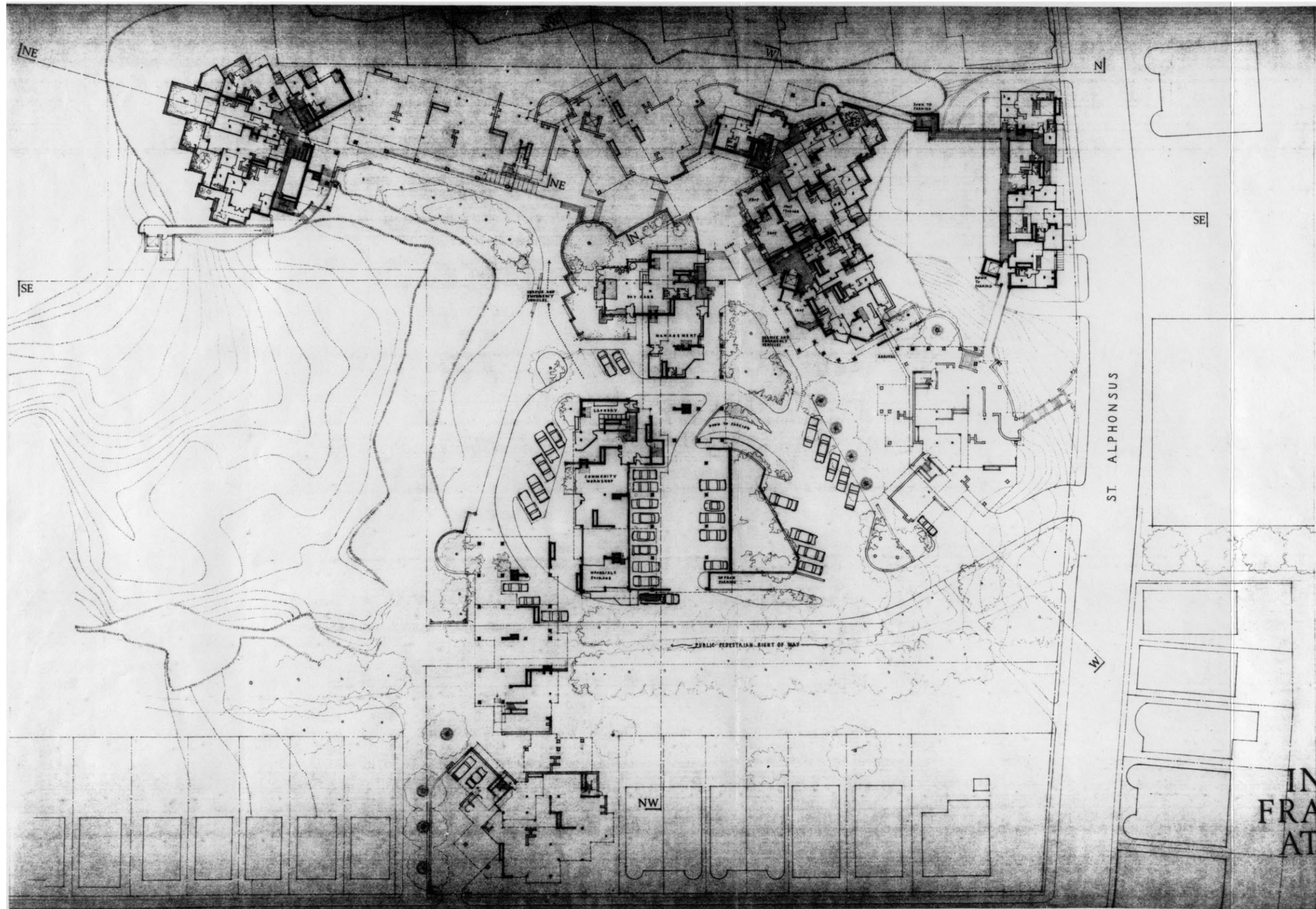


FRAMEWORK
AT GROUND



FRAMEWORK
AT 22'6"

A PROPOSAL FOR THE
QUARRY
 MISSION HILL, BOSTON
 M. ARCH. THESIS, M.I.T.
 RENNER AND VAN DAM
 JANUARY, 1976.



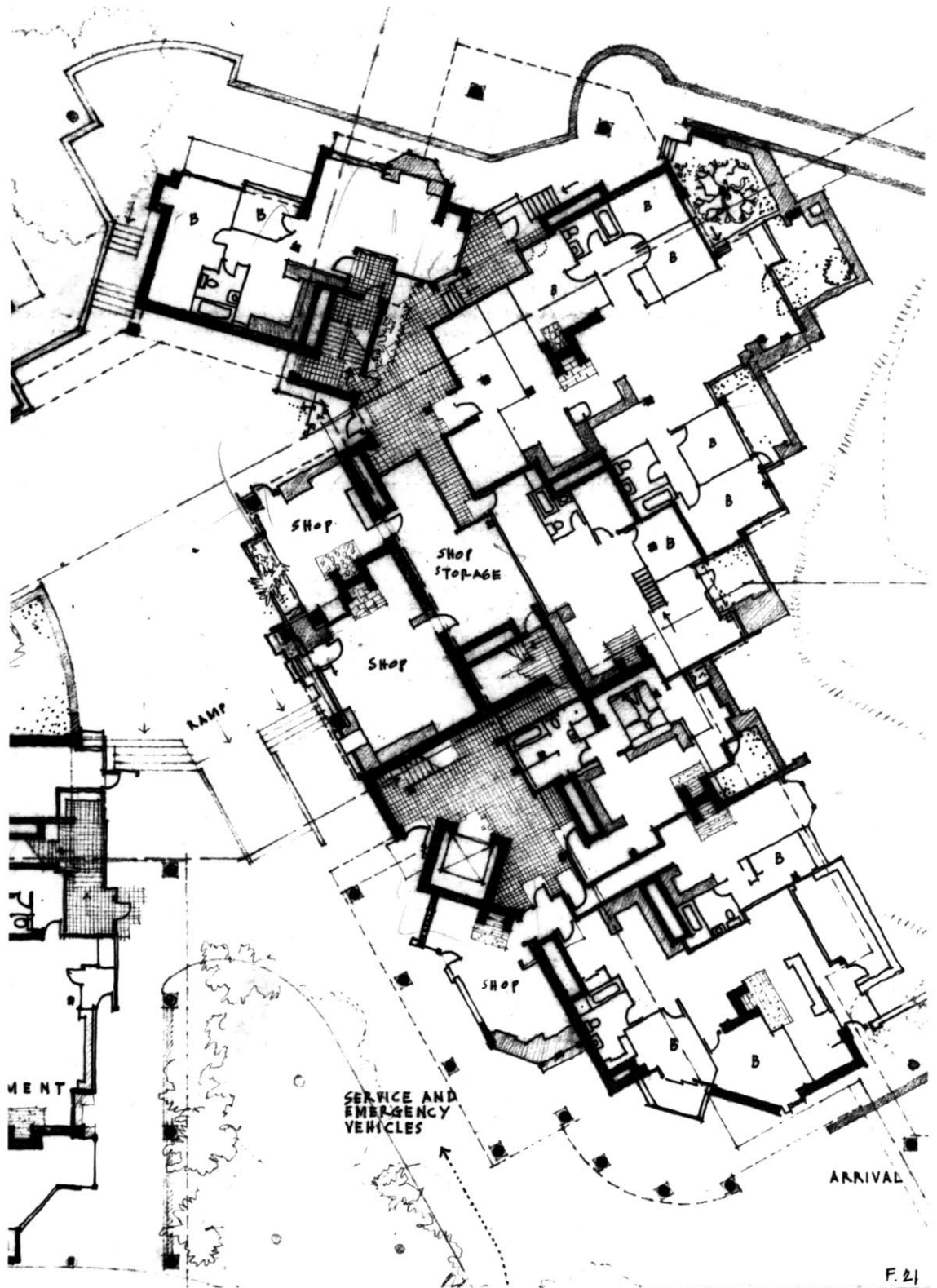
ST. ALPHONSUS



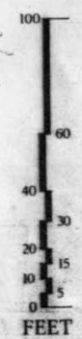
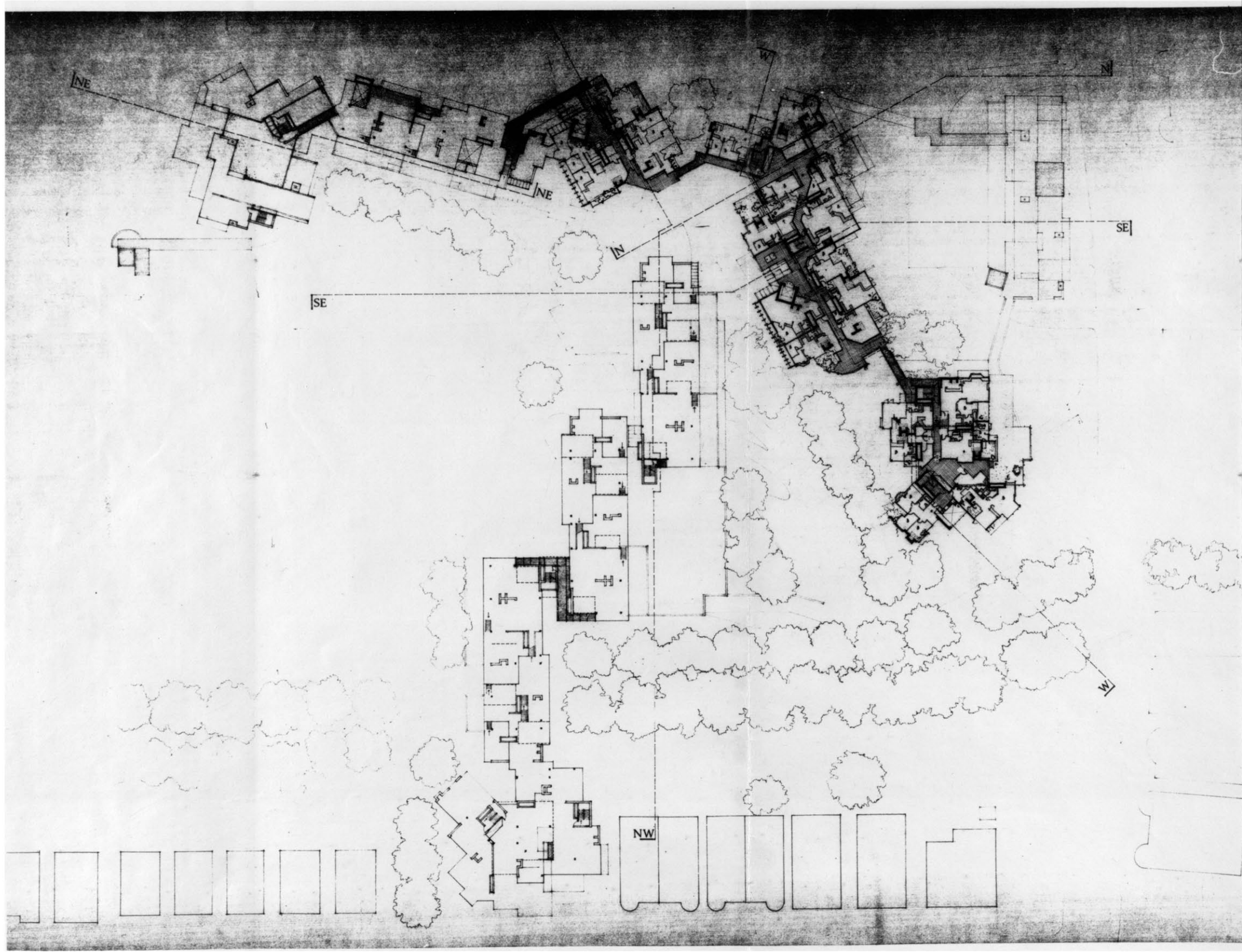
NORTH



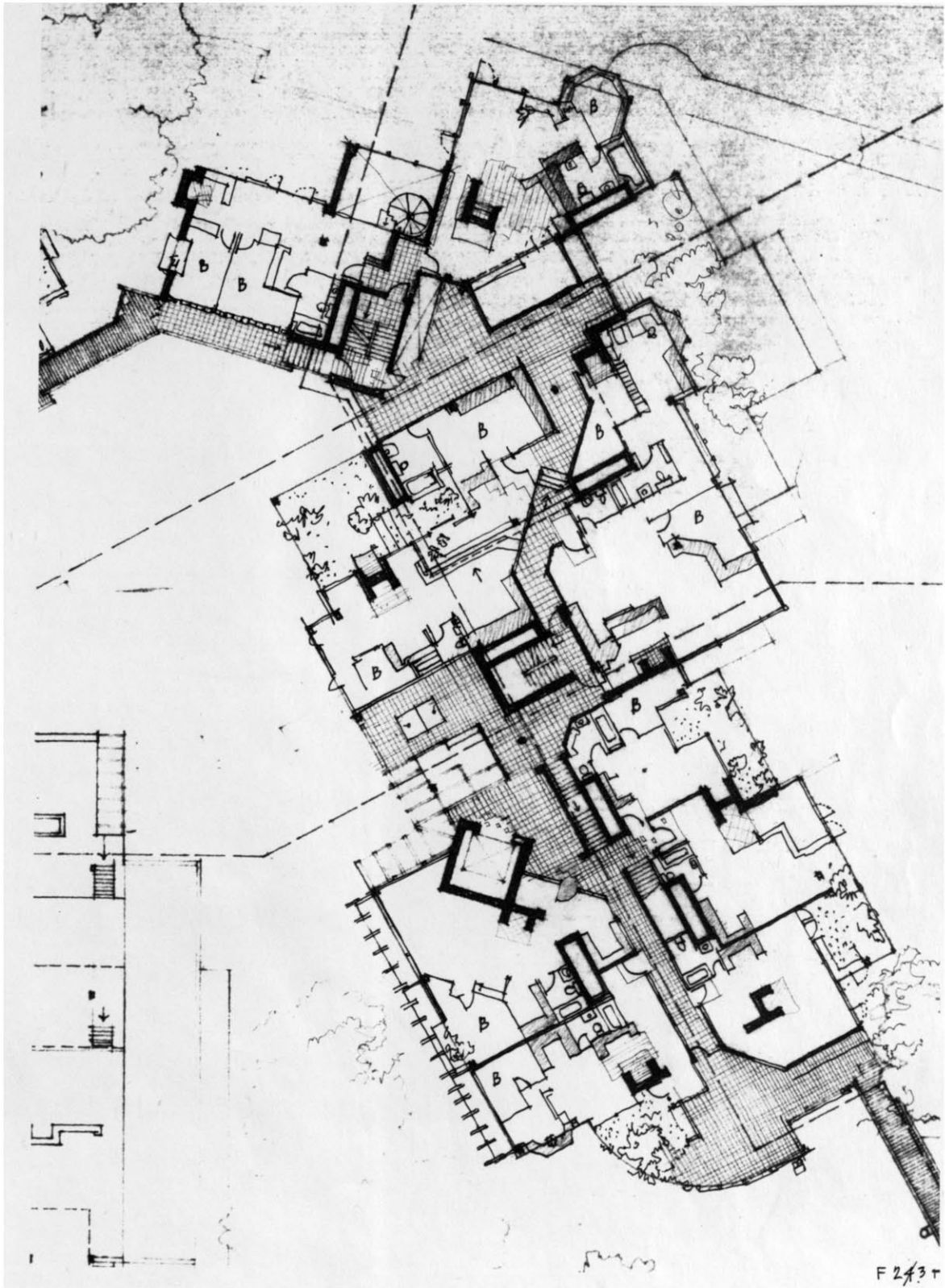
**INHABITED
 FRAMEWORK
 AT GROUND**



A PROPOSAL FOR THE
QUARRY
MISSION HILL, BOSTON
M. ARCH. THESIS, M.I.T.
RENNER AND VAN DAM
JANUARY, 1976.



**INHABITED
FRAMEWORK
AT 22'-6"**



NW

NW

SE

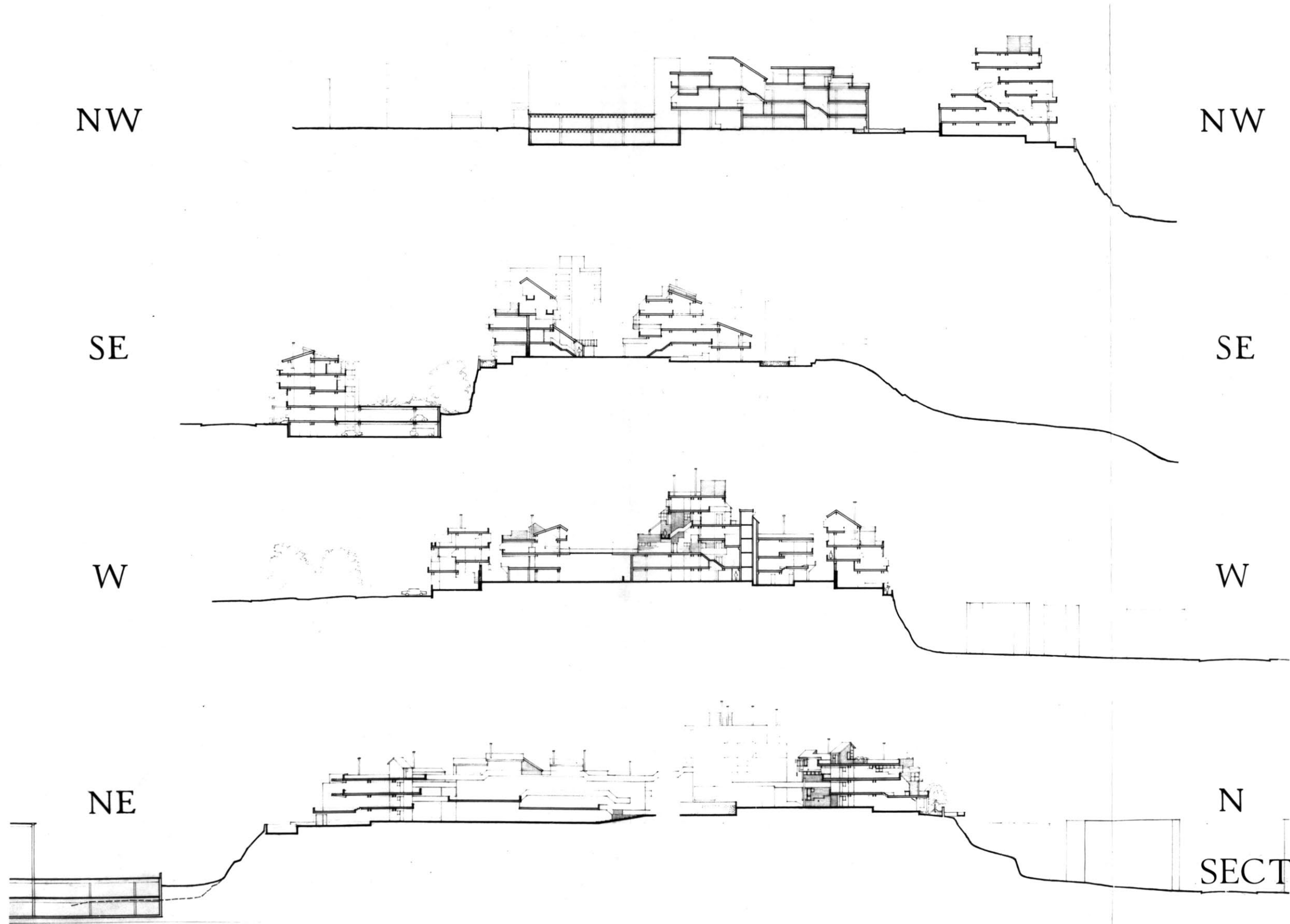
SE

W

W

NE

N

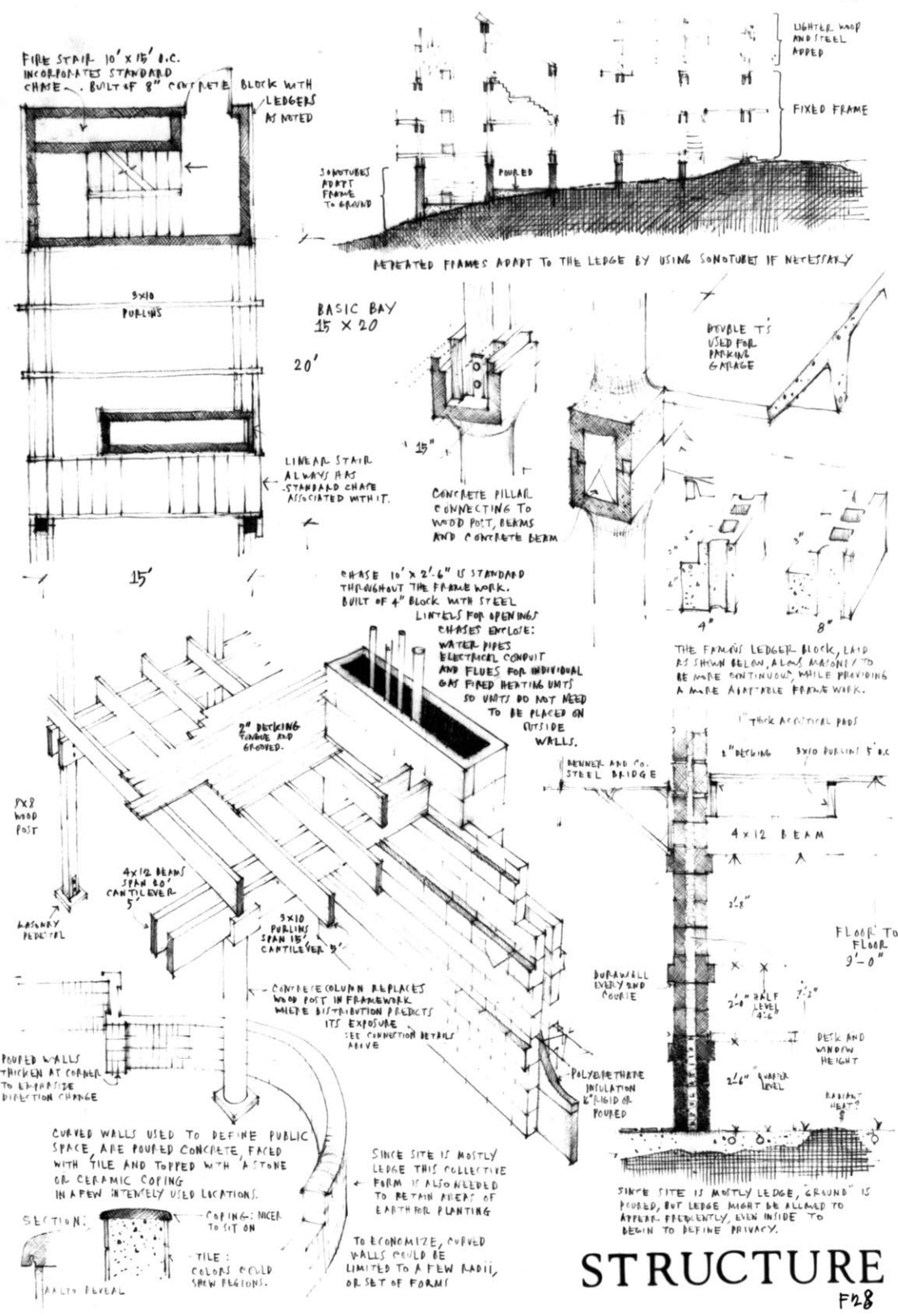


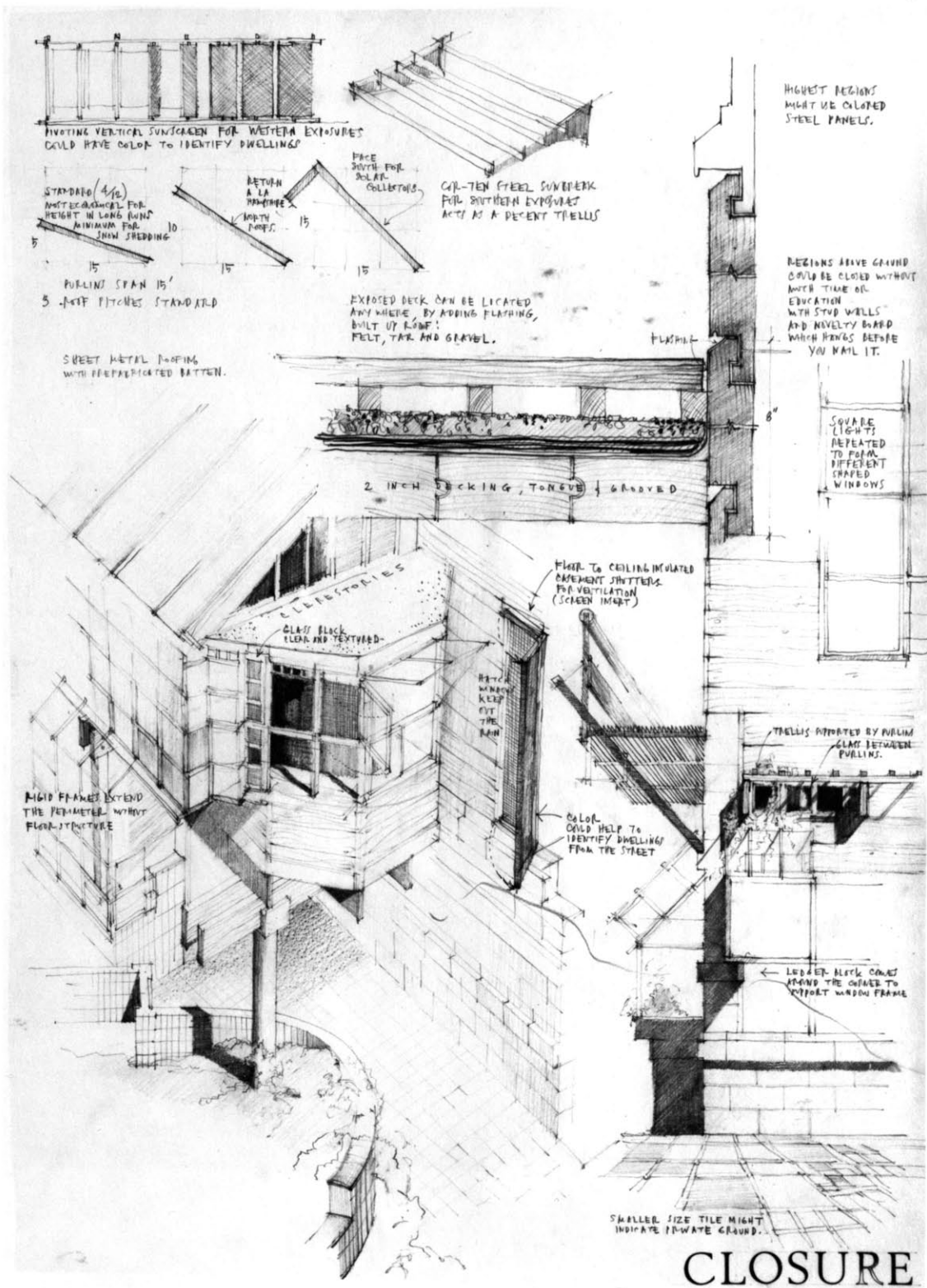
SECTIONS











CLOSURE

F 29

APPENDIX G

EXCERPTS FROM

MEMORANDUM OF UNDERSTANDING

(By and Between

ROXBURY TENANTS OF HARVARD ASSOCIATION, INC.

and

PRESIDENT AND FELLOWS OF HARVARD COLLEGE

FEBRUARY 1976

II Development Agreement

Harvard agrees with RTH, both directly and in RTH's capacity as a member of Mission Park Associates, that RTH shall have the right to approve the following items of the Program of Development:

- A. The number of housing units and the type thereof;
- B. The ratio of apartments containing one or more rooms, hereinafter referred to as the "unit mix", and the size and layout of such apartments;
- C. The subsidy financing programs to be used, the number of units to be so subsidized and the initial projected rentals for each housing unit;
- D. The preliminary site plan;
- E. Preliminary elevations and outline specifications;
- F. The basic exterior materials;
- G. The building systems to be used; and
- H. The Tenant Selection Plan, Affirmative Marketing Plan, the Management Plan, the Management Contract and the form of Tenant Lease to be approved by MHFA.

III Management Agreement

Harvard agrees that RTH shall be a co-manager of the Project with the rights and obligations set forth below and shall cause the owner of the Project (the "121A Corporation") to execute a management contract with RTH which contract shall,

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prior to the maturity of the MHFA mortgage, be terminable only by MHFA. In addition, Harvard further agrees that subsequent to the repayment of the MHFA mortgage, and provided Harvard has the general operating responsibility for the Project, either as owner of a majority of the stock of the 121A Corporation or under the terms of any agreement between Harvard and the owner of a majority of the stock of the 121A Corporation, it will not terminate the co-management agreement.

Under the terms of the co-management agreement RTH shall have the right to participate in causing certain aspects of the management of the Project to be conducted as follows:

A. The initial management agent shall be Hunneman & Co., Inc.

B. A successor management agent or substitute management agent shall not be selected without concurrence of RTH.

C. Harvard shall be responsible for the supervisory management of the Project and shall have the right at its sole option to terminate the management contract with the managing agent if required under the provisions of the documents providing for the equity financing of the Project, or if in its judgment the quality of the Project maintenance or management is unsatisfactory. Failure to earn the approved return shall constitute unsatisfactory management, RTH shall have the right to approve any successor management agent. In the event of a disagreement concerning a new managing agent MHFA shall be requested to appoint a new managing agent.

D. RTH shall have the right to observe the activities of the management agent and obtain information from the 121A Corporation, and Harvard and the management agent at reasonable times concerning the activities comprising the management of the Project.

E. If RTH shall conclude that the management of the Project is unsatisfactory, it shall so advise Harvard and the managing agent in writing, and shall set forth in such notice its specific complaints. If thirty (30) days after such notice has been served, the problems have not been resolved to the satisfaction of RTH, it may request that the management contract be terminated and a new management agent selected.

If during such thirty (30) day period, Harvard and RTH disagree concerning the complaints made by RTH, either party may submit the matter to arbitration and agree to MHFA as arbitrator. The management agent shall have a right to appear before MHFA and be heard with respect to the issues

presented. The decision of MHFA shall be binding upon Harvard and RTH. If the management agent shall fail to comply with an award of MHFA within thirty (30) days Harvard shall terminate the management contract.

IV Financial Arrangements

RTH shall be paid \$50,000 at the initial loan closing (less such sums as have been advanced by Harvard prior to closing) and during the construction period in accordance with the schedule attached as Exhibit D. This payment shall cover the salary of RTH's staff, office expenses, and accounting and legal fees. Commencing thirty months after the initial loan closing, RTH shall be paid by the 121A Corporation at the rate of \$15,000 per year in each of the next five years for its services in tenant orientation and training, tenant counseling and/or related matters to the extent RTH's share of any distribution from Mission Park Associates is inadequate to yield \$15,000 per annum during such period. Following such five year period, RTH and the 121A Corporation shall negotiate an appropriate level of compensation for the services rendered by RTH to the 121A Corporation.

So long as Citicorp is a stockholder in the 121A Corporation, RTH shall receive one-half of all cash flow distributions paid to Harvard with respect to its stock by the 121A Corporation, such payments to commence after reimbursement of Harvard's advances to support unfunded construction costs, guaranteed Citicorp dividends and prior project operating costs. Should Harvard purchase the interest of Citicorp in the 121A Corporation, RTH shall be offered a twenty percent equity interest in the 121A Corporation for a purchase price consisting of (A) \$1.00 and (B) an amount equal to twenty percent of the amount paid by Harvard to Citicorp to purchase Citicorp's interest. The portion of the purchase price described in (B) above shall be paid in installments subsequent to the purchase of RTH's interest in amount equal to the distributions made from time to time to it in respect of its stock interest in the 121A Corporation until the purchase price is paid in full.

The co-management contract and any related agreements between RTH and Harvard or the 121A Corporation shall provide that RTH will make no change in the provisions of its Articles of Organization or By-Laws with respect to the geographic and financial eligibility for voting membership in RTH and that all financial and participatory benefits derived by RTH under such agreements shall be exclusively for the benefit of the Project or related purposes consistent with the RTH Articles of Organization.