A NEW GRADUATE CENTER FOR
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Architecture at the Massachusetts Institute of Technology.

August 10, 1959

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University of Washington, 1955
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August 10, 1959

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Dear Dean Belluschi:

In partial fulfillment of the requirements for the degree of Master of Architecture I would like to submit my thesis entitled, "A New Graduate Center for Massachusetts Institute of Technology".

Sincerely yours,

Paul R. Dermanis
I would like to take this opportunity to express my appreciation for the guidance and encouragement given me in the development of this thesis.

To:
Professor Imre Halasz
Mr. Paul Nelson
Mr. Norman Fletcher

I would also like to thank the members of MIT faculty, staff, and student body who were helpful to me with information, suggestions and ideas.

Particularly:
Dean Harold Hazen
Professor Avery Ashdown
Professor Thomas Mix
Mr. James Kelso
Mr. Richard Balch
Mr. Malcolm Rivkin
Mr. Bruce Shore
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ABSTRACT

a. Title: A New Graduate Center for Massachusetts Institute of Technology.


c. Submitted for the degree of Master of Architecture in the Department of Architecture on August 10, 1959.

d. Abstract of thesis:

The problem of this thesis is the design of a new graduate center for MIT. The design is based on the anticipated needs of the Institute by 1975. The new center would provide housing for 1200 men constituting about 40% of single male graduate students. It would also be a focus of social life of the graduate student body and would accommodate extra-curricular activities of an intellectual nature.

The selection of a site is also one of the problems of this thesis. The site selected is the site presently occupied by the Graduate House, the adjoining row houses and the parking lot, bordered by Massachusetts Avenue, Memorial Drive, Amherst Street and Danforth Street.

Particular emphasis has been placed on the long-range architectural development of MIT campus.
I. GUIDING IDEAS IN DESIGN

In designing a building complex accommodating 1200 students and providing social, dining and recreational facilities for many more, it seems impossible to limit the problem as purely architectural. It becomes also a problem of educational and social philosophy. Ideas in the fields of education and social philosophy held by the architect or the lack of them will influence students for many years to come.

Two graduate centers built in the northeast section of the country in the last fifty years are the Princeton Graduate College designed by Ralph Adams Cram in 1913 and the Harvard Graduate Center designed by Walter Gropius and the Architects' Collaborative in 1950. While the Princeton Graduate College has been designed in English Gothic, the Harvard Graduate Center is uncompromisingly modern. The difference between these two building complexes reflects not only changes in fashion and an economic inflation, but also changes in educational philosophy and social conditions.

Both Cram and Gropius believed that their architectural missions had profound cultural implications. Cram was convinced of a need of historic and cultural continuity expressed in architecture, and he felt that English Gothic was expressive of Princeton's spiritual and intellectual lineage from the medieval cathedrals and English universities such as Oxford and Cambridge. At the time the Graduate College was built, Princeton was rejecting the German conception of Akademische Freiheit which allowed the students to choose their own studies freely and to live wherever they chose. The residential life of the students at Princeton was considered to be an
important part of education.\(^1\)

Cram believed that society should be aristocratic in its organization. Emphasis was placed upon the creation of small social groups by means of many entrances and divisions by cross walls.\(^2\)

A different view was taken by Walter Gropius and President Conant of Harvard under whose administration the Graduate Center was built. Conant believed that there is "an explosive force inherent in a stratified society" and that "one of the highly significant ideals of the American nation has been the equality of opportunity".\(^3\) The individual rooms at Harvard are identical and contain the same mass-produced furniture. The social areas are public and not conducive to the formation of exclusive groups.

The present Graduate House at MIT was established in the belief that those contacts which aid in developing qualities of leadership and co-operation would be encouraged by bringing graduate students into one group. It was also pointed out that the most natural training comes from free social intercourse between men of different interests but of equivalent intellectual outlook.\(^4\)

In February 1958, the Committee on the Future of the Graduate School at MIT published a report concerned, among other things, about the size and scope of a new Graduate Center at MIT. It was the conviction of the committee that an interdepartmental sense of community is essential among graduate students. A new center would provide maximum opportunities and inducements for informal contact and interchange.
between men working in different fields. The committee emphasized that there is a minimum scale on which such physical facilities must be conceived if these opportunities are to be achieved. A mere rearrangement of dormitory quarters, concentrating graduate students, for example, in existing facilities at the east end of the campus, would not be of lasting value.

To provide the best opportunities for informal contact and interchange of ideas it seems essential to limit the size of the group. It is in casual daily meetings, sometimes involuntary and dictated by circumstances, that social contacts develop and interchange of ideas takes place. The closer social relationship of a small number of persons sharing a common living room is more likely to give them a better insight into each other's work and ideas.

Social spaces should vary in size and scale from intimate ones accommodating a small group to larger ones serving groups of several hundred, thus creating a hierarchy culminating in the largest social spaces serving the entire graduate student body. A student should have a sense of belonging to a group which in turn belongs to a larger group. Yet, while being a member of several residential groups of different sizes, each individual should have the opportunity for perfect seclusion in a completely private area of limited size.

If there is a consistent architectural tradition at MIT, it is one of bold thinking and the acceptance of contemporary ideas. In the design of its own physical plant, as well as in science and technology, MIT has not only accepted what is best at present, but also shown the way to what is best for the future.
II. FUTURE GROWTH OF MIT

Before any estimates of the size and location of a new Graduate Center can be made, a study of the future growth of MIT is essential.

In June 1958, the Planning Office of MIT submitted an estimate of population increase by 1975 to the Long Range Planning Committee and the Academic Council. It predicts a doubling of the graduate school and the faculty and only a minor expansion of the undergraduate school. (Table 1)

The administration of the Institute believes that the graduate school will exceed the undergraduate school in size in the next 8-10 years and that the graduate school should be the primary concern in future campus planning. The undergraduate school, although exceeded in size by the graduate school, will still be an important part of MIT.

How much additional building space will MIT require in future years? The selection of a site for a Graduate Center cannot be separated from the larger problem of overall campus expansion. Any prediction for the future depends on too many variable factors to be accurate, such as enrollment or policies of the administration. For present planning purposes, the enrollment increase estimate till 1975 has to be accepted as a basis for design.
Table 1

PROJECTED POPULATION FOR MIT

Compiled by the MIT Planning Office from Registrar's and Bursar's reports. Figures for 1967 and 1975 interpolated from present trends.

<table>
<thead>
<tr>
<th>Category</th>
<th>1951</th>
<th>1957</th>
<th>1967</th>
<th>1975</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduates</td>
<td>3,154</td>
<td>3,650</td>
<td>4,000</td>
<td>4,000</td>
</tr>
<tr>
<td>Graduates</td>
<td>1,720</td>
<td>2,480</td>
<td>4,000</td>
<td>5,200</td>
</tr>
<tr>
<td>Faculty</td>
<td>457</td>
<td>607</td>
<td>1,000</td>
<td>1,300</td>
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A. Academic and Research Space

Over the past 17 years the ratio of floor space to student has remained constant at about 380 sq. ft. Table 2 shows the projected space additions based on an index of 380 sq. ft. per student. Table 3 shows the projected space additions based on an index of 250 sq. ft. per new undergraduate and 400 sq. ft. per new graduate student. The results are similar at over 1,100,000 sq. ft. For planning purposes, 1,200,000 sq. ft. of additional floor space can be considered as the 1975 need.
Table 2

PROJECTED SPACE ADDITIONS BASED ON AN INDEX OF 380 SQ. FT. PER STUDENT (GROSS) FOR 1975

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Floor Space Academic, Research, and Special Research</th>
<th>No. of Students</th>
<th>Additions Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>1957</td>
<td>2,390,000</td>
<td>6,137</td>
<td></td>
</tr>
<tr>
<td>1975</td>
<td>3,480,000</td>
<td>9,200</td>
<td>1,090,000 sq. ft.</td>
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Table 3

PROJECTED SPACE ADDITIONS BASED ON AN INDEX OF 250 SQ. FT./NEW UNDERGRADUATE AND 400 SQ. FT./NEW GRADUATE STUDENT (GROSS) FOR 1975

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Floor Space Undergraduate Growth Academic, Growth Research and Special Research</th>
<th>Graduate Space Increase from Under-graduates</th>
<th>Space Total Increase Space from Under-graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1957</td>
<td>2,390,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1975</td>
<td>3,520,000</td>
<td>350</td>
<td>2,780</td>
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<tr>
<td></td>
<td></td>
<td>19,000</td>
<td>1,111,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1,130,000</td>
</tr>
</tbody>
</table>

Source: MIT Planning Office
B. A Graduate Center

Currently MIT houses 32% (450) of its unmarried graduate students in the Graduate House. By 1975 there will be a graduate student body of 5200 students with about 3000 single students. Since a number of applicants for residence in the Graduate House has been turned down each fall, 40% of single graduate students or 1200 would be a better estimate for initial planning till 1975. In the present Graduate House there are 384 sq. ft. per occupant. Considering that the new Graduate Center would include common facilities not available in the present Graduate House, the per occupant index should be raised to 400 sq. ft. Thus, a 1200 man Graduate Center would require about 480,000 sq. ft. of building space.

C. Undergraduate Facilities

By 1975 the Institute may be expected to have 4000 undergraduates. The present number of undergraduates residing in dormitories is 1585 or 45% of the total undergraduate enrollment. It can be assumed that an improved house resident system would attract a larger percentage of undergraduate students than at present. Assuming 60% as the percentage of undergraduates residing in dormitories by 1975, the number of students to be accommodated will be 2400. It might be reasonable to assume that new space for approximately 800 students will be necessary by 1975. At 400 sq. ft. per student, 320,000 sq. ft. of new building space will be needed.

D. Women's Dormitory

At MIT there are now over 100 undergraduate and graduate women. A number are now staying at Bexley Hall which may be
torn down to make way for an extended plaza and a religious center. A new women's dormitory, housing about 100 students at 400 sq. ft. each, would require 40,000 sq. ft. of floor space.

E. Student Center

The Student Center Committee has urged that a new Student Center contain 70,000 sq. ft. of floor space and that an additional 30,000 sq. ft. of commercial space be built on campus to replace the Mercantile Building and the Technology Store.

F. Athletic Plant

The athletic department has requested an eventual addition of 640,000 sq. ft. on land now occupied by Westgate and Westgate West.

G. Parking

To handle the anticipated increase in academic and research activity, MIT may have to provide an additional 1800 spaces by 1975. To accommodate the cars of students residing on campus, about 1350 spaces may be needed by 1975, allowing one car for every two graduate students and one car for every three undergraduates. Due to the limited amount of land available and the high cost of acquiring new land, the construction of multi-story garages will be necessary. Assuming an index of 300 sq. ft. of space per car, MIT may need about 950,000 sq. ft. of parking area by 1975.
Density

How much more building space can the current campus take? Should the present density standard be increased? It should be realized that MIT is an urban university where land costs require higher densities. At the same time it should also be realized that a university has to provide an open, enriching environment for its students and faculty.

Table 4 shows the comparative floor area ratios for different universities with the density of MIT somewhat higher than average.

To accommodate the predicted expansion of MIT in the future it seems unavoidable that the density ratio will have to be increased. The solution seems to be multi-story elevator structures of relatively low ground coverage to retain spaciousness at the pedestrian level.
| Case, excluding athletic fields and lower level parking | 0.98 |
| Western Reserve Adelbert campus, excluding athletic fields | 0.6 |
| University Hospitals, Cleveland | 1.5 |
| Cleveland, maximum allowable in University Circle area, by ordinance | 1.5 |
| Harvard University, Yard | 0.75 |
| Illinois Institute of Technology (new academic campus) | 0.98 |
| University of Chicago, excluding athletic fields | 1.0 |

MIT East Campus (Mass. Ave., Vassar St., United Carr, Ames St., Memorial Drive) 1.2

MIT - Vassar St., east of Mass. Ave. 0.78

West Campus - to Audrey St. (All facilities including Westgate and restaurants and athletic fields) 0.50

excluding athletic fields 0.71

F.A.R. (floor area ratio) = amount of floor space/amount of land on site

Source: MIT Planning Office
The classic order and serenity of the Great Court
III. CAMPUS PLANNING CONSIDERATIONS

The development of MIT's campus during the next 20-30 years depends to a large extent on the location of the Graduate Center and the subsequent campus planning implications. Therefore, a brief discussion of the development of MIT's campus and its present state would be relevant. Welles Bosworth's initial concept of MIT's campus was one monumental building around the Great Court. After the last part of the main building was completed in 1938, further expansion has been difficult from a campus planning viewpoint. The main academic building and the Great Court are elements complete in themselves and are difficult to connect to new expansion. The expansion north and east of the main building consists of individual buildings not very satisfying as a group spatially. The dignity and serenity of the Great Court is contrasted by small haphazard spaces and the ubiquitous parking lots.

The campus development west of the main building and Massachusetts Avenue has absorbed buildings that were not built for the purpose they are serving now, such as the Graduate House and the Burton House. The Mercantile Building, Bexley Hall and Technology Store, in addition to Massachusetts Avenue, are barriers between the east and west parts of the campus. A start to organize the West Campus spatially was made by Eero Saarinen with the plaza development around Kresge Auditorium and the chapel. Otherwise, the West Campus is a linear development of buildings along Memorial Drive.
Lack of spatial order among the expansion
Now that large-scale campus planning is again necessary with the design of the Graduate Center, the standard set in 1916 by Welles Bosworth should be kept in mind as the minimum for future growth.

The depression of Massachusetts Avenue and an overpass are the prerequisites for successful integration of East and West Campus. The Mercantile Building, Bexley Hall, and the Technology Store should be removed to connect the plaza to the main educational building. A landscaped strip would separate the plaza from Massachusetts Avenue and a religious center would be built in the present location of Bexley Hall. A student center would be built on the north side of the plaza.
IV. CRITERIA REGARDING THE SELECTION OF THE SITE

Ideally, the site of the Graduate Center would have to meet the following criteria:

A. Proximity to the academic buildings.
One of the advantages of the present Graduate House is its proximity to the academic buildings. Many graduate students are conducting research or teaching classes requiring numerous short trips to the academic buildings. If the distance was increased considerably, it might be the deciding factor for many students to look for accommodations across the Charles River in Boston or elsewhere in Cambridge.

B. Proximity to social, cultural, athletic and religious activities.
As the graduate students will in the future comprise the largest part of MIT's student body, the Graduate Center should be in a convenient distance from social, cultural, athletic and religious activities if they and the graduate students are to benefit from each other. The mentioned activities are concentrated around the plaza and include, specifically, the chapel, Kresge Auditorium, Rockwell Cage and the athletic fields, and the proposed Student Center.

C. Proximity to public transportation.
Many graduate students are depending on the MTA for transportation. To them, access to an MTA line is important.

D. Effective separation from the industrial surroundings of Cambridge.
MIT is surrounded by an industrial area, containing many odor-producing factories.
E. View of Charles River and Boston.
Since MIT is fortunate to be located on the Charles River, it seems appropriate that the largest and most important body of its residents should be able to enjoy the view.

F. Parking.
Since about one half of the graduate students now residing in the Graduate House own cars, land should be available nearby for parking lots or parking garages.
V. SELECTION OF THE SITE

There are several sites on MIT campus capable of accommodating the Graduate Center.

A. The site occupied at present by the temporary housing at Westgate. The distance to the main academic buildings, the library and any means of public transportation is the most important objection. Furthermore, a Graduate Center on the Westgate site would create another architectural climax on the West Campus, competing with the plaza at Kresge Auditorium, particularly since the latter would remain incomplete as an architectural space.

B. An East Campus site in the block east of Ames Street and north of Amherst Street. Although close to the academic buildings, the Graduate Center would be separated from the athletic fields, chapel and auditorium, and the proposed Student Center. It would be surrounded by industrial buildings and most of the view would be blocked by the apartment house at 100 Memorial Drive. The expansion of academic buildings east would be blocked leaving the area across the tracks as the only direction for expansion.

C. The block occupied at present by the Graduate House, the adjoining row houses and the parking lot. It is limited in size, but further expansion after 1975 could take place in the area west of Kresge Auditorium, moving the athletic fields farther west.
This is the site that has been selected in the context of this thesis. The author is aware that it also has drawbacks - its limited size, exposure to the traffic at the intersection of Massachusetts Avenue and Memorial Drive and the loss of the present Graduate House. On the other hand, it is very close to the academic buildings, it has a magnificent view, and the plaza with the auditorium and the chapel would become an effective focus of the non-academic life at MIT. It would become an enclosed space visually, being bordered by the main academic building after the depression of Massachusetts Avenue, the Student Center and the new Graduate Center. Further expansion of the Graduate Center west of Kresge Auditorium would enclose the plaza on the fourth side.

The decision to place the Graduate Center on the mentioned site entails the demolishing of the present Graduate House. This seems to be the time to decide whether it will remain a permanent part of MIT campus for many years to come. The Graduate House at the present time is in need of remodelling. If it was converted into an undergraduate dormitory, some additional remodelling would be necessary. The present building was built almost 60 years ago as a hotel and was not intended for student occupancy. Since its service side and the adjoining parking lot face the entrance side of the plaza, it prevents a successful development of the latter.

If the Graduate Center is located on the mentioned site, the expansion of the campus as described in paragraph II can take place without difficulty. The academic buildings can expand in the block east of Ames Street and north of Amherst Street as land is acquired.
New undergraduate dormitories and a women's dormitory can be built along Memorial Drive on the site formerly occupied by the Solar House and on the land now leased to the Smith House restaurant and Howard Johnson's.

The athletic plant can expand into the site now occupied by Westgate temporary housing.

Parking structures of several stories can be constructed in the area between Vassar Street and the railroad tracks.
The selected site seen from Kresge Auditorium
The plaza and chapel seen from the selected site
VI PROGRAM

With some exceptions to allow for individual differences, the Center would be organized in the following way.

4 study-bedrooms would be combined into a suite with 1 living room and bathroom.

About 75 suites would form a house with its own social areas. One housemaster would reside in each house.

4 houses would form the Center with social areas used by the entire graduate student body.

A. Residential

Study-bedroom 85 sq. ft. each

The basic unit of the residential part of the Center would be the study-bedroom. It would accommodate one person and would provide the necessary physical and acoustical isolation for sleeping and study. It would be just sufficiently large to accommodate the activities of sleeping and studying and contain the minimum amount of furniture - a bed, a desk, a closet, a lounge chair and a bookshelf.

Living room 250 sq. ft. each

The living room would be used for activities of a social nature such as discussions of studies and small parties. Each living room would have a balcony, preferably facing the river. Adjoining the living room would be a small kitchenette, containing in one unit a range, a refrigerator
and a sink, which could be concealed behind a folding door.

Bathroom
The four-bedroom suite would have a bathroom consisting of two compartments. One would contain a bath with a shower, the other, a toilet and a lavatory.

To accommodate students to whom the arrangement of bedrooms into suites would not seem desirable, a certain number of deviations from the basic standard are necessary. A number of single rooms, two sharing a bath, would accommodate students desiring seclusion and a number of double rooms, each with a bath, would accommodate students desiring more economical accommodations than those of the suites.

Janitor's store room
85 sq. ft. each
Janitor's store rooms would be located in convenient locations to serve each 60 bedrooms. Janitor service would include weekly cleaning of rooms and halls.

Resident housemaster's suite
Would be located in each house, of sufficient size to accommodate the needs of each particular housemaster.

B. House Social Facilities

House lounge
500 sq. ft.
Used for conversation, reading, meeting visitors.

TV room
450 sq. ft.
Would accommodate both regular TV and closed circuit educational TV.
Vending machine room

450 sq. ft.

Would accommodate vending machines for soft drinks, ice cream, sandwiches, cigarettes, coffee.

Party room

2000 sq. ft.

Would accommodate groups of several hundred. Used primarily by the residents of each house, but could be used also by outside groups.

Game room

1600 sq. ft.

Would accommodate ping pong, billiards and similar games.

C. House Service Facilities

Trunk room

1200 sq. ft.

Used for storage of large trunks and bulky objects, such as skis and bicycles.

Laundry

800 sq. ft.

Would accommodate 5 automatic washers, 5 automatic dryers and ironing boards for use by residents of each house.

Linen issue room

500 sq. ft.

D. General Center Facilities

Lobby

2500 sq. ft.

Would serve as a gracious entrance to the Center. The main desk would be located in the lobby with an attendant on duty at all times. Mail would be received at the main desk, sorted and distributed in mailboxes in the lobby.
The telephone switchboard would be located at the main desk.

Administrative offices

Would consist of a reception area accommodating a secretary and two offices for the manager and his assistant.

Main lounge

Located near the lobby, serving as a meeting point for the entire graduate student body. A large fireplace would be the center of interest in the lounge.

Coat rooms and public rest rooms

Located at entrance points to the center.

Guest rooms

10 guest rooms for visiting faculty members and students would be located in one residential unit.

E. Dining Facilities

Main dining room

Seating would accommodate 500 persons. Food would be served cafeteria style, in two serving lines. The average serving capacity of a cafeteria serving line being 5-6 persons/minute, in two hours the cafeteria could serve 1200-1400 persons.

Large private dining room

Would be used for banquets accommodating 250 persons.
2 small private dining rooms 400 sq. ft. each
Used for smaller groups, each accommodating 30 persons.
Partitioning would be flexible, so that the dining rooms
may be combined.

Coffee shop and snack bar 1500 sq. ft.
Would serve coffee, sandwiches, etc. A counter and indi-
vidual tables.

Kitchen 4500 sq. ft.
Would include:
Receiving and storage
Garbage disposal
Vegetable cleaning and preparation
Meat preparation
Walk-in refrigerators
Cooking area
2 dishwashing stations
Employees' locker rooms with adjoining toilets
Manager's office

F. Extra-Curricular Academic Activities

Assembly room 6000 sq. ft.
Used for lectures given by visiting lecturers for smaller
groups than could be accommodated in Kresge Auditorium.
Also used for receptions and dances.

4 meeting rooms 600 sq. ft. each
Used by different graduate student groups for meetings
and conferences
G. Recreational Facilities

Library

1600 sq. ft.

Would serve recreational purposes only. Would accommodate the present Graduate House Crafts Library, future expansion and magazines and newspapers. Operation would be self-service.

Music rooms

1600 sq. ft.

Used for record listening and for playing of musical instruments. One room would be larger to accommodate a piano and the record collection. The other three would be smaller and would accommodate record players.

2 dark rooms

200 sq. ft. each

H. Miscellaneous

Maintenance shop

1600 sq. ft.

Intended primarily for custodial use, but would be available for use also by students.

Maintenance personnel locker room

300 sq. ft.

Toilet and lavatory adjoining.

Store

3000 sq. ft.

A small store would be operated by a concessionaire selling magazines, groceries, toilet articles. It would also be a pickup and delivery point for laundry and dry cleaning.
Heating
Steam from the central boiler plant.

Air conditioning
The Center would be air conditioned throughout.

Parking
Parking for residents would be provided in new parking garages between the railroad tracks and Vassar Street.
VII DESIGN SOLUTION

A. Number and Form of Residential Units

The total of 1200 students to be accommodated on the site seemed best divided into four units of 300 students each. The high density of persons per ground area indicated the desirability of a tower solution. However, isolated towers of about 20 stories would be unrelated to the existing campus buildings, which would be particularly objectionable after Massachusetts Avenue is depressed and East and West Campus is connected. Furthermore, four towers would not be very satisfying as a group, appearing more as a row.

Consequently, the author decided to use only three towers and a long block along Amherst Street the height of the main academic building and Baker House. The low block would provide a satisfying enclosure for the plaza, together with the main academic building, the new Student Center, and the future expansion of the Graduate Center west of Kresge Auditorium, which would take a similar form. Thus the plaza would become a live, enclosed space and an effective open-air center for MIT's non-academic life. From Boston the three towers would appear as a well-defined group when seen against the background of the low building.

The division of the total of 1200 students into houses would be:

3 towers with 320 students each;
1 low block with 240 students.
Initial sketches of three towers and a low block
B. **Shape of the Towers**

The view from the site towards Charles River and Boston is spectacular both by day and at night. The best view, in fact, is down the river where the sailing basin is located with the tallest buildings of Boston behind it. It seemed that the shape of the towers should recognize that fact enabling the greatest possible number of rooms to enjoy the view. After several studies the triangular shape was arrived at, in which all living rooms face the view and 75% of the bedrooms.

C. **Relation to Massachusetts Avenue and Memorial Drive.**

Due to the large amount of traffic on Massachusetts Avenue and Memorial Drive, ground floor lobbies and lounges of the residential structures would be exposed to the noise and restlessness created by passing automobiles. To minimize it and to give a better view of Charles River, the author decided to raise the ground floor of the towers above the level of the street. The base would accommodate storage, game rooms and miscellaneous services.
Map showing direction of view from the triangular towers
View of the sailing basin and Boston skyline from the sixth floor of the Graduate House
View across the river
View up the river
FOOTNOTES


2 Ibid

3 Ibid

4 Student Residence at MIT, 1959

5 Report of the Committee on the Future of the Graduate School, MIT, February 1958
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