A SCHOOL OF DESIGN AND ENGINEERING
FOR THE PROPOSED "JERUSALEM UNIVERSITY"

MASTER OF ARCHITECTURE DEGREE

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Dean William W. Wurster

Author: Saba G. Shiber

Signature redacted

September 8, 1947

M. I. T. Graduate House
Cambridge 39, Massachusetts
August 12, 1947

Mr. William W. Wurster, Dean
School of Architecture and Planning
Massachusetts Institute of Technology
Cambridge, Massachusetts

Dear Dean Wurster:

In partial fulfillment for a Master of Architecture degree, I submit my thesis entitled, "A School of Design and Engineering for the proposed Jerusalem University."

Very truly yours,

Signature redacted

Saba G. Shiber

DEDICATION

This thesis is humbly dedicated to my father and mother in Jerusalem who have been of great inspiration to me all my life.

-- Saba G. Shiber

Signature redacted

I should like to express my thanks to the following persons of the M. I. T. Architectural Department who were of great help to me in preparing my thesis:

Dean W. Wurster

Professor L. Anderson

Professor C. Koch

Mr. N. Anderson

Professor H. Beckwith

Professor R. Kennedy

Miss Florence Stiles (Rotch Librarian)

I should like to thank, also, my father who, indisposed as he has been lately, bore patiently with my persistent correspondence and sent me all the needed information without which this thesis would have been impossible.

-- Saba G. Shiber

Signature redacted

TABLE OF CONTENTS

"Youth is the time when the character is being molded and easily takes any impression one may wish to stamp on it. Shall we then simply allow our children to listen to any stories that anyone happens to make up and so receive into their minds ideas often the very opposite to those we shall think they ought to have when they are grown up?"

Plato -- "Republic"

I. INTRODUCTION

It is a rather strange but regrettable fact to know that Palestine has, so far, no university for the majority of its present population, namely the Arabs. Palestine's population according to the latest statistics is 1,870,000 people, 1,100,000 being Arabs and the remaining 770,000 Jews and others. The latter have been coming to the country in increasing numbers since 1918, in accordance with the so-called "Balfour Declaration".

Although politics is not within the precincts of an architectural thesis, yet without a short political sketch of the last thirty years, Palestine as it is known today would have been a totally different country, or at least a more peaceful country. For this reason the author considers it of relevant importance to mention a few salient facts about the governing forces which have molded the fate of Palestine for the past thirty years, and which leave Palestine at present in a predicament far from an easy solution or the hopes of a satisfactory solution. Pessimistic as this may sound, it, however, is not an exaggeration. The special U. N. committee recently appointed to study the situation in Palestine and propose a solution is enough proof that Palestine's dilemma, if ever it can be solved, has to be solved by the whole world.

The literature about Palestine's recent history, colored as it is one way or the other, is not wanting. In fact, so much has been written about it that very few readers can arrive at a true picture of the actual situation and events in Palestine "just by reading". I shall not try to add to the already extensive literature, but shall try briefly to trace the events that led to the existing situation in Palestine at present; and this will, I hope, help to explain the real purpose of this thesis. Far from being simply an architectural problem, its real purport

and usefulness will not be felt until the scheme of the university is actually built, and the aspirations of its founder realized.

II. SHORT HISTORICAL SKETCH

In 1917, the victorious British army under General Allenby routed the troops of the Porte, the then "Sick Man of Europe". Tired as the Arabs were under Turkish domination, stifled for about four centuries, so that they lost their once-glorious culture which extended as far as France, they fought whole-heartedly with the British against the Turks. For this fighting they were promised their complete independence. This was one promise or agreement the British made.

The second was a promise to the Jews, to make of Palestine an "Independent Jewish State", repaying Professor C. Weizman for certain scientific contributions to the Allied cause, which proved very helpful against the Germans, who too were on the verge of "donating" Palestine to the Jews had they not been defeated. This was the second promise or agreement made by the British.

The third and simultaneous agreement was a treaty which the British, French and Russians signed, known as the Sykes-Picot Treaty which divided the booty of war, and England's booty, or as it is better known, England's Mandate was Palestine, the French being satisfied with the less strategic but larger countries of Syria and Lebanon.

The reasons why the British carried the second promise more thoroughly than the other two are many but need not be delved into.

A very efficient British High-Commissioner was appointed who began to facilitate the establishment of a Jewish State in Palestine. Although to start with the British have absolutely no right to dispose of Palestine at their fancy, yet they even overlooked (and certainly would have continued to overlook, had it not been for the Arab Awakening) an item of the Balfour Declaration which states, "it being clearly understood that nothing shall be done which may prejudice the civil and religious

rights of existing non-Jewish communities in Palestine, or the rights and political status enjoyed by Jews in any other country".

Pioneers as they were, and backed financially by rich Jews in England and the United States, attracted by a "virgin" country surrounded by some more virgin countries, the Jews did a really splendid job. Coming as they did particularly from Europe, with high standards of living, technically and artistically minded, they started building a Jewish homeland. The Arabs, stifled as they were under the Turks, poor and illiterate, could not detect that behind those early settlers there was an organized scheme for the ultimate dispossession of their country. Some due to ignorance, others due to poverty, yet others due to greed, sold land for no minute prices to the Jews.

Matters began to be obvious and the Arabs began to awaken and expressed their indignation, ruthlessly sometimes, against both the British and the Jews. Tension existed all the time; strikes, battles, destruction were all that Palestine experienced. The climax came in the period roughly between 1936 - 1939 when the Arabs openly fought the British for the acquiescence to continued Jewish immigration and the Jews as the "usurpers". That period was the most horrible in Palestine's recent history. In the meantime the British created and armed a Jewish police force to fight the Arab nationalists, or rebels as they were popularly known. This added to the fury of the Arabs. Yet when the Second World War broke out in 1939, the Arabs stopped fighting, and contrary to the false allegations that they did not help the Allies, did all they could to help the British - their main purpose being the hope, doubtful as it might have been, that the British would this time grant them their independence.

The Arab rebellion was not fruitless, however. The British government issued a paper called "The White Paper" in which they tried

to modify the "Balfour Declaration", whereby they "controlled immigration, restricted land sale, and declared that their obligations to the Jews of establishing a Jewish Homeland had been realized."

From that time up until now, it has been the Jews who "rebelled" against injustice, and helped to restore Palestine to its accustomed atmosphere of bloodshed and unrest. The situation kept deteriorating to the extent that it warranted a special U. N. session which took place quite recently at Lake Success. Both Arabs and Jews, however, believe it will be miraculous if the U. N. can come out with a satisfactory and unprejudicial solution that will restore peace to the Holy Land.

Obviously all the things that man aspires for will continue to be sacrificed if no quick and peaceful settlement is arrived at. Elementary and whatever higher education that existed in Palestine suffered a great deal due to the incessant disturbances.

It is no wonder then that such an important item as a university for the Arabs in Palestine has not been established, either by the Arabs or their "mandators". The former were too concerned with preventing the loss of their country and the latter with attempting to maintain peace.

III. EDUCATIONAL OPPORTUNITIES FOR THE ARABS

For the above reasons, students who were financially able sought education in foreign countries, particularly in Lebanon, England, and France. When, however, the second World War broke out, travel to Europe became almost impossible, so that practically all Palestinian Arabs (and a considerable number of Jews) flocked to the American University of Beirut in the Lebanon, so much so that at one time Palestinian students constituted around fifty per cent of the total enrollment in the American University of Beirut, which catered to students from all the Arab countries.

After the War, the situation at the American University was partially relieved because students began again to apply to foreign countries for admission, this time a considerable number applying to American universities. The Egyptian University of Cairo also allotted some places to Pan-Arab students, but being quite a crowded university in itself, its openings were rather limited and far from meeting a fraction of the increased demand.

The American University of Cairo accepted quite a lot of Palestinian students but not in engineering or medicine, since their courses led only to a general Bachelor's degree.

Putting the financial capacity of students aside, we realize that Palestinian students had to struggle quite hard to avail themselves of an entry into some foreign university. To get acceptance has not always been easy, and quite impossible during the War. The neighboring universities (with the exception of the Egyptian Universities of Cairo and Alexandria) had a limited and insufficient number of courses to offer. For example, the American University of Beirut has only Civil Engineering in its Engineering School and no Law or Dentistry Schools. The same applies to the Iraqian University in Baghdad with respect to Engineering,

while the Syrian University in Damascus has Law, for example, it has no School of Engineering. So any student who wanted to study some branch of Engineering was "drafted" in Civil Engineering if he studied in near-by universities. Good as this might be as a foundation, very few students could afford to do that. Most of those who did it, however, were unable to continue further with their desired specialization.

Yet, even those who could afford to go through any or all the tedious possibilities mentioned above were very restricted in number. Living expenses abroad, travelling expenses, etc., made it prohibitively expensive for the majority (perhaps ninety-five per cent) of high school graduates to proceed in various fields of specialization. Their matriculation either got them an uninteresting, underpaid government job or they got apprenticed to professional men, or they returned to their villages where the environment invariably, far from being conducive to a continuance of interest in education, made them forget whatever niggardly education afforded them by the schools.

The Hebrew University in Jerusalem and the Hebrew Technical School in Haifa, although they do not discriminate against Arab enrolment, conduct lessons in Hebrew language, which very few Arabs study for the purpose of entering a Jewish institution.

Such have been the educational opportunities of a young Arab, graduating from high school, for approximately the past thirty years, with the exception that in the interval more people were able to send their children abroad.

IV. SOLUTION: ESTABLISHMENT OF AN ARAB UNIVERSITY

The educational situation in Palestine would not be so very gloomy if a university is established in the country to cater to the demands of the Palestinian students. Day by day the need for such an institution is increasing, yet day by day the future of countless young, energetic, and clever boys and girls is being sacrificed, for no fault of theirs. The really sad thing is that higher education, which is the only means whereby the Arabs can maintain their country for themselves, has been willfully sacrificed by the machinations of statesmen at the sacrilegious altar of politics, to the misfortune of the young people. What Ortega y Gasset said of Spain[1] not very long ago applies to the peoples of the Near East in general and to those of Palestine in particular -- people who have been up till very recently (with the exception of Palestine, which still is) suppressed and thoroughly imperialized; however thay have begun "to stir", due to various impacts "with those sleepy, jerking movements of a person about to awake and rise to his feet." The moment can happily be described by that very expressive line of poetry in which the venerable poem of the Cid relates to the dawn of a day: "Apriessa cautan los gallos e queren crebrar albores."[2]

[1] The Mission of the University. -- Ortega y Gasset
[2] Abruptly, cocks begin to crow, the light of dawn is about to break.

V. JERUSALEM UNIVERSITY ASSOCIATION

It was for such reasons that a society, called "The Jerusalem University Association", has been founded on the 7th of September, 1945, by Mr. George Shiber, architect, with the following aim:

"To establish and maintain in Palestine a university to be known as the "Jerusalem University", and other educational institutions for the development and promotion of education and the promotion of literary, scientific, technical, and artistic activities."

The founder had to struggle hard with the Palestine authorities to get this society legally registered, having convinced the British authorities that the purpose of the society was not (as they thought) to compete with their "educational enterprises", and that it did not have in mind any discrimination against any one group in or neighboring Palestine.

None of the undertakings of the society shall be conducted for profit as is explicitly expressed in one of the items of its constitution:

"The society hereby formed as well as any bodies or organizations created by it or dependent upon it shall not be conducted for the purposes of profit and all or any income derived by the society from any source whatsoever or as a result of its activities shall entirely be used and devoted for the furtherance and development of the objects of the society and education in Palestine."

It is not necessary to go into all the legal items provided for in the constitution of the society, but a few items may be worthwhile to list below.

"Item 19. Sunday shall be observed as the day of rest and shall be kept holy by the society's various educational institutions.

"Item 20. The society shall encourage healthy sports of all kinds with a view to developing in the present and future generations good, clean, and healthy bodies as well as minds.

"Item 21. The society shall secure that principles of rational and healthy social life, social service and goodwill are inculcated in the minds and habits of the present and future generations passing through its various educational institutions.

"Item 22. The society shall be entitled to establish in connection with and for the benefit of its sundry educational institutions and activities a printing and publishing institution" etc.....

The benefits that a country like Palestine will gain from the establishment of such educational facilities as mentioned above, particularly of a full-fledged university, are tremendous. Not only will more educated men in all the fields of learning be produced, who will take charge of the development of their country from all aspects, but a university will be the meeting place of Moslems, Jews, and Christians (in ratios that do not exist in any university in the world -- for in the West the crushing majority of students are Christian and in the Near East, Moslem) where they can meet each other on equal basis, discuss their problems, broaden their neutralities, and help to lay the foundation of a Utopia where racial, religious and social prejudices will melt into thin air. Statesmen who propose solutions for the Palestine problem based on partition of the country and similar ridiculous solutions only aggravate matters and help to sharpen the already too sharp differences existing.

HOUSES IN JERUSALEM DESIGNED BY GEORGE S. SHIBER, FOUNDER OF THE "JERUSALEM UNIV. ASSOC."

A.

B.

C.

APARTMENT BLDGS.
IN JERUSALEM,
DESIGNED BY G. S. SHIBER

A. 1926
B. 1930
C. 1942 – still incomplete due to disturbances.

VI. SIGNIFICANCE OF A FULL-FLEDGED UNIVERSITY IN PALESTINE

The geographical situation of Palestine is very central with respect to Arab countries on the one hand and to foreign countries on the other. Students from all the neighboring countries can easily converge on the focus, viz. Jerusalem, which already is one of the most cosmopolitan cities of the world. For this reason among many others, it is considered that Jerusalem is the ideal spot for the location of a university in the Near East.

It is hoped that the future "Jerusalem University" will not only cater to the demands of Palestinians and Arabs, but to students from all over the world.

Just as the most ancient university in the world, viz. "Al-Azhar" University in Cairo, caters at present to the demands of all students of Moslem theology from all parts of the world, so will the "Jerusalem University", located in the meeting place of East and West, cater to students from the East and West and be a melting point of ideas and a place of real understanding.

VII. JERUSALEM: PLACE OF UNIVERSITY

As a city, Jerusalem is dear to Christians, Moslems, and Jews and contains the shrines and relics of these respective religions. The inhabitants of Jerusalem (150,000 people) are as diversified as the history of the city.

Its geographical location with respect to the Near East and surrounding countries is hard to rival; and its actual physical situation in Palestine, located on top of the mountains that overlook the Mediterranean Sea on the West and the lowest spot in the world (viz. the Jordan Valley and the Dead Sea) on the East, is certainly unique. It is only an hour's drive by car from the nearest seaport and ten minutes' drive from the nearest airfield.

Its temperate climate, conducive to studying all the year round, is one of the best in the Near East.

Its architecture is most varied, from Greek to Saracenic to Mendelsonian. The seat of the government is in Jerusalem.

For the above major reasons, and many other minor reasons, Jerusalem has been selected to be the place of the University.

JERUSALEM 'Y.M.C.A.'

HIGH-COMMISSIONER'S HOUSE

JERUSALEM MUSEUM.

COMMERCIAL BLDG. IN JERUSALEM.

KING DAVID HOTEL MINUS WING MARKED "X".

WORKER'S HOUSES IN JERUSALEM.

JERUSALEM'S POST OFFICE.
(Plinth of Tiberias pitch-black lime stone)

Y.M.C.A., KING DAVID HOTEL
(Right wing blown by Jewish terrorists about a year ago),
AND OLD-JERUSALEM WALLS
IN BACK-GROUND.

TYPICAL STREET SCENE
IN JERUSALEM.

VIII. POPULATIONS OF ARAB COUNTRIES INCLUDED IN THE ARAB LEAGUE

Egypt	18,000,000
Syria	3,500,000
Lebanon	1,000,000
Palestine[1]	1,870,000 (1,100,000 Arabs; 670,000 Jews; 100,000 others)
Trans-Jordan	400,000
Saudi-Arabia	7,000,000
Iraq	6,000,000
Yemen	2,200,000
	39,970,000

[1]Palestine is not yet a member of the Arab League due to political implications and impediments.

IX. MAIN EDUCATIONAL INSTITUTIONS IN THE ARAB PART OF THE NEAR EAST

This population is at present served by the following main institutions of higher education in Arab countries:

Egypt	Fuad I University in Cairo
	Farouk I University in Alexandria
	American University in Cairo
	Engineering College in Cairo
	Al-Azhar University[1] in Cairo
Lebanon	American University in Beirut
	Jesuit University in Beirut
Syria	Syrian University in Damascus
Iraq	Iraqian University in Baghdad
Palestine	Arab College[2] in Jerusalem
	Hebrew University in Jerusalem
	School of Law in Jerusalem
	Technical High School in Haifa (Jewish)

Trans-Jordan, Saudi Arabia and the Yemen still do not have any institutions of higher learning.

In Egypt, plans are being made to start another State University at Asuit in Upper Egypt on the same lines as the Fuad I and Farouk I Universities in Cairo and Alexandria respectively. The American University of Cairo is also planning to expand its present university in the heart of Cairo to the outskirts in Giza on the highway to the pyramids. Although Egypt has the most advanced universities in the Near East, viz. Fuad I and Farouk I universities, yet these are still inadequate to meet the demands of even Egyptian students.

[1] This university is primarily religious.
[2] This college started offering courses leading to a general Bachelor's degree only last year (1946).

As mentioned before, the above list of institutions includes colleges which offer just one profession like the Law School in Jerusalem and the Technical High School at Haifa. Other institutions listed as universities offer only a limited number of courses, like the Syrian University and the American University of Cairo.

The need, therefore, of a centrally located, up-to-date and complete university in Jerusalem will cater not only to Palestinians but to Arabs (and non-Arabs) from all over the Near East.

X. EDUCATIONAL FACILITIES FOR PALESTINIAN STUDENTS

Since the "Schemes of the Jerusalem University Association" are of vital importance firstly to Palestinians, it might be worthwhile to investigate what educational facilities are needed most badly for Palestinian students, and in that way prepare a preliminary scheme for the most needed of them to serve as the architectural thesis.

1. MEDICINE

Medicine is fairly well provided for in the Fuad I and Farouk I Universities in Cairo and Alexandria, the American University in Beirut, the Jesuit University in Beirut and the Iraqian University in Baghdad. Pressing as the need for more medical education of Palestinian students is, yet the above-mentioned universities, as well as European Universities, have met the need so far.

2. DENTISTRY

The School of Dentistry at the American University of Beirut has been closed up for the past ten years. The only places where Dentistry could be studied at the present in the Near East are the Jesuit University in Beirut and the Fuad I and Farouk I Universities in Cairo and Alexandria. Since there are only about fifty Arab dentists in Palestine, it seems that a school of Dentistry in Jerusalem warrants serious consideration.

3. LAW

The Law School in Jerusalem, although rather crowded, yet relieves the pressure of students who want to study Law. Besides this school, the Law Schools of the Fuad I and Farouk I Universities and the Syrian University relieve further pressure, so that the consideration of a Law School at present in Palestine is not very essential.

4. ARTS AND SCIENCES

These subjects are provided for in most of the universities in the Near East. The Arab College in Jerusalem has recently extended its high school curriculum to lead to a general Bachelor's degree, so that an Arts and Sciences School is not of pressing importance right now.

5. AGRICULTURE

Palestine is primarily an agricultural country with a climate similar to that of California. Yet its agricultural possibilities have not been properly exploited, although the Jews have proved, by their application of technical methods to agriculture, that Palestine can be made to produce wonderful crops, vegetables, and fruits. With the future development of the chemicals from the Dead Sea, and when fertilizers become available in large quantities at low prices, the country will need a large number of agricultural engineers to put into practice modern methods of agriculture. And since the only universities around Palestine providing agricultural instruction are the Fuad I and the Iraqian Universities, it would seem that the School of Agriculture ought to receive early consideration.

6. ARCHITECTURE AND ENGINEERING

Of the universities listed above, only the Fuad I and Farouk I Universities in Cairo and Alexandria respectively offer architecture and additional engineering professions to Civil Engineering, which the American University of Beirut offers, too. The other engineering courses which they offer besides Civil Engineering are Electrical, Mechanical, Chemical, Aeronautical, Marine, and Petroleum Engineering. None of the universities mentioned above offers a complete course in either City Planning or Landscape Architecture except as auxiliaries or requisites to the architecture course.

In a country like Palestine, which is being built up at quite a fascinating speed by both Arabs and Jews, where small towns are being built, small villages increasing in size and population, and in a country whose physical features vary astonishingly within a distance of sixty-five miles from sea level, to snow-clad mountains to the lowest spot on earth and where engineering can help to exploit these natural features; in a country for which a project like the Lowdermilk Scheme has been proposed; a country rich in chemicals (the saltiest[1] sea in the world -- the Dead Sea) and oil, it seems that its future progress will certainly depend upon how well these assets are exploited. And that needs architects, engineers, planners, and agriculturalists in large numbers.

It seems, therefore, logical and safe to assume from what has been said above that the school to train architects, engineers, planners, and agriculturalists would necessarily warrant first consideration in the "Jerusalem University" scheme.

7. COLLEGE FOR GIRLS

The lack of such a college in the Near East except for the inadequate Junior Girls' College at Beirut, makes the establishment of such a College of great importance. It is not as yet customary for Arab girls to travel abroad unaccompanied (with certain exceptions) so that they suffer for lack of higher education more than the boys do. This unbalance in education between boys and girls is creating quite a serious social problem in most Arab countries, which should be cured as soon as possible. Therefore, the establishment of a girls' college on similar lines as say Wheaton College or Wellesley College warrants special attention.

[1]The salinity of the Dead Sea is about $2\frac{1}{2}$ times that of the ocean.

XI. ANALYSIS OF THE UNIVERSITY SCHOOLS

It is the opinion of the author, after correspondence with the founder of "Jerusalem University Association", that the following order of importance as to the starting of the various schools which will comprise the "Jerusalem University" is the most logical:

1. School of Design and Engineering, to start with Architecture, City-Planning, Landscape Architecture, and Civil Engineering and later to expand to include Electrical, Mechanical, Chemical, and Petroleum Engineering, etc.
2. School of Agriculture
3. College for Girls
4. School of Dentistry
5. School of Medicine
6. School of Arts and Sciences
7. School of Law and Journalism
8. School of Commerce

The reason for starting the School of Design and Engineering with Architecture, City Planning, Landscape Architecture, and Civil Engineering is due to the nature and close inter-relation of these subjects to each other and the marked schism between men of the above-mentioned fields in a time when complete understanding and co-operation in these fields is vital to the success of any planning scheme. Aside from that, Palestine is a country that can use a large number of men trained in the above-mentioned fields. Another important point of consideration is the fact that there is a small number of Arab architects and civil engineers available in the country who are well qualified and willing to render part of their time for teaching. This consideration,

insignificant as it might appear, is of vital importance to a school starting almost from scratch. It would be hard and incorrect at this early stage to attempt to organize and map the campus and buildings of the future University, since there are many indeterminate points and considerations that need "on-the-spot" study and investigation. However, the most probable conglomeration of the various prospective schools might be as follows:

1. School of Design and Engineering (complete)
2. School of Agriculture
3. College for Girls (This college might be incorporated in the "Jerusalem University" campus or will probably occupy a different site in a southern suburb of Jerusalem originally bought for the purpose.)
4. Schools of Dentistry and Medicine and Hospital
5. School of Arts and Sciences
6. Schools of Law, Journalism and Commerce

Supplementing these buildings will be the following buildings:

1. Main Administration Building
2. Main Central Library
3. Alumni Building
4. President's Residence
5. Dormitories for boys and girls
6. Big Assembly Hall
7. Recreational Buildings
8. Staff Housing
9. Student Housing

XII. ENROLLMENT OF THE UNIVERSITY

To foretell what the over-all enrollment of the university will be is an impossibility at present since so many indeterminable factors enter such a statistical attempt. Some of the difficulties, for example, are as follows:

1. Political Situation. If the political situation remains as it is in Palestine, and if the Jews and Arabs fail to come to an understanding (which is the most likely thing), this at once strikes out the possibility of one-third of the prospective students enrolling (assuming equal enrollment among Arabs and Jews). Aside from the local political situation in Palestine, the future of Pan-Arab relations will to a great extent determine the number of students coming over from neighboring Arab countries. Foreign students will certainly hesitate to go to Palestine as long as there is no physical security at least.

2. Financial Capacity. The size of the university will be greatly influenced by the budget of the university. Since it is going to be a non-profit institution, its size and growth will be greatly dependant upon grants and donations from individuals, Arab governments and institutions, and possibly foreign institutions.

3. Mission of the University. How well the university will be able to accomplish its mission to the Arab population is a determining factor in its success and consequent growth and size.

Conjecturally, however, the following figures are quite safe to reckon on:

1.	School of Design and Engineering	650
2.	School of Agriculture	350
3.	College for Girls	900
4.	School of Medicine and Dentistry	750
5.	School of Arts and Sciences	500
6.	School of Law, Journalism and Commerce	400
	Total	3,550

This means that about one person per 600 will be able to go to the University, viz. $\left(\frac{3,500}{1,900,000}\right)$. In 1940, about one person per hundred was going to college, viz. $\left(\frac{1,500,000}{150,000,000}\right)$ in the United States[1] and this ratio has greatly increased since the introduction of the G. I. Bill. To attain the 1940 proportion of students going to college in the U.S.A., the "Jerusalem University" or the combined Educational Institutions of the "Jerusalem University Association" should be able to accommodate about the same size as the Fuad I University of Cairo.

[1] General Education in a Free Society. Harvard University Press, 1946

XIII. SITE OF THE PROPOSED JERUSALEM UNIVERSITY

The site has already been chosen by the founder after intensive research as to the best location of the University. It is only about ten minutes' drive by car from the heart of Jerusalem. In fact, part of it lies within the urban and municipal boundary of Jerusalem. This site is on the Biblical Mount of Olives, a small part of which is already occupied by the Hebrew University and the Jewish (Hadassah) Medical Centre. Of part of the site, Patrick Geddes wrote,

"No other site in the world is at once so magnificently panoramic and historic as this! Rightly named as the 'hill of seeing', Mt. Scopus overlooks on the South the Mount of Olives, on the West the outspread ancient and modern City (Jerusalem), and Eastward it commands the ranges of deserted hill tops that plunge down to the Jordan Valley and the Dead Sea, behind which rise again the mountains of Moab (Trans-Jordan)."[1]

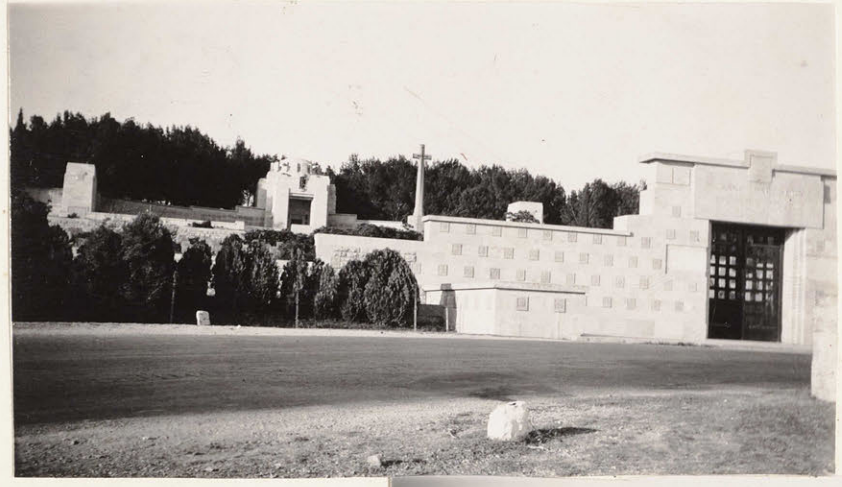
To the East of the hill, the land slopes very abruptly, and similarly to the West, so that expansion can most economically take place in a northern direction where the land is unlimited in extent.

There is little fear of the expanding City of Jerusalem from encroaching on the future university because of the great valley that separates the city from the Mount of Olives; and no danger exists except possibly in the far future where the city might expand to the North, but this danger can be overcome by the buying up of most of the land to the North for the University, a thing that is being done at present.

The site in general is covered by a rather thin layer of soil, a fact which applies to most of Palestinian terrain. This is due to excessive denudation by the climate and not checked by forestration.

[1]Patrick Geddes. By Boardman. University of North Carolina Press. 1944. Page 357.

Directly under are deep layers of fine limestone (in this site the color happens to be whitish-grey) which it is hoped will be quarried, machine-cut, and used as a facing for the entire University buildings. This is not so much a matter of choice in Jerusalem, since the municipal and town planning regulations require that all buildings in Jerusalem should be stone-faced. Excavating in Palestine is not so much hated, since it produces what the Arabs believe to be the most beautiful and durable building material -- stone.

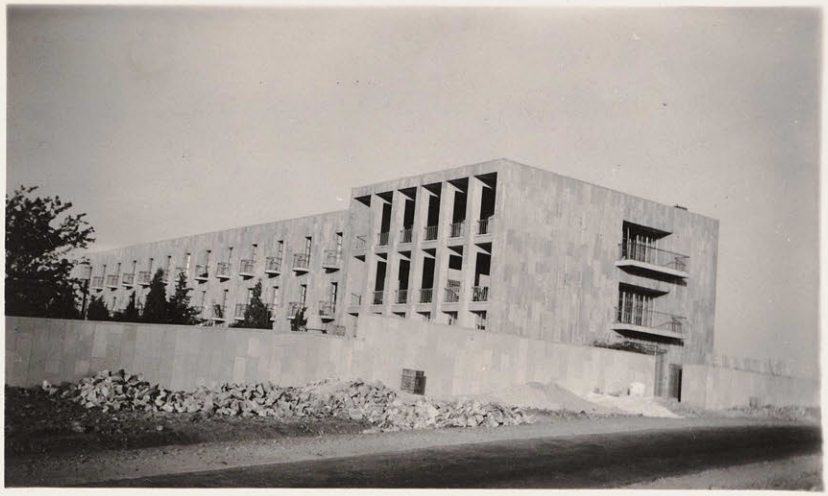


WAR CEMETERY ADJOINING UNIVERSITY SITE. MEDICAL CENTER DESIGNED BY ERICH MENDELSOHN IN BACKGROUND OF LOWER PHOTO.

VIEWS OF THE JERUSALEM UNIVERSITY SITE.

VIEWS OF THE JERUSALEM
UNIVERSITY SITE.

EXISTING HOUSES ON SITE, WHICH WILL BE USED FOR SOME FACULTY MEMBERS.



JEWISH MEDICAL CENTER, DESIGNED BY ERICH MENDELSOHN, NEAR THE J.U. SITE.

XIV. STUDENT ACCOMMODATION

Since the bulk of the prospective students of the Jerusalem University will come from various parts of Palestine and the Near East, it is obvious that a large percentage will have to be accommodated on the campus. A good number of students will probably choose to live in Jerusalem or nearby Ramallah and commute daily to the University. But since very few will be able to afford to live in the city and pay for their daily transportation, it is expected that they will prefer to live on the campus.

This idea of students' living on the campus will be greatly encouraged by the University board with the hope that students coming from all over the Near East will be able to study, live, and associate with each other, thereby promoting a spirit of co-operation and understanding that will have its effects on the future unity and uniformity of culture throughout the Near East. For this reason the campus will be fully equipped to meet all the demands of a completely independent student body and staff.

The question that arises next is how to accommodate these students on the campus. Would the dormitory buildings be grouped in one part of the campus and secluded from the academic quarters? Or will the student body be housed in a giant skyscraper building as those conceived of by Corbusier? Or will each living quarters of a particular school be attached or close to the school building itself? The various ways suggested above have their pros and cons but the author seems to favor the last one mentioned, viz., having the sleeping quarters of every school close to the particular school, for the following reasons:

1. Grouping students of like or similar interests together will give these students an opportunity to associate still more closely to-

gether than in the classroom or drafting room, exchange ideas, and discuss their problems together. On a small scale, and speaking for one particular school of the University, this will be similar to M.I.T., where technical students are grouped together both in study and in their outside life, thus producing a class of similarly-minded students in the fields of Engineering. The Jerusalem University will have not only Engineering students thus group but a multitude of others, like medical students, law students, etc., forming various nuclei and in turn comprising a whole.

2. The proximity of the living quarters to the teaching quarters is of great help to the students, as practically no time is lost at all going to and fro. Also if the sleeping and teaching quarters were close to each other, students can feel at home in their school at all times. Library, laboratory, and drafting room would be accessible at all times under any circumstances.

3. This way, students of one school can hold inter-school meetings, parties, etc., in the various dorms, thus promoting the spirit of co-operation. On a very small scale it would be an experimental ground of jealous nations getting along together.

The school of thought opposing this sort of grouping say it is bad because students of various interests do not get the full opportunity to associate freely together. The arguments against this assumption can be summarized thus:

1. There are no two human beings who are exactly alike in traits, ideas and thinking, even though they might be engineers, doctors, etc.

2. From college experience in various countries, it has been apparent on campuses that students of similar schools in general usually flock to each other naturally.

3. In the time allotted a student for study in the dorm and for sleeping, he usually has barely enough time to give those two matters their due, so that mixing students of different schools will not in general produce the assumed mingling.

4. Students generally meet each other and have time for each other during athletic activities, lectures, discussion groups, and when going down-town together, so that it is not really essential to mix them in the dorms, especially if one of the main aims of the school is to produce proficient graduates.

For the above reasons, the third system will be applied, at least experimentally, for the first school of the University. If it is found to work well, it will be applied in the remaining schools. If not, the dorm for the first school will be altered to serve other functions, or, in the particular case of the School of Design and Engineering dormitory, the remaining dormitories could be built on the slope that begins with the first dormitory and connected by corridors to form a centralized set of dormitories. Since ultimately there will be included on the campus Centralized Restaurants, the latter dormitories will not have restaurants, but the first dormitory will have its own restaurant until such a time when centralized restaurants are built.

XV. THE SCHOOL OF DESIGN AND ENGINEERING

It was mentioned before that the need for a School of Design and Engineering is of primary importance to Palestine, a country in the primary stages of shaking off a long slumber and entering a new era of progress and advancement. Certainly the first problem facing the country is the problem of organized planning and construction. Most of the cities have to be redeveloped and most of the villages need scraping, replanning, and rebuilding if there is to be any hope for physical well-being of the population. The country has a lot of slums, unhealthy and unsanitary houses, and structurally unsafe buildings. The means of transportation are far from sufficient for the fluidity of traffic. Lots of otherwise fertile land are useless from lack of irrigation. In short, the country needs countless qualified men to take the responsibility of building up their country. Architects, Landscape architects, City Planners, and Civil Engineers are wanted badly.

Lewis Mumford, in his "Techniques and Civilization", says,

"Whereas the physical sciences had first claim on the good minds of the past epoch, it is the biological and social sciences, and the policital arts of industrial planning and regional planning and community planning that now most urgently need cultivation; once they begin to flourish, they will awaken new interests and set new problems for the technologist."

A decent environment for the people to live in, sound, sanitary, and healthy houses, easy means of communication, ample dairy and agricultural products and beautiful surroundings should precede the other luxuries as a first step of reformation in Palestine. For this reason, an attempt will be made to design a school for the training of men who will assume the responsibility of providing the country with the aforementioned necessities.

XVI. CURRICULUM OF THE SCHOOL: A GENERAL STUDY

Much has been written about education in general and about architectural and engineering education in particular. There are many schools of thought and many new ideas are daily coming out. Education and its system is in a state of flux. There are so many indeterminables since education has to deal with still confused realms of psychic life. It is not the object of this thesis to investigate the various realms of thought about education, as this is certainly an endless endeavor.

Not very long ago, for example, the Beaux-Arts System of teaching architecture was in vogue in probably all schools of architecture. It still is so in many institutes all over the world. But the fact that the progressive contemporary movements in architecture are slowly replacing antiquated systems goes to prove that there is nothing stable in education, daily progress being achieved in most of the fields of learning. Schools, therefore, should always be abreast of all developments and should continually be looking ahead for new developments.

It is always good to know about the past, know the present, and look forward to the future. This applies to all fields of learning and particularly to architecture and planning which are so intimately linked with the ever-changing lives of people.

The first educational question that will confront the board of directors of the Jerusalem University will certainly be the educational program of the various schools. It would be very hard for them to evolve a totally new system of education and a completely new program. The logical thing to do would be, therefore, to look into the programs of already existing and progressive institutes and learn from their experience.

Being a good representative of progressive schools, the author

thought it wise to start the program of the proposed school of Design and Engineering on the same lines as the program of M.I.T. for Architecture, City Planning, and Civil Engineering, and the Lawthorpe School of Landscape Architecture (now incorporated in the Rhode Island School of Design) and Harvard University as good representatives for landscape architecture. Very few modifications have been introduced which certainly do not affect the basic courses. (The changes introduced have been underlined with red on the program). The material given in each course, however, should be adaptable to Palestine and the Near East, especially in such subjects dealing with materials, horticulture, social sciences, etc.

Imitating the courses of an already established institution might appear to be a very uninspired and stale procedure. This is perfectly true, especially in the formulation of the courses of the other schools of the University, particularly courses dealing more with the humanities and philosophies, which it is intended to teach the students. The correct approach would be to answer the following question, "What is a university for and what must it consequently be?" This naturally will entail a lot of study and research by the board of education to be appointed by the University, and this board will have to decide about what is right and fitting for the University to preach and teach.

In down-to-earth Engineering subjects, it is probably wisest to follow in the current trends of development; and these current trends of development, if they are to be found anywhere, should be found in the most progressive and representative institutions, which have undergone a lot of change, experimentation, and experience, which a new-born university like the "Jerusalem University" cannot afford to undergo during its infancy for many reasons -- financial, lack of experienced educators as yet, and the short time span in which it is expected to begin functioning

in the lives of Palestinians.

For these reasons, and to enable him to evolve an architectural program, the author resorted to the curricula of the above-mentioned institutions, realizing that if this process is blindly followed, it would most certainly result in sterile products.

"I do not criticize our informing ourselves by observing an exemplary neighbor; on the contrary, that is necessary. But such observation cannot excuse us from the labor of determining our destiny for ourselves. By this I do not mean any quest of 'racial purity' and all that nonsense. Even if we were all -- men or nations -- identical with one another, imitation would still be fatal. For in imitating, we evade that creative exertion of laboring at a problem, from which we can learn the real nature, including the limits and the defects of the solution we borrow. There is no question here of 'racial purity', which is as common as the hayseeds. It is immaterial whether we come to the same conclusions and the same forms as other countries; what matters is that we arrive by our own legs, after a personal combat with the fundamental question at issue."[1]

Although Ortega y Gasset in this particular instance was speaking of Spain, yet his words are so true of Palestine, too, and any other country.

The courses for the various departments of the School of Design and Engineering (Architecture, Landscape Architecture, Civil Engineering, and City Planning), with the number of class-hours and preparation hours per week, are indicated in the tables below. The first year is identical for all students, with a Surveying course to be held during the first summer vacation on one of the mountains in Palestine or Lebanon where the topography is so varied and ideal for all surveying purposes. The four departments will take Surveying since it is equally important for Architects, City Planners, Civil Engineers, and Landscape Architects.

[1] Mission of the University. Ortega y Gasset. Princeton University Press, 1944. Page 47.

After the first year, the students are allowed to choose their field of specialization. The Architecture course is the longest in duration, stretching over a period of five academic years, while the other courses, viz., City Planning, Civil Engineering, and Landscape Architecture, stretch over a period of four academic years.

XVII. COURSES OF THE SCHOOL OF DESIGN AND ENGINEERING

FIRST YEAR FOR ALL DEPARTMENTS

First Term	Class hours	Preparation
Chemistry, General	7	4
Physics	6	5
Engineering Drawing	6	0
Language	3	5
Choice of:		
English		
German		
French		
Calculus	3	6
Psychology	3	3
	28	23

Second Term		
Chemistry, General	7	4
Physics	6	5
Descriptive Geometry	6	0
Language (as above)	3	5
Calculus	3	6
Psychology	3	3
	28	23

ARCHITECTURE

Required During Summer -- Surveying Camp

	Hours per week
Surveying Fieldwork	13
Surveying Fieldwork	4
Route Surveying Fieldwork	6

SECOND YEAR

First Term	Class hours	Preparation
Statics and Dynamics	3	5
Architectural Design	9	3
Physics	5	5
Near East in World History	3	5
Calculus	3	6
Sociology (General)	3	3
	26	27
Second Term		
Strength of Materials	3	6
Shop	4	0
Architectural Design	9	3
Materials	2	4
Urban Sociology	2	4
Near East in World History	3	5
Theory of Architecture	3	3
	26	25

THIRD YEAR

First Term		
Sanitation	2	4
Heating and Ventilation	2	4
Visual Fundamentals	4	0
Architectural Design	12	6
Structural Analysis	8	0
Economics	3	5
	31	19

Second Term	Class hours	Preparation
Heating and Ventilation	2	4
Visual Fundamentals	4	0
Architectural Design	12	6
Structural Analysis	8	0
Materials	2	4
Philosophy (General)	3	5
	31	19

FOURTH YEAR

First Term		
Architectural Design	12	6
Electricity	3	6
Architectural Acoustics	5	3
Materials	2	4
Specifications and Quantities	3	5
	25	24

Second Term		
Testing Materials Lab.	5	2
Light and Color	6	0
City Planning Principles	2	4
Architectural Design	12	6
Illumination	2	4
Professional Practice and Contracts	3	5
	30	21

FIFTH YEAR

First Term		
Graphic Presentations	6	0
History of Architecture	3	6
Site Planning and Construction	9	3

First Term (Con'd.)	Class Hours	Preparation
Architectural Design	9	3
Land Economics	2	4
Thesis Research	—	6
	29	22

Second Term		
Graphic Presentation	6	0
History of Architecture	3	6
Building Economics	2	4
Thesis	21	
Elective Subject	6	
	48	

LANDSCAPE ARCHITECTURE

FIRST YEAR (See Page 33.)

Required during Summer -- Surveying Camp

SECOND YEAR

First Term	Class Hours	Preparation
Landscape Design	10	4
Graphics	3	2
Plant Material	15	5
Horticulture	5	1
Freehand Drawing	2	2
	35	14

Second Term		
Landscape Design	12	3
Shades and Shadows	1	2
Planting Material	1	2
History of Landscape Architecture	2	2
Horticulture	2	1

Second Term (Con'd)	Class Hours	Preparation
Color	6	0
Perspective	7	0
	36	14

THIRD YEAR

First Term		
Landscape Design	7	4
Site Planning	10	4
Plant Material	9	3
Planting Design	2	2
Horticulture	5	1
Freehand Drawing	2	1
	35	15

Second Term		
Landscape Design	16	4
Planting Design	3	3
Construction	10	4
Planting Material	4	1
Freehand Drawing	2	1
Plant Research	0	2
	35	15

Summer School

Plant Material	14	3
Horticulture	14	3
Field Trips	7	2
	35	8

FOURTH YEAR

First Term	Class Hours	Preparation
Landscape Design	18	4
Construction	10	4
History of Landscape Architecture	2	2
Specifications and Quantities	3	3
Plant Research	0	4
	33	17
Second Term		
Landscape Design	16	4
Planting Design	7	3
Construction	10	4
Professional Practice	3	1
Plant Research	1	2
	37	13

CITY PLANNING

FIRST YEAR (See Page 33.)

Required during Summer -- Surveying Camp

	Class Hours	Preparation
Surveying Fieldwork	13	0
Surveying Fieldwork	4	0
Route Surveying Fieldwork	6	0

SECOND YEAR

First Term		
Architectural Design	9	3
Physics	5	5
Engineering Geology	4	4
Near East in World History	3	5
Public Speaking	3	3
Psychology	3	3
	27	23

Second Term	Class Hours	Preparation
City Planning Principles	2	4
Architectural Design	9	3
Physics	5	5
Economic Statistics	3	6
Near East in World History	3	5
Geography	2	3
	24	26

THIRD YEAR

First Term		
Sanitation	2	4
Government and Public Administration	3	6
City Planning Principles, Theory, and Practice	3	6
City and Regional Planning	12	6
Economics	3	5
	23	27

Second Term		
Municipal Engineering	3	3
City Planning, Theory, and Practice	3	6
City and Regional Planning	12	6
Urban Sociology	2	4
Philosophy	3	5
	23	24

Required during Summer

Office Practice

FOURTH YEAR

First Term		
Site Planning and Construction	9	3

First Term (Con'd.)	Class Hours	Preparation
City and Regional Planning	9	3
Public Finance	2	4
Land Economics	2	4
Humanities (elective)	3	5
Thesis Research	6	
	50	

Second Term		
Planning Legislation and Administration	2	4
Land Economics	3	6
Thesis	26	
Humanities (elective)	3	5
	49	

CIVIL ENGINEERING

FIRST YEAR (See Page 33.)

Required during Summer -- Surveying Camp

Surveying Fieldwork	13	0
Surveying Fieldwork (Adv.)	4	0
Route Surveying Fieldwork	6	0

SECOND YEAR

First Term		
Surveying, Adv.	6	6
Statics	3	5
Physics	5	5
Near East in World History	3	5
Calculus	3	6
Sociology	3	0
	21	29

Second Term	Class Hours	Preparation
Route and Construction Surveys	2	4
Fluid Mechanics	2	4
Dynamics	3	5
Physics	5	5
Near East in World History	3	5
Differential Equations	3	6
Sociology	1	2
	19	31

THIRD YEAR

First Term		
Fluid Mechanics	3	6
Strength of Materials	3	6
Thermodynamics	4	5
Engineering Geology	4	4
Materials	3	6
Economics	3	5
	20	32

Second Term		
Structures	6	6
Reinforced Concrete Design	6	0
Testing Materials Laboratory	5	2
Hydraulics Laboratory	2	2
Electrical Engineering (Fundamentals)	4	6
Humanities (Elective)	3	5
	26	21

FOURTH YEAR

(a) Sanitary (b) Transportation (c) Hydraulic (d) General

First Term	Class Hours	Preparation
(b) Transportation Engineering	6	6
(d) Highways and Airports	3	3
Soil Mechanics and Foundation Engineering	6	6
Structures	3	6
Bridge Design	6	0
(c) Hydrology and Flood Control	6	6
(d) Hydrology and Water Power Engineering	3	3
(a) Water Supply and Purification	6	6
Professional Problems	2	4
Humanities	3	5
	26	27
Second Term		
(b) Transportation Engineering	6	3
Structures	3	6
Structural Design	6	0
(c) Water Power Engineering	6	3
(a) Sewerage and Sewerage Treatment	6	3
(d) Water Supply and Sewerage	6	3
Engineering Construction	3	3
Thesis	9	
Humanities	3	5
	47	

XVIII. COMPOSITION OF THE SCHOOL

The School will have 200 students, with the following probable enrollment in the various departments:

Architecture	64 students
Civil Engineering	68 students
City Planning	36 students
Landscape Architecture	32 students
Total	200 students

Flexibility in drafting space to accommodate for increase or decrease in the number of students enrolled in one of the departments will be provided for by moving partitions which separate the various drafting rooms.

Each department will be headed by one of the professors of the School. The Dean of the School will be head of one of the departments in addition to his capacity as head of the School.

It is quite difficult to tell at this stage exactly the number of professors and instructors that the School will need. However, by comparison with several schools, the author believes that the School will need about forty-four staffites, as shown in the table below:

Architecture	10 staffites
Civil Engineering	14 staffites
City Planning	8 staffites
Landscape Architecture	8 staffites
Humanities	4 staffites
Total	44 staffites

There will naturally be a head librarian and two assistant librarians. An emergency clinic to take care of laboratory and workshop accidents will require the presence of a nurse.

There will be five janitors, two for the school, two for the

dormitory, and one for the grounds. Two of these janitors will necessarily reside in the School and the remaining will probably commute. A crew of three will form the maintenance personnel -- a carpenter, a plumber, and a jack-of-all-trades, who, too, will commute. There will be a gardener to keep the trees and flowers in good shape.

The following requirements will form basically the School of Design and Engineering. The author has tried to make the school as complete as possible, yet in many cases had to omit various unnecessary functions which the School could dispense with at its start. However, it should not be thought that the inclusion of the various items listed below constitutes an ideal set-up for a School of Design and Engineering. In fact, the various functions provided for in the design constitute a minimum for running such a school. It has been carefully observed in the design to allow for future expansion both horizontally and vertically, without affecting the basic architectural design, to include any future functions and expand existing functions. Wherever possible, flexible or light partitions have been provided, especially in cases where it was hard to foretell exactly what load that function would take when the School got running. This is particularly true of the drafting space, which is divided up by light partitions which can be easily shifted from their place to increase or decrease the drafting space of a particular department to suit the demand.

The program which follows has been explained at places where the author believed that the drawings might convey a mistaken idea. It is by no means meant to be duplication of the drawings. In fact, the inclusion of certain obvious requirements in many rooms, like closets, sinks, desks, lavatories, telephone booths, small storage spaces, etc., has been omitted.

XIX. ARCHITECTURAL PROGRAM

TEACHING REQUIREMENTS

1. Drafting space for 200 students (allow about 65 sq. ft./student)

In order to get proper cross-fertilization of ideas among students of one department and to promote a spirit of friendliness and co-operation, students of the various departments of the School, of all classes, have been grouped together in separate drafting spaces. The drafting spaces, as mentioned before, have flexible partitions to take care of fluctuations of students attending a particular department of the School. The drafting space was deliberately stretched out in what appears to be a long row for the purpose of providing the same orientation, view and cross-ventilation for all students. It so happened, too, that the land sloped down in the desired direction (45' in 350' which is the length of drafting space) which helped to break up the drafting space without losing the desired orientation, thus relieving whatever monotony might ensue. The proximity of the various drafting spaces to each other brings students of the various departments in very close contact.

2. a) Freehand Studio for 30 students (allow about 50 sq. ft. of floor space per student to allow for the placing of necessary equipment and to permit students to observe models and machine-parts).

b) Model's Room

c) Instructor's Room

d) Storage Space

3. a) Photography Studio about 900 sq. ft. of floor space. This studio is meant to serve for teaching students photography and for the use of students to photograph their models, drawings, etc.

b) Dark Room with three cubicles for photographic machines.

c) Rooms for two instructors.

d) Ozalid Room with space for Ozalid machine and for working it. Since the drawings become the property of the School, this machine will enable the students to print their drawings cheaply for their own keep.

4. Four Lecture Rooms with capacities of 50, 60, 70, and 80 students respectively. They should be provided with storage space and a display desk in case the lecture concerned requires demonstrations. Proximity to laboratories of lecture rooms was thought advisable for easy carrying of necessary apparatus. Each room should be provided with a projecting lantern for the showing of slides.

5. Construction and Materials Room for about 35 students, to be provided with work-tables. Proximity to one of the shops is essential to this room, since it will be used a lot in conjunction with the courses taught in this room.

6. Six Seminar Rooms, about 400 sq. ft. of floor area each to hold about 25 students. These seminar rooms need not all be grouped together but could be interspersed in the School, but preferably to be near the places of maximum concentration of students as the library and drafting rooms. Adjoining these seminar rooms, it was thought wise to provide some teachers' offices.

7. Offices for professors, teachers, instructors, and assistants. Some of these offices should be private, while the rest can hold two or even three staffites. The number of staffites to have office space is 44.

8. a) Assembly Hall[1] to hold about 280 people (200 students, 44 staffites, and about 36 visitors). This hall would be used when all the students want to attend a lecture or a convocation. No stage as such need be provided, but a platform space is necessary.

b) Projection Booth

c) The main entrance lobby can serve as the lobby to this assembly hall.

[1]Proper shaping of the theatre acoustically is very important.

9. Laboratories

a) Soil Mechanics Laboratory provided with dry and humid sample storage space. (The humidity of the latter storage space should be maintained at 100 R.H.) Due to the nature of work carried on in this laboratory, viz., dealing with various kinds of soil and its transportation, it is advisable to have this laboratory at ground level.

b) Sanitary Engineering Laboratory

c) Hydraulics Laboratory

d) Testing Materials and Concrete Laboratory, part of which should have a sunken floor to accommodate a crushing machine. Curing Rooms (about 4' x 4') should be provided and kept at a R.H. of 75%. This laboratory, too, is preferable to be on the ground level for the construction of full-scale concrete members for the purpose of testing.

e) Structural Analysis Laboratory. This should have, in addition to general laboratory space, a room for a polaroscope (about 10' x 15') for studying stress patterns by polarized light. A dark room should be provided, too.

f) Acoustics Laboratory

All laboratories must be provided with the following:

(i) Instructor's Room

(ii) Storage Space

(iii) Atelier Space

(iv) Demonstration Space

(v) Easy expansion in size and number or laboratories

(vi) Easy access by trucks

(vii) General storage space for new materials, unused apparatus, and furniture, etc.

10. Workshops

a) Machine shop, about 1200 sq. ft.

b) Woodworking shop, about 1200 sq. ft.

c) Unassigned shop, mainly for full-size models, about 1700 sq. ft., with an experimental work court adjoining it. It need not be a definite room as such but it could be a covered space.

All shops require storage space (for materials and tools) and each an instructor's office.

11. Exhibition Rooms

a) Permanent Displays Exhibition, about 1000 sq. ft. of floor surface. This room is for the purpose of displaying various drawings, photographs, models, etc. of vital interest to the education of both student and visitor, preferably to be as close to main entrance as possible.

b) Student exhibits and Criticism Room, about 1400 sq. ft., to be used for displaying students' work of all departments and to serve as a jury room for students' problems.

c) Traveling Displays Room. This could be accommodated in the main entrance lobby; and if this is not sufficient, the lobby over the ground floor could be used to supplement the lobby on the ground floor. A conveniently located room should be provided as a work room.

12. Library

a) Reading space for at least eighty people to start with. The reason the library is liberal in reading and stack space is the fact that practicing engineers and laymen will have free access to it due to the lack of such a technical library in Jerusalem for the Arabs.

b) Stack space (on library level and a mezzanine) to provide for

	(i)	10,000 architectural books
	(ii)	5,000 City-Planning books
	(iii)	5,000 Civil Engineering books
	(iv)	4,000 Landscape Architecture books
	(v)	1,000 Humanity books
Total		25,000 books

(vi) 5,000 documents

(vii) 15,000 slides

c) Work room, about 500 sq. ft. for receiving, unwrapping, indexing, etc., preferably close to School's service entrance

d) Inquiry and check desk, with waiting space

e) Head Librarian's room and secretary

f) Lavatories

13. Students' Lounge

a) Boys' lounge, about 250 sq. ft. with kitchenette and close to jury room, preferably with collapsible partitions for joint use on occasions.

b) Girls' rest room, about 90 sq. ft., with a powder room

14. Administration

a) Dean's office, with room for secretary and waiting space

b) Students' Administrative office, with four secretaries, each catering to one of the departments of the School

c) General Administrative office

(i) Executive office

(ii) Secretarial and file room

(iii) Cashier's room

(iv) Registrar's room

(v) Vault

d) Faculty or conference room with chair storage and a strip kitchen

e) Rooms for heads of departments, with a common secretarial room

15. Services and Maintenance

a) Superintendent's office (locker keys, mail, storage of School documents)

b) Maintenance shops (carpenter, plumber, etc.), about 200 sq. ft.

c) Rooms for three janitors

d) Surveying instruments storage

e) Garage for two trucks, and one bus, with an atelier room

f) Mechanical equipment room

g) Drafting supplies and Book-sales

h) Room, First Aid Clinic

16. Small Publishing Department for School's Literature

17. Dormitory

a) Sleeping accomodation for 150 students

b) Entrance lobby

c) Lounge

d) GamesRoom

e) Office (with inquiry desk, mail and laundry delivery, etc., with special, easily accessible entrance by car)

f) Manager's room

g) Study room on every floor

h) Visitors' room on every floor

i) Sun bathing deck and roof garden

j) Lockers and showers

k) Restaurant for 100 persons (cafeteria service)

l) Kitchen, with dish-washing room and food storage spaces, adequate service entrance

18. Swimming Pool and Four Tennis Courts

19. Parking for about 100 cars

XX. CLIMATE OF PALESTINE

The physical structure has a definite bearing upon the many local peculiarities of climate. Palestine is open to the influences of the Mediterranean and thereby escapes the excessive drought of the interior of Arabia and Syria. The westerly winds associated with rain-bearing cyclonic storms are felt in the Mediterranean in Winter and strike the coast of Palestine, giving very heavy rains. At the same time the interactions of the moist warm air over the Mediterranean and the denser, colder, drier air in the Winter over Asia Minor and Arabia give an extension to the cold, dry air of the interior of Asia, a feature giving a winter snowfall to the Judean hills and the mountains of the North. Even in Winter, the deep Jordan Valley is relatively warm, as the air is heated as it blows down from the North and West. The winter westerlies deposit their rain on the long westward-facing slopes, leaving the eastern scarp of the Jordan rift almost rain-free. The winds are carried again in the deep valley and, on cooling, deposit further rain on the slopes of the oak-forested Gilead. The winter rains die away about Easter time. These are "the latter rains" of the Old Testament that foretell of heat and the ripening of crops. What rain falls in summer is mainly associated with local thunderstorms, due to the interaction of the land and sea air. In the hot, dry Summer, with dust-laden winds blowing from the desert over Palestine, the thermometer occasionally registers as much as 100° F. in the shade, though 80° - 90° is the more normal maximum. In the Jordan Valley, the temperature may reach 130° F. The temperature may range within twenty-four hours from freezing point to 80°; this daily alternation of temperature may cause the wind to veer round the whole circle of the compass in a day (Eccl. i, 6). In October come "the former rains" which are the signal for winter ploughing. After October

the winter westerlies set in again. The mean annual rainfall along the coastal area is about 28 inches, although in exceptional cases as much as 10" more are registered. On the mountains, a rainfall of 18 inches is the common mark hit.

Although Palestine gets a great deal of rain, much of the water percolates through large expanses of limestone rock and is thus wasted.[1]

[1] Encyclopedia Brittanica

TABLE I

RANGE OF CLIMATIC CONDITIONS IN PALESTINE AND ILLUSTRATIONS OF CONDITIONS IN THE SEVERAL BELTS OF PALESTINE

	Palestine	Tel-Aviv	Jerusalem	Jericho	Beersheba
Precipitation					
Average Ann.(In.)	1 - 38	20.8	15.9	5.0	7.8
* P/E Index	1 - 76	36.9	34.1	7.1	13.0
Average Annual Rel. Humidity (%)	47 - 79	79	69	54	66
Temperature					
Mean Coldest Month	43 - 61	55	47	57	54
Mean Warmest Month	73 - 92	81	75	88	80
Mean Annual	56 - 78	69	63	74	68
Absolute Max.	86 - 120	115	107	120	115
Absolute Min.	19 - 46	37	26	36	32
Day Degrees above 50° F.					
Between May 1 and Oct. 1		4162	3519	5385	4162
Between Oct. 1 and May 1		2641	1496	3464	2497
Total		6803	5015	8851	6659

* P/E is the precipitation-effectivity index.

TABLE II

Chart giving mean monthly and yearly temperatures (°F.) and absolute maximum and minimum temperatures (T), monthly and yearly precipitation (P), and precipitation-effectivity index (P/E), and relative humidity (R) in percentage for Jerusalem (latitude 31° 47' and altitude 2485 ft. above sea level).

Month	T	P	R
January	47.0	4.1	78
February	48.0	5.3	72
March	55.0	1.1	60
April	61.0	1.0	52
May	69.0	0.1	44
June	73.0	0.0	46
July	75.0	0.0	50
August	75.0	0.0	55
September	73.0	0.0	60
October	69.0	0.2	58
November	62.0	1.2	62
December	52.0	2.9	73
Year	63.0	15.9	69
Maximum	107	P/E	
Minimum	26	34.1	

U. S. * Davis, N. E. California, 38° 30'; 51 ft. slightly cooler winters

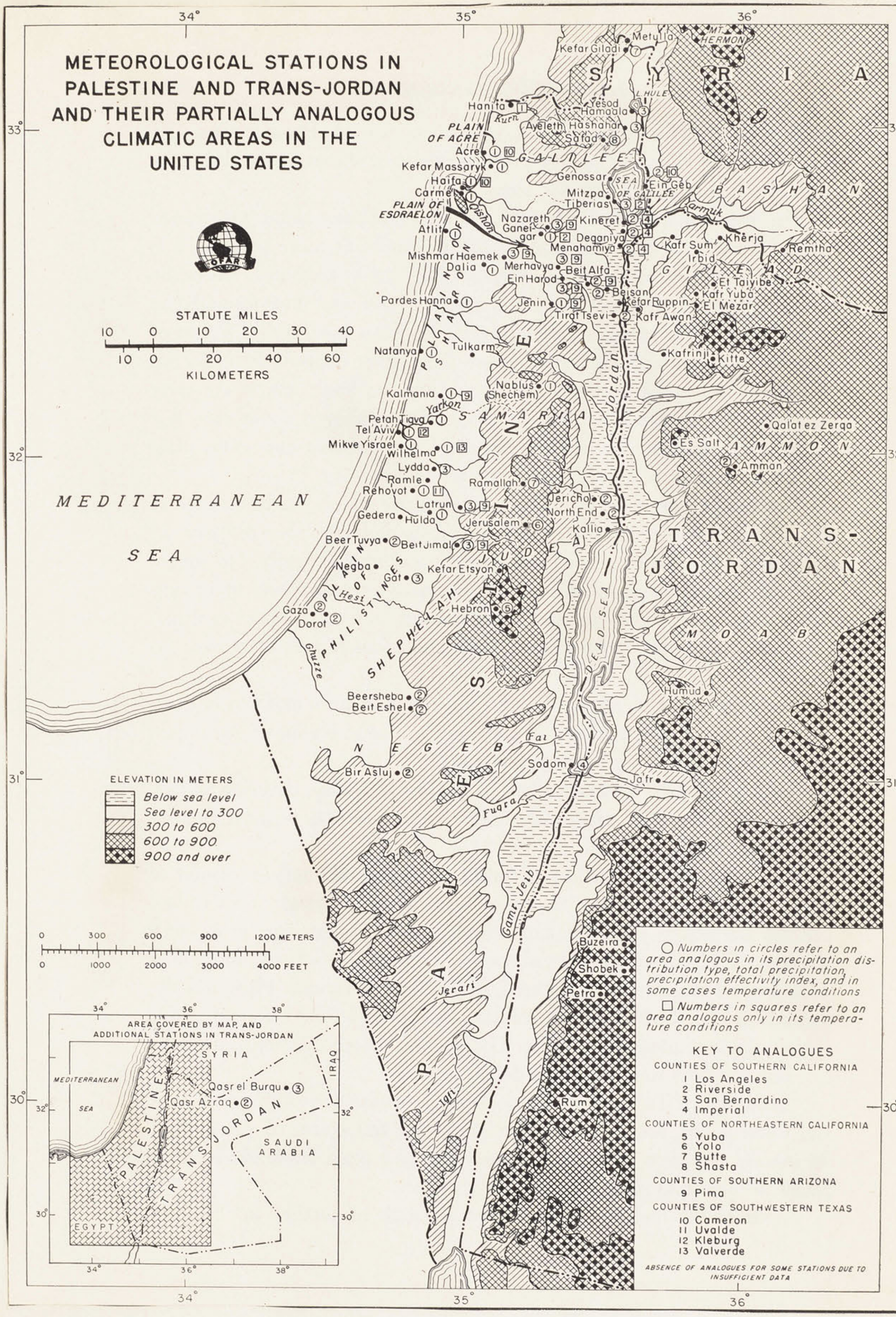
* "U. S." indicates climatic analogue in the United States based on annual distribution of precipitation and P/E index and in most cases temperature.

TABLE III

YEARLY PRECIPITATION IN VARIOUS AREAS OF PALESTINE (IN INCHES)

Coastal Belt		Hill Country	
1. South	17.4	1. Judea	21.4
2. Plain of Judea	20.7	2. Samaria	22.7
3. Plain of Sharon	21.3	3. Lower Galilee	25.4
4. Plain of Acre	27.2	4. Upper Galilee	26.8
5. Plain of Isdraelon and Valley of Jezreel	19.9	5. Valley of Jordan	13.4
		6. Negeb	5.3

JERUSALEM UNDER SNOW.


METEOROLOGICAL STATIONS IN PALESTINE AND TRANS-JORDAN AND THEIR PARTIALLY ANALOGOUS CLIMATIC AREAS IN THE UNITED STATES
STATUTE MILES
10 0 10 20 30 40
10 0 20 40 60
KILOMETERS
MEDITERRANEAN SEA
SYRIA
TRANS-JORDAN
PALESTINE
BASHAN
GILEAD
AMMON
MOAB
GALILEE
SAMARIA
JUDEA
NEGEB
SHEPHELAH
PLAIN OF ACRE
PLAIN OF ESDRAELON
PLAIN OF SHARON
PLAIN OF PHILISTINES
SEA OF GALILEE
DEAD SEA
Jordan
ELEVATION IN METERS
Below sea level
Sea level to 300
300 to 600
600 to 900
900 and over
0 300 600 900 1200 METERS
0 1000 2000 3000 4000 FEET
AREA COVERED BY MAP AND ADDITIONAL STATIONS IN TRANS-JORDAN
Qasr el Burqu ③
Qasr Azraq ②
SAUDI ARABIA
IRAQ
EGYPT
○ Numbers in circles refer to an area analogous in its precipitation distribution type, total precipitation, precipitation effectivity index, and in some cases temperature conditions
□ Numbers in squares refer to an area analogous only in its temperature conditions
KEY TO ANALOGUES
COUNTIES OF SOUTHERN CALIFORNIA
1 Los Angeles
2 Riverside
3 San Bernardino
4 Imperial
COUNTIES OF NORTHEASTERN CALIFORNIA
5 Yuba
6 Yolo
7 Butte
8 Shasta
COUNTIES OF SOUTHERN ARIZONA
9 Pima
COUNTIES OF SOUTHWESTERN TEXAS
10 Cameron
11 Uvalde
12 Kleburg
13 Valverde
ABSENCE OF ANALOGUES FOR SOME STATIONS DUE TO INSUFFICIENT DATA

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(v) "The Arab Awakening", George Antonius, G. P. Putnam and Sons, New York, 1946

(vi) "Standards of College Buildings", Evenden, Strayer and Engelhardt, Bureau of Publications Teachers College, Columbia University, New York City, 1938

(vii) Geographic Review, July, 1947

(viii) Constitution of the "Jerusalem University Association"

(ix) Correspondence with Founder of the "Jerusalem University Association"

APPENDIX. I.

THIRTY YEARS OF PALESTINE'S HISTORY

1917—The British Government issues the Balfour Declaration, favoring "the establishment in Palestine of a national home for the Jewish people." British forces defeat the Turks and occupy Jerusalem.

1920—A mandate for Palestine and Trans-Jordan is assigned to Great Britain (and approved by the League of Nations in 1922).

1936—Arab Higher Committee is formed to unite Arabs against Jewish claims.

1937—Britain's Peel Commission recommends partitioning of Palestine into a Jewish state, an Arab state and a British-mandated territory.

1939—British White Paper is issued, providing for admission of 75,000 Jews within next five years, after which there would be no Jewish immigration without Arab consent. Zionists oppose the plan; its operation is halted by outbreak of war.

1945—Britain agrees to admit 1,500 Jews a month to Palestine.

1946—Anglo-American Committee of Inquiry recommends that 100,000 Jews be admitted at once and that the mandate be continued pending establishment of a U.N. trusteeship. Illegal immigrants are shunted to Cyprus; Jewish terrorists in Palestine commit acts of violence.

1947—U.N. Commission makes investigation and prepares report for General Assembly. Violence in Palestine continues.

The UN usually favors the Jews over the Arabs.

THIS FACT WAS CLEAR FROM THE U.N. PROPOSALS ISSUED EARLY THIS MONTH (SEPTEMBER).

The Palestine Problem

Another attempt to solve the burning Palestine problem will be made when the report of the United Nations Special Committee of Inquiry is submitted this week. This is the fourth major investigation into the Palestine situation in the last decade.

The first two inquiries were British—the Royal Commission, headed by the late Earl Peel in 1937, and the Partition Commission in 1938. The third, the Anglo-American inquiry of 1946, had an equal number of British and United States members. The present United Nations approach to the problem of the Holy Land has been international. The progression from unilateral to bilateral to multilateral has symbolized the increasing importance of the Palestine issue.

Against the broad background of the Middle East, Palestine appears as a major strategic proposition. As the large map indicates, Palestine is the cornerstone of British influence in the region and is the terminus of pipelines from the fabulous oil fields of Iraq. Furthermore, the Holy Land is a key communication center linking the eastern and western worlds, and is within easy flying distance of Russia.

The map of Palestine shows the present distribution of the Jewish population of the Holy Land to be concentrated in the coastal plain, with terminals at Tel Aviv and Haifa. In Jerusalem the Jewish community is estimated at 90,000.

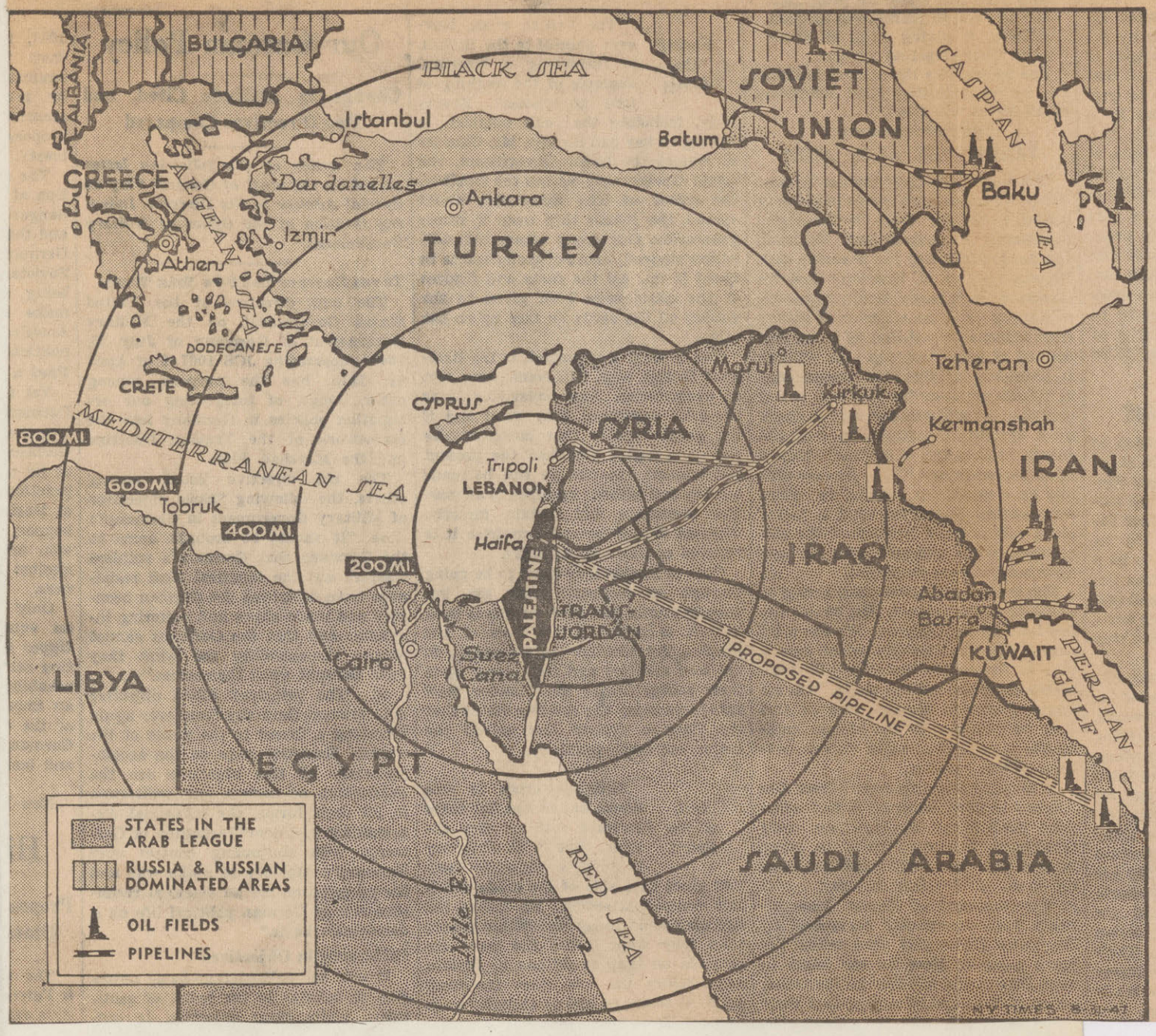
The Tel Aviv and Haifa regions are heavily industrialized; the coastal plain has so far been the center of agricultural settlement through the Jewish National Fund (buying the land) and Palestine Foundation Fund (providing initial farm budgets). The Negev, or southern wilderness, has been looming in importance as a potential zone for new Jewish settlement.

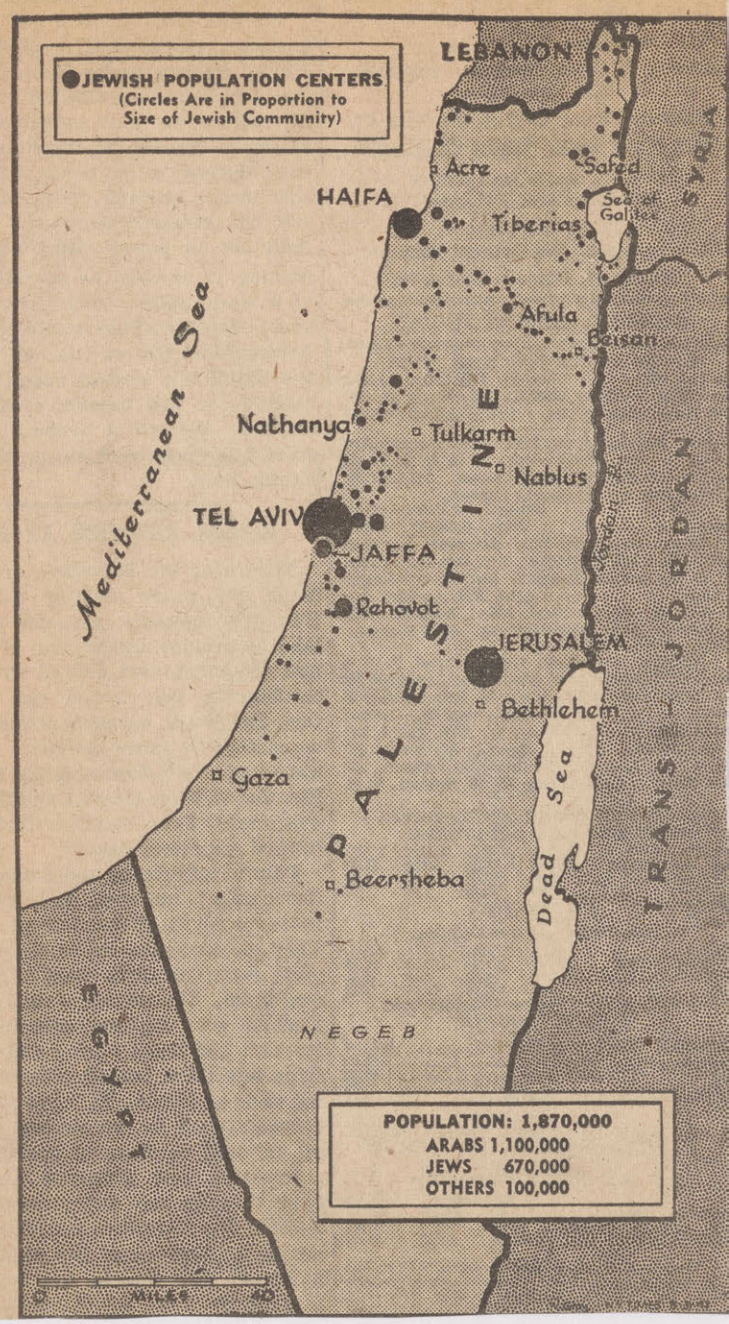
The Arab population is settled in the mountain areas running up the center of the country, with large communities in the four coastal towns of Gaza, Jaffa, Haifa and Acre. Nablus has an all-Moslem population and Nazareth is all Christian.

—JULIAN LOUIS MELTZER.

Note. Map referred to above is on following pg.

PALESTINE—AND ITS STRATEGIC IMPORTANCE





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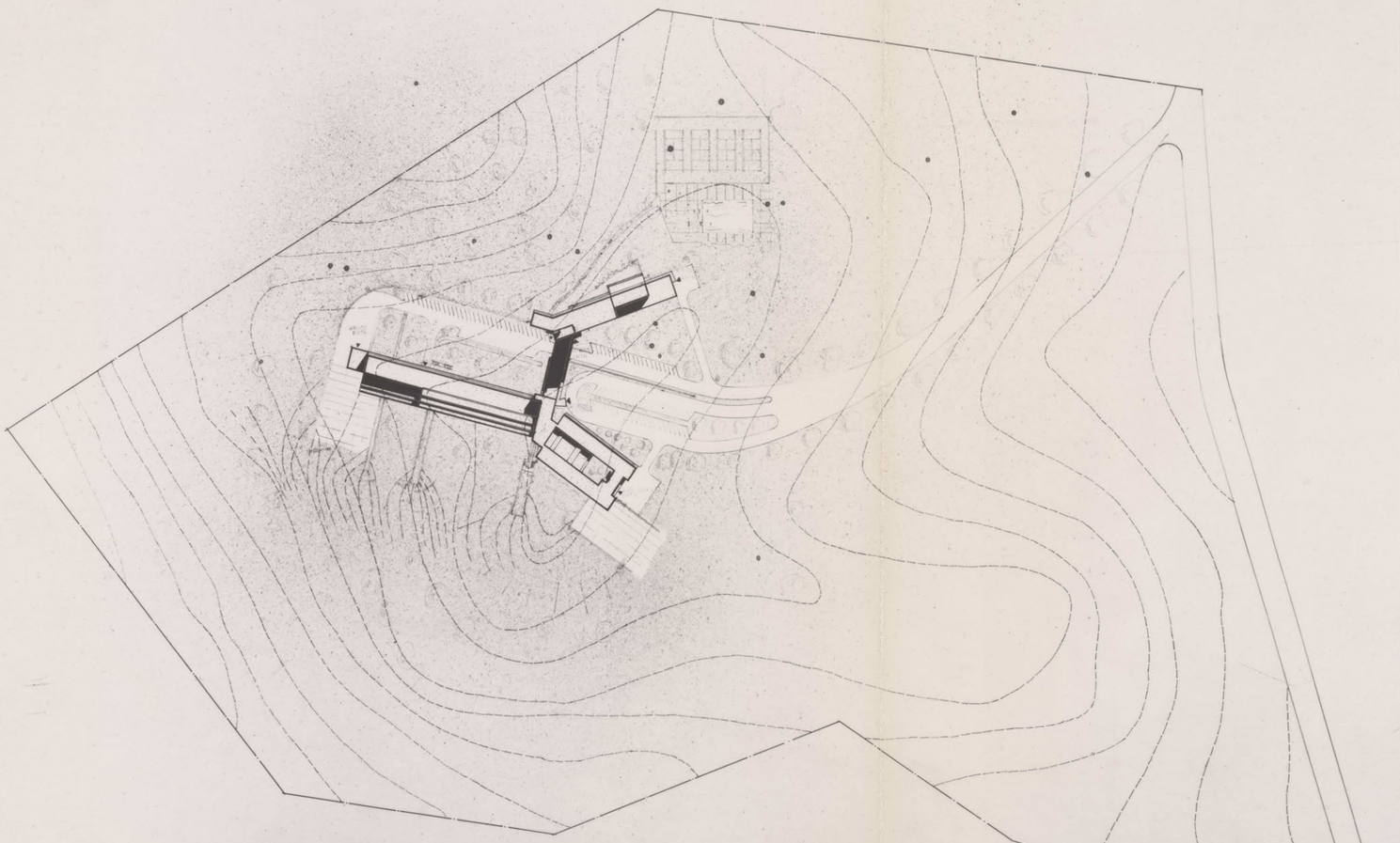

SITE PLAN

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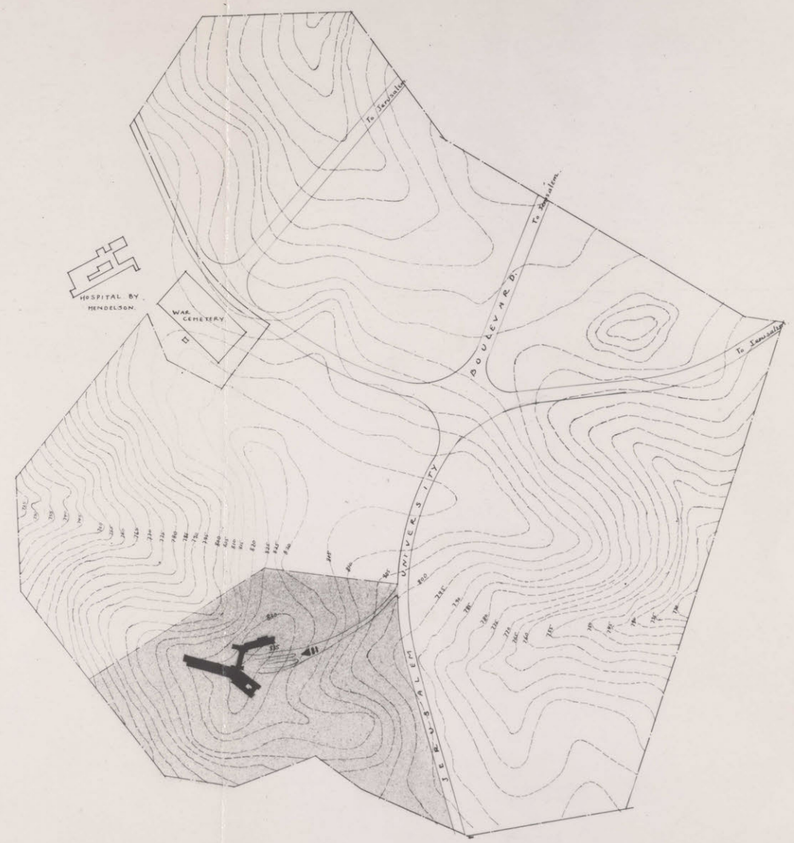

UNIVERSITY SITE

1:4000

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LOBBY SHOT A (1)

• LEVEL - 1 PLAN 1:200

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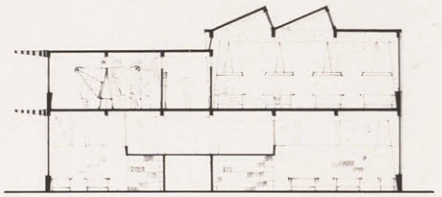

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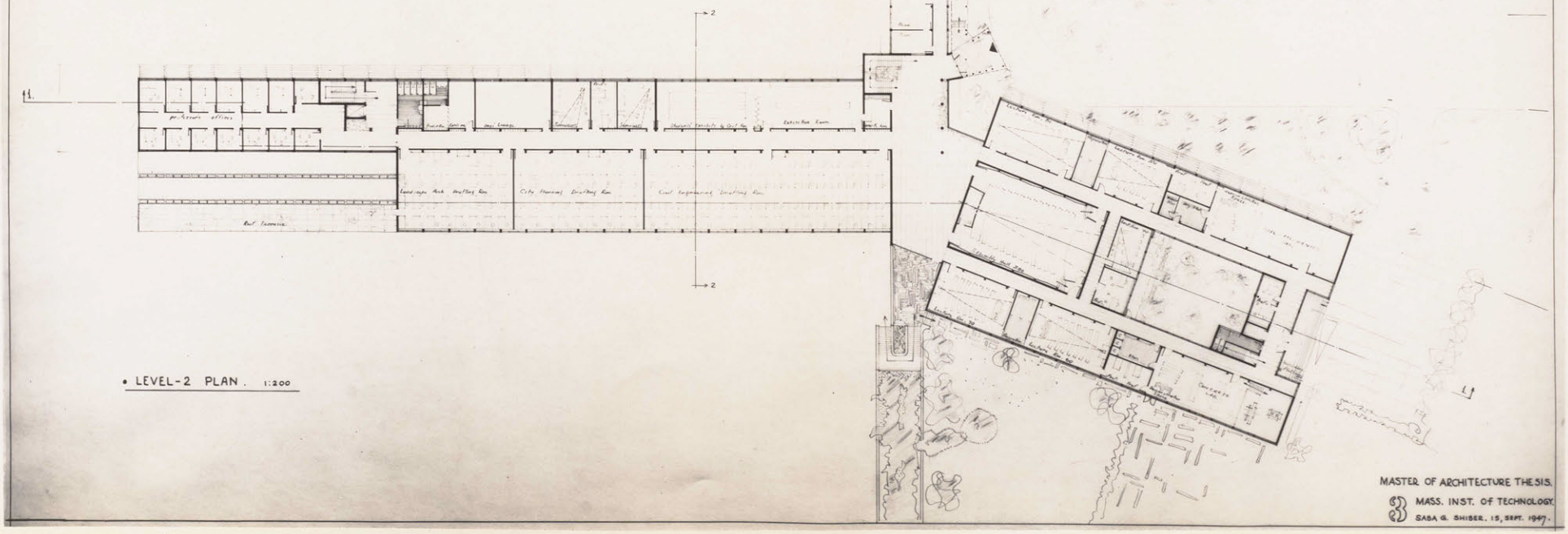

• LEVEL-2 PLAN . 1:200

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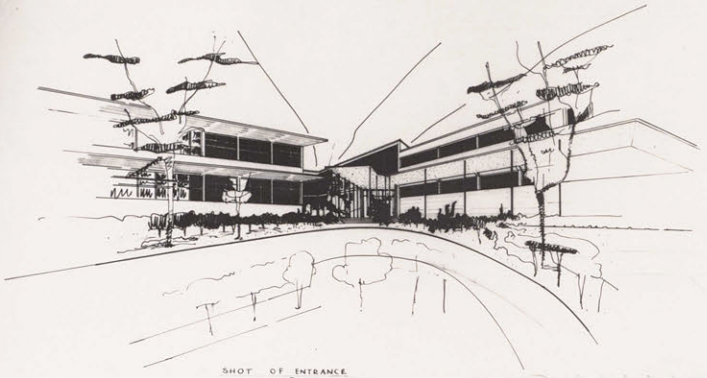

SHOT OF ENTRANCE AT ①

LEVEL-3 PLAN. 1:200

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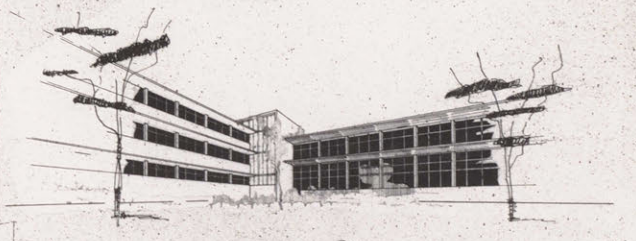

SHOT FROM (1)

• LEVEL - 4 PLAN . 1:200

• LEVEL - 5 PLAN . 1:200

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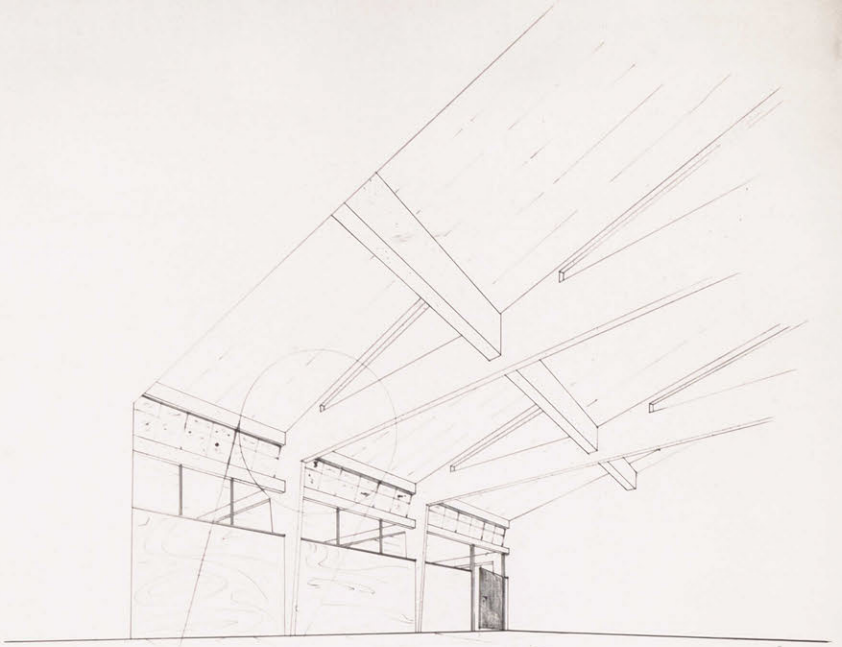

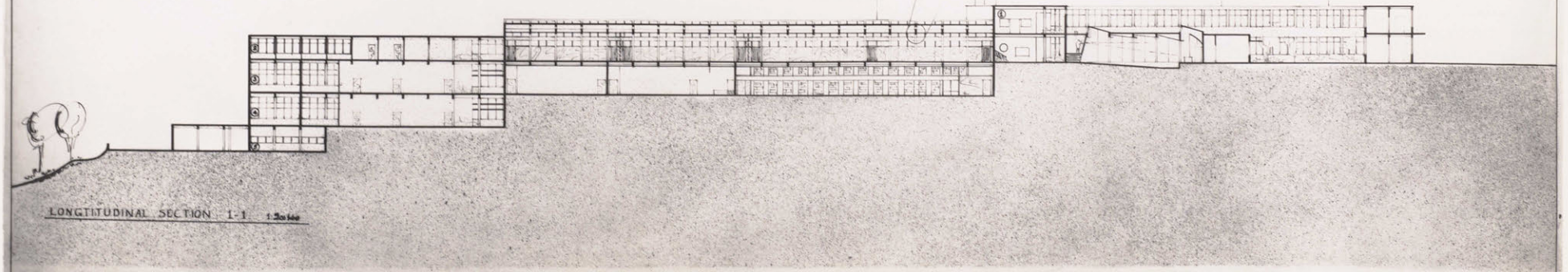

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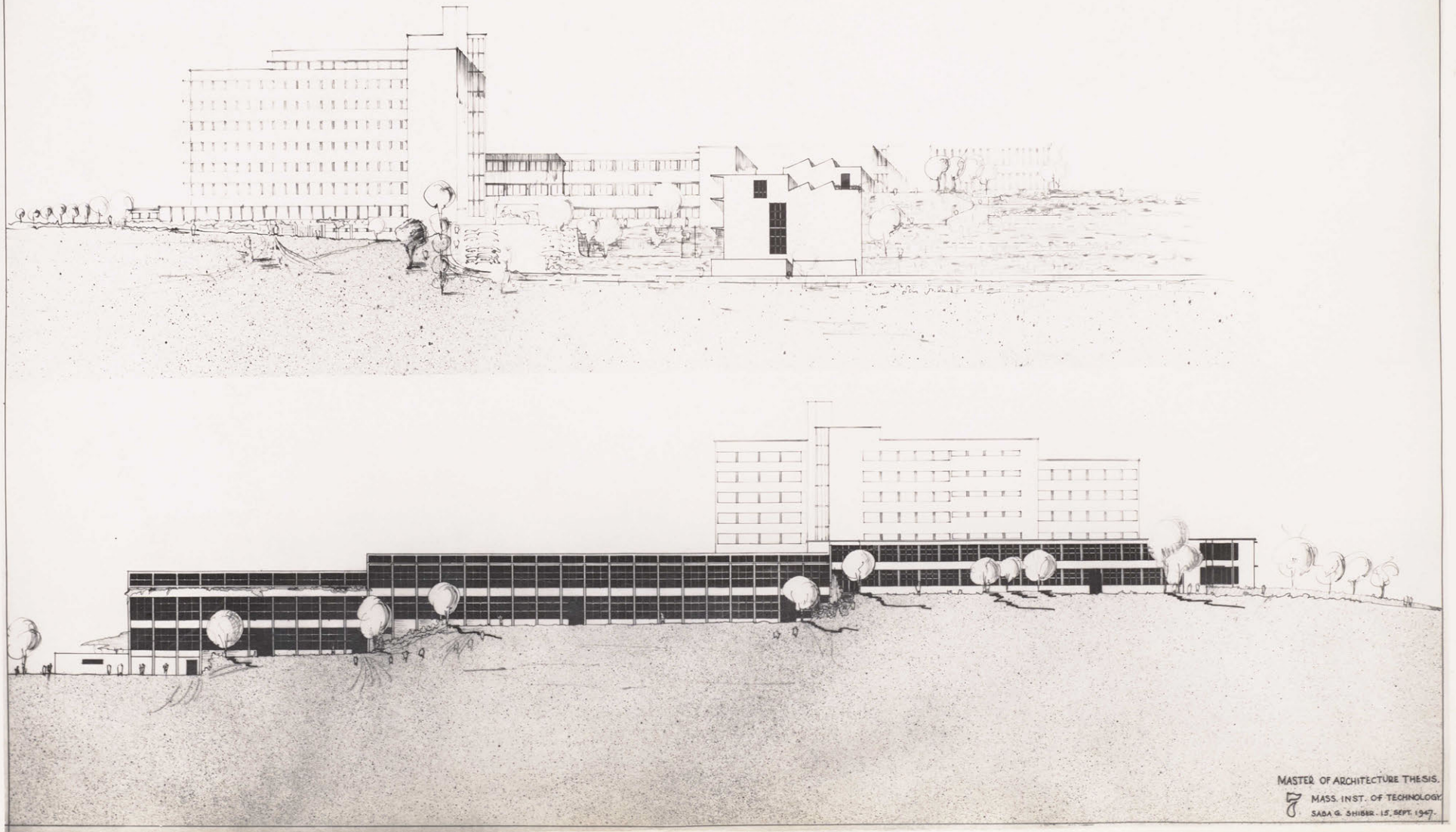
N. & E. ELEVATIONS.

1:200



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S. & W. ELEVATIONS

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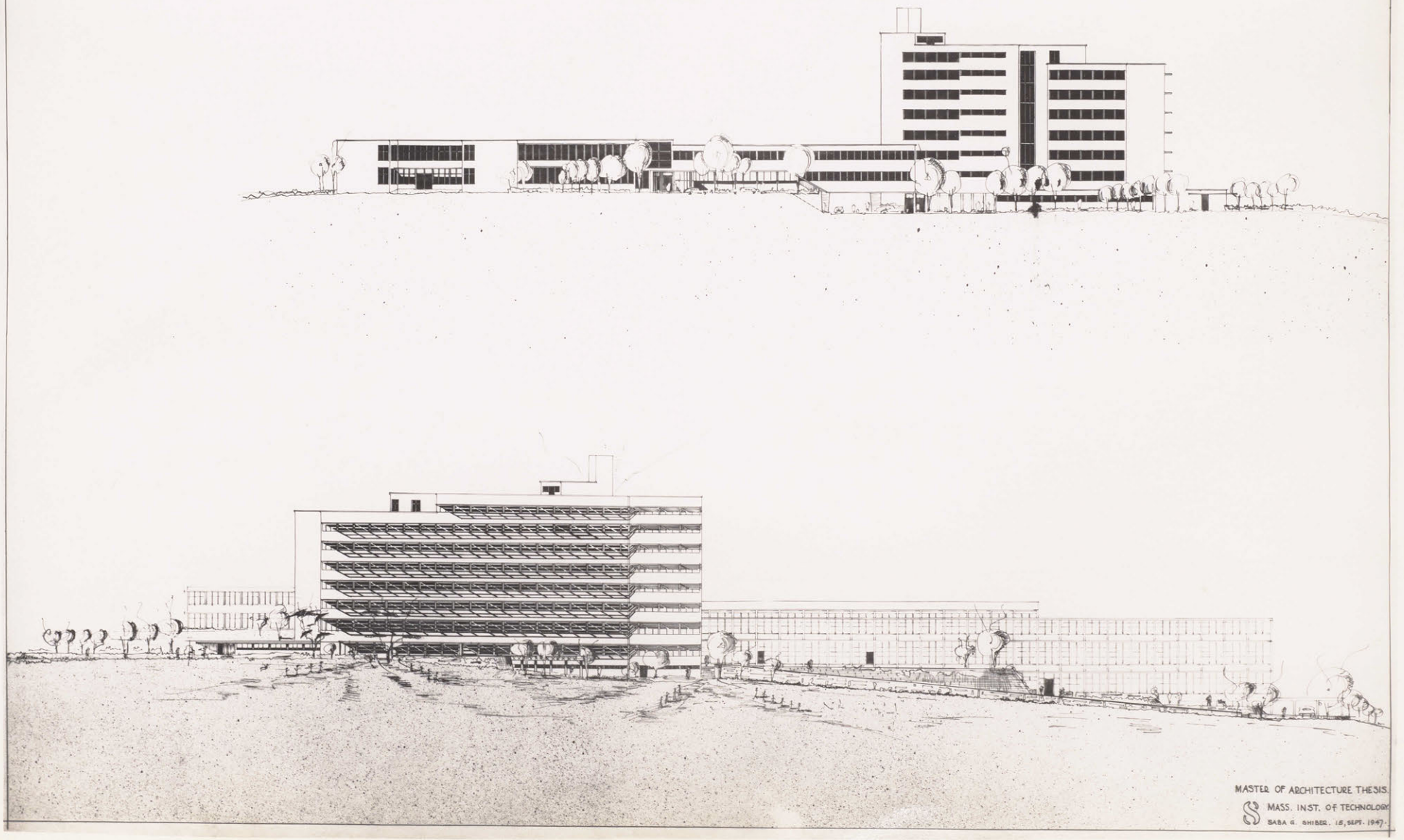

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