A PUBLIC LIBRARY, CAIRO

UNIVERSITY OF LIVERPOOL

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N.B.:

A set of working drawings sheets with all necessary details have been prepaired, Besides two models for the site and the building have been ~~made~~ built.

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A PUBLIC LIBRARY

CAIRO

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THE PURPOSE THE DESIGN IS TO FULFIL

The first library ever known was built in Egypt in the year 2000 B.C. by Ramses II with these words on its entrance:

'The Treasure of the Remedies of the Soul'

In the year 287 B.C. the famous library of Alexandria was built by Ptolomy Philadelphus. It consisted of 400,000 vols. It was partially destroyed by Julius Caesar, and a second library was formed from the remains of the first, consisting of 700,000 vols. This also suffered destruction at the hands of succeeding generations.

In the year 1904 the present public library of Cairo was built. The Egyptian Government now intends to build a new one to replace the present library which cannot adequately accomodate the rapid increase of the number of books. The old library will then be converted to a branch library.

In the year 1950 a decision was taken to build the new library, a new Broadcasting House, a National Theatre, a Town Hall and a Collective Building to accommodate some of the Government departments. The latter has been already built in the 'Liberation Square'.

The main purpose which the design is intended to

fulfil is to create a 'Cultural Centre' with the Egyptian Museum of Antiquities as one of its units. The National Theatre will then be built for the completion of the centre.

The scheme will help to create and satisfy the cultural interest of the general public and assist students and research workers for whom it is inconvenient to use the University Library of Giza. The design will also accommodate the big collections of books and coins left behind by the ex-King.

The erection of such a 'Cultural Centre' is essential to fulfil one of the main targets of The Egyptian Revolution of the 23rd July 1952; that is to spread education as far as possible among the common people. The fact that the Government has started building 400 primary schools as a first step in building 7,000 schools in the coming ten years, is a clear evidence of her desire for spreading education among the people. The object is not merely to combat illiteracy, but also to give a reasonable share of sound education to the masses, raising their standard of living and helping every Egyptian to be a good and a free citizen in the widest sense of the word.

The building of this 'Cultural Centre' will be as a completion to the 'Recreation Centre' on the other

side of the Nile, which includes the Exhibition Grounds and the Fairs. This, with the surrounding parks will make this part of Cairo an attractive spot for the people to enjoy culture, entertainment, health and leisure; this is what the population of Cairo needs. I have been myself thinking of this scheme for more than ten years.

THE CHOICE OF THE SUBJECT

The public library, being one of the main units of the 'Cultural Centre' and as the Government has already decided to build a new public library in the site of the Egyptian Museum of Antiquities to replace the old one; it was necessary to start with scheme due to its extreme importance.

The present public library "Dar-El-Kutub" cannot absorb more than its 700,000 vols., and the site where it exists does not help any extension to be built.

The fact that there are not sufficient public libraries in Cairo to cope with the steady increase in the population of the capital, which is about 2.5 million, makes it essential to build a new one. Not only to be as a municipal library, but to be as a unit of the 'Cultural Centre' with a considerably big lecture hall to replace the memorial Ewart's Hall of the American University in Cairo where many public lectures have been given by prominent authorities in Egypt.

THE PREVIOUS DEVELOPMENT OF THE SCHEME

The idea of establishing a 'Cultural Centre' for Cairo was first thought of in 16th January 1863 when the 'Kedive' of Egypt gave orders for the building of a public library, a cultural institute and two museums - one for the Egyptian Antiquities and the other for the Greek Antiquities. The scheme was not carried out because of political instability and lack of funds.

The Museum of Egyptian Antiquities was then built in the year 1900, and is now considered to be the first unit of the 'centre' to be built. The occupation of the foreign troops in 'Qusr-El-Nil Barracks' in Cairo, prevented the extension of the scheme. When these troops evacuated the site in the year 1948, the Egyptian Government started to re-design the whole area.

The south-west quarter of the site has been already chosen for building a large hotel and a tourist centre. The northern half of the site is left for the 'Cultural Centre' which includes the National Theatre. This scheme has been fully approved by all the authorities concerned. They took into consideration the establishment of a Town Hall, a Broadcasting House and a collective building for the Government departments in the Liberation Square in the south-east end of the site.

AN HISTORICAL ACCOUNT AND A BRIEF DESCRIPTION OF THE PRESENT PUBLIC LIBRARY

'DAR-EL-KUTUB'

In 23rd March, 1870 the Khedive 'Ismail' of Egypt, gave his orders to the late 'Ali Mobarak', the director of the Education Department then, to collect the different manuscripts which had not been decayed, and which were seized by the 'Sultans' and the 'Mamluks' and prevented from reaching the Mosques and the educational institutes. 'Ali Mobarak' was asked to collect these manuscripts and form a public library consisting of 30,000 vols.; reference books and maps.

By these collections and by others owned by 'Mohamed Ali El-Kabir', the Khedive's grand father, the Egyptian Library was established and opened to the public in 24th September 1870.

This library was built in Dar-El-Gamamiz street near to the high schools in old Cairo. It also occupied the ground floor of the Palace of 'Mustafa Fadel', the Khedive's brother. A collection of instruments were added to this library for the scientific experiments. The library was then transferred to its present site in Bab El-Khalk in the year 1904.

The Khedive, Ismail was so interested in the library that he bought the collections of his late brother

Mustafa Fadel who died in Istamboul in 1876. This collection consisted of 3,458 vols. including some of the rarest books and manuscripts.

The Arabic and Oriental collections began with what had been collected from the Mosques and the cultural institutes and would have otherwise been lost. This is together with the collection bought by the Khedive and referred to above. The Foreign collections, which includes French, English and other languages, began with the books which belonged to the Egyptian Society which was established by some foreigners in 1836. This last collection had been presented to the Egyptian Public Library in 1873.

COLLECTIONS ADDED TO THE EGYPTIAN PUBLIC LIBRARY.

Since the addition of the collection of the late M. Fadel in 1876, the following has been added.

Kawala library: This library was established by M. Ali and has been added to the Egyptian Public Library by King Fouad 1st in 1929. It consisted of 3,500 vols., including printed books and manuscripts.

The late Khalil Aga collection: It consisted of 1,500 vols., printed and manuscripted, and has been added to the Egyptian Public Library at the order of King Fouad 1st.

The late Ibrahim Halim collection: The distribution of this collection among the cultural institutes was ordered by King Fouad 1st. The share of the Egyptian Public Library was 1,607 vols. (printed books and manuscripts).

The Taimorian collection: This collection includes a number of rare manuscripts, a collection of photostat, some rare manuscripts written in Damascus, Istamboul and Europe, and a collection of book

covers related to different periods. The collection consists of 19,527 vols.

Talaat collection: The share of the Egyptian Public Library of this collection was 30,000 vols. These included manuscripts and books printed in Arabic, Oriental and European languages. It also included some of the most famous Korans written by famous inscribers.

The Khazana-El-Zakia collection : Its volumes were collected by the late Proph. Ahme Zaki. It contained manuscripts, photographed books, and other prints in Arabic, Oriental and European languages. This collection was distinguished with a big collection of Arabic books printed in Europe. It contains 18,622 vols.

The late Ali Galal El-Huseni collection: This contains 8,636 vols. in history and law in Arabic and foreign languages.

El-Shankiti collection: It contains 1,409 vols. of rare manuscripts and research in Arabic language.

Other collections of less importance had been added - such as the late Wagihi-El-Emary collection

which contained many rare manuscripts written by the most famous Arabic Writers. The collection of Shiekh Ahmid Abu-Khatwa, a notable religious leader, and the collections of El-Said Omar Makrum, the head of Al-Ashraf, (a religious group). This is in addition to other collections and manuscripts offered to the public library by many other learned men in gratitude and to encourage the continuity of its great cultural message.

Grants were recently offered to the library by many well-known personalities such as the late Kamal El-Din Hussein, Omar Toson and Yousef Kamal whose offer includes many unique pieces of art as well as other historical and geographical volumes.

NUMBER OF VOLUMES IN THE PRESENT PUBLIC LIBRARY

The number of vols. boughtor offered by individuals = 300,000 (1939)

The number of vols. of the collections offered to the library = 100,000 vols.

The whole number of vols. (till 1939) =400,000 vols.

As statistics show that the number of volumes is nearly doubled within 25 years therefore the number of vols. in 1954 = 640,000 vols.

Number of vols. of more than one copy= 150,000 vols.

The number of vols. in the branch libraries = 65,000 vols.

The total no. in the present Public library = 790,000 vols.

THE EXHIBITION

The Exhibition is divided into four main sections:-

1. El-Khazanah El-Tuymooreyah (Book collection)
   It contains a considerable number of rare manuscripts as well as many photographs of other manuscripts in the libraries of Damascus, Asetaneh, and Europe. It also contains many photographs of well known personalities such as Governors, writers, scientists, and others from all nations.
2. The Papyrus exhibition: It shows the development of writing and the process of manufacturing Papyrus from the times of the Greeks till that of the Arabs from the first to the fourth centuries. It contains also articles and materials used by the Arabs in their scripture.
3. The Iranian Exhibition: It contains old Iranian collections distinguished by their remarkably bright colours.
4. The General Exhibition: This shows the development of the Arabic Scripture till it reached its contemporary state. It also contains many volumes and manuscripts of well known writers such as El-Hariri, El-Firozabady, and other collections of the Koran written in Koufi. Also there is a good collection of painting by internationally famous artists.

The Public Library has now reached a very high stage of importance. It has been used by many orientalists and other historians and scientists who sought knowledge from its unique collection. It has also been used by many publishers and others concerned with culture and research work.

To continue in serving the great message for which it was established, the library is now in a great need of expansion. New printing offices and stacks are very essential.

All the above mentioned reasons point at the neccessity of having new buildings and preferably a new site for the future expansion of this library.

THE DEPARTMENTS OF THE PRESENT LIBRARY

1. Administrative and financial department (General Office)
2. Consultation and registration office.
3. Librarian office. (Also to deal with the outside borrowers).
4. Lending library and reference library.
5. Classifying and cataloguing department. (To deal with books of Arabic and Oriental languages coming from the registration office. It also repairs the publications of the library.
6. A classifying and cataloguing section dealing with columes of foreign languages.
7. Literature section.
8. Manuscript section. (To look after manuscripts and choose the valuable ones. It also classifies and catalogues the different manuscripts and makes photographic reproductions when required).
9. Egyptian Papyrus section. (To look after and classify the collections of the Papyrus in the library).
10. Coins and Medal section. (To classify the old coins according to their dates and values).
11. Cultural co-operation department. (To be always in contact with the other libraries and scientific and cultural organisations in Egypt and the other countries).

12. Statistic department (To collect the informations and the statistics of the activities of the public library and the branch libraries; i.e. the number of readers, number of books borrowed inside the library).
13. Branch libraries department. (To deal with the affairs of the branch libraries).
14. Photostatic and Microphotographic department.
15. The Blind section. (To look after the blind. It contains many publications printed in braille.
16. The printing office.

THE BRANCH LIBRARIES WITHIN THE CIRCLE OF SUPERVISION OF THE PUBLIC LIBRARY

1. El-Zaher Branch Library: (el-Sakakini Street)
2. Shubra Branch Library: (el-Shennawi Street)
3. El-Zeitoon Branch Library: (Nosohi Street)
4. The Citadel Branch Library: (The Citadel)
5. Fouad el-Awal Branch library: (Salah-el-Din Square, the Citadel).
6. The Art Library: (Kasr-el-Nil Street).
   This is connected with the Museum of Modern Art and has got a musical section.
7. Helwan Branch Library: (Fidi Street).
8. Labourers' Library: (Embabah).

9. El-Moneerah Branch Library: (Ismail Street).

10. El Amirah Ferial Branch Library: (Heliopolis).

THE FINANCIAL BACKGROUND AND THE PRACTICABILITY OF THE SCHEME

The Scheme has every chance of materialising as the Egyptian Ministry of Public Work has already chosen the site and allotted £E.500.000 for its erection. And this does not include funds allotted for the erectionof a new broadcasting house, a national theatre, and a town hall. The collective building of the Government's departments which has been build, cost the Government £E.538.000.

The first step which was taken for the execution of this big scheme was the replanning of the Liberation Square, where the Monument of the 'Unknown Soldier' will be erected.

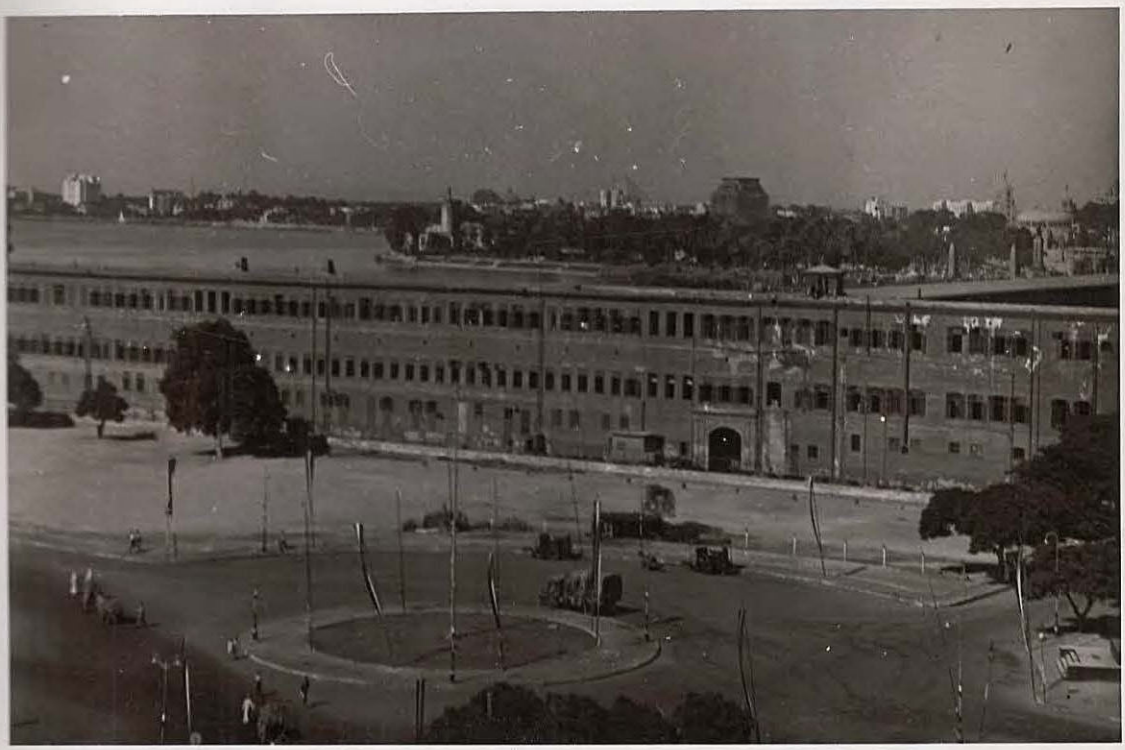
THE SITE

The site chosen is that of the 'Quasr-el-Nil' Barracks in Cairo. The site is limited from the west by the Nile, from the east by 'Merriette' street, from the north by El-Antiqukhana Street and from the south by El-Khedive Street. Merriette Street radiates from the Liberation Square and runs to the north leading to Cairo's Central Station. El-Khedive Street leads to the residential suburbs of El-Dokki, El-Gezira, El-Awkaf City and the town of Giza. It extends to the east across the Liberation Square, the Republican Palace in the residential district of Abdin, then further on to old Cairo.

The Liberation Square lies in the south east of the site. From it radiates Quasr-El-Eini Street to the south, where most of the Government administrations are found. The extension of this street across the Liberation Square is known as Sohiman Pasha Street. The latter is famous with its elegant shops, stores and cinemas and leads to the commercial centre of the City. From the Liberation Square, El-Saraia Street leads to the district of Garden City, to the south of the site, where the Foreign Office and many Embassys are situated.

The site lies in the heart of Cairo and is accessible from all directions. It is a starting point for many buses and trams.

THE LIBERATION SQUARE



THE OLD BARRACKS & EL-GEZIRA ISLAND

THE FOREIGN OFFICE (SOUTH)

THE OLD BARRACKS - WEST

The site is generally flat. Existing retaining walls safeguard it from any erosion caused the river.

A sounding test in the site gives this result:

The sewage system:

The sewage system in the site has been designed to suit the buildings as a barracks. The whole system leads to a pumping chamber, a precipitation chamber, and a dissolving chamber, recently erected in the west side of the site at the end of Meriette Street.

The water and electric installations already on

the site used to serve the Barracks and the Museum of Egyptian Antiquities.

GENERAL SURVEY OF THE BUILDINGS IN THE VICINITY OF THE SITE

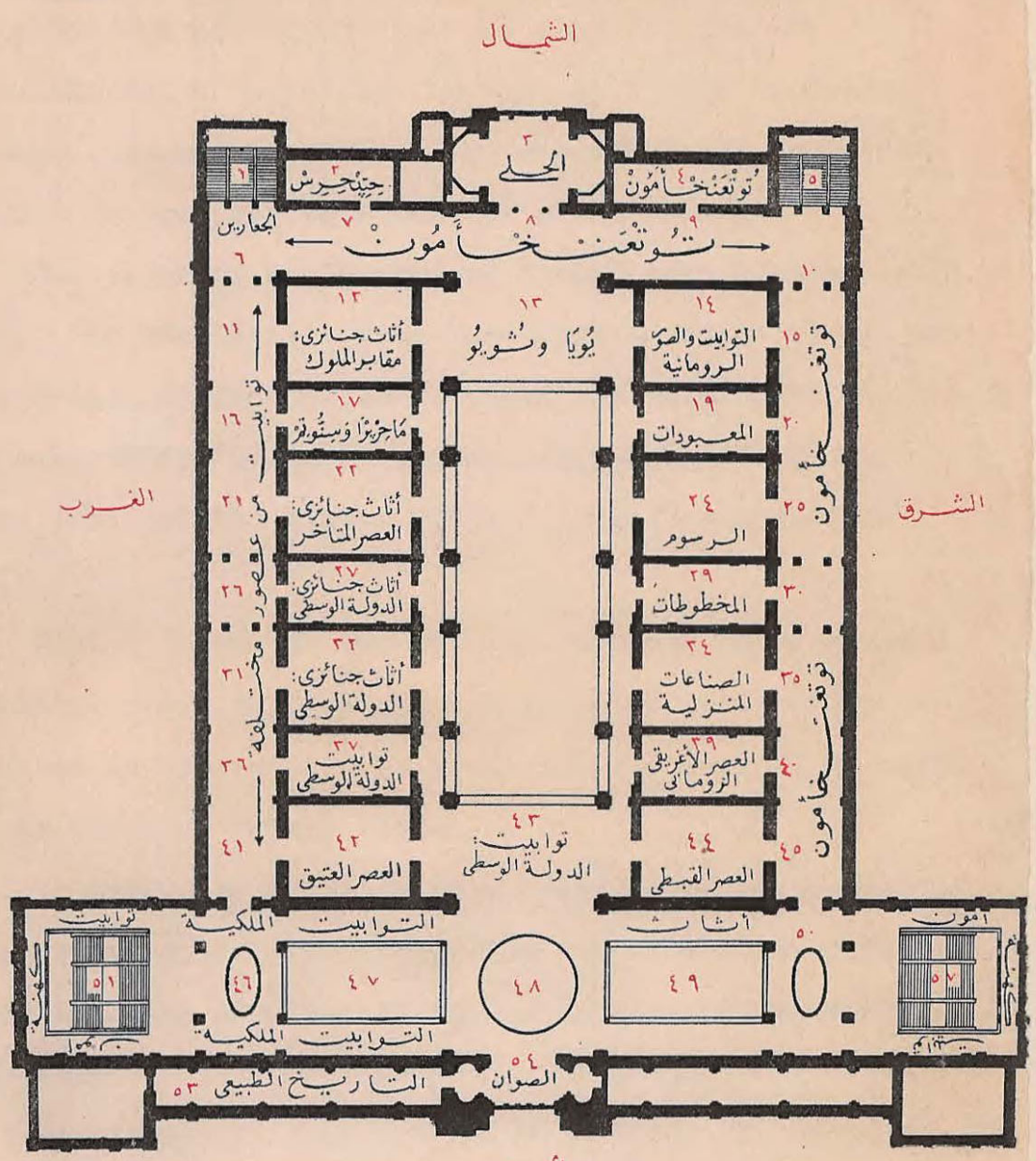
The most important buildings are: The Museum of Egyptian Antiquities, the Foreign Office, the Collective building of the Government Departments, and other residential and office buildings.

The Museum of Egyptian Antiquities, being adjacent to the prospective site will have a significant bearing on the design and so careful study of its plan and elevations is desirable.

The history of the Egyptian Museum:

When M. Meriette, the French archaeologist, was appointed as the director of the Archaeological Department in Egypt in the 19th June 1858, he established a store for the antiquities in the office building of the Nile Navigation Co. at Nile bank in Boulak. This store was converted to a museum after the discovery of the treasures of the Queen "Ahotep" in 5th February 1859.

In 18th January 1863, the Khedive Ismail ordered the establishment of a museum for the Egyptian Antiquities, a second for the Greek antiquities, anda



الطبقة العليا

THE MUSEUM OF EGYPTIAN ANTIQUITIES

FIRST FLOOR

third for the Syrasinic art. He also ordered the establishment of a public library and a high institute of Arabic language. But, this scheme was not completed, and the antiquities were left in their place.

The halls of the museum of Boulak were flooded in 1878. The antiquities were then kept in boxes after the destruction of some of them. When the water level droppe d, the Authorities repaired the building and raised the floor level of the Museum Halls. It was re-opened in 1881.

When M. Meriette died he was replaced by M. Maspiro who had a great interest in the Egyptian collections which he re-organised. Later he was replaced by M. Gribo as the Director of the Museum.

In 1890, the exhibits were transferred to Saraia-El-Giza Museum under the supervision and care of M. Jacque de Morgan, the director of the Archaeology department 1892-1897.

The present museum was built in 1900. M. Maspiro resumed his work and started to transfer the antiquities from Giza to its present place. The museum then was opened to the public in 15th November 1902. Recent discoveries were added to the original collections of Saraya el-Giza.

From 1903 to 1910 M. Maspiro studied and organised the different collections and made an accurately detailed guide which replaced the original short one published in 1883. The large statues were put in the ground floor as well as in the inner court. The furniture, pottery, jewelleries and all the fine antiquities of a special artistic value were exhibited in the first floor and its balconies. The antiquities were classified and exhibited according to their kind and date.

The collections in the museum were increasing continuously till they surpassed the collections of Egyptian antiquities in all the other museums of the world. Now all the finest and most important pieces of art whether they were discovered by foreign expeditions, by the Department of Archaeology or by the Egyptian Universities, found their way to the Museum.

The statistics of 1951 shows the number of visitors during the different months of the year is as follows:-

In January 11.807 including 4.954 person coming in organised parties.

In February 16.254 including 10.010 person coming in organised parties.

In June 5.326 including 5.264 person coming in organised parties.

In September 7.704 including 7.600 person coming in organised parties.

In December 6.016 including 3.640 person coming in organised parties.

The total number of visitors during 1951 was 103.785 including 2.518 individual permits, 21.571 organised parties and 79.696 other visitors.

General Description of the Buildings:-

The museum is built in the Renaissance style. The height of the ground floor is 22 feet, that of the first floor is 16 feet, and the ground floor is 4 feet above the street level. The south elevation with the main entrance in the middle has three arches on both sides. On the eastern end of the facade is the entrance to the purchase hall. The library of the Museum is on the western end. No fenestrations are found in this elevation. Instead, there are panels holding the names of those who served and helped in the discoveries and the organisation of the Antiquities. The other elevations are nearly blank.

The plan consists of the entrance hall with two other halls on each side, with the staircases at their extreme ends. The main block simply consists of different bays and three long galleries round the inner court which goes through the two stories of the building. All galleries, halls, and the inner court, have their light from a top

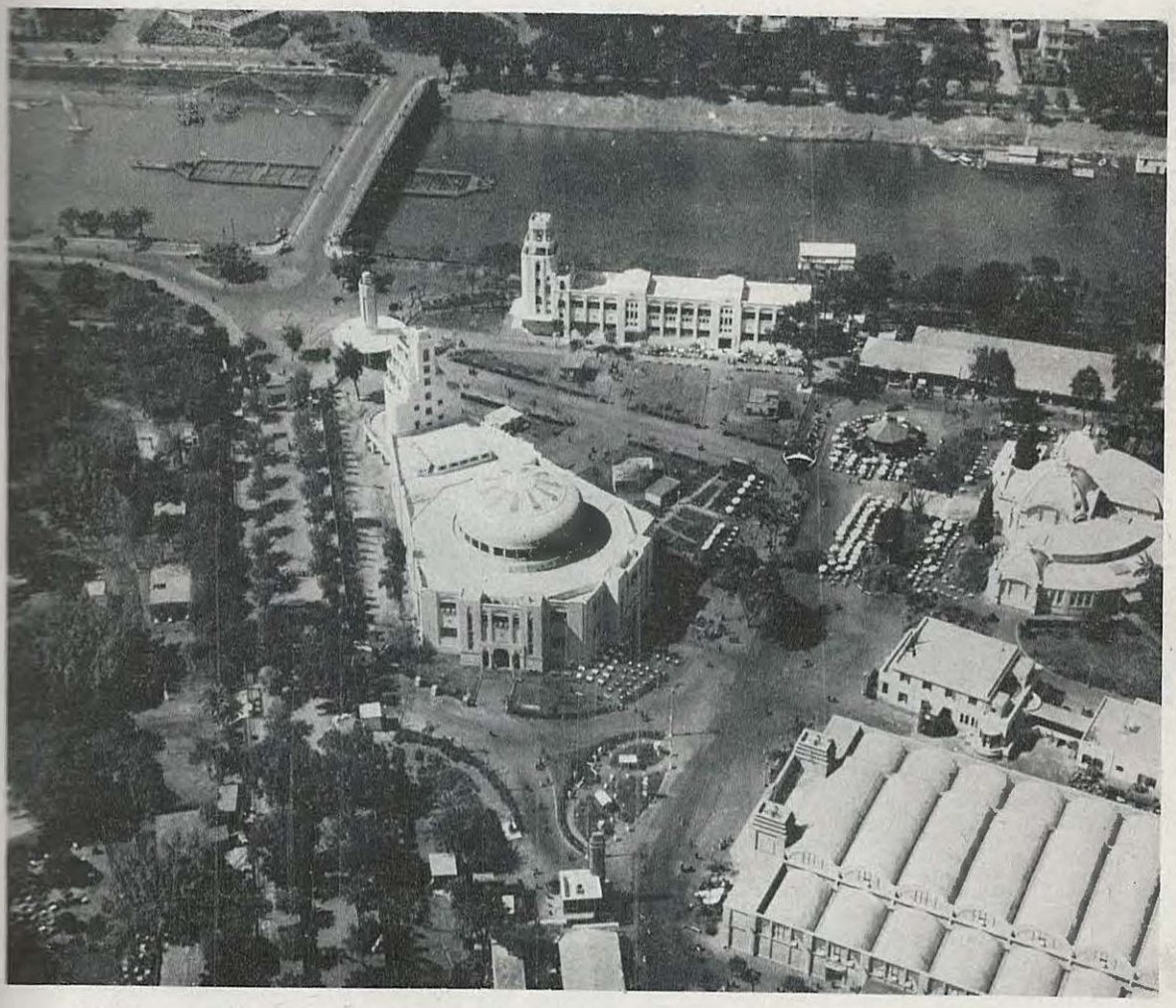
skylight. The entrance hall has a semicircular dome.

The administrative section occupies the northern part of the museum.

The building occupies an area of 100,000 sq. ft.

On the north west of the Museum lies the English Cathedral in a sober and modern style.

On the extreme end of the southern side of the site lies the Foreign Office in a Baroque style. All the other buildings in the eastern side of the site or those which line the Nile banks are modern buildings. On the opposite bank of the Nile the Exhibition grounds and funfairs are found. Those Buildings on the eastern side of the site are of six and seven stories and those on the Nile Banks are of nine to twelve stories.



A GENERAL VIEW OF THE EXHIBITION GROUNDS

THE EASTERN SIDE OF THE SITE.

HISTORICAL INTRODUCTION

"Libraries-General"

There was a public library founded in Athens by Pisistratus about 544 B.C., but perhaps the most famous of these early libraries was that built by Ptolemy Philadelphus at Alexandria in 287-284 B.C. This latter, which was partially destroyed by Julius Caesar, was said to have contained some 400,000 books. A second library, formed at Alexandria from the remains of the first, consisted of 700,000 volumes, and this also suffered destruction at the hands of succeeding generations.

At Pergamon, in Asia Minor, there was an important library, said by Plutarch to have contained 200,000 books. This library is reputed to have consisted of rolls formed of parchment of more durable material than the Egyptian papyrus and was described by Vitruvius as being 'open to all'.

Under the Roman Empire, with its highly developed social services, libraries played an important part in the daily life of the community and there are said to have been no fewer than twenty-six in Rome alone. Conveniently placed near the therma, temples and public markets, they formed an agreeable rendezvous for philosophers and students in an age renowned for its

delight in the practices of discourse and learning. A feature of these Roman libraries was the colonnade, where students might stroll and engage in conversation away from the 'silent' parts of the building. Monastic libraries possessed a somewhat similar feature in the cloistered court, and the need for some such provision may be felt from noting the use which, in more modern times, is made by readers, of the British Museum colonnade or of that outside the circular Picton Reading Room at Liverpool.

With the fall of Rome and throughout the Dark Ages, learning was at a standstill for a period of approximately one thousand years, and when, in the fifteenth century, interest was again beginning to be taken in library matters, we find a very different attitude of mind evincing itself. It is true that a public library was founded at Florence by Nicholas Niccoli and was presented to the public on his death in 1436 A.D. But where, throughout Europe, libraries did occur, they were usually in connection with monastic foundations and their use was largely confined to a minority - the small ruling and privileged class who were sufficiently educated to be able to take advantage of them. The library was small and frequently served the additional purpose of a scriptorium where the scribes might work and copy, and the

number of books was infinitely less than had been the case in classic times. Even with the introduction, at the middle of the fifteenth century, of printing from movable type, the number of books produced still remained small and, with certain notable exceptions, it may be said that in this country at any rate, it is only within the last eighty years that any services which will be adequate to meet the growing needs of the community at large have been established.

The factors which govern the requirements of a central library will differ considerably in each individual town or city and depend not only on the type and inclinations of the public served, but also on the nature and extent of other educational facilities provided in the vicinity.

As an example of this 'suitability to environment' one may note that in the case of the Sheffield Central Library the manufacturing interests of the city, which are essentially concerned with the steel and cutlery trades, have called for representation in the form of a very large library room devoted exclusively to commercial, scientific and technological works. At large central libraries, such as Sheffield and Manchester, the arrangements for the receipt and despatch of books are of such importance that special loading bays, where books may be received or discharged under cover, have been considered a necessity.

Similarly, in the case of a district particularly rich in historic, architectural or geographic interests, the library will certainly be made a storehouse of such local records as pertain to these subjects. It is in fact impossible to select any particular library building and to say 'here is the perfect and typical example of the ideal solution of the central library problem' - each city presents its own problems, which are, of course, only capable of their own individual solutions.

NOTES ON SOME FOREIGN LIBRARIES.

America

The problems of heating, lighting, ventilation, and other services to be provided in the erection of large-scale public buildings have, in America received intensive and scientific consideration. In a young rich country, possessing an abundance of open space and opportunity for expansion, it is natural that libraries should frequently form one unit of an extensive layout of park space or university campus.

As regards internal planning, a symmetrical arrangement of plan elements has usually been adopted.

The 'open-access' system, almost universally adopted in England, is also popular in America. In America it is a common practice to provide combined reference and lending subject-department instead of having the lending library entirly separate from the reference library - as is the normal method in this country.

In the smaller libraries access is usually direct, by means of an entrance vestibule, to a central delivery room and counter. This delivery room forms the hub of the library organization and round it will be grouped the library reading, reference, and children's departments. Stacks and the necessary service rooms will be accommodated in the basement or at the back. If a second floor is

provided it will usually be pierced by a central area which will permit of the admission of top-light to the delivery room below.

In the case of the larger libraries the main reading room is treated as the principal element of the plan. This room will usually be of considerable size, situated on an upper floor and extending along the front elevation of the building. External expression will be given by the long vertical lines of the reading room windows, often accentuated by a columnar or pilaster treatment of the front facade. This method of treatment is strongly reminiscent of that adopted in the library of Sainte Genevieve, Paris, a fact which is easily explained when one recalls to what extent the influence of the French school has been impressed upon American architecture. Behind the reading room will be grouped the main stairway (sometimes duplicated), the lifts, and, if the size of the scheme necessitates it, the light wells. The stacking accommodation is usually of considerable magnitude, the metal stacks being arranged in tiers, with an allowance of 7 ft.6 in. in height between each stack floor. Natural light and ventilation are not considered necessary for the storage of books, with a result that the stack room is often placed inside the building, the stack framing being utilized to stiffen the walls and to support the

upper floors of the structure.

The problems of quick service from stack shelf to delivery counter, and of the provision of facilities for the future expansion of the stack storage space, are of vital moment and their solution has been attempted in various different ways. In the New York Public library the multi-storied stack block is expressed boldly on the front elevation. The reading room is placed on the top of the stacks, with which it communicates vertically by means of a service of book-lifts. The Boston Public Library has a square arrangement of plan, of which square, the front constitutes the reading room and the sides and back the stack and service accommodation. The central courtyard thus enclosed is open to the sky, but is surrounded on three sides by a covered arcade where readers may loiter and converse.

In America, as in England, the more recent library plans show a movement away from the monumental plan to an open arrangement of accommodation, capable of easy sub-division by light party walls or partitions. Of these later libraries mention might be made of the Enoch Pratt Free library at Baltimore, Maryland, The Memorial Library of the Massachussetts Institute, Lamont Library at Harvard University, Hayden Memorial Library and the library of Illinois University are amongst the most famous and modern libraries in America.

Great Britain

The ten years prior to the second world war saw a tremendous impetus given to the library movement, particularly in the north of England, and in addition to these municipal examples: Hendon Central library, the Manchester Central library, the Huddersfield Public Library, the Sheffield Central Library and Graves Art Gallery, St. Marylebone Public Library and the Birkenhead Central Library; attention might also be directed to libraries of other types which were being developed simultaneously. Of these, the University Library at Cambridge, the Brotherton Library at Leeds University the National library of Wales at Aberystwyth, the Radcliff Science Library at Oxford, and the University Libraries at Manchester and Liverpool are probably the most outstanding examples.

The increased attention which was being given to library services during the above mentioned ten years may not be entirely explained by the facts of the increased number of publications, the removal of the rate restriction, or a greater thirst for knowledge on the part of the general public. Social factors also enter into this question. People no longer live in large-roomed houses fitted with massive bookcases containing bound volumes of encyclopediae and other bulky works of reference. The modern flat or corporation dwelling contains little

space for the storage of articles which are only used occasionally - even works of fiction, except in the homes of real book-lovers, will probably be found to be obtained from the nearest circulating library.

In Finland the Viipuri Library breaks new ground in library construction. Functional both in planning and design, it is notable chiefly for the skillful treatment of varying levels and for the original and scientific solutions which have been arrived at in connection with the problems of heating, lighting, ventilation, and acoustics. (Fig.).

The Swiss National Library at Berne, the Central Library at Lugano and the Public library of Luzan are good examples for the Swiss Libraries ; free planning and efficient construction and materials (Fig.).

One of the most remarkable examples is the Vienna Public Library which houses 20,000,000 volumes, in its circular stack tower in the centre of the building. From this huge central tower radiate seven blocks of three storeys each containing the different reading rooms.

In Sweden the Stockholm Public Library was built in 1927. The main feature of the plan consists of a circular lending hall lit by means of windows in the cylindrical outer wall. This hall occupies a central position on the first floor, with reading and study rooms symmetrically arranged on three sides of it. Below this

lending hall is the book magazine room, which, for the time being at any rate, is to fulfil the requirements of a book storage room.

Russia

In 1864 the first Moscow public library was founded from a number of private collections and was housed in the Rumyantsev Museum.

The stock of the library increased very rapidly (it now amounts to over 9,600,000 volumes) and a new building has been erected comprising an eighteen-storey book depository having 180,000 meters of shelving. Reading rooms, whose erection was delayed owing to the war, are in the course of being erected.

The Lenin library serves not only its own readers, but also the libraries of many other cities of the Soviet Union (Fig.).

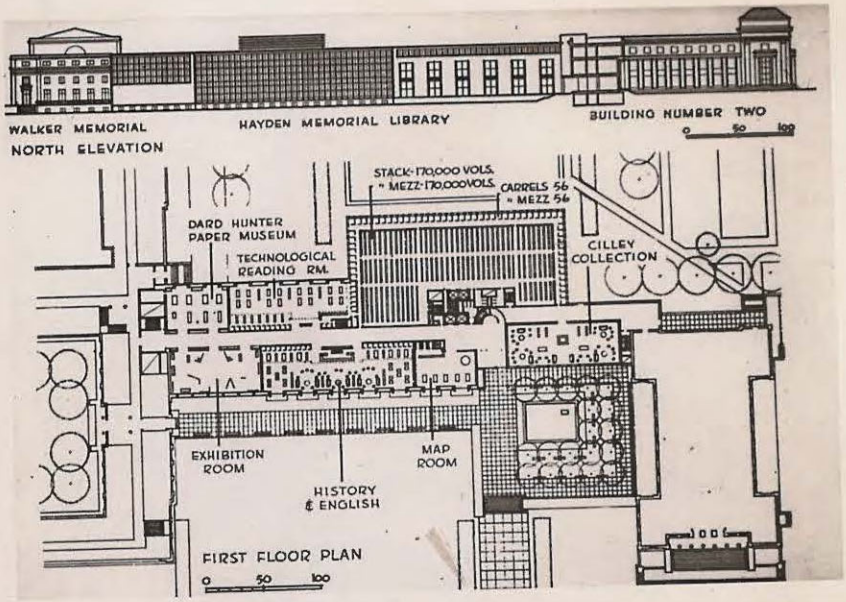
Libraries exist in almost all Russian towns and have a similar service to that in English libraries. They have special children's sections and there are also special libraries for the children in each of the larger districts.

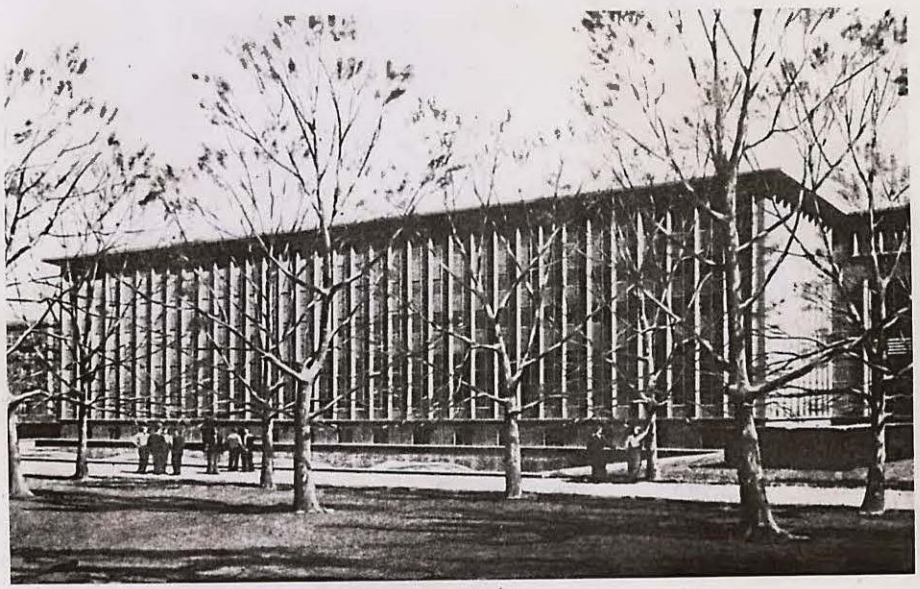
Mexico

The most remarkable example which Mexico can offer in this respect is the Mexican University Central Library, which feeds and looks after many reference libraries and special libraries distributed between the different

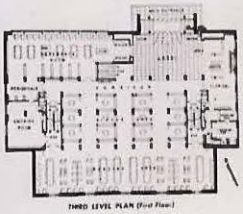
faculties of the newly built University.

This library will serve 25,000 students and all the research workers of the city. The main floor of the library contains a reading room for 200 readers, magazine rooms for 150 readers, a catalogue room and a bibliography room. All these rooms are under the control and the supervision of the staff enclosure in the middle and which is connected with the book stack tower by means of lifts and a staircase. The stack tower consists of ten floors with 170,000 volumes in each floor. The tower has no finestrations so as to keep an artificial climate with constant humidity for the preservation of books. The four sides of the tower are covered by four great mosaics of polycrome stones, by architect Juan O'Gorman.

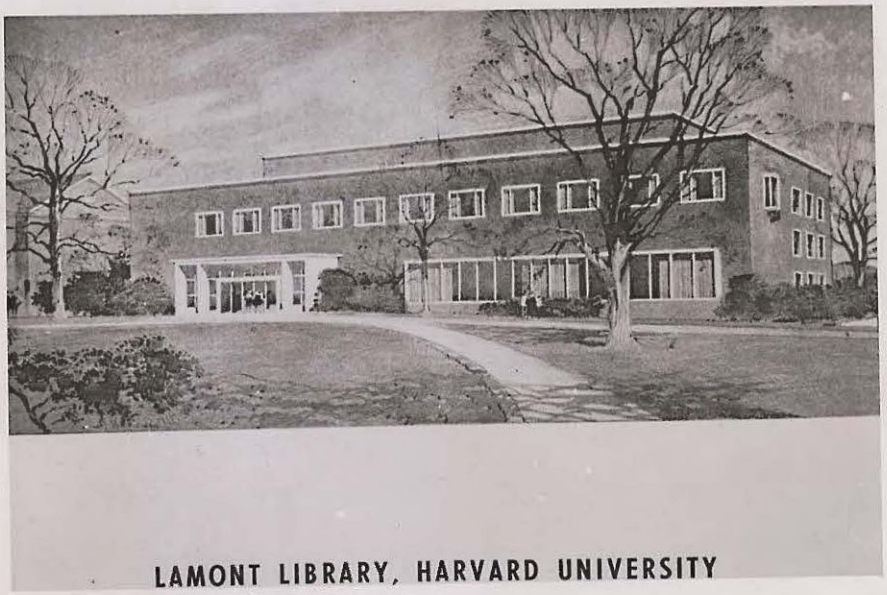

WALKER MEMORIAL
NORTH ELEVATION
HAYDEN MEMORIAL LIBRARY
BUILDING NUMBER TWO
0 50 100
STACK-170,000 VOLS.
" MEZZ-170,000 VOLS.
CARRELS 56
" MEZZ 56
DARD HUNTER
PAPER MUSEUM
TECHNOLOGICAL
READING RM.
CILLEY
COLLECTION
EXHIBITION
ROOM
MAP
ROOM
HISTORY
& ENGLISH
FIRST FLOOR PLAN
0 50 100



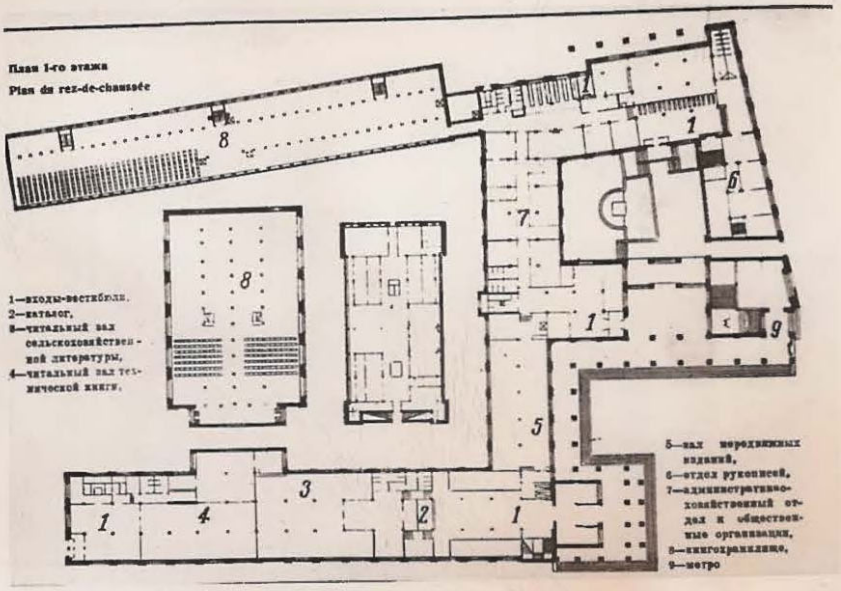
THIRD LEVEL



THIRD LEVEL PLAN (First Floor)



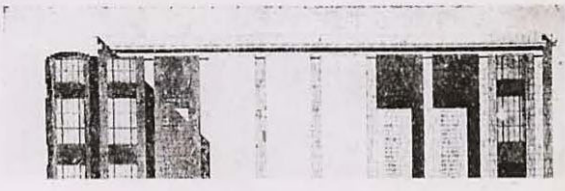
LAMONT LIBRARY, HARVARD UNIVERSITY



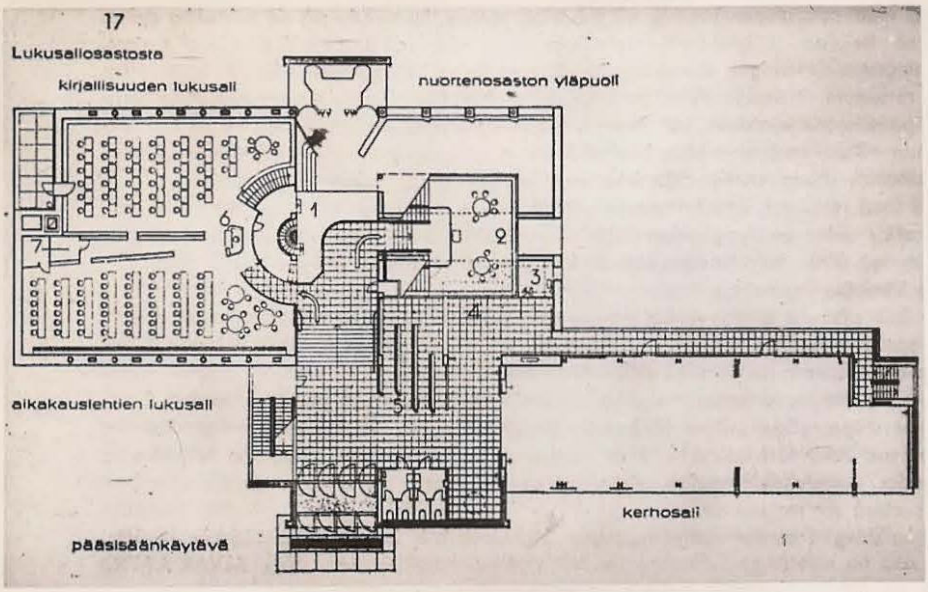
скульптурной группы на углу, в месте пересечения осей.

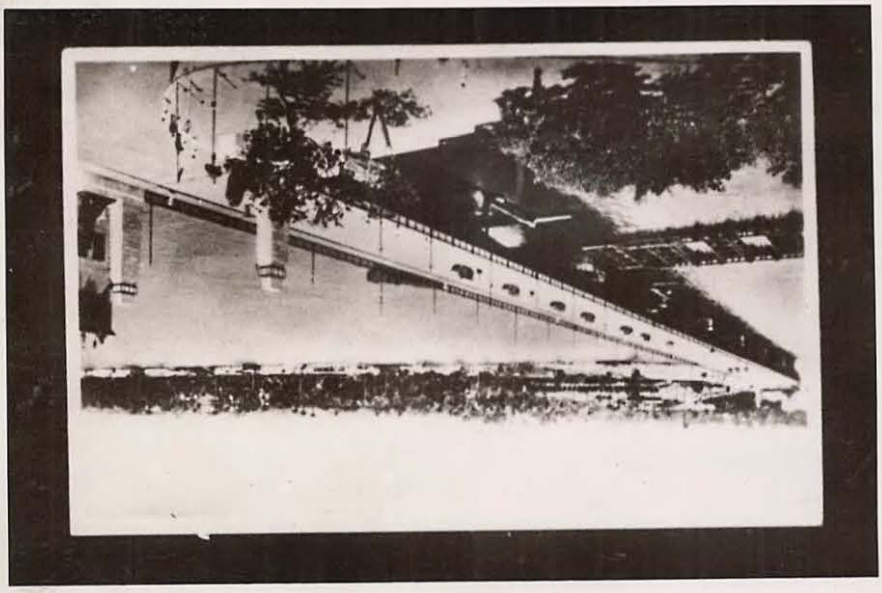
Несмотря на некоторые недостатки, которые безусловно будут устранены в дальнейшей работе, комплекс библиотеки имени Ленина в целом является незаурядным архитектурным произведением.

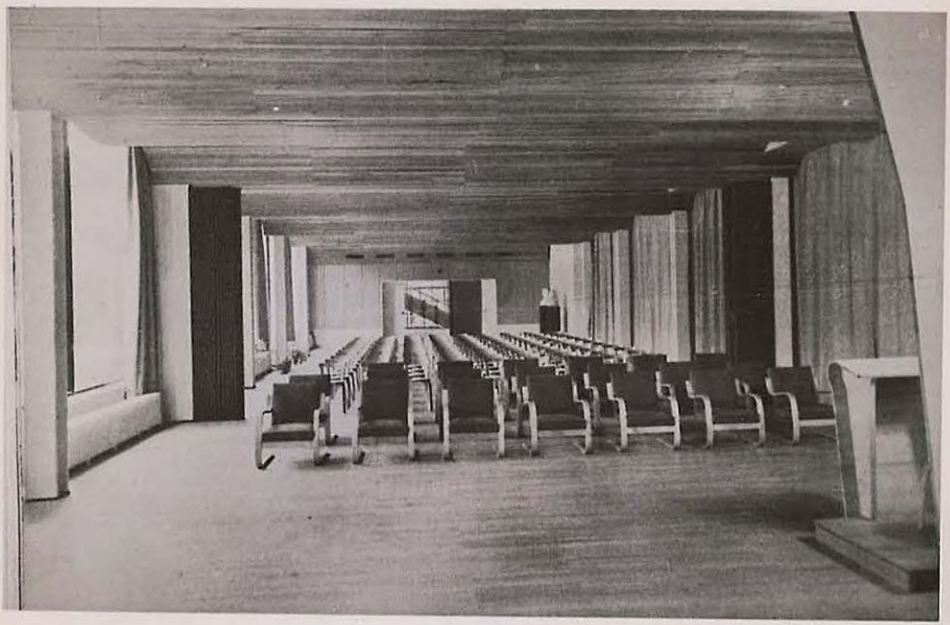
Сейчас еще трудно дать исчерпывающую оценку его интерьерам.

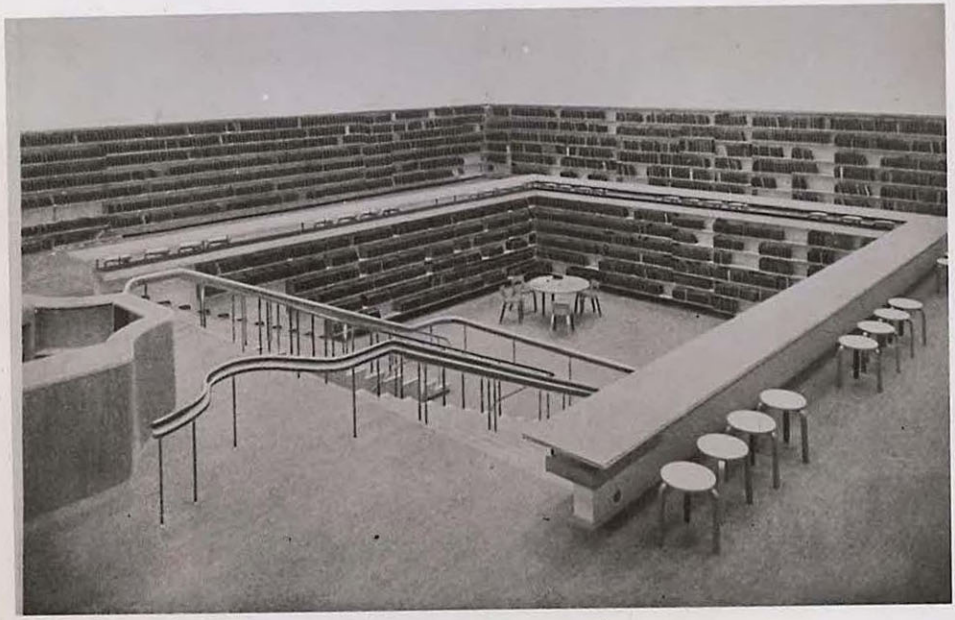


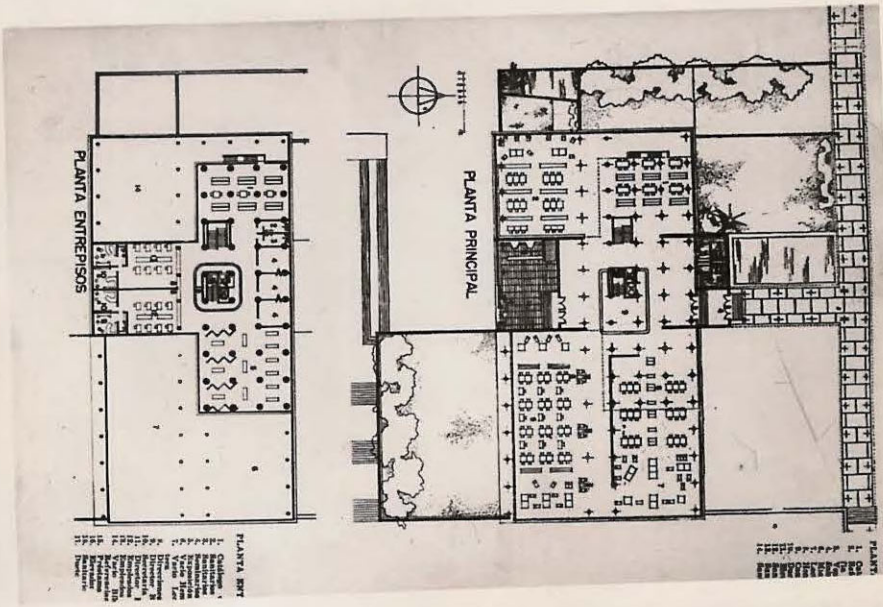
17

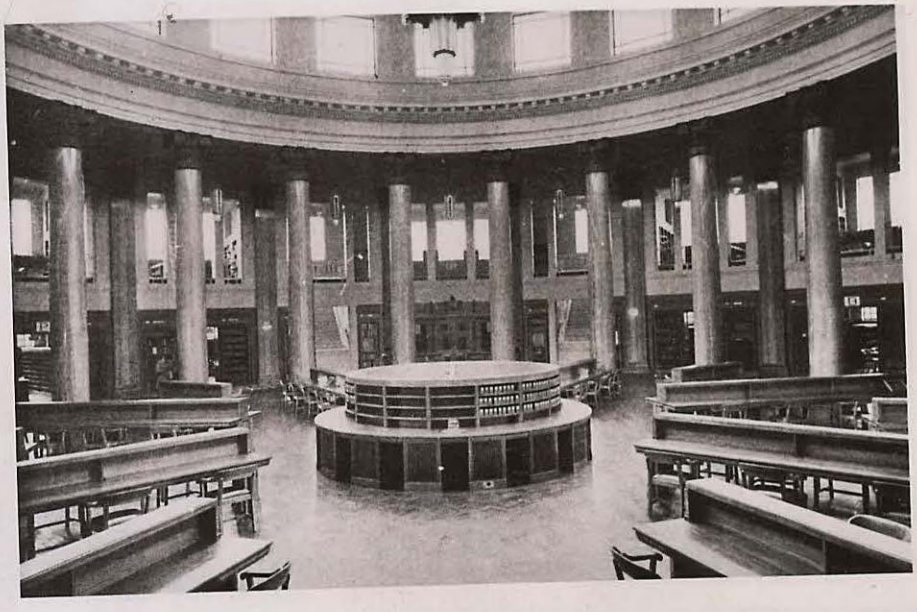

Lukusaliosastosta
kirjallisuuden lukusali
nuortenosaston yläpuoli
1
2
3
4
5
7
aikakauslehtien lukusali
kerhosali
pääsisäänkäytävä

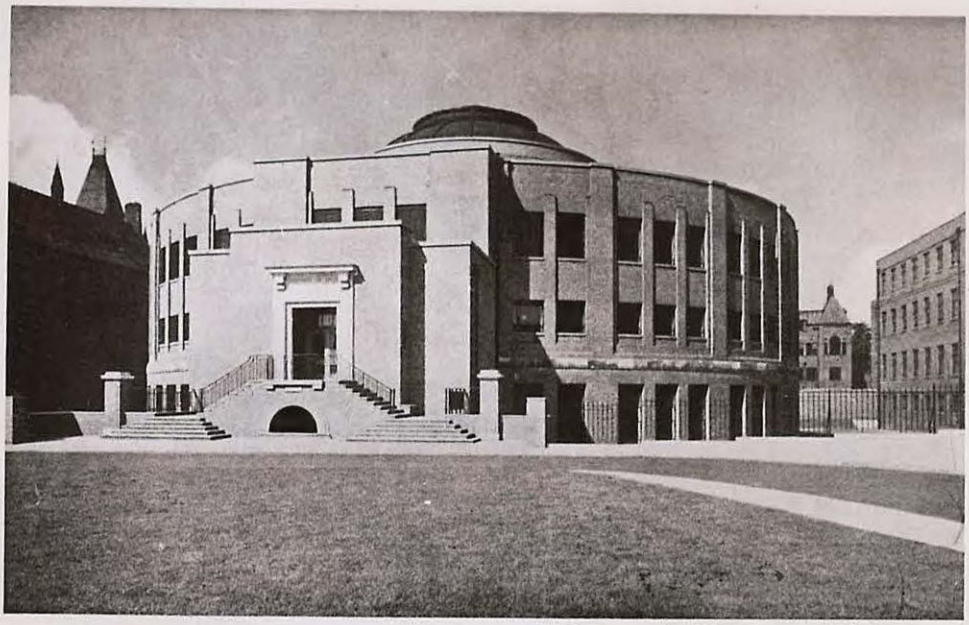


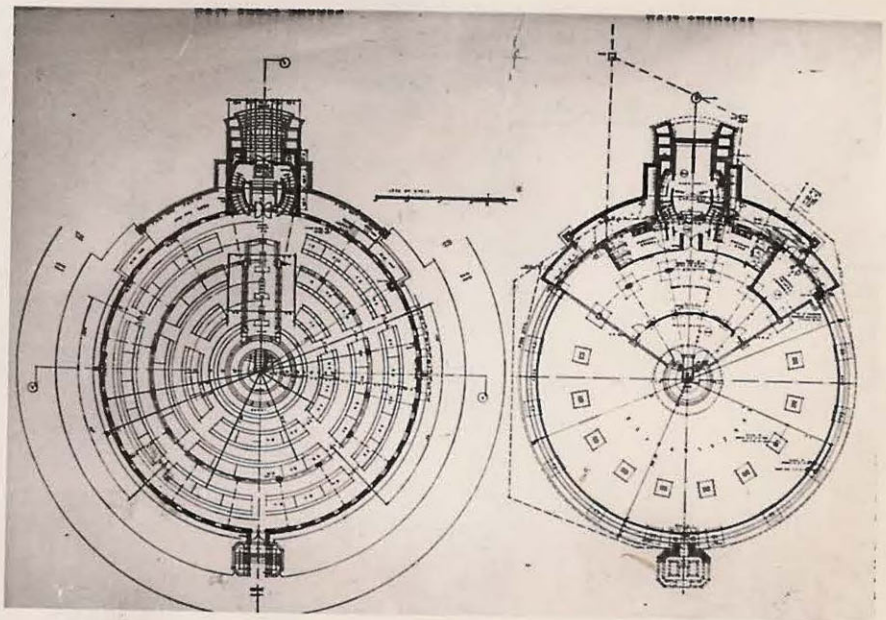





PLANTA ENTREPISOS
PLANTA PRINCIPAL

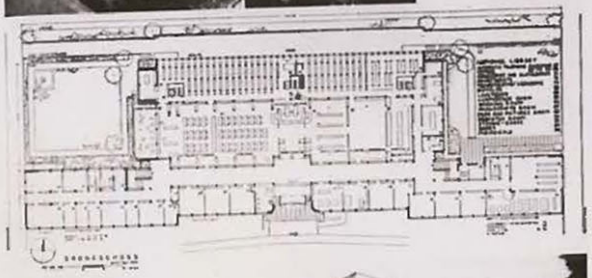






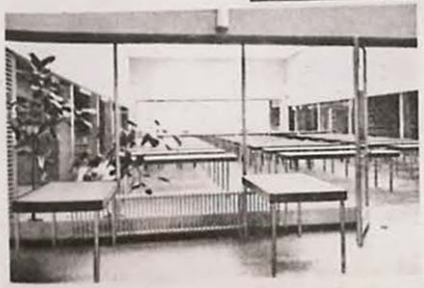
SWISS NATIONAL LIBRARY, BERNE

Architects:
Oeschger and Kaufmann and Hostettler



Above is an aerial view of the library from the south-east, shown with the Berne Grammar School in front.

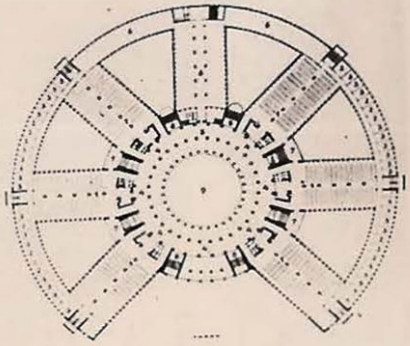
Ground floor plan and (right) view of the library from the north-west. The tallest block on the north side is the bookstack



Left is the large reading-room seen from the waiting-room marked 97 and 98 on the plan

The building is of reinforced concrete construction

CENTRAL LIBRARY AT VIENNA



SE for a new Central Library ... by Dr. Werner ... to the first floor plan illustrated

... room; 2. Professors' read- ... 3. Research rooms; 4. Cata- ... special subjects; 5. Subject ... General catalogue; 7 and 8, ... 9, well over entrance hall. ... shows the principal eleva-

ALAGES SONT EN PARTIE HARGÉES OU LAISSÉS EN BRUT, TEL QU'IL SE PRÉ LORS DU DÉCOFFRAGE.

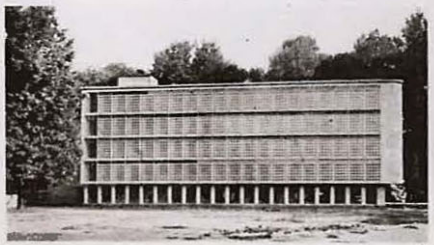
NORD

SUD

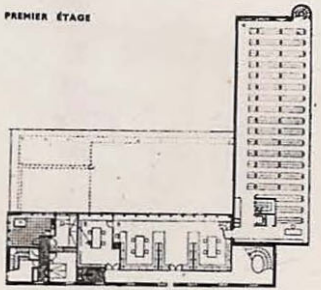
BATIMENT DU MAGASIN DES LIVRES.

A droite, la grande salle de lecture. Le bâtiment du magasin à livres est séparé du reste de la construction par un joint de dilatation. Cette solution de continuité permet aussi, en hiver, de ne chauffer le magasin qu'à un maximum de 12°.

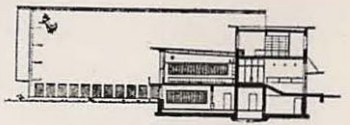
Le magasin est éclairé au nord exclusivement. Si la lumière est nécessaire à la bonne conservation des livres, les rayons solaires lui sont en effet néfastes. La disposition des piliers permet une répartition optimum du poids considérable des livres et libère la façade vitrée (voir le plan).



PREMIER ÉTAGE

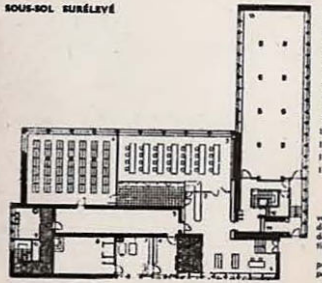


1. Logements du gardien.
2. Salle Rinaldo Manzoni.
3. Salle d'art.
4. Magasin des livres.



COUPE TRANSVERSALE SUR LES BATIMENTS COMPRENANT LES SALLES PRINCIPALES ET L'ENSEMBLE DES LOCAUX ANNEXES.

SOUS-SOL SURÉLEVÉ



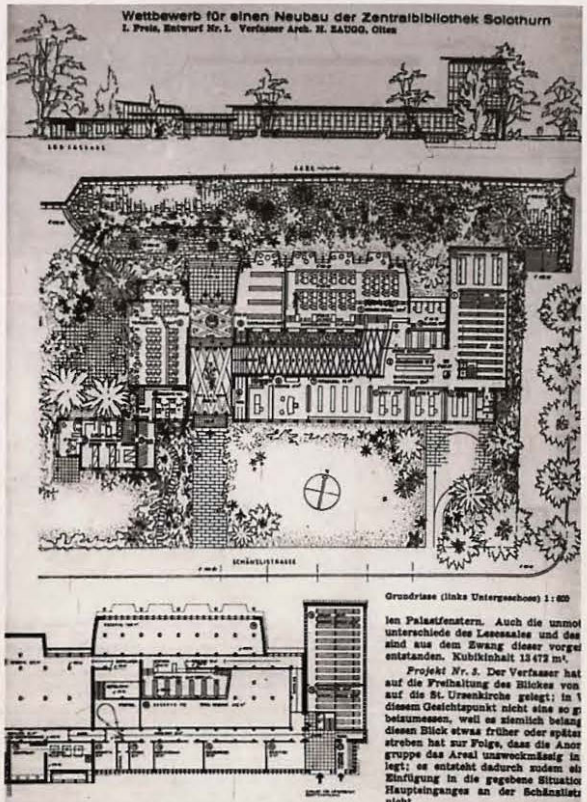
1. Catalogue de la bibliothèque populaire.
2. Local de prêt.
3. Salle de lecture.
4. Magasin à livres.
5. Dépôt et refuge antiaérien.
6. Local des machines et compteurs.
7. Chauffage.
8. Bois et charbon.
9. Chambre à lessive du gardien.
10. Cave.
11. Vestiaire.
12. Machinerie de l'ascenseur.
13. Locaux divers (exp. photo, reliure, etc.).

Sol et parois isolés de manière à obtenir un matelas d'air ventilé et un espace nécessaire au passage des tuyauteries. Cette disposition renforce l'effet d'imperméabilisation du radier : tout danger d'humidité par condensation de vapeur d'eau ou infiltration éventuelle de l'eau du lac est écarté.

Différentes sections sont prévues pour une future bibliothèque populaire, dont le fonctionnement devra être en partie indépendant de reste de l'édifice.

Wettbewerb für einen Neubau der Zentralbibliothek Solothurn

I. Preis, Entwurf Nr. 1. Verfasser Arch. H. BADUO, Olten



Grundrisse (links Untergeschoss) 1 : 600

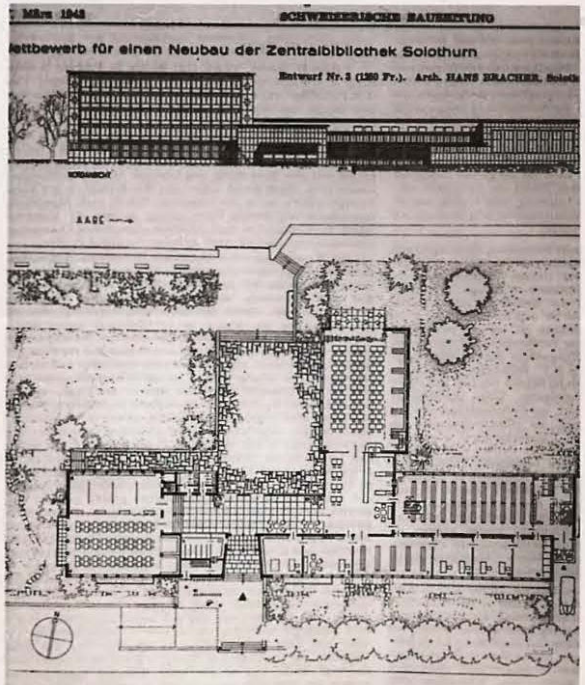
...t vom Bücherhaus und Katalograum entfernt. Ungünstig ...r abgelegene Lage des Ausstellungssaales im ersten Stock. ...ngeschlossene Ausstellungsterrasse im Obergeschoss, ohne ...tsicht, ist bei der gegebenen Situation unverständlich. ... die Lage des Volkslesesaales verzichtet auf die Vorzüge ...hbaren Baugrundes. Die Arbeiterräume im Untergeschoss ...len Palastfenstern. Auch die unmot... unterschiede des Lesesaales und des ... sind aus dem Zwang dieser vorge... entstanden. Kubikinhalt 13 472 m³.

Projekt Nr. 3. Der Verfasser hat ... auf die Freihaltung des Blickes von ... auf die St. Ursenkirche gelegt; in ... diesem Gesichtspunkt nicht ohne so g... beizumessen, weil es ziemlich belang... diesen Blick etwas früher oder später ... streben hat zur Folge, dass die Anor... gruppe das Areal unzweckmässig in... legt; es entsteht dadurch zudem ei... Einfügung in die gegebene Situatio... Haupteingangs an der Schänzlistr... nicht.

Der Grundriss ist im allgemeinen gut und w... nete Verbindungen unter den verschiedenen Betri... Die Abtrennung des Volkslesesaales und des Aus... vom übrigen Bibliothekbetrieb ist sehr zweckmä... förmige Anordnung um eine etwas zu grosse Tr... ohne Reiz. Die Verwaltungsräume und der Voll...

ettbewerb für einen Neubau der Zentralbibliothek Solothurn

Entwurf Nr. 3 (1280 Fr.). Arch. HANS BRACHER, Soloth...



...ugel jeder Fluss sich gegen das rechte Ufer drängt; auf der ...lichen gegen das linke. Der Fluss fresse sich bei uns am ...chten Ufer «gegen den Berg», während das linke Ufer flacher ... v. Baer schreibt ferner: «Das fliessende Wasser, wenn es ...om Aequator gegen die Pole bewegt, bringt eine grössere ...tationsgeschwindigkeit mit, als ihm zukommt und drängt das...alb gegen die östlichen Ufer, weil die Rotationsbewegung gegen ...ten gerichtet ist, also auch dieser kleine Ueberschuss, den das ...ssende Wasser aus niedrigen Breiten in höhere mitbringt.» ...ngekehrt bringt ein von Nord nach Süd ziehender Strom eine ...inere Rotationsgeschwindigkeit mit sich, drängt also an das ...stliche Ufer, d. h. auch an das rechte.

...demische?) Interesse der Tech...

Die Schiffbau-Versuchsanst... Anstalten, in denen Schleppver... im Masstab von etwa 1 : 10 bis... nen, sind für den Schiffbau ebe... den Flugzeugbau. Solche Versu... auch von Schweizer Fachleuten ... bau-Ingenieur A. Ryniker in B... Neu- und Umbauten der beiden ... «Uri» (SBZ, Bd. 118, S. 73*, 1... sehr aufschlussreiche Versuche ... Anstalt Wien durchführen. Ue...

LIBRARY TECHNIQUE

Size and Cost

(Wheeler Joseph L. Dg 5390 The American Library)

The size and cost must be based on community population (the population 20 years later) : by two methods:

1. Service number of books housed, readers seated and volumes circulated per annum.
2. Cost - The cost per capita.

In America the cost/volume shelved is assumed as one dollar and cost/seat = 1,000 dollars, and 1,000 volumes for every seat i.e. the cost = the number of volumes in dollars. These standards are far too low to-day.

The U.S.C. Formula

u = number of volumes (all kinds in shelves and stack)

s = number of seats for readers in a building.

c = the circulation in volume/year.

This formula has to have a reasonable economy of space, the combined area of all floors, basement, mezzanine and galleries.

the area = X times volumes + Y times seats + Z times circulation.

(The numbers 12, 15 or 20 vol/ft.^{2} in stack construction and 20,25 and 30 ft^2 in reading rooms are insufficient). X,Y and Z must be large to include space required for

general administration and heating services, stairs, corridors, toilets, wall thickness etc. because later figures only refer to floor areas of individual rooms within surrounding walls.

The value of X, Y and Z can be tried or by the error method:-

1 ft^2 is for 10 vol. therefore X = 1/10

1 seat requires 40 ft^2 " Y = 40

1 ft^2 is for 40 vols. circulated/year therefore Z = 1/40.

The U.S.C. Formula:

(Vols/10) + (Seats x 40) + Circulation/40) = the combined area in ft^2.

As a check for normal cost, size and capacity:-

1. Adjustment of population figure

   Estimated size of community in 20 years - Population

   Subtract number served by other libraries.

   Reduce the number of illiterates.

   Increase for probably high demand for service = Adjusted population.

2. Cost/Capita as basis to determine the size.

   The number of the adjustable population x cost standard = Cost.

   Cost/ft^3 cost = Cubage.

   Assume number of stories and height = Total height.

Cubage/height = Ground Area.

3. Library service as basis to determine the size.

The number of population x ft^2/capita standard =
Combined area.

Combined area/number of stories = Ground Area.

The total height (assumed) x ground area = Cost.

(Cost standard = 3.00 dollars)
(ft^2/capita standard = .375) In U.S.A.

LIGHTING

Lighting is being considered not as a problem in itself but as a component part of what may be described as the total setting found by the libraries guest. Measurements of foot candles and reflection values take an important but a subordinate place. Artificial illumination, with its steady and unaltering characterisations, introduces an incalculable, and therefore less than perfect element. The attitude of the architect is that the people love daylight, that there are differences of individual preference that some people like changing moods, that is pleasure in work depends on sentiment, then sentiment enters the data no less than 'performance standards' expressed in statistical terms whose validity may be less than ultimate.

Specifically, the alternation between vertical wall and vertical glass panels is accepted as giving

the reader a personal device. Not enough is yet known about the eye to be sure that all eyes are alike. Let those who prefer to sit in full sun brightness choose that kind of a seat, let those who prefer more shade have what they wish.

What artificial light can do during daytime is to smooth out those extremes which are known to be deleterious Thus,it is contended for example, by those who favour uninterrupted glass walls, that there is a vicious effect in the sharp alteration between light windows and dark outer walls, which results in so called glare. By punching a high level of well diffused artificial light into the room as a whole, the fixtures supplied by the modern industrialist permit us to have our"sentimental" daylight and still not suffer the glare. And along with daylight we keep the distant view.

Opinion and recommendations on the subject continue to vary widely, with recent assertions by ophthalnologists as to the possible harmful effects of flicker and ultra-violet radiation adding fuel to the controversy of filament U.S. flourescent systems.

Discussion of desirable intensity in fairly well confined within the range of 10 → 30 footcandles;there is general agreement that glare, both direct and reflected, must be avoided as much as possible within the visual angle; contrast over large areas should be controlled

within the ratio of at the most 10 —>1 "Unity is ideal" and the authorities generally agree that the more near the quality of general illumination approaches daylight, the better it is. Coffer or Troffer systems are considered efficient. Cone lights systems are considered excellent where the room is not wide.

AIR CONDITIONING FOR BOOKS AND PEOPLE

There is to be a maintained temperature in winter of 70°F and a relative humidity of 50%; in summer the maximum temperature is to be 85°F, with the same relative humidity of 50%. Windows are to be commercially manufactured double plate glass with a hermetically sealed air space between, creating a controlled system of air circulation within the buildings. In summer, air is to enter at a temperature of 15°F below the room level; in winter at 70°F or room temperature.

Air is to be both filtered and passed through an electrostatic industrial dust precipitator 75% of the air is to be recirculated.

(The capacity of the system cu.ft./min)
Air is to enter rooms through ceiling units of the type

SOUND CONTROL

These is no new basic approach to obtaining essential quietness in the library. This still depends upon:

1. Sound isolation (prevention of transmission of outside sound into the library)
2. Sound conditioning (controlling the intensity and direction of sounds created within it).

Air conditioning remains the major factor in preventing outside noise from entering, and also wall mass has such a major effect. Enterior walls should be of double wall construction with dead air space and sound absorbing materials between.

There has been discusions regarding the degree of quietness to be sought in the library. Some believe that by reducing the overall noise level unduly the ear is made very sensitive to sudden sounds. But the consensus is that noise within a reading room should not exceed 30 decibles (as is that in a quiet resident).

Sound absorbing materials used (wall covering and acoustical ceilings and resilient flooring) are selected for their efficiency in absorbing higher sound frequencies, since high frequency noise at average intensity are the most disturbing to a person with average hearing.

BOOKSTACK CAPACITIES

(Time saver Standard page 439)

Among formulas suggested for use in computing the

size of stacks necessary to house a given number of books is the "Cubook" method, devised by R. W. Henderson of the New York Public Library (Library Journal 15 Nov. 1934, 15 Jan. 1936) The "Cubook" method, is a measurement of stack capacity, defined as the "Volume of space required to shelve the average book in the typical library". According to this formula, a single faced section of stack, 3 ft. long and 7 ft. 6 inch high has the following capacities:

100"Cubook" (85% octavos, 13% quartos and 2% folios (an octavo is about 8 to 10 inch high, a quarto is 10 to 12 inch. and a folio over 12 inch.)

117 volumes (87% octavos and 13% quartos)

132 " (octavos only)

67 " (quartos only)

12 " (folios only)

The "Cubook" method makes provision for 10% of each shelf to remain unoccupied since it often is impractical to load shelves to their full visible capacity.

To determine the number of sections required when the number of volumes to be shelved is known, the following formulas are used:

Let N = number of single-faced sections required

(1 section = 100 "Cubook")

1. For a typical library, when the "Cubook" is considered

directly applicable: N = vols. ÷ 100.

2. For a library made up of octavos and quartos only N vols. ÷ 117.
3. For a library made up of octavos only N = vols ÷ 132.3
4. For a library made up of quartos only N = vols ÷ 67.5
5. For a library made up of folios only N = vols ÷ 11.7
6. For a library made up of various size groups when the ratios are known

N = [Octavos + (Quartos x 1.96) + (folios x 11.3)]/132.5

Shelf Size

The foregoing formulas indicate the number of sections required but do not cover the number of shelves or the proportion of shelves of each width (8 in, 10 in or 12 in.) In general, the following shelf data applied:-

For folios - 13 - 12 in. shelves per section.

For Octavos and quartos - usually 7 shelves per section, divided as follows:-

85% 8 in. shelves
10% 10 in. "
5% 12 in. "

Area and Volume Requirements

The "Cubook" can be reduced to approximate terms of area and volume requirements for book stacks as follows:-

11.08"Cubooks" require 1 sq. ft. of stack floor area
1.48"Cubooks" require 1 cu. ft. of space in stack.

These values can be used as follows:

Required stack floor area No. "Cubooks" x 0.090

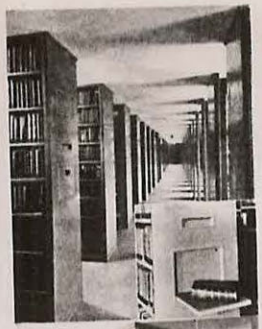
Required space (Cu. ft) No. "Cubooks" x 0.676.

SHELVING DATA FOR SPECIAL COLLECTIONS

To be considered with "Cubook" method, figures shown should be reduced by 10% to avoid overcrowding shelves.

Type of Book	Vol/ft of shelf	Vols/ft of single-faced range	Vols/ shelf	Max. Vols. per single section	Shelf depth (in.)	Shelves per section
Circulating (Non-Fiction)	8	56	24	168	8	7
Fiction	8	56	24	168	8	7
Economics	8	56	24	168	8	7
Gen. literature	7	49	21	147	8	7
Reference	7	49	21	147	8 & 10	6 - 7
History	7	49	21	147	8	7
Technical & Scientific	6	42	18	126	8,10 & 12	7
Medical	5	35	15	105	8 & 10	6 - 7
Law	4	28	12	84	8	7
Public documents	5	35	15	105	8	7
Pound periodicals	5	35	15	105	10 & 12	5 - 7
U.S Patent Specific	2	14	6	42	8	7
Art	7	42	21	126	10 & 12	5 - 6
Braille	4	24	12	73	15	5 - 6

CATALOGUE ROOM.



CLIMATE CONDITIONS IN EGYPT.

With the exception of the coastal areas the climate of Egypt is very dry. During summer, and the greater part of spring and autumn rain is practically unknown, while only a few light showers may be experienced in the winter. In other years heavy rain may occur, but never for any lengthy period. In summer, late spring and early autumn sunshine produces quite high temperatures, particularly when the sun shines from clear, cloudless skies. At these times the shade is a pleasant relief from the heat of the sun. However, during the winter the sunshine is very welcome, for the weather can be cool and the wind keen, although the period when such conditions are likely to occur is not very long as usually lasts from about mid-December until the end of February. As a result of that, the solar heating properties are just as welcome in the winter as the sunshine is objectionable in the summer.

It should be noted that the normal practice in Egypt is to employ external lowered wooden shutters to exclude the sun's rays. This practice produces gloomy conditions even when the sun is at its strongest.

The use of large unscreened window areas, giving good natural lighting, would result in rooms being uninhabitable in summer due to excessive solar heating. By the use of sun screening, however, selective exclusion of

sunshine can be obtained together with good lighting conditions.

To meet the varying climatic conditions of both summer and winter various forms of fixed and adjustable sun-screens have to be employed. The theoretical basis upon which these screens have been designed has been fully justified in practice, the derived degree of sunshine control has to be obtained with considerable accuracy and at the same time evenly distributed, high intensity, glare force light is to be provided. Also every advantage has to be taken of the prevailing cool and invigorating wind which blows from the quarter between north and west.

One of the Egyptian Farmers' old songs, or sayings is that mentioned by Heinrich Schaefer in his book "Die Lieder eines âgyptischen Bouren" or "The Songs of the Egyptian Farmers". The subject is Orientation.
The Arabic sext in Latin letters says:-

Eza Kan Bab Beituk Bahari Allieeh
W'in Kan Bab Beituk Sharki Khallieeh
W'in Kan Bab Beituk Gharbi Seddoh
W'in Kan Bab Beituk Kebli Heddoh

which means:-

If the door of your house faces North enlarge it,
If the door of your house faces East leave it alone,
If the door of your house faces West block it up,
If the door of your house faces South pull it down.

This is another saying which deals with the same subject:

El-Bahari Sultan W'El-Sharki Waziroh.

W'El-Kebli Shitan W'El-Gharbi Naziroh.

which means:-

The North is a Sultan and the East is his Visir

The South is a Devil and the West is his compeer.

The following figures illustrate the solar angles in the winter, autumn and summer for Cairo, which is on North latitude 30°.

Summer, June 22nd.

A.M.	P.M.	Azimuth	Altitude
Noon		180° - 0'	83° - 30'
11.40	12.20	144° - 30'	82° - 0'
11.00	1.00	112° - 30'	75° - 0'
8.00	4.00	81° - 30'	36° - 30'
5.00	7.00	62° - 30'	0° - 0'

Spring, March 21st to Autumn September 23rd.

A.M.	P.M.	Azimuth	Altitude
Noon		180° - 0'	60° - 0'
10.00	2.00	131° - 0'	48° - 30'
8.00	4.00	106° - 0'	25° - 30'
6.00	6.00	90° - 0'	0° - 0'

Winter, December 22nd

A.M.	P.M.	Azimuth	Altitude
Noon		180° - 0'	36° - 0'
10.00	2.00	148° - 30'	29° - 0'

Contd.

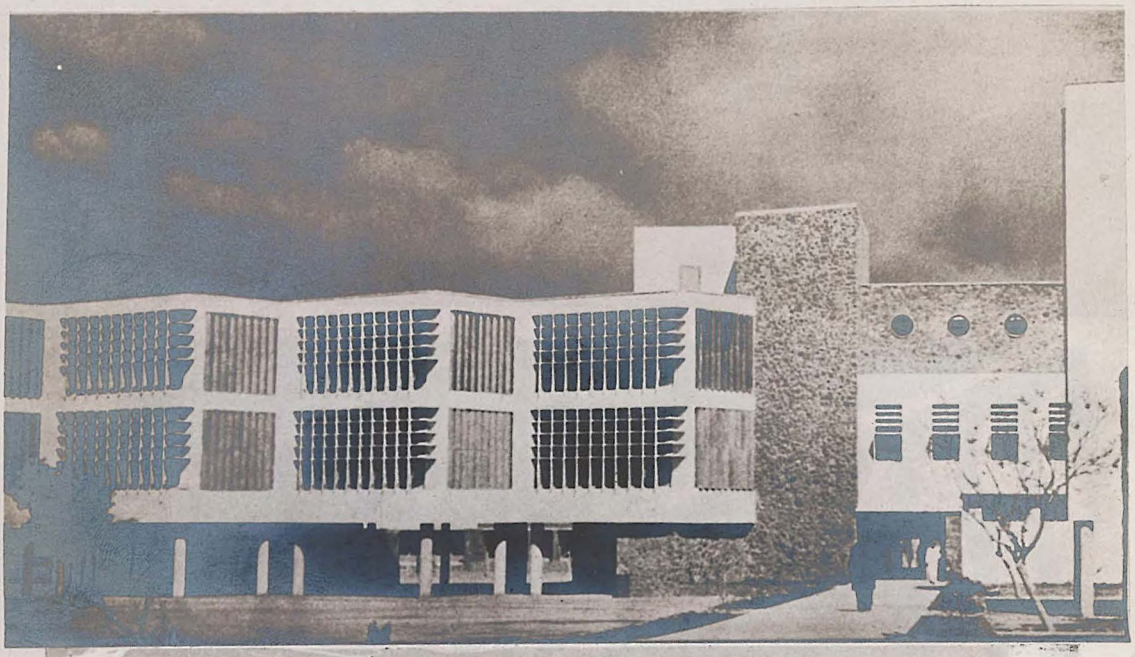
Contd.

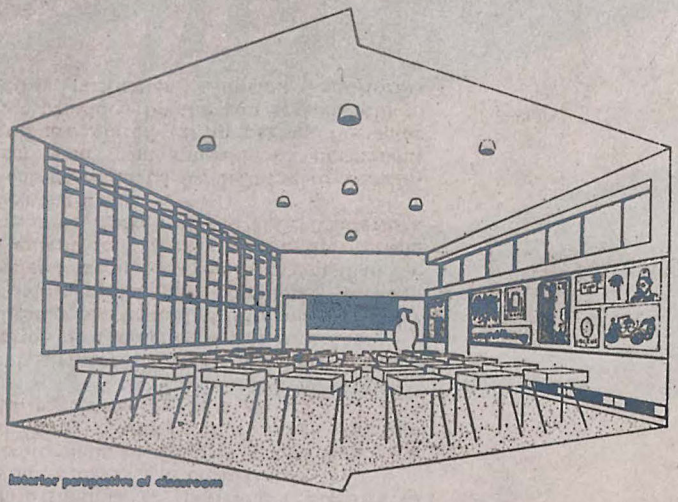
A.M.	P.M.	Azimuth	Altitude
8.00	4.00	126°0'	11° - 30'
7.00	5.00	117°30'	0° - 0'

The Angle of Horizontal field of vision, within which the viewing of a bright sourse will cause glare is about 60°

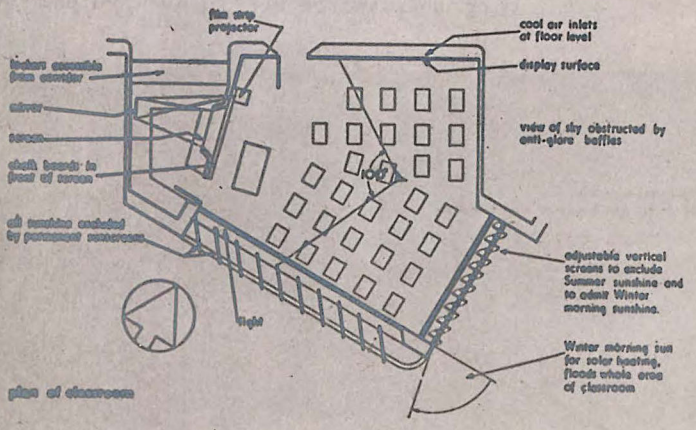
The Angle of vision = 180° (Horizontal)

The Critical vertical angle of Vision is about 30° with a limit of about 55° ("eggbox" screens may be designed across roof openings to obscure views of the sky for all normal angles of vision).





Interior perspective of classroom



plan of classroom

VICTORIA COLLAGE

CAIRO.

REASONS FOR DISPOSITION OF SCHEME

The site chosen is considered to be the quietest in the city centre. The scheme being a unit in a cultural centre, with the Museum of Egyptian Antiquity as a fundamental unit. The approach to the library will be included in the way to the Museum. The approach to the site from the Museum side is also convenient for the public coming from the different parts of the city, by the electric metro from the north and by buses and tramcars from other directions. A considerably large parking area is provided near the main entrance for private cars.

The second approach from the south leads to the entrance of the offices to the auxiliary entrance and exit of the lecture hall. The cafeteria kitchen is also served from this side. This southern approach joins to a side road connecting the centre of the area to the Nile promenade. Moreover the site is accessible from the river side. The building is set back a considerable distance from the river side and is as far away as possible from the main thoroughfare. This area will be converted to a public park. The northern side is situated away from any outside disturbances caused by traffic, to keep the reading rooms in absolute quietness, besides enjoying the northern

orientation.

The three main considerations for the disposition of the different items of the scheme are:-

(a) The avoidance of any nuisance caused by the traffic.

(b) To take the maximum advantage of the prevailing wind from the north-west.

(c) To avoid hot and airless "pockets", by having closed courts.

The scheme consists of these items:-

1) The library.

2) The stack tower.

3) The offices.

4) The lecture room and the cafeteria.

The library containing the different reading rooms takes the best orientation and the quietest position of the site. It occupies the northern part of the plan.

The office and the working rooms occupy the south eastern corner of the building. This takes a shape of two perpendicular wings of three floors. The ground floor is left for the working rooms (binding, cataloguing, micro photography, photostatics) and the printing machine rooms.

The lecture hall is the first floor with the cafeteria in the ground floor, both occupy the south-western corner of the building. In this position they

have a lovely view over the Nile and the parks, and enjoy the north-western breeze in summer. The lecture hall and the cafeteria are accessible from both the river side and the centre of the city.

The book stack takes the shape of a tower, so as to be increased in the vertical direction without interference with the other parts of the building. The stack tower is directly connected from its southern point with the offices and the working rooms, and from its northern end with the library reading room. Three courts are provided in the plan to give more chance for good ventilation. The western court receives the north-western breeze to ventilate the different parts of the building.

The Exhibition, which consists of four sections, is situated immediately over the entrance hall. They are in one room with a gallery in the level of the second floor. They are accessible from both ends to the library proper and to the offices and the lecture hall foyer.

The Requirements of the Programme

(a) The Library.

(i) A main reference library to seat 300 readers with the necessary catalogues, bibliography and staff enclosure with a considerably big service area.

(ii) Two reading rooms: the Technical and Commerce

library, to seat 220 readers (110 in each room).

(iii) Periodicals and magazines; to seat 90 readers.

(iv) Lending library with shelves to house 44,100 vols. and a staff enclosure.

(v) Newspaper room to house the different newspapers and magazines published in Egypt and in other countries. There are about 294 different kinds of periodicals published in Egypt including:

183 magazines.

20 Governmental periodicals (statistics and information).

29 daily newspapers.

29 half monthly periodicals, and others in French, English and Greek.

All the library's reading rooms are directly connected to the stack tower by the service shaft which consists of a staircase, two lifts for books and one for trolleys.

(vi) Maps, prints and special collections.

(vii) Blind library section, including a good collection of Braille books.

(viii) 24 carrels for research workers, and special study rooms with direct access to the stacks.

(b) Book Exhibitions with its four sections.

(c) The entrance hall with two staircases, cloakrooms and lavatories for ladies and gentlemen to serve the whole

library and the lecture hall, porter, etc.

(d) A lecture room (number of seats, 400) to be accessible from the main entrance hall and from the street.

(e) A cafe with a kitchen to serve light meals to the public attending a lecture in the theatre.

(f) Offices and working rooms. Part of the offices will accommodate staff to supervise the main library, the main reading rooms, the lending library and the newspaper and magazine reading rooms. It will also look after the exhibition with its different sections. Another part of the offices will deal with the working rooms which include binding, cataloguing, printing, photostatics and microfilming. The last part of the offices deals with outside affairs such as branch libraries, cultural co-operation etc. These offices will have their own lounge and cafe. Most of the employees finish work at 2 o'clock in the afternoon to have their meals in their own homes. The rest will have an hours break for lunch and small service is then needed. These offices have to be kept as far away as possible from the public rooms. The staff will have their own entrance, cloaks and lavatories and the offices will consist of:

(1) Committee room.

(2) Librarians office.

(3) Librarian workroom.

(4) Assistant librarian.

(5) Secretaries.

(6) Business offices including purchase, account, statistics, editting and publishing, branch libraries department.

(7) Literature office.

(8) Manuscripts office.

(9) Papyrus offices.

(10) Coins and medals offices.

(11) Cultural co-operation department (including receiving and shipping offices, temporary stores and workshops).

(12) Workrooms: binding, cataloguing, filing and records. Printing office, photostat and micro-photography with darkrooms and stores.

The offices should have direct supervision over the workrooms.

(g) A stack tower to house 1,600,000 volumes, with direct connection to the reading rooms and the working rooms.

GENERAL DESCRIPTION OF THE SCHEME

The reading rooms in a library are always the most important elements in the plan, their lighting, ventilation and quietness should be given utmost consideration. From what is written about the climatic conditions in Egypt, it seems that the reading rooms should have a northern orientation, not only to prevent any sunlight coming into the reading rooms, but to allow them the benefit of the prevailing north-western breeze. The ventilated air is drawn out through normal type window units.

Sunshine is desired during winter, not for reading but for warming the place. This is preferable in the morning, by allowing the sunlight to reach the reading rooms from the eastern side. To prevent the glare caused by the bright sky, the reference library room (on the first floor) is provided with horizontal and vertical covers above a level of 7 ft.

The main library reading rooms occupy the northern part of the plan for its absolute quietness. They overlook the public park, with the Nile in the background. These reading rooms occupy two stories. The magazine and periodicals reading room, the lending library and the newspaper room occupy the ground floor and all are directly accessible from the main entrance

hall, the magazine reading room to the west and the newspaper room to the east with the lending library in the middle. The three rooms are under direct control and served by the staff in their working offices situated round the service shaft which includes a staircase, two booklifts and one lift for trolleys. (In between are the service ducts).

The lending library which is not considered the main feature in the central library is designed on the 'opened access' system. It contains 44,000 vols. The reader approaches the book room from the entrance hall by passing on one side of the staff enclosure (working place) where returned books and fines etc. are dealt with. In front of the staff working place are placed the catalogues for reference. The reader then circulates the book cases, selects the books required and passes out on the opposite side of the staff working space, where the borrowed books are checked and reader cards issued.

The magazine reading room which seats 90 readers, is placed in the north-western corner of the building to enjoy quietness, the cooling breeze, the northern orientation and a good view over the park.

The newspaper room is also accessible from the entrance court. The newspapers are placed on island stands with

sloping faces and designed at such a height that readers must stand, and so eliminates loafers. Some tables with seats are provided for elderly readers.

The main reference library reading room on the first floor, is placed over the last ones, together with the catalogue and bibliographies which occupy a considerably large space. This is the main reference to the library.

The main control of the room is from the 'book issued' desk and the working space round the service shaft. To minimise the time taken to obtain any book wanted, two electric book lifts and one lift for book trolleys are used, connecting the librarian with the different stories of the stack tower. Coloured lights and bells are used in every stack floor. The card filled in by the reader is sent to the different floors by means of air pressure in tubes.

One side tables are used so as to keep the light source to the right-hand side of the Arabic language reader and to the left-hand side of the European languages reader. Moreover this arrangement gives more privacy to the reader and avoids the possible distraction of someone facing opposite him. This arrangement also facilitates the control over the readers from the staff's working place.

On the second floor of the main big reading room

which has the height of two floors, there are two reading rooms for science and economical subjects. Each room seats 80 readers. The rooms are controlled and served from the working space round the service shaft.

At the southern end of the hall on the second floor there is a reading room for special collections. Opposite it is the map room.

The requirements to be satisfied consists of:-

(a) The public library complete with reading and lending libraries, news rooms, special studies.

(b) The lecture room, offices, cafe and refreshment rooms.

(c) Stacks and exhibitions.

The three functions are expressed in the elevation and in the plan which consist of an asymmetrical arrangement of two rectangular blocks with the entrance hall and the exhibition in between. The stack tower which is over the middle link, serves the library proper and the offices and working rooms at the same time. The main entrance is approached from an open court with a colonnade along its southern, western and northern side. This gives an air of invitation to the main building as well as providing a shaded and attractive area in front

of the entrance hall. This is much welcomed in a hot country. The entrance hall itself is opened from the other side to the western court, with a colonnade along its southern, western and northern side. This court is considered the centre of attraction to both reader and the public using the lecture room. It also receives the north-western breeze which passes through the different parts of the building for cross ventilation, The entrance hall is glazed on both sides.

In the entrance hall there are two similar staircases. The northern one serves the library's reading rooms and the other leads directly to the entrance of the foyer of the lecture hall on the first floor. It also serves the special collections and the map rooms on the second floor, and offers access to the offices on the first and second floors. Both staircases serve the exhibition hall and its gallery which are situated over the entrance. The two staircases continue to the third floor between the stack tower and the horizontal part of the building. The carrolls occupy the whole of the third floor.

At the southern end of the entrance hall are the cloak-rooms with two lavatories on both sides for ladies and gentlemen. At the northern end are found the enquiry office, the porter's room and the entrance to the ground

floor of the library proper (that is, the magazine reading room, the lending library and the newspaper room).

The southern part of the horizontal block consists of the lecture room, the cafe and the offices and the working rooms.

Offices

The main entrance to the offices is approached from the south-eastern corner of the building. In the office entrance hall there are the staff cloakrooms and lavatories on the ground floor with the working rooms. A staircase leads directly from the entrance hall to the upper floor where are the different office departments.

The ground floor contains the working rooms, the binding workshop to the south and the cataloguing rooms. The idea of this disposition is to keep the working rooms as far as possible from the public, and to be directly served from the street. Cross ventilation is essential. The plan satisfies this aspect. In between the binding and the cataloguing room there is a room for the office looking after the two sections as well as receiving the new books coming to the library. The new books are revised and recommended in the upper offices before binding and cataloguing. With the binding and cataloguing department there is the printing machine room, with

a store for books and paper in front of it.

After the book has been bound and catalogued and registered in the office archive, it is sent up to the stack tower by the service shaft. Cards with the name of the author are added to the catalogues and the bibliography in the main reference room. A third is sent to the lending library if needed.

Beside the cataloguing room there are two rooms for photostat and microphotography. Each is fitted with a dark room, basins, working counters and stores. A bed-sitting room and a path to be used by the porter are planned beside the service shaft.

The first floor of the offices has two wings. Each wing consisting of one row of rooms along an open corridor, the reason being for the cross ventilation of the rooms across the corridor. The offices have their lavatories for ladies and gentlemen. The eastern wing accommodates the staff looking after the library and its exhibitions. They include:-

The librarian and his secretaries.

The assistant librarian and his secretaries.

A committee room.

A small book stack and the blind library with books written in Braille.

The papyrus office, the coins office, the manuscript office and the literature office.

The position of this part of the administration is to have direct connection with the library, its exhibitions and its stack tower by means of the service shaft, and the branch libraries office is also found on the same floor.

On the second floor, the second wing is devoted to the following offices:-

1. The cultural co-operation department.
2. The business offices : purchases, accounts, statistics, editing and publishing.

The southern wing is devoted to the canteen and the lounge with a terrace in front. Very light meals are served, due to the fact that nearly all the employees get their lunches at their homes after they finish their work at 2.30 in the afternoon. A service kitchen serves this purpose. The lounge and the canteen enjoy both southern and northern orientation. The southern facade of the offices is fitted with sun breakers covering the whole height of the room. These sun breakers are of precast concrete boxes of 2" thickness and dimensions of

They are designed to prevent the sunlight pressing through the rooms in spring, summer and autumn time and to let it in in winter time when it is desirable.

Lecture Hall

The south-western end of the building is devoted to

the lecture hall and the cafeteria. These two elements must always be related to each other in public buildings. The lecture hall occupies the first floor, with a capacity of 400 seats and a projector's room containing lantern, projector and stores for films and slides in case of illustrated lectures. The hall is used additionally as a theatre for showing documentary films, or the performance of staff plays. A small stage is designed for this purpose. Beside that a retiring room with lavatory accommodation is connected with the platform.

The hall is approached from the main entrance so that the normal public rooms of the library are not disturbed. The hall is also approached from the street by means of stairs from the gallery on the ground floor overlooking the southern court. A suitable foyer for the public in front of the hall, is accessible from the western court too. The foyer can be locked up independently.

The lecture hall in this position is accessible from the Nile bank promenade as well as from the Liberation Square in addition to the entrance hall of the building. The lecture hall is lit from its western side by windows to the height of 7 ft from the floor level. Above that, fixed vertical sun breakers are designed as not to allow the passage of sun-rays during and at the same time

as the glare from the bright sky. The hall has some openings to the east for cross ventilation. The foyer is glass all round; there is a terrace connecting the foyer to the art gallery on the other side of the court. The height of the hall covers two floors, while that of the foyer is only one floor.

The hall is furnished with fixed tip-up seats in upholstery and Dunlopillo cushioning, red pile carpets fitted along the aisles, maple veneer plywood panelling to the side and end walls with painted celotex board above and plastered ceiling with indirect lighting concealed in the cornice.

The stage is floored in single strips on battens on a R.C. framework raised to a height of 3 ft. The proscenium arch is of plasterwork and the scenery flats at the rear are removable when required. Space is provided for footlights and side floods. The cinema screen is on an electrically operated roller located in the top of the proscenium arch, where also is housed the loudspeaker.

The Projection Room : 225 sq. ft. of fireproof construction with fireproof doors, the projector slits with fireproof shutters and an emergency escape stair with fireproof door. The floor is of granolithic finish. It should be arranged so that the lecturer can automatically

operate the lantern. The room is also accessible from the main hall.

The cafeteria on the ground floor is considered as a semi-detached element to the library. It is used by the public using the library, the public attending the different lectures or performances, and by outsiders. It serves light meals and other refreshments. The cafeteria is accessible from the west for the people on the Nile bank and from the east for the people using the library. A staircase is connecting the foyer with the cafeteria.

The direction of the cafeteria runs north to south to get a full view over the park and the Nile, with a terrace and a pergola in the front for outdoor diners. There is also abar served directly from the kitchen. A cashier counter is provided. The kitchen which is rather small, occupies the southern end as the main services would be. Cross ventilation is well thought of during the design. The kitchen is served from a southern entrance and has lavatories for staff use. Lavatories are placed in the eastern gallery of the cafeteria. It is most desirable that all the services, lavatories and kitchens should have southern orientation. The kitchen itself is fitted with refrigerators, two ovens, service tables, basins and cupboards.

The Stack Tower The vertical part of the building is described as the stack tower. The tower consists of nine storeys, 9 ft. (floor to floor). The lower storey is occupied by the carrolls. The stack tower takes a rectangular shape with the longer sides facing east and west. The tower is served by two service shafts at each end. Each shaft consists of a service staircase, one lift for trolleys, two lifts for books, and in between there is a main duct. The service shaft at the southern end is mainly used by the staff and connects the stacks with the working rooms in the ground floor.

The other service shaft at the northern end of the tower serves the different reading rooms of the library. The eastern and western facades of the tower are fitted with vertical R.C. sun breakers, so as not to allow sun-rays into the stacks at any time of the year. The sun-breakers of the western facade help to conduct the north-western breeze through the stack. Each floor of the tower houses 160,000 books on light metal shelves. Lavatories are available every three floors.

The lift machines and two air conditioning plants are put in two rooms on the roof of the tower with a pergola connecting them. The stack tower in this shape can be extended upwards or built on in stages according to the number of volumes available.

THE CHARACTER OF THE SCHEME

During the long history of Egypt, the country was affected by different civilizations. Egypt's history begins about 6000 B.C. During the Pharoes' period the country was invaded and conquered by the Hykos, 2000 B.C. In 525 B.C. came the Persians. In 332 B.C. came the Greeks under the leadership of Alexander the Great. Egypt fell into the hands of the Romans and became a province of the vast Roman Empire in 30 B.C. Then in 640 C.E. Egypt was conquered by the Arabs. Egypt was then a part of the Ottoman Empire in 1517 - 1805. In 1805 Egypt came under the control of her people with the leadership of Mohammed Ali and his son Ibrahim. Their descendants were not worthy of their names and thus Egypt gradually fell under the sway of the French and the British. Then the people started the struggle for freedom and the independence of their country in 1919. In 1922 they gained a quasi-independence. In 1936 another step was taken towards a full independence of the country. The people's struggle was then crowned by the revolution of 23rd July 1952 and the proclamation of the republic, under the leadership of General Neguib, who translated the people's aspirations into action.

From this very brief historical account, it

is shown how Egypt has been affected by the different civilizations. Where the east and west meet together, a non-homigenious life is formed, the result of which is the disappearance of national character in the country. This is obvious in the people's dress, customs and also in architecture. One look in a Cairo street shows that there is a great collection of different styles and movement. Buildings designed by Italian, Greek, French, British and Egyptian in a hasty manner. This chaos came to an end when the country started to control herself by herself. Now the Egyptian architect tries to show his elasticity by following the very modern lines regardless of any other factors. I consider this is a transition period of our national character. The tendency is for a unifying of the people's dress, culture, and social life.

The history of architecture in Egypt has passed through many different stages. Pharaounic style as related to Ancient Egypt is what we may call a pure Egyptian style. The Saracinic architecture, which was introduced after the Arab conquest of Egypt in the 7th century, was used mainly for Mosques, etc. These were usually the two main styles affecting architecture in Egypt.

Once the Italian and the French Renaissance had at

an earlier period and for a short time, some influence, but it was comparatively small and soon died away.

As Egyptian architecture has passed through all these styles at different periods, one single tradition can hardly be traced in the new buildings of today. This can be seen in the accompanying photographs of some of the buildings erected in Cairo during the last fifteen years. It is true that some architects not very long ago tended to advocate the Pharaunic style and others considered the Saracinic to be the one that should be followed as a traditional style.

On the other hand, new ways of construction, new building materials and the closer gap between the different nations, all these factors give architecture an international character especially between the nations who have similar climatic conditions culture. The satisfaction of every element in building to its function, gives the building its true character. This is the character of the schemo.

The Public Library being a municipal building, it should reflect a sober and modern effect of a monumental feature. The site is surrounded by many modern buildings, most of them offices and blocks of flats. The Museum of Egyptian Antiquities which is nearly adjacent to the library, has a classic style. This has its effect on the

design and the character of the scheme. The museum's long facade ends in prespective to that horizontal part of the scheme with the stack tower as a focus or land mark, to the whole cultural centre suggested.

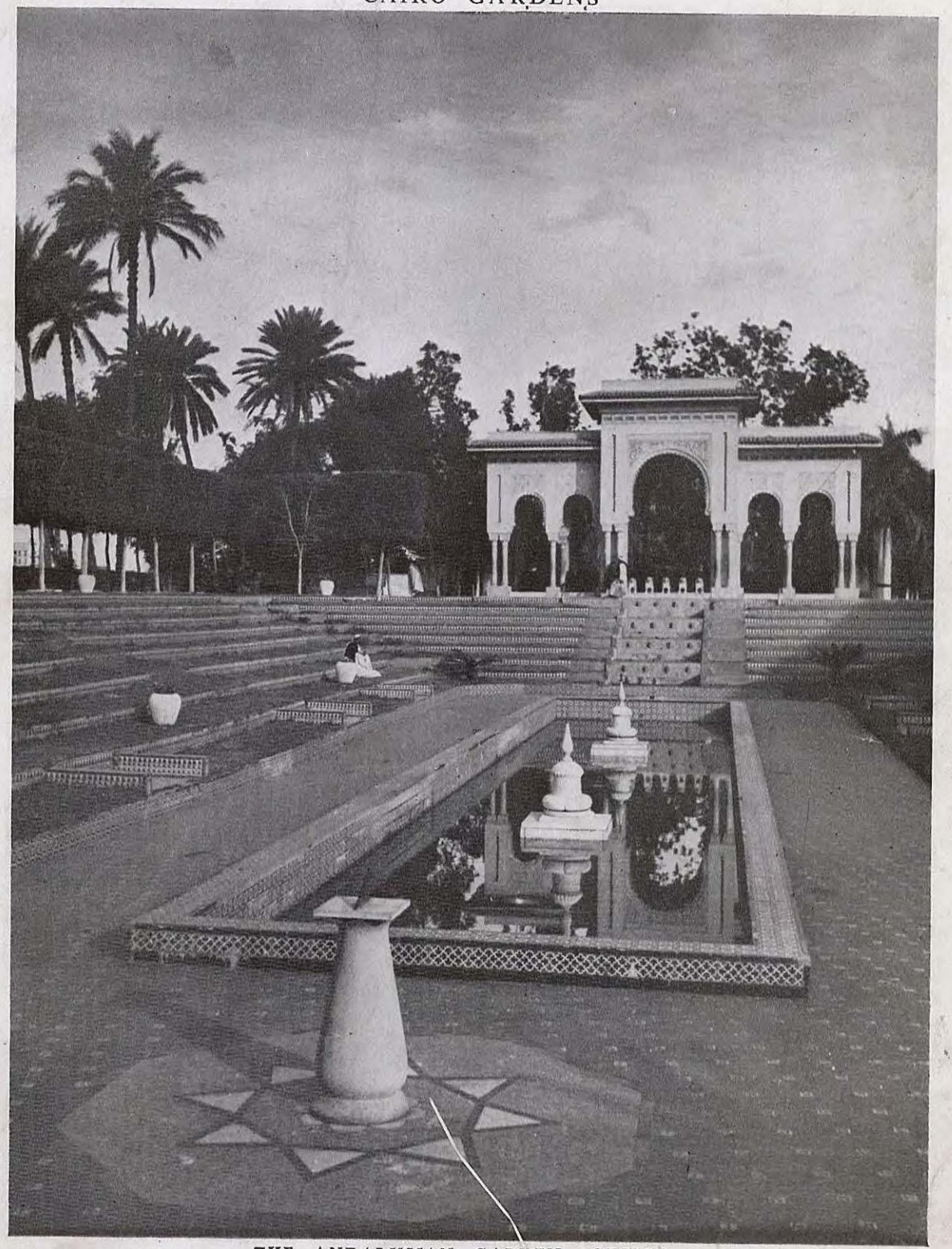
The Oriental character is shown in the colonnaded courts which help the ventilation of the building and give a good amount of shade to the different parts of the building.

The character of the building in this scheme evolved mainly from the straight forward solution of problems encountered, without being affected by any predetermined form or style.

FUAD I UNIVERSITY

GENERAL VIEW

MIDAN SULIMAN PASHA



THE ANDALUSIAN GARDEN, GEZIRA

SCHEDULE OF ACCOMMODATION WITH AREAS

GROUND FLOOR

(a)	Main entrance hall	2250	sq. ft.
	Enquiry office	225	" "
	Porter's office	225	" "
	Cloaks	225	" "
	Lavatories (Ladies)	225	" "
	" (Gentlemen)	225	" "
(b)	The Library rooms:		
	Newspaper room	4284	" "
	Lending library (including service shaft and working area)	6525	" "
	Magazine reading room	4284	" "
(c)	Working rooms and offices		
	Entrance hall	810	" "
	Lavatories (Ladies and Gentlemen)	300	" "
	Binding room	1620	" "
	Reception office	225	" "
	Store	300	" "
	Cataloguing office	2025	" "
	Printing machine room	675	" "
	Paper store	330	" "
	Photostat including dark room	330	" "
	Microphotography and dark room	330	" "
	Three strong rooms	112	" "
	Service shaft	225	" "
	Utilities and Porter's living room	450	" "
(d)	Cafeteria:		
	Entrance (to the east side) ...	56	" "
	Lavatories (Ladies and Gentlemen)	500	" "
	Kitchen and services	698	" "
	Cafateria with the western entrance	2700	" "
	Circulation (corridors and halls)	2700	" "

FIRST FLOOR

(a)	Hall	3150	" "

	Exhibition	3150	sq. ft.
	Art Gallery	900	" "
(b)	Service shaft	225	" "
	Main reading room (reference library)	9900	" "
	Catalogues	3375	" "
	Bibliography	2700	" "
	Service place	1800	" "
(c)	Lecture hall	3375	" "
	Foyer	1800	" "
	Gallery	1125	" "
	Stage	1350	" "
	Terrace	1125	" "
	Retiring room and toilet	350	" "
(d)	Offices:		
	Committee room	360	" "
	Librarian's office	360	" "
	Secretary to Librarian	360	" "
	Sub-Librarian's office	360	" "
	" " secretary	360	" "
	Branch libraries dept.	720	" "
	Papyrus office	360	" "
	Coins office	360	" "
	Literature office	360	" "
	Manuscripts office	360	" "
	Other offices (3)	1080	" "
	" "	450	" "
	Blind section	675	" "
	Lavatories (Ladies and Gentlemen)	360	" "
	Circulator area	1860	" "
	Information	112	" "

SECOND FLOOR

(a)	Hall and stairs	3150	" "
	Upper part of Exhibitions	2100	" "
(b)	Technical Library	3660	" "
	Commerce library	3375	" "
	Service shaft and service place and circulation	2025	" "
	Special collections	2925	" "
	Projector room	225	" "
	Maps	1050	" "
(c)	Service shaft and office	585	" "

Book stacks for office	...	...	675	sq. ft.
6 rooms (offices) 6 x 360 (accounts, statistics, purchase editing)	...	...	2160	" "
Lounge	...	...	900	" "
Cafe.	...	...	400	" "
Kitchen	...	...	450	" "
Terrace	...	...	900	" "
Circulation	...	...	420	" "

THIRD FLOOR (The carrolls)

24 carrolls 7½ft x 7½ft)	...	...	1575	" "
2 service shafts	...	...	450	" "
Circulation area, offices and stores	...	...	3595	" "

STACK TOWER

8 floors each of	...	...	7425	" "

ROOF

2 machine rooms each of	...	...	225	" "

The whole volume of the building - 1,910,700 sq. ft. Where it is considerably cheaper in Egypt than in this country, the cu. ft. will cost about 4 shillings. The approximate cost of the building will be:

£400,000

The Egyptian Government is paying a great consideration to the establishment of a new public library. A similar amount of money was decided on in the five years scheme which the Government has planned.

STATEMENT OF MATERIAL AND STRUCTURAL SYSTEM

The type of structure adopted in the scheme is in its most simple way. A unit of 15 ft. is carried on

all over the plan. The simplification of the structure reduces the time and cost of construction. On the other hand it gives the scheme an architectural rhythm.

There is always a general law controlling the different sides of nature, its structure and its growth. This law can be applied in architecture as units.

Structure

It is a R.C. frame building. The external walls are cavity walls. The outer skin is 4½ inch brickwork and the inner skin is 4 inch breeze blocks. The building is faced with 2 inch precast concrete slabs fixed to walls by means of lugs cast in the slab. Some of the internal walls are of light materials, mainly of breeze blocks, as shown in the drawings.

Consideration has been given to provide for "expansion joints" where necessary as shown in the drawings. The footings for the columns etc. and expansion joints are of cantilever type. All column footings are of R.C. The concrete used for the columns and beams in the centre block (the tower) is of high grade mix 1 : 2 : 4, and high tensile steel is also used. This has been done for the purpose of minimising the size of the beams and columns.

The concrete used for the rest of the building - in the slabs, beams and columns - is of the ordinary grade

concrete 1 : 2 : 4 with a better mix (1,000 lb 1 sq. inch allowable stress on concrete) to reduce the cost.

The floors are of reinforced concrete hollow slabs.

R.C. has been chosen as the structural material for this scheme for its popularity in Egypt, with its low cost in comparison with that of steel structure.

Stainless metal windows have been used in all the buildings for their superiority to wooden windows in hot climates such as that of Egypt. The windows and external doors are surrounded with projecting pre-cast concrete frames.

Materials : Flooring

The entrance hall's floor finish is of ½" terraza on 2" cement screed 3:1 with brass strips anchored in the screed. The columns are covered with marble of a very dark tone.

The floor finish of the reading rooms is rubber tiles of a dark tone. (Furniture : the chairs are comfortably designed armchairs fitted with rubber pads to eliminate any possibility of noise caused by moving the chairs, thus disturbing the readers).

The W.C. and cloaks. The floor finish is of green asphalt tiles laid to fall to floor channels for easy cleaning. The walls are tiled with very fine paints up

to a height of 6 ft. from the floor.

The floor finish of the corridors is carefully considered in relation to upkeep. Rubber tiles are to be used, laid on a solid base to minimize the noise.

The rooms. Floor finish of all rooms except the W.Cs. is of wooden boards fixed to timber joists which are clipped to concrete floor.

Cladding

(1) Brickwork of hollow construction 15 ins. or 25 ins. overall consisting of half brick inner and outer bonded leaves. The former by metal wall ties, and the latter by cross walls at intervals, finished externally with cream colour rendered with rubber "Tyrolean" finish, which is divided into panels by sinkings.

(2) Local Abbassia stone of red-brown colour in uncoursed random rubble, 16 in. to 20 in. thick, generally load bearing (for the ground floor walls)

Roofing

The roof finish is:

(a) 15 cm. (6 in.) of an aerated lightweight concrete material of high insulation value under (b) cement and sand screed to falls, under (c) two layers bitumen felt and hot bitumen waterproof

membrane, under (d) 4 cms. (1⅝ in.) thick x 40 cm (16 in) x 4 cm (16 in.) Maasarah Balattes on sand bed. These balattes are cut slabs of soft white limestone which provide good reflective insulation owing to their natural white colour.

Walls

Except where the red-brown sandstone rubble walling is used for colour and texture, both as external walling and the decorative treatment internally, the walls are built of solid white limestone masonry. Where they are weight carrying, the thickness is about 20 ins., where wall for the cladding to the R.C. structure, they are built in hollow bricks.

All internal wall surfaces are plastered and painted. For those of the reading rooms, the plaster used is accustic plaster the eliminate the reflection of sound.

All columns on the outside are covered by 1" red marble.

Library Furnishings

Hard wood is the most popular material for internal furnishing of public rooms.

The service counter forms the pivot on which the whole work of the library hinges. Particular care is paid in its treatment. Provision should be made for the receipt and disposal of returned books pending their sort-

ing and replacement on the shelves and for the storage in an accessible place of roll tickets, fine slips, book covers, stationery etc. A cash drawer fitted with bowl will be required for fines. A continuous foot bar extending the length of the counter to be fitted to it.

The counter is connected to the different floors of the stack tower by means of local telephone systems besides the service shaft including book hoists 25" x 19" and gravity message tubes.

Readers using the lending library are strictly controlled. They enter the library by using low swinging doors attached to the service counter. The normal procedure of returning books, new registrations, paying fines and handling cards, can then be resumed. The counter itself leads to the exit which is under control.

Roll top covers protect all card trays from dust at times when the library is closed, and as these covers are fitted with lock and key, the responsibility for the order and arrangement of the cards is placed entirely on the members of the staff concerned. Service counters are 2 ft. wide across the top. In the plan, consideration is given to space for queuing at rush hours.

In the lending library, the lowest shelf is 1'2" above the floor level and 6'3" for the highest shelf. The span of each shelf is 3 ft. and $\frac{7}{8}$" in thickness. (Fig. shows the different types of furniture construction)

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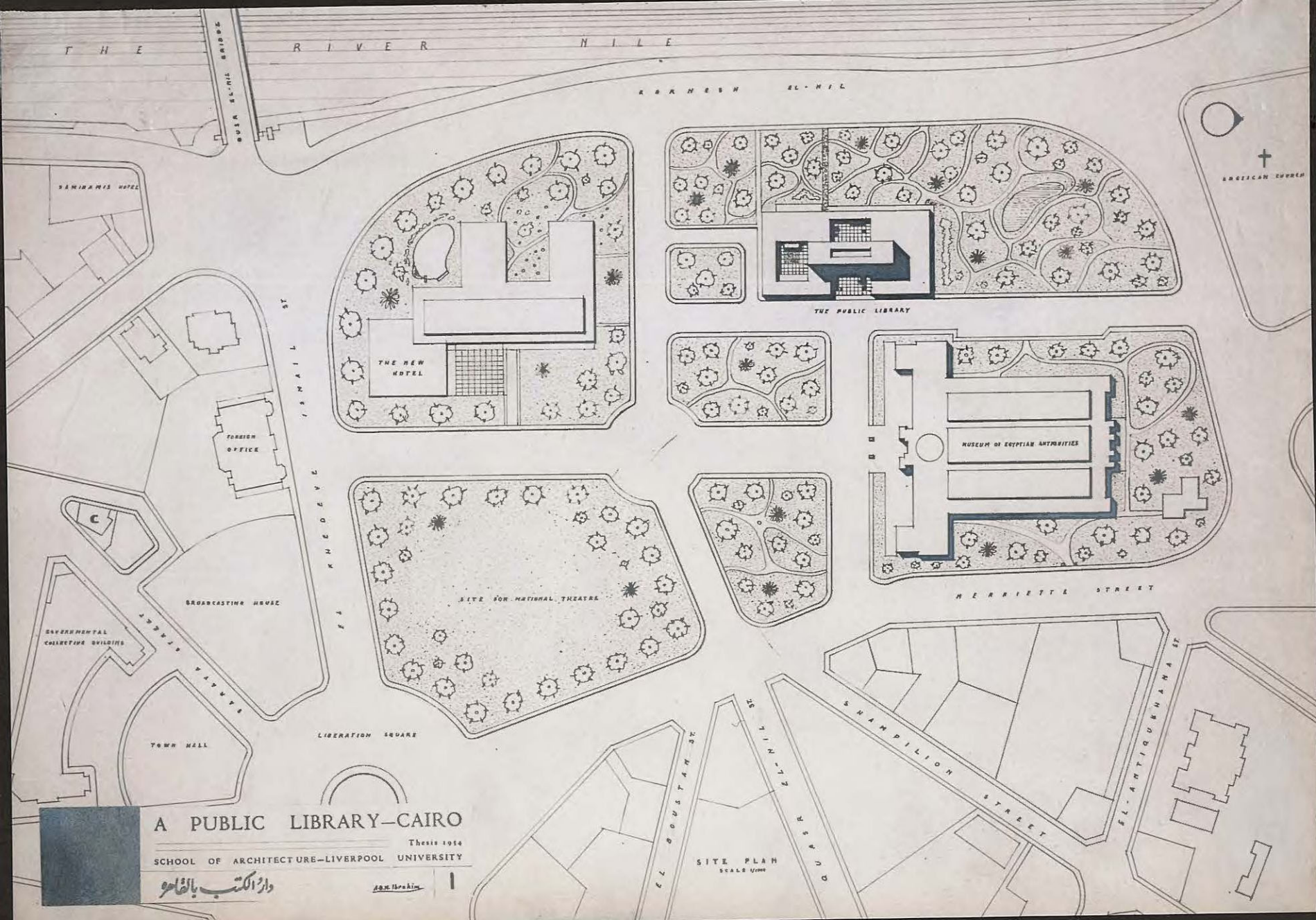

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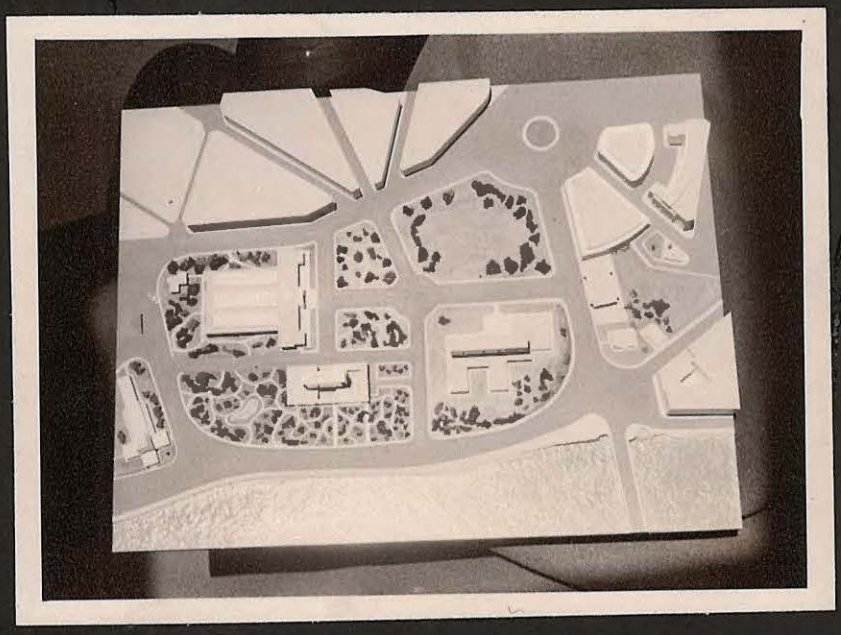

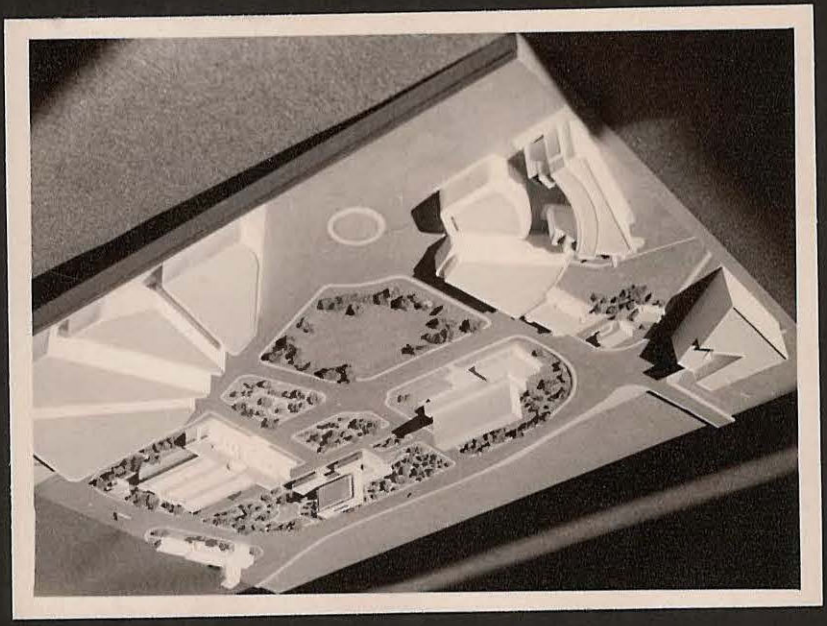

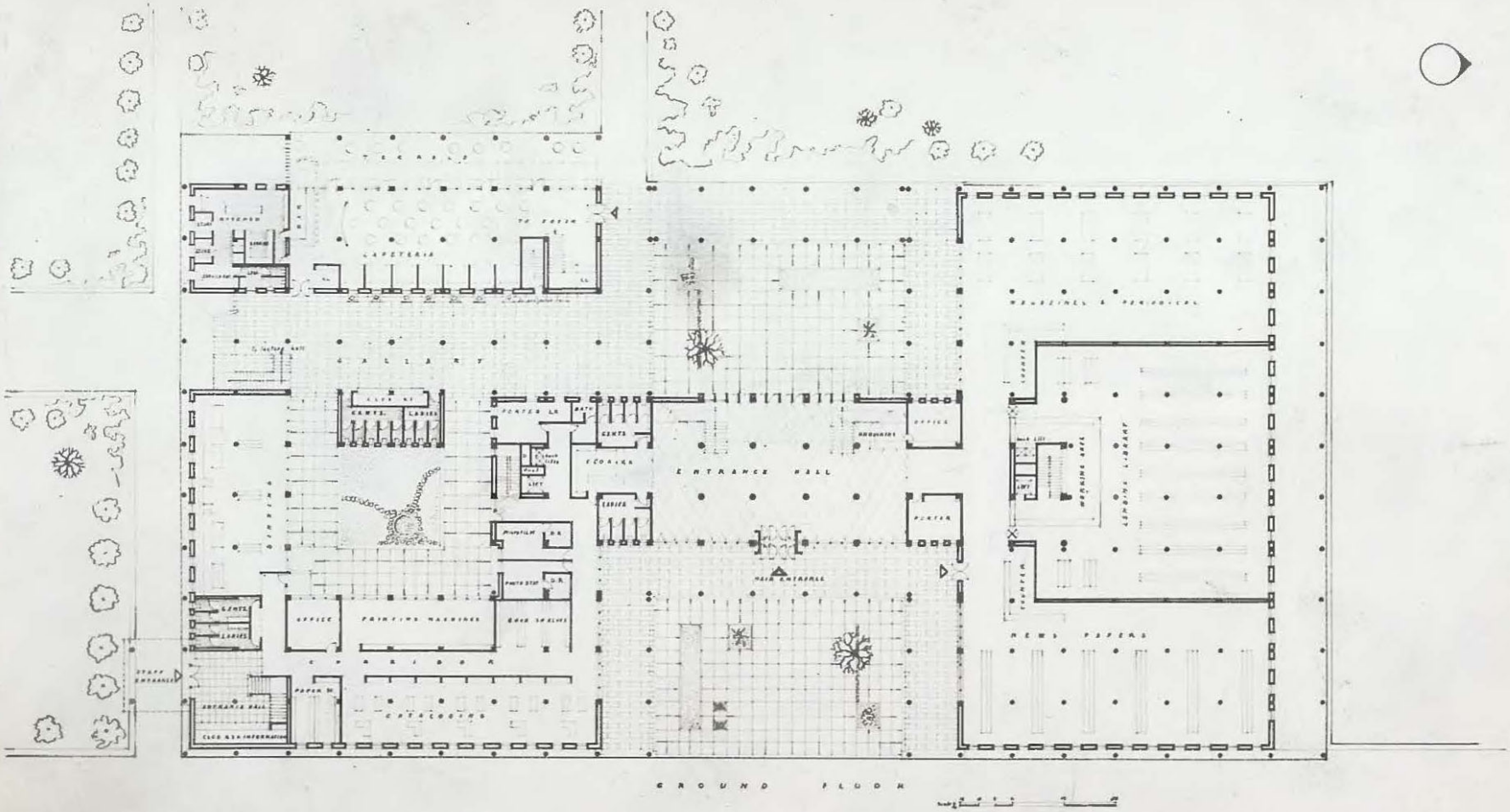

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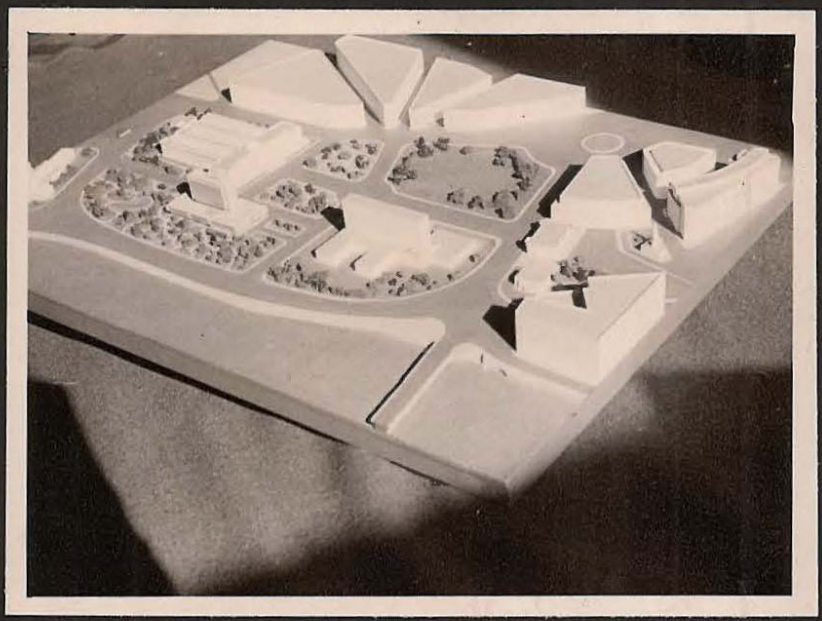

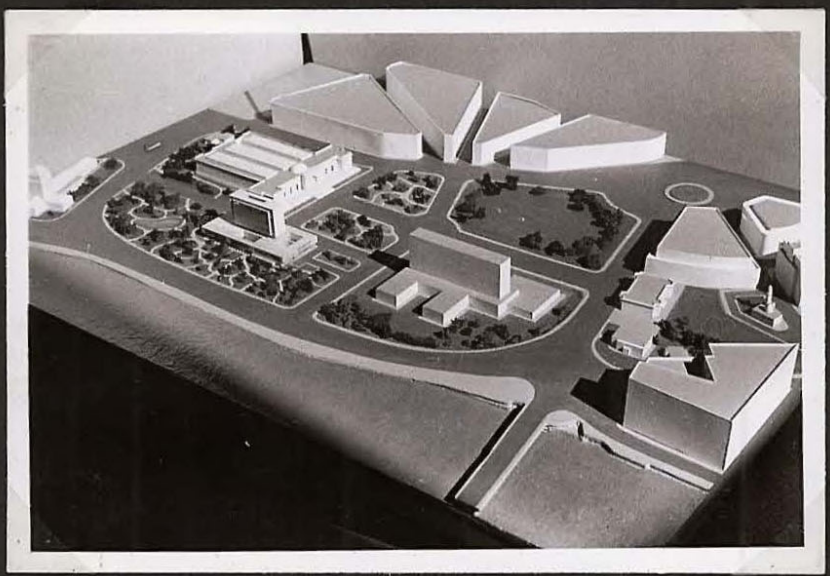

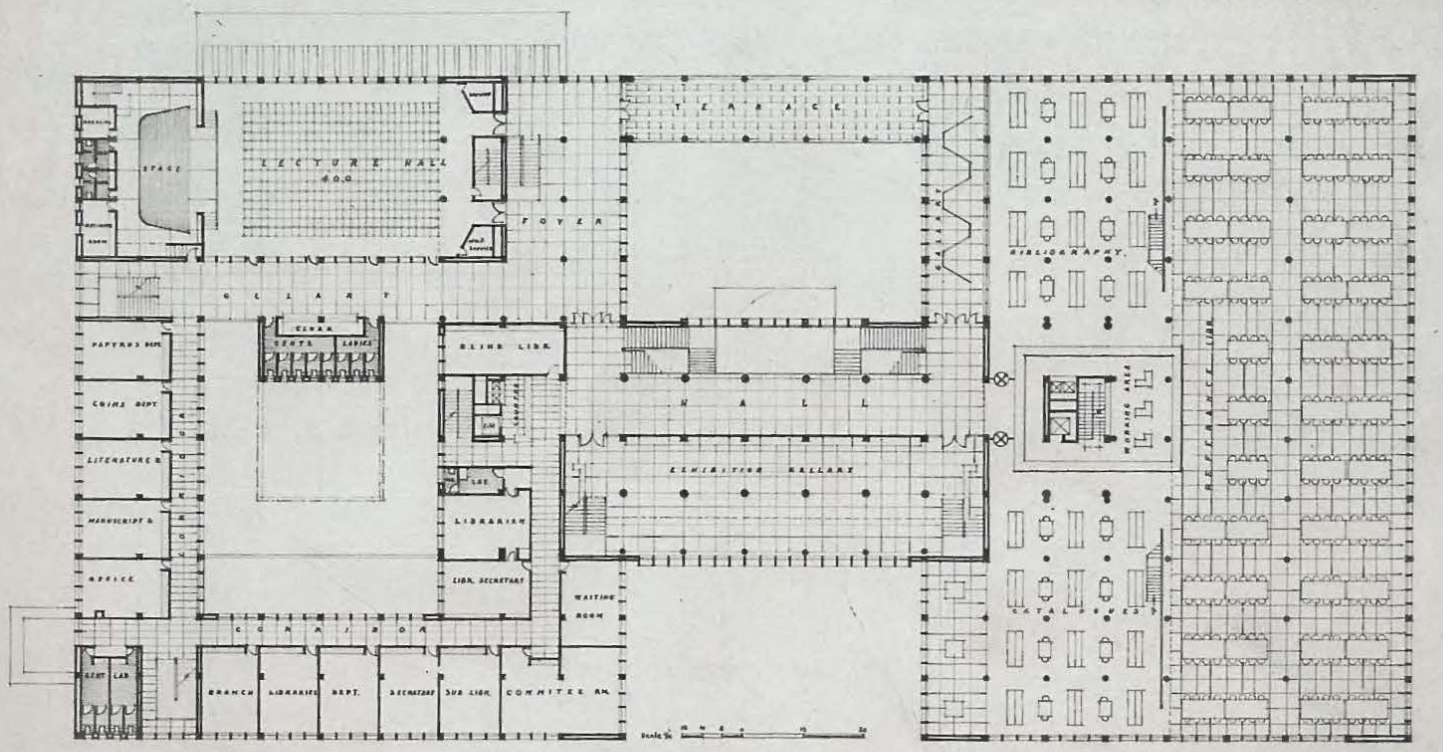

FIRST FLOOR

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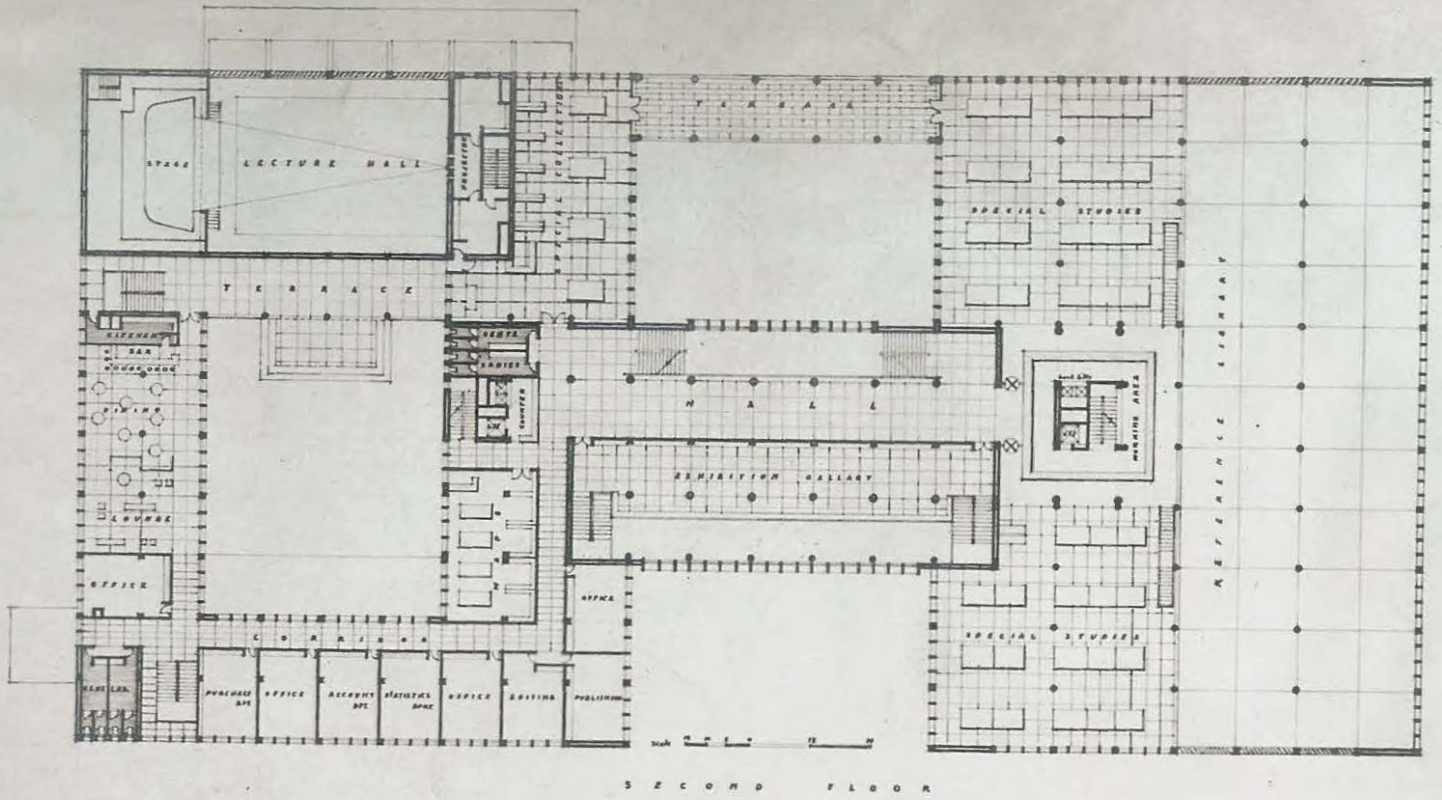

SECOND FLOOR

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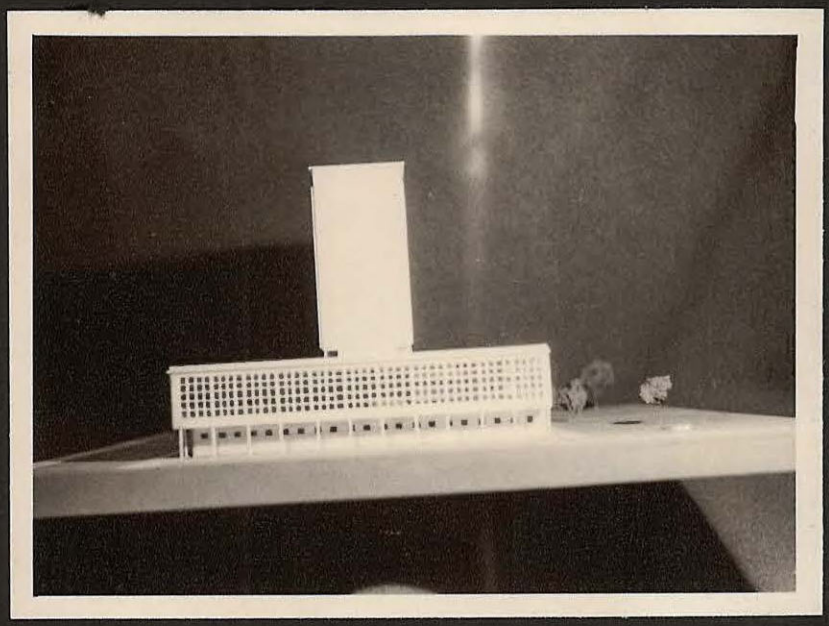

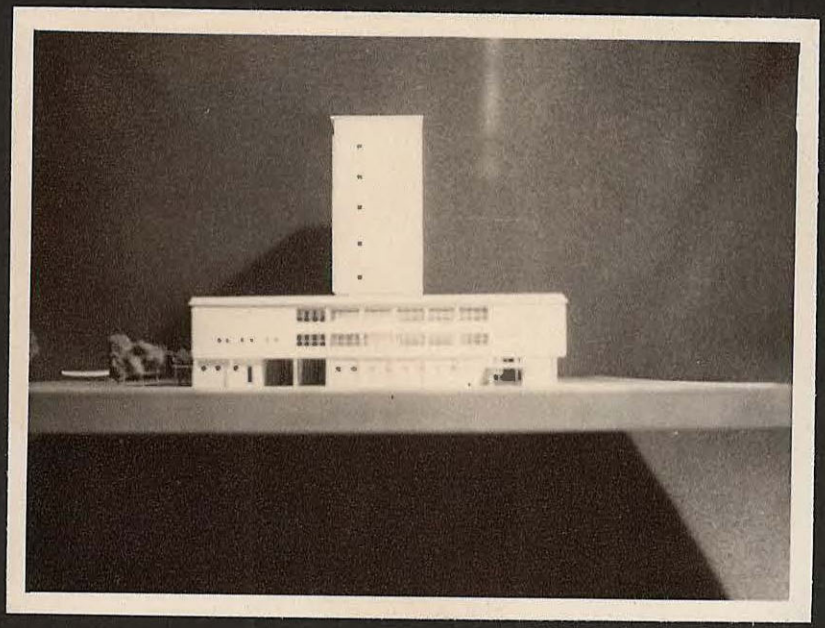

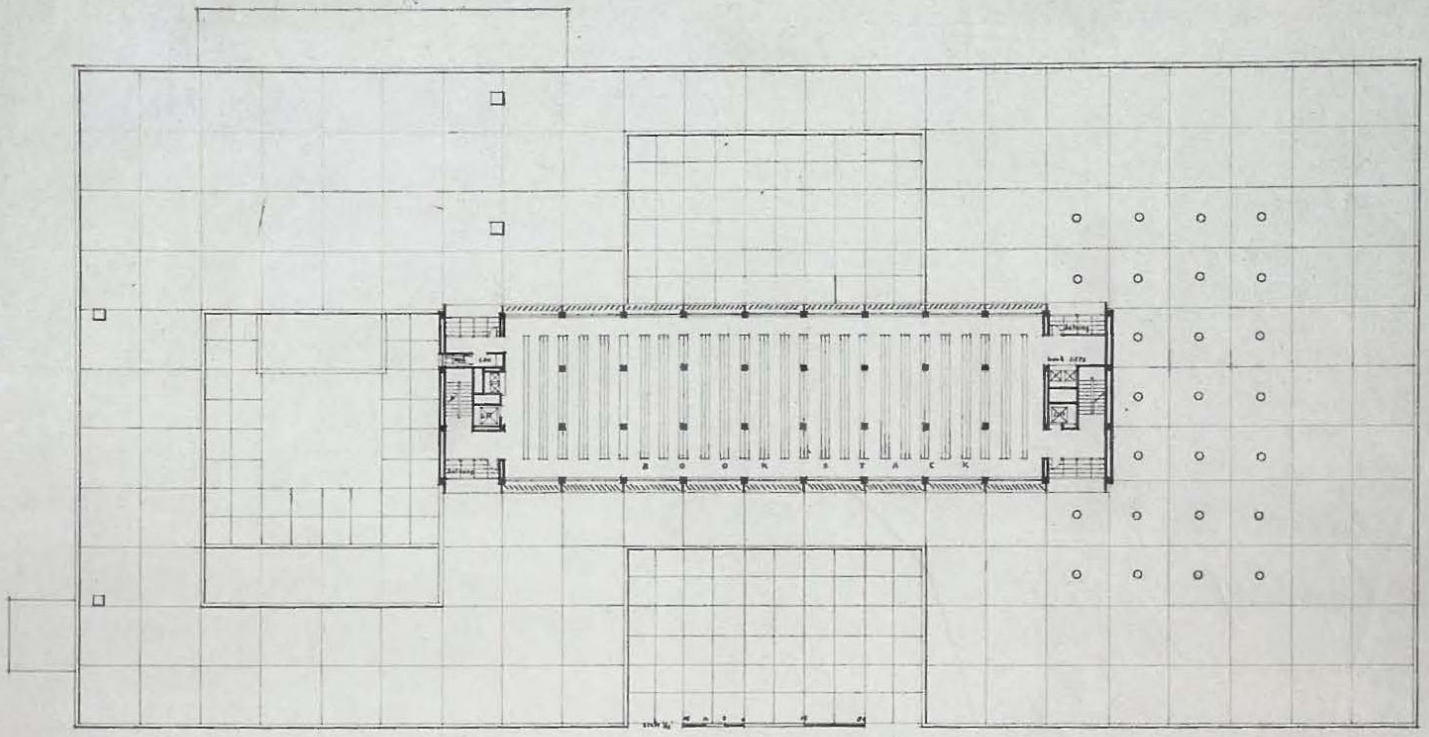

STACK TOWER : TYPICAL PLAN

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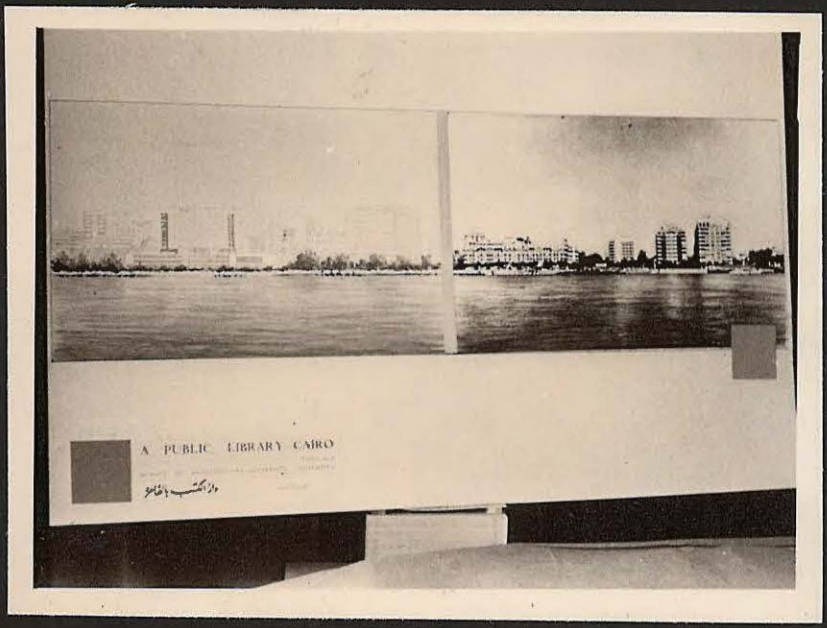
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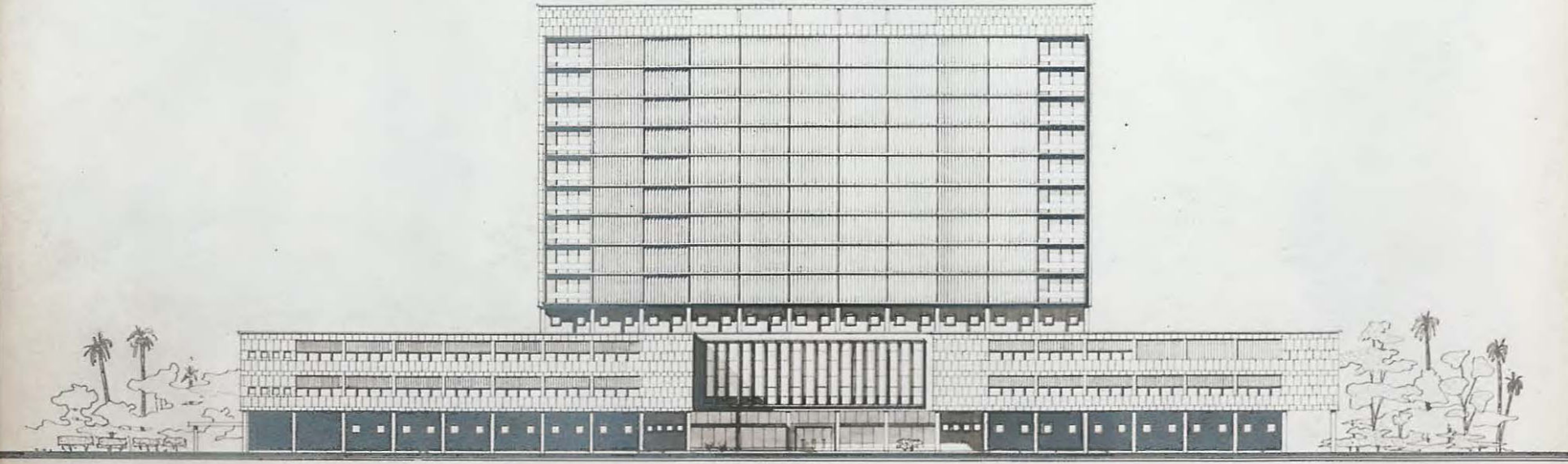

EASTERN ELEVATION

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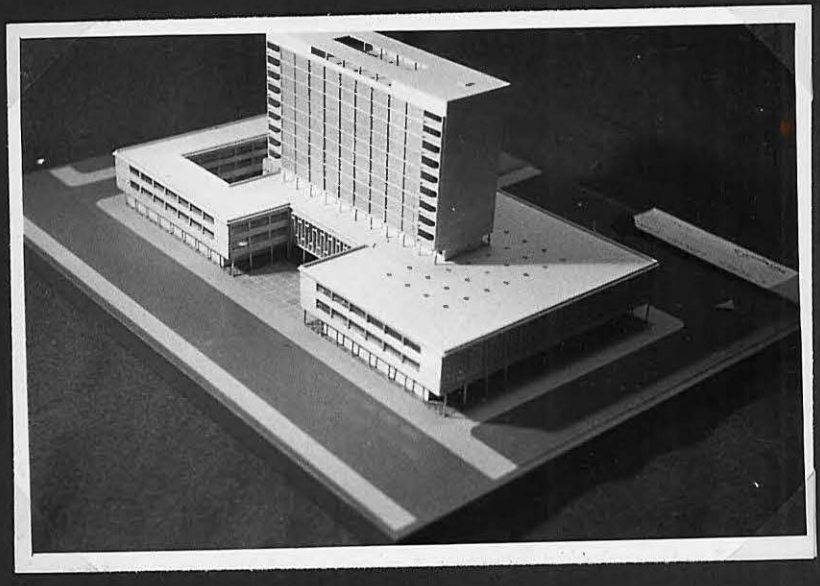

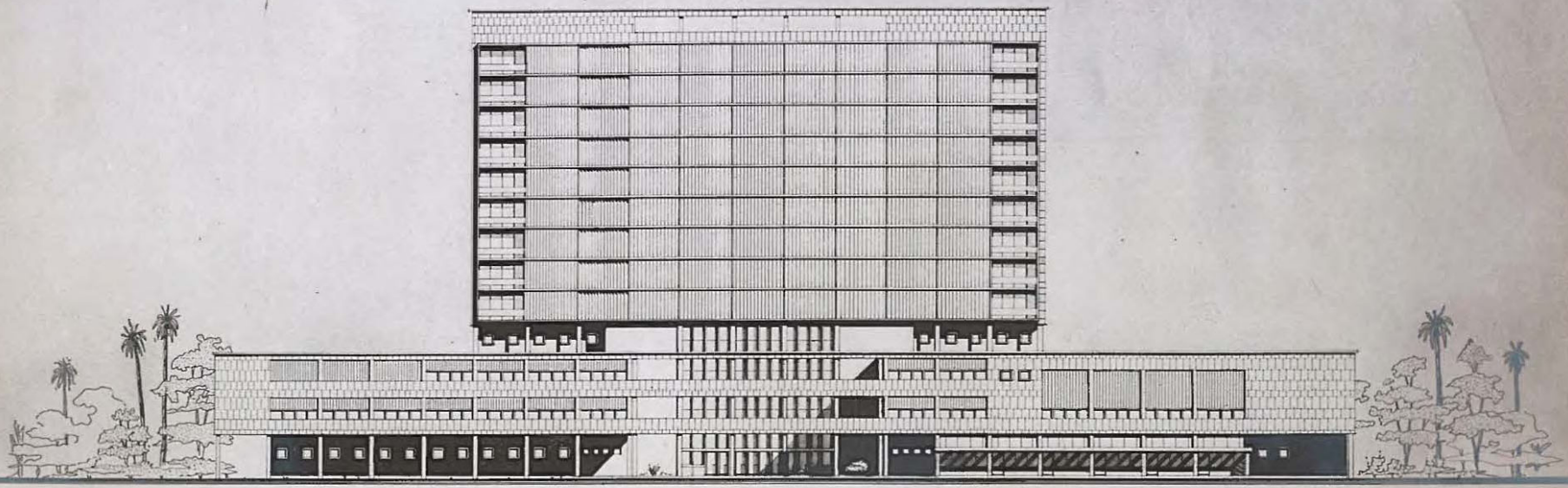

WESTERN ELEVATION scale

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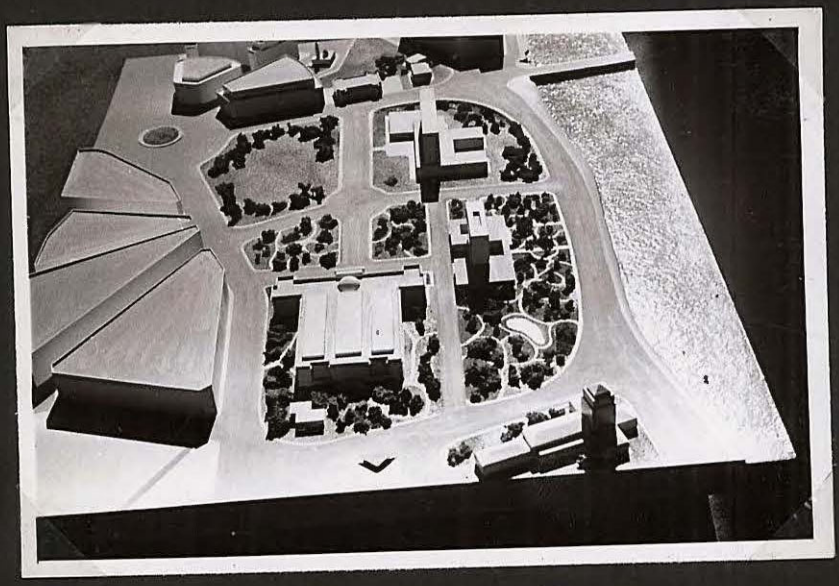

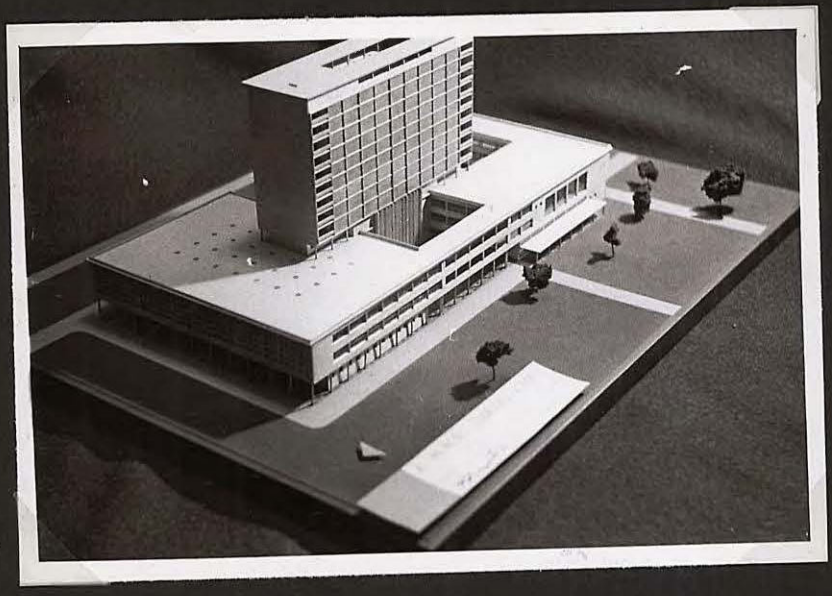

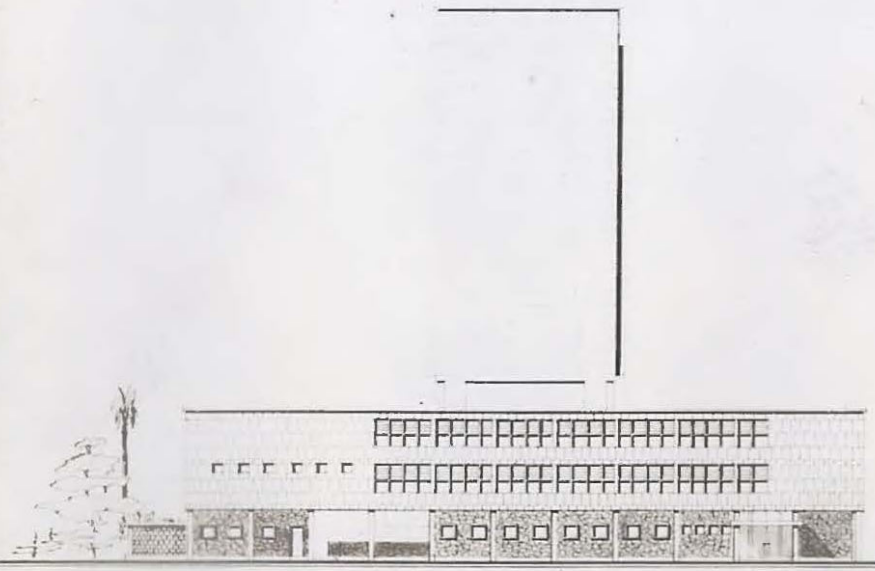

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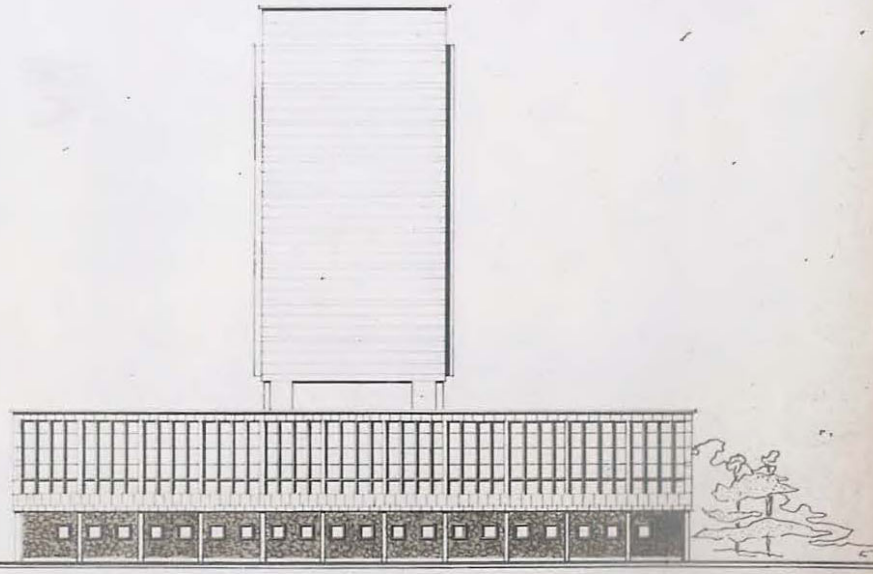

NORTHERN ELEVATION

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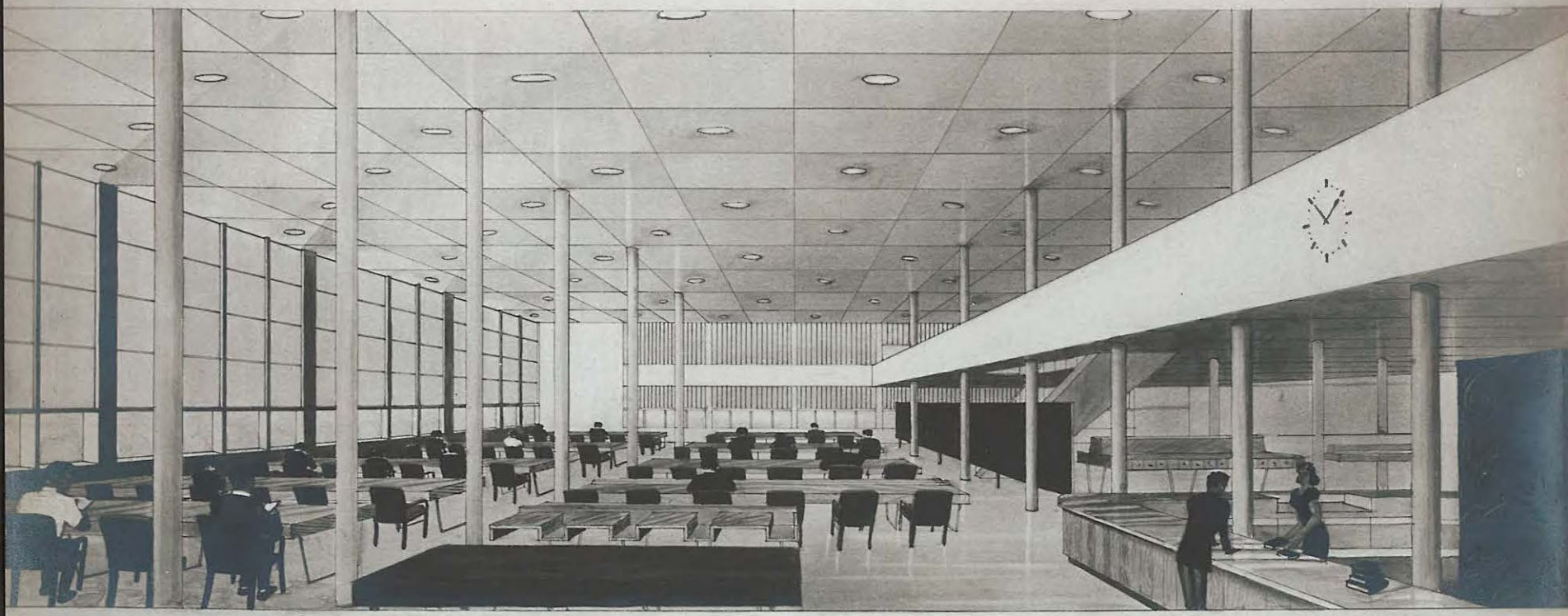

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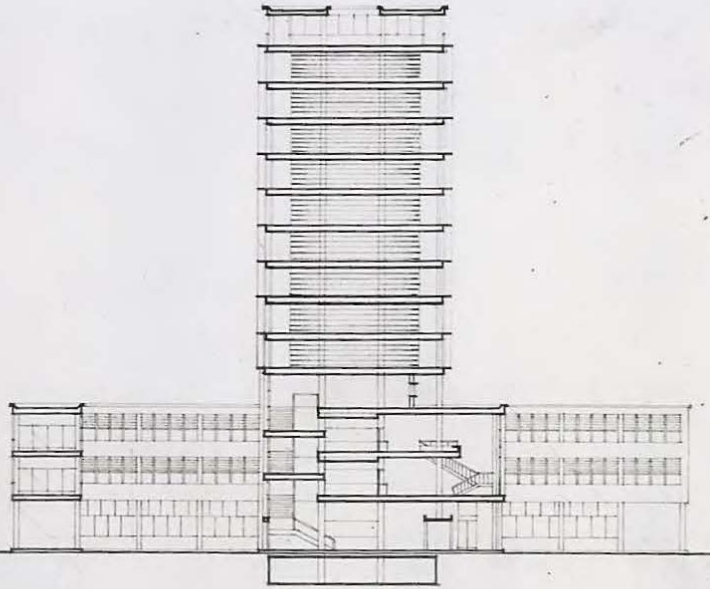

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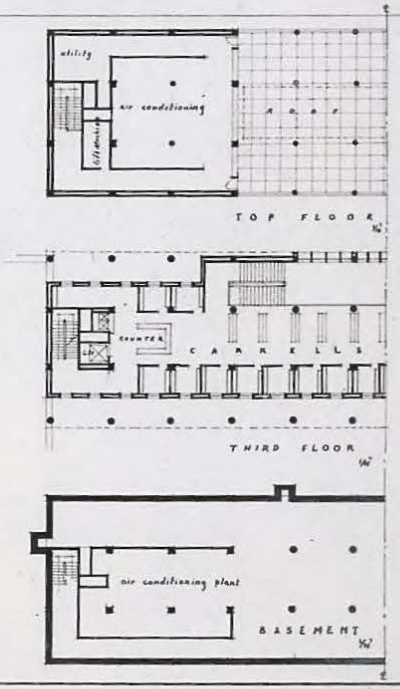

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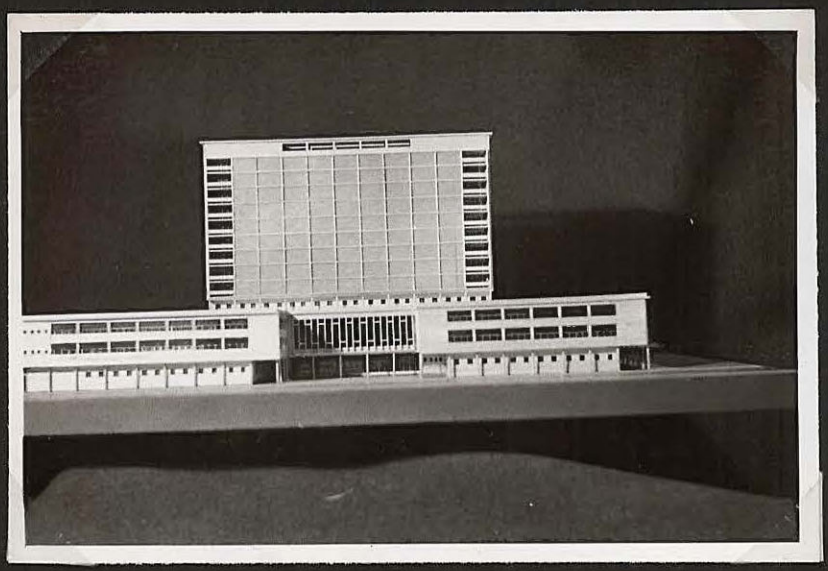

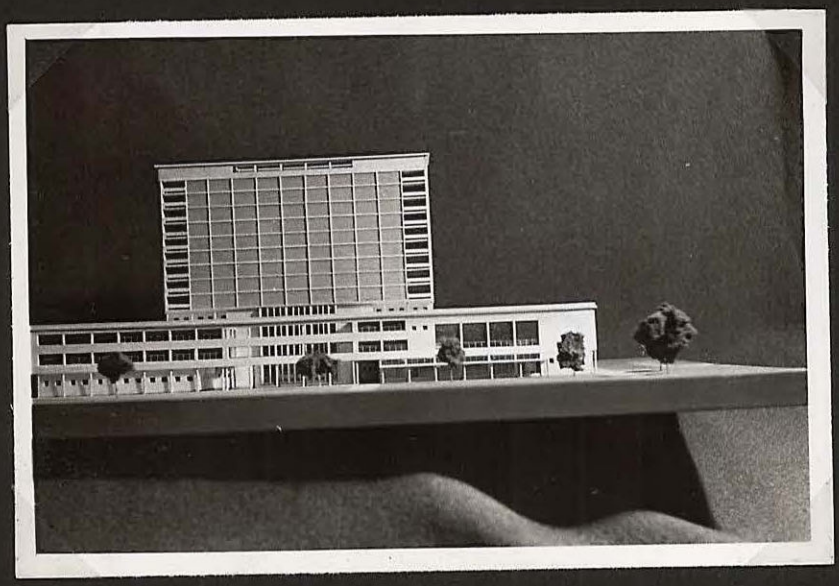

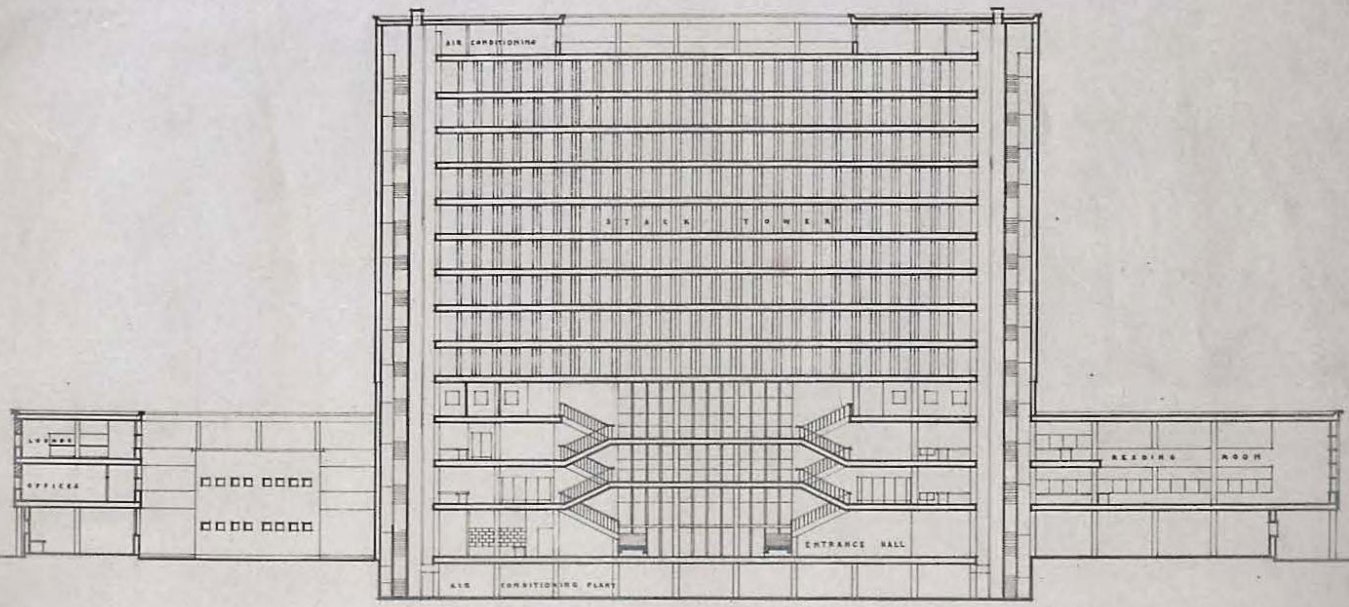

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