

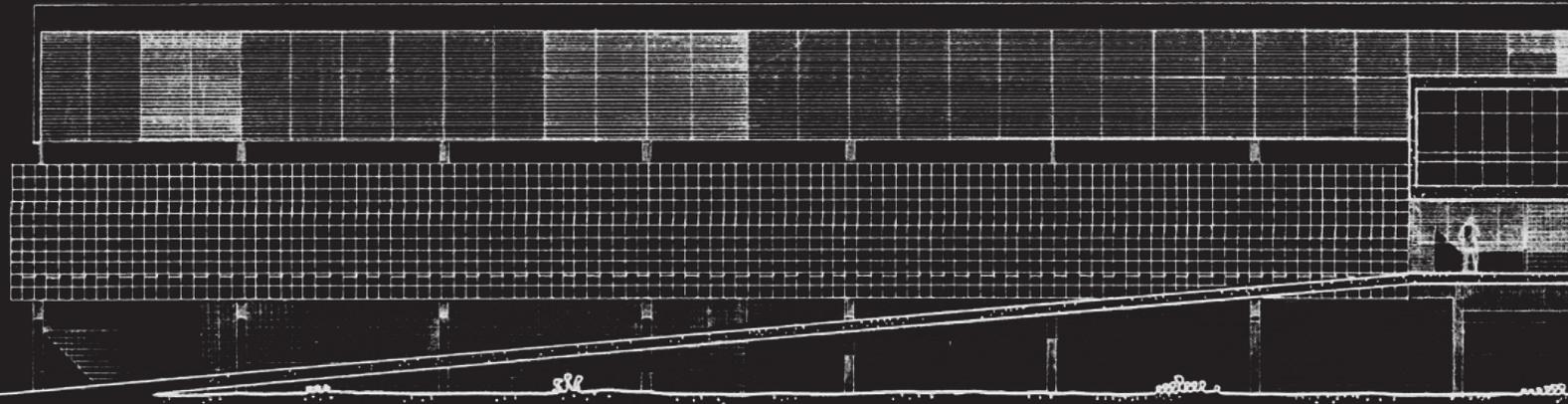
Jarbas Karman's

hospital designs

Exhibition held during the *7th Hospital Building Development Brazilian Congress*, between the 28th and 30th of September 2016 - Salvador - BA - Brazil

IPH
INSTITUTO DE
PESQUISAS
HOSPITALARES
ARQUITETO
JARBAS KARMAN

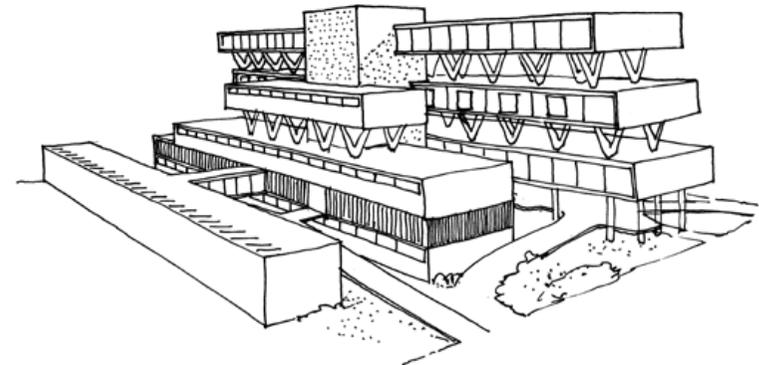
MVA ALVARO SALLAS DE OLIVEIRA



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July 2018

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Jarbas Karman's hospital designs

Exhibition held during the *7th Hospital Building Development Brazilian*

Congress, between the 28th and 30th of September 2016 - Salvador - BA

- Brazil

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English Version

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PRESENTATION

Writing the preface of a publication on the work of the engineer, architect, teacher and researcher Jarbas Bela Karman is a great honor to me. It would be unnecessary to explain the reason why, given the importance of his career of more than 60 years drawing projects and planning health facilities in Brazil. However, I would like to give special emphasis to his important and admirable performance as a researcher and educator, which I usually refer to during my own classes. Because of his enduring concern with the evolution of technical-scientific knowledge in health, Prof. Karman revolutionized the health industry by establishing the *Instituto de Pesquisas Hospitalares* (IPH) in 1954, an institution that provided training for hundreds of hospital administrators. In addition to his impressive architectural production, it was his researcher and teaching roles that struck me the most when I met him.

The first time I attended one of his classes was in 2001, the year I began to walk more effectively the path of health facility architecture. It was a lecture given during the Brazilian Congress of Architecture and Hospital Engineering, organized by the São Camilo University along with the Hospital Fair, in São Paulo. While listening to his detailed explanations, what struck me most was to realize that there was a man ahead of his time, a visionary, who, despite being responsible for hundreds of hospital projects, was not concerned with bragging or preening himself over his many accomplishments, but with proposing and discussing what was yet to come, thinking creatively, generating tendencies, and proposing constant innovations.

Years later, in 2007, we had the pleasure of welcoming him in Brasília, where he held a lecture for the specialization course in health systems architecture that we had introduced early that year in a partnership with ABDEH-DF. As expected, the assembly room was filled to capacity for that special occasion. The sprightly nonagenarian Prof.

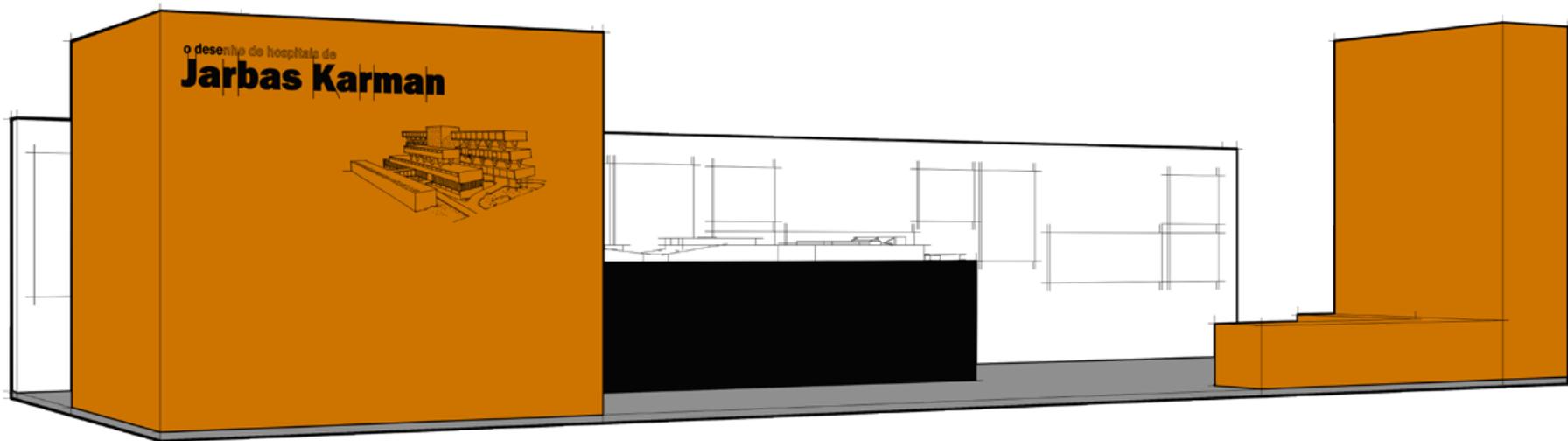
Karman awed us for over two hours, uninterrupted, with his repertoire of stories and anecdotes, rich in detail and inspiration. His disposition and resourcefulness amazed us all, teachers, students and guests, who, afterwards, lined up to take pictures with and ask questions to the master. When I left him at the hotel, I was certain that we had all witnessed a special moment there, one to be etched in our memory. A few months later, Professor Jarbas Karman left us, however, we continue to feel his presence through his vital legacy, which is still being diffused and imparted to the new generations of architects and engineers.

Consequently, we were thrilled when IPH reached us with the proposal to hold a special exhibition on the trajectory of Jarbas Karman as part of the VII Brazilian Congress for the Development of the Hospital Building, held by ABDEH in Salvador in September 2016. That was unmistakably a historic and remarkable edition of our congress. In 2004, ABDEH hosted its first national meeting in the capital of Bahia and, to mark the “return to the origins”, there was nothing more appropriate than providing the opportunity to enlighten the hundreds of people who attended the venue every day on the work of this national icon of hospital architecture.

For those who have not had the opportunity to be present at the exhibition, this publication offers an excellent record of the elegant simplicity with which the organizers have displayed some of the most astounding projects of Jarbas Karman’s career. It was probably not a very easy task to choose from so many significant works, however, there could not have been a better selection. The exhibition included, with beautiful drawings and models, the Hospital de Clínicas de Pelotas, a Karman’s project with Alfred Willer, a worthy representative of the

pre-Brasília modernist architecture in which the authors presented important innovations in project design. It could not be left out of the exhibition: the current Hospital de Força Aérea do Galeão, in Rio de Janeiro, whose architectural design approach was defined by the extensive use of structural modulation and flexibility; and the Hospital Israelita Albert Einstein, considered by many to be the best hospital in Latin America, whose project Karman got involved since the beginning. The aforementioned and additional projects exhibited give a dimension of what Jarbas Bela Karman represents for health architecture and engineering in Brazil. Congratulations to those who conceived this project!

Architect Marcio N. Oliveira
Chairman - ABDEH



THE EXHIBITION AREA

PLANNING THE EXHIBITION AREA

To conceive the area for the exhibition, we took into consideration the suggestion of designing a pathway that would guide the visitor through the content of the exhibition.

The walk began at the main corridor of the fair, which led to one of the wings of the area designed for the exhibition. Upon arrival, the visitor should be able to spot the title first, then the biography of the architect, his projects, and, finally, the information concerning the projects that were carefully selected by the curators.

From the suggestion of this course, the project proposed five installations, each one consisting of three independent walls enclosing a worktable to display the material of the exhibition and a bench to encourage visitors to spend time there.

Two orange walls were placed in the forefront of the space: An L-shaped one on the left side and a higher one on the right side. The first wall had one of its sides strategically facing the axis of circulation of the main corridor and it displayed the title of the exhibition, which allowed the public to identify the exhibition from about 25 meters away. The inner sides unveiled the professional trajectory of the architect. The second wall (placed across from the first one and attached to the rest bench) exposed to view the technical information about the exhibition and the Institute.

A white freestanding wall was placed in the back to show Jarbas Karman's 11 projects and their aspects.

The projects shown in the exhibition were:

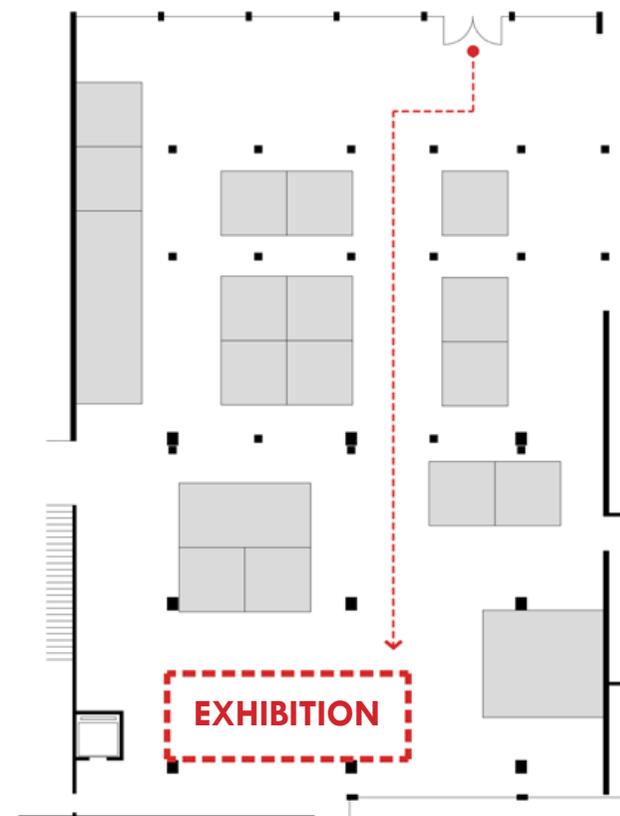
- Hospital de Clínicas de Pelotas;
- Competition for the Hospital Santa Mônica;
- Hospital São Domingos;
- Hospital São Luiz;
- Competition for the Hospital Israelita Albert Einstein;
- Laboratório Central de Pesquisas;
- Hospital Geral da Guarnição do Galeão;
- Expansion of Hospital Israelita Albert Einstein;
- Expansion of Hospital Vera Cruz;
- Instituto Nacional de Câncer e Queimados (Paraguay);
- Hospital São Judas Tadeu da Fundação Pio XII.

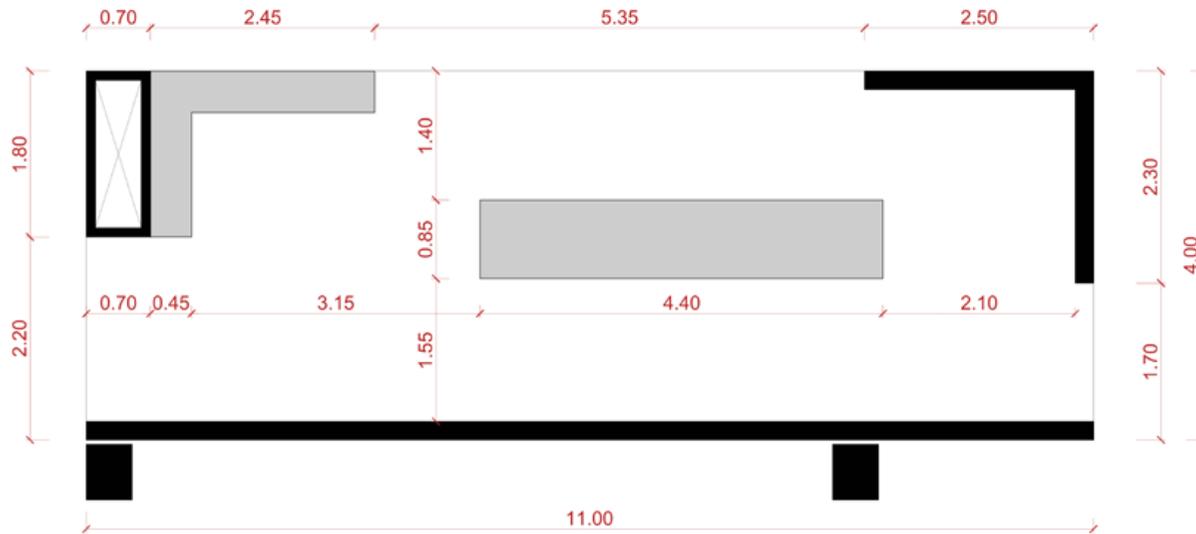
The exhibition placed emphasis on the following aspects of the projects:

- Vertical x horizontal;
- Flexibility;
- Humanization.

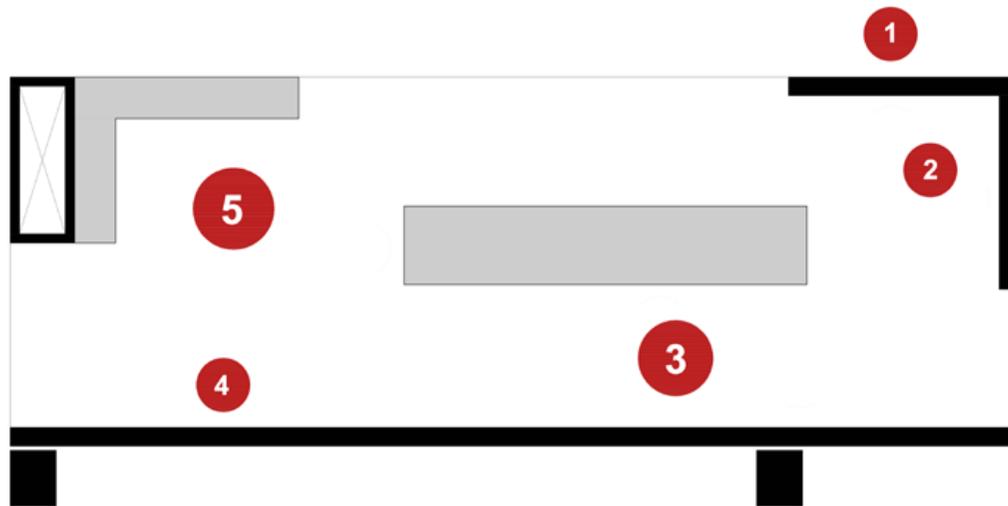
At the end of the course of the exhibition, there was a clearance, where a bench was placed, serving as a small living room where visitors could talk about what they had just learnt.

Location of the exhibition and visitor pathway





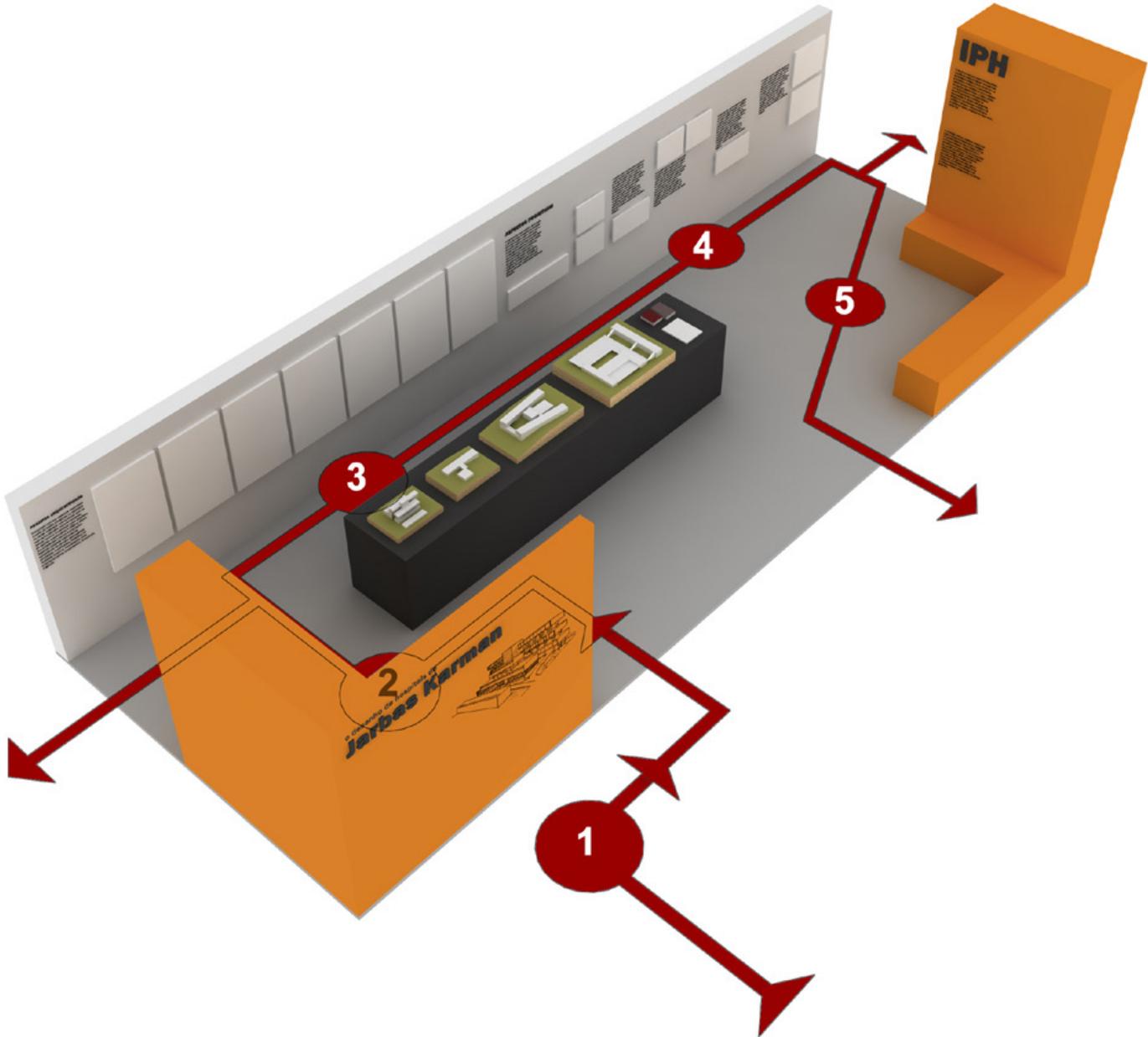
The exhibition area plan

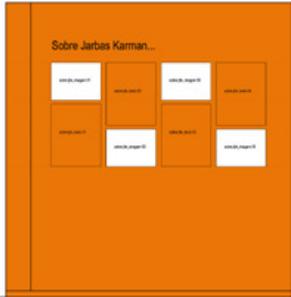


The position of the content displayed

Content

- 1 - Exhibition title
- 2 - About Jarbas Karman
- 3 - Architectonic projects
- 4 - Aspects concerning the projects
- 5 - Living room





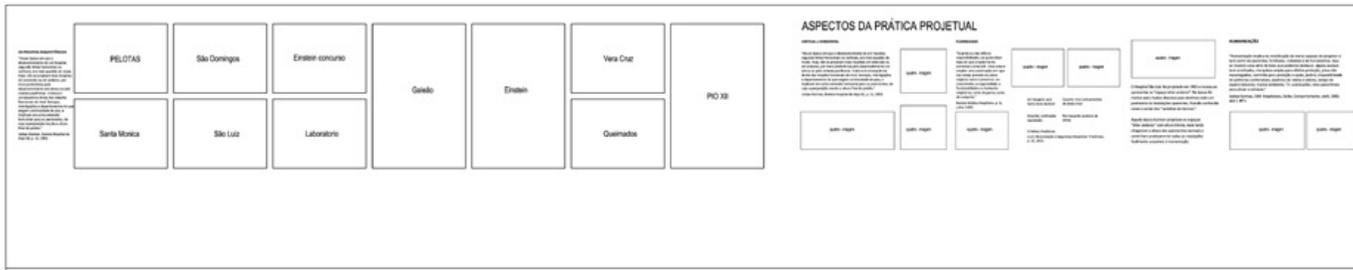
View – About Jarbas Karman



View – Presentation



View – Living room

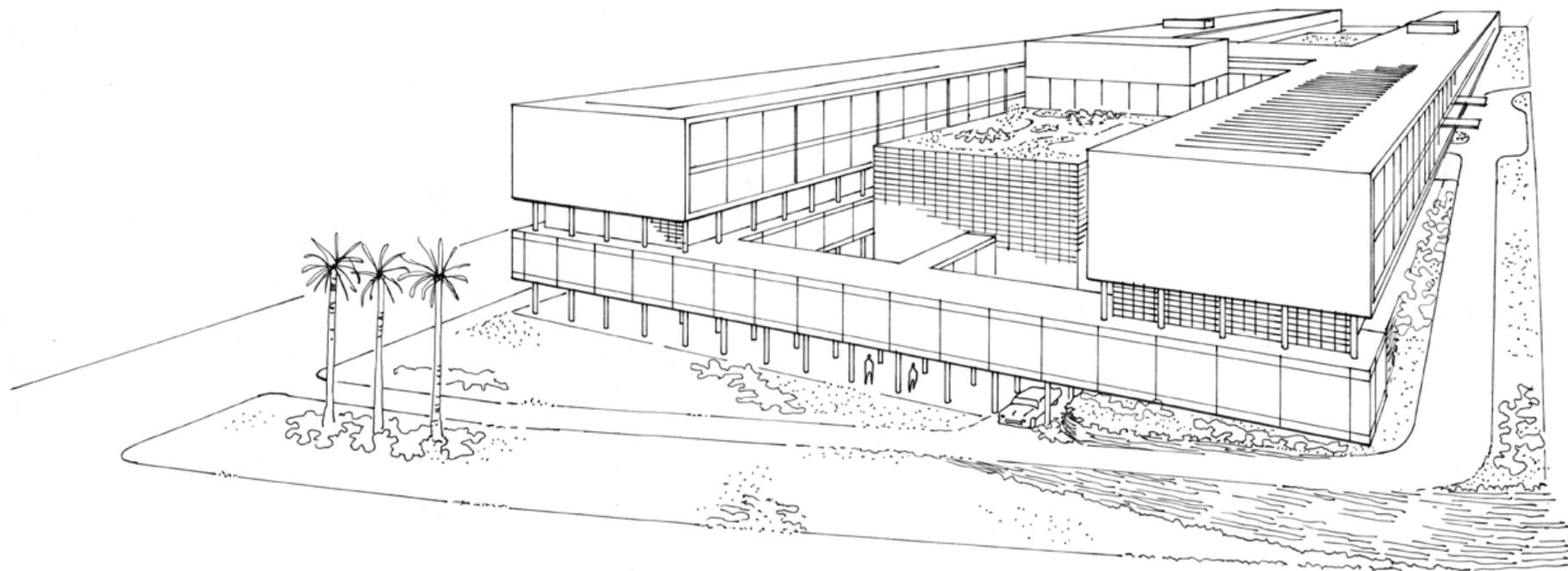


View – Architectonic projects and aspects concerning the projects



Front slope





Proposal for the Hospital Santa Mônica - architecture competition - artistic perspective - 1957

THE CONTENT



Jarbas Karman

JARBAS KARMAN'S HOSPITAL DESIGNS

The civil engineer and architect Jarbas Karman (1917-2008) built his career from the meager health situation found in the Brazilian backlands. A reality that he experienced during his years at SESP (Special Public Health Service), which was incompatible with the advanced research he had been conducting during his master's studies at Yale University in the 1950s. In the quarrel between reality and science, he chose to be an architect with a questioning and creative spirit of the problems to be faced.

By employing foreign studies, he designed Brazilian solutions, expanding, modifying and reflecting them in the national reality. He would come up with his own solutions by researching, discussing, fighting, creating and drawing. The lines he drew traced the development of the national industry. A tireless provocateur, he published the *Hospital de Hoje* Magazine, texts and books concerning architecture, maintenance and predictive hospital security.

His projects were visionary as he would think of a hospital building that could be improved, grow and change over the years. Natural lighting, cross ventilation, gardens that promote a resting area and voids that allow future enlargements. His drawing lines were conceived from functionality and ease of maintenance in a country where everything is precarious and awaits the future.

This exhibition is an invitation for everyone to be enlightened on the architectural work of Jarbas Karman through his architectural designs of hospital buildings that comprise more than 50 years of production in this area.

ABOUT JARBAS KARMAN

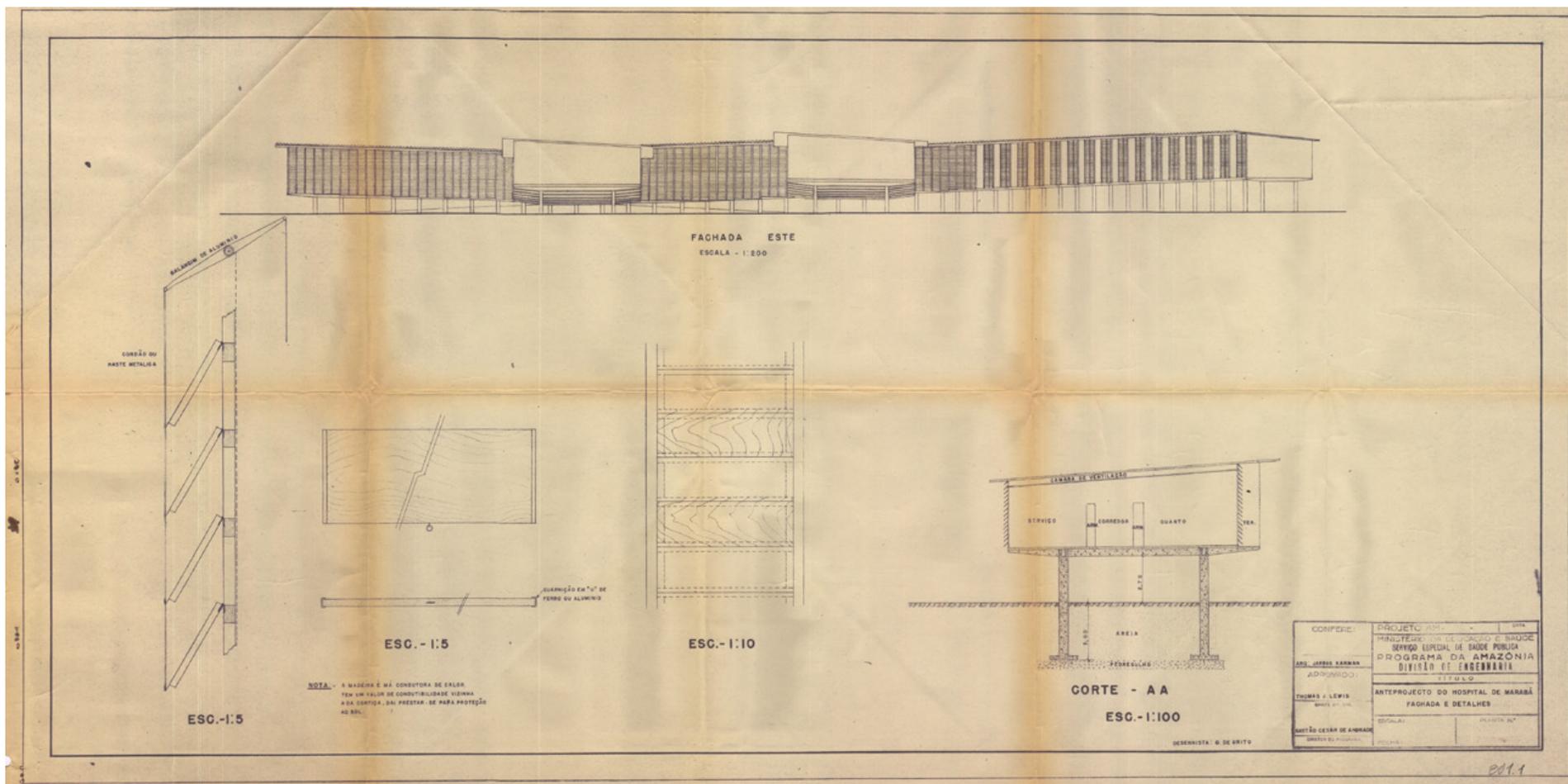
Jarbas Bela Karman was born in Campanha, Minas Gerais, on April 13, 1917. Jarbas Karman got his Civil Engineering degree from the Polytechnic School of the University of São Paulo in 1941. While at university, he also attended the CPOR (Reserve Officers' Training Corps), achieving the degree of Second Lieutenant. In 1942, he was called to serve as a reserve officer for the active engineering service, it was when he had contact with the precarious health condition of the population living in the north and northeast of Brazil.

He returned to São Paulo in 1944 where he worked with the family real estate business and as a civil engineer in the public sector. Shortly thereafter, he returned to the Polytechnic to study Architecture.

Jarbas on his education:

“I became an architect in 1947. During school, we had to design projects for buildings, churches, schools, hospitals. But no one could answer my questions about hospitals. I was concerned, I talked with my brother, a doctor, and began to visit hospitals. I had technical questions, such as: ‘How many operating rooms are necessary for a 100-bed hospital? How does the air-conditioning is supposed to work in an operating room? Nobody could answer me that. We were isolated.’”.

Project for a hospital in Marabá, 1950.





In 1949, he began his works with the newly established SESP (Special Public Health Service), building hospitals in the Amazon region, first, and later in Vale do São Francisco. In 1951, after being granted a scholarship by SESP and Ponto IV*, Jarbas took a master's degree in Healthcare Architecture at Yale University. During his time at Yale, Karman attended several courses, among them, "Surgical Set and Aseptic and Sterilization Technique " given by Carl Walter.

Karman in his letters to friends in Brazil:

"Last week I had a real hospital orgy. Picture 50/60 hospital administrators, sanitary engineers, dietitians, hospital technicians and a staff from Washington's US Public Health Service meeting for days (and even some nights) at the Hartford Hospital to discuss hospital problems. There were specialists to answer each and every question – don't you think that's breathtaking!? Bedpan sterilizer, for example. Do you remember the impressive kinds of catalog that used to inspire awe? Well, they're not efficient, they're condemned. They proved that a few minutes of steam are not enough to sterilize (neither to kill bacterial spores), but only, at most, to disinfect."

Jarbas Karman (right) on a visit to the hospital in Kichener, Ontario, Canada, 1952.

*The so called "Ponto IV" was an American program of economic reconstruction between the years 1949 and 1951. It was conceived after World War II by Secretary of State George Marshall during the rule of Harry Truman.



He returned to Brazil in 1952 eager to use the knowledge and techniques that he had studied during the time he spent in the United States for the benefit of society. Thus, he organized, with the help of IAB, the 1st Course for Planning Hospitals, which was a milestone in this industry, besides being the first step towards the establishment of IPH, which he conceived and where he worked until the end of his life.

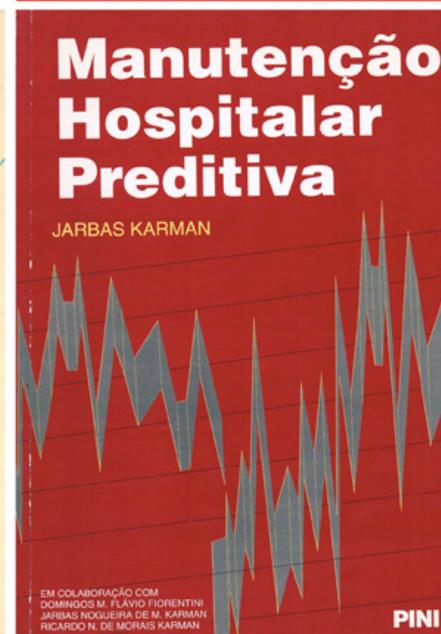
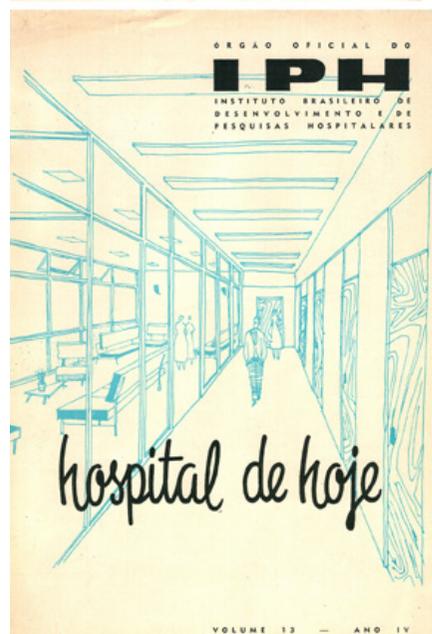
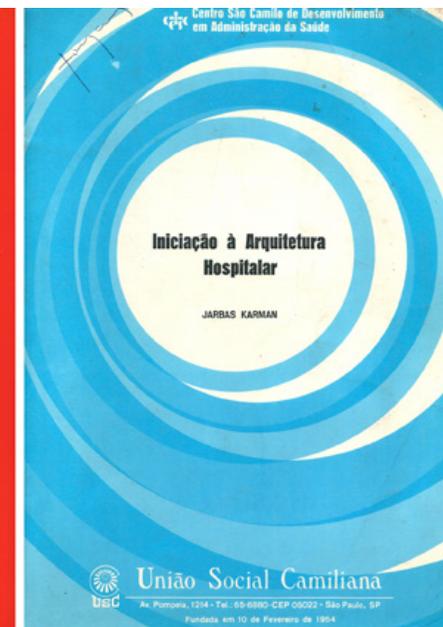
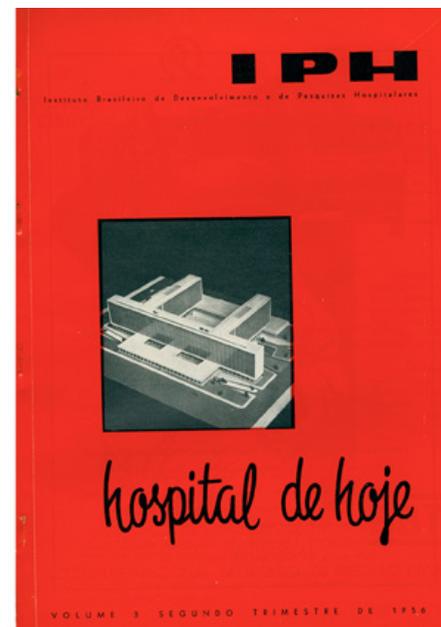
He edited the *Hospital de Hoje* magazine and the *IPH Magazine*. Moreover, he published the following works: *Planejamento de Hospitais*, edited by the Comissão de Planejamento de Hospitais from the São Paulo section of the IAB (Institute of Architects of Brazil), led by the architects Amador Cintra do Prado, Jarbas B. Karman and Rino Levi, in 1954; *Iniciação à Arquitetura Hospitalar e Manutenção Hospitalar Preditiva*, a technical publication edited by IPH, São Paulo, in 1972; *Manual de Segurança Hospitalar*, São Paulo, Pini, 1994; and *Manutenção e Segurança Hospitalar Preditivas*, São Paulo: Estação Liberdade/IPH, edited posthumously in 2011.

His work as a teacher and consultant in the hospital field was prolific, having taught numerous courses and lectures in Brazil and abroad. He became an active member of the PHG-Public Health Group of the International Union of Architects.

Jarbas Karman in a lecture presentation at the 1st Course for Planning of Hospitals, 1953.

He advised, designed and remodeled hundreds of health institutions, such as: Hospital de Clínicas de Pelotas (Pelotas, RS, 1956), Hospital Santa Mônica (competition, Belo Horizonte, MG, 1957), Hospital São Domingos (Uberaba, MG, 1960), Hospital São Luiz (Santos, SP, 1961), Hospital Albert Einstein (competition, São Paulo, 1958), Hospital de Força Aérea do Galeão (Rio de Janeiro, 1967), Hospital Atibaia (Atibaia, SP, 1968), Instituto Nacional de Câncer e Queimados (Capiatá, Paraguay, 1984), first great expansion of Hospital Albert Einstein (São Paulo, SP, 1979-1993), Hospital São Judas Tadeu – Fundação Pio XII (Barretos, SP, 1993) and Hospital Geral de Palmas (Palmas, TO, 2006), among many others.

Jarbas Bela Karman passed away on June 2, 2008, at the age of 91, leaving a legacy of hundreds of hospitals designed, countless articles, lectures, courses and classes, besides a legion of professionals who were trained through his teachings. After his death, he received several honors, among which a special one from IPH, which was renamed as “Instituto de Pesquisas Hospitalares Arquiteto Jarbas Karman”.



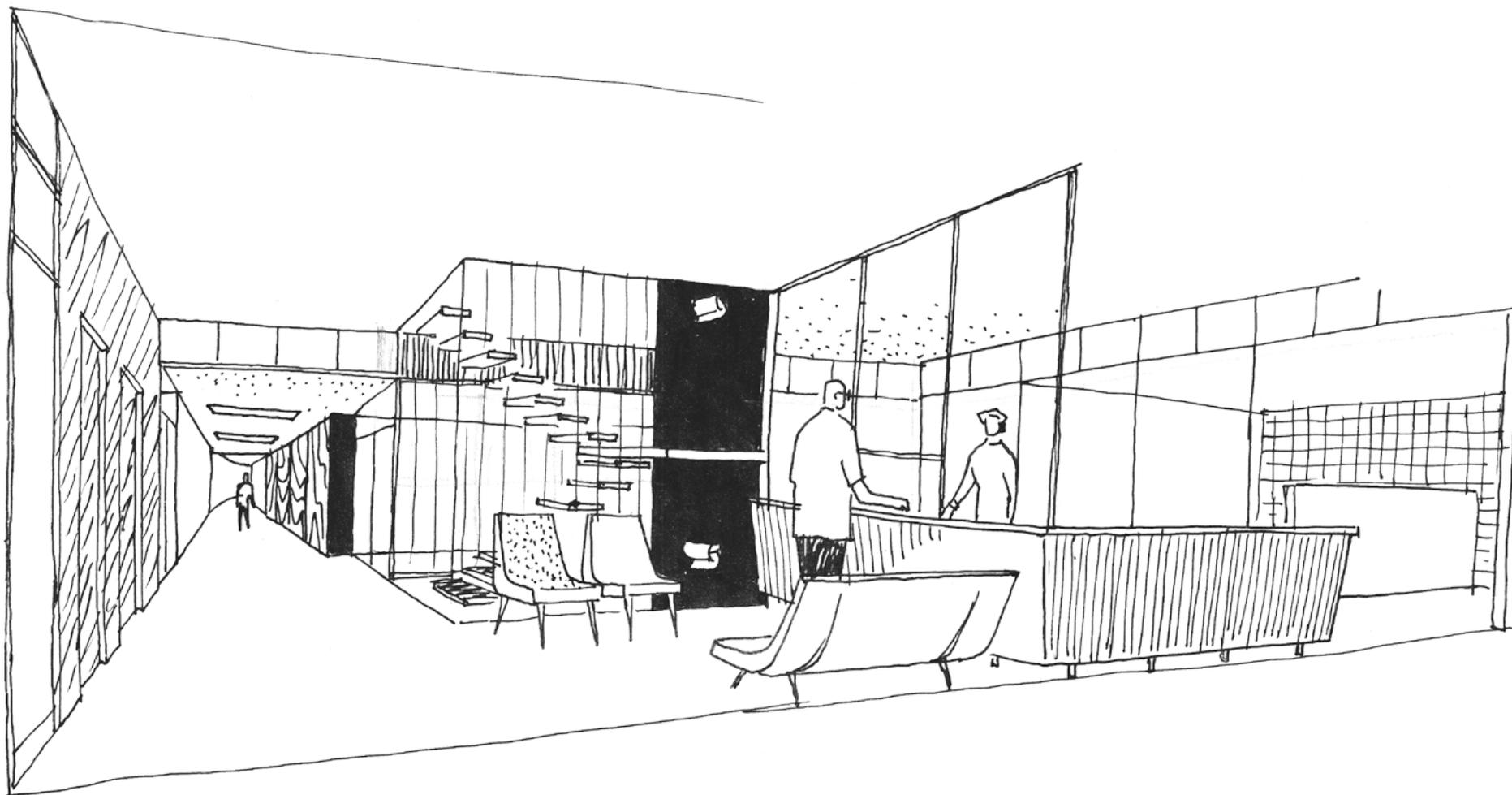
Some of the magazines Jarbas Karman edited and the books he has written.

ARCHITECTURE PROJECTS

How to see a hospital

“I believe that few know how to actually “see” a hospital, since the hospital, unfortunately, is poorly known among us; many don’t even take the time to study the solutions presented, not caring that they are abridged and superficial, as long as the plan is “clean” and the exterior is magnificent. This method of valuing an architecture work may be suitable for commercial buildings, but it will never be good for a hospital. A hospital is very different, while each department and its components must observe exact dimensions, it is necessary that these departments and components be arranged in accordance with the ideal interconnections. Any concession will be reflected in the increased cost of hospital maintenance.”.

Jarbas Karman, Folha da Manhã, August 24, 1958.



Perspective of Hospital São Domingos
entrance hall, 1958.

Hospital de Clínicas de Pelotas

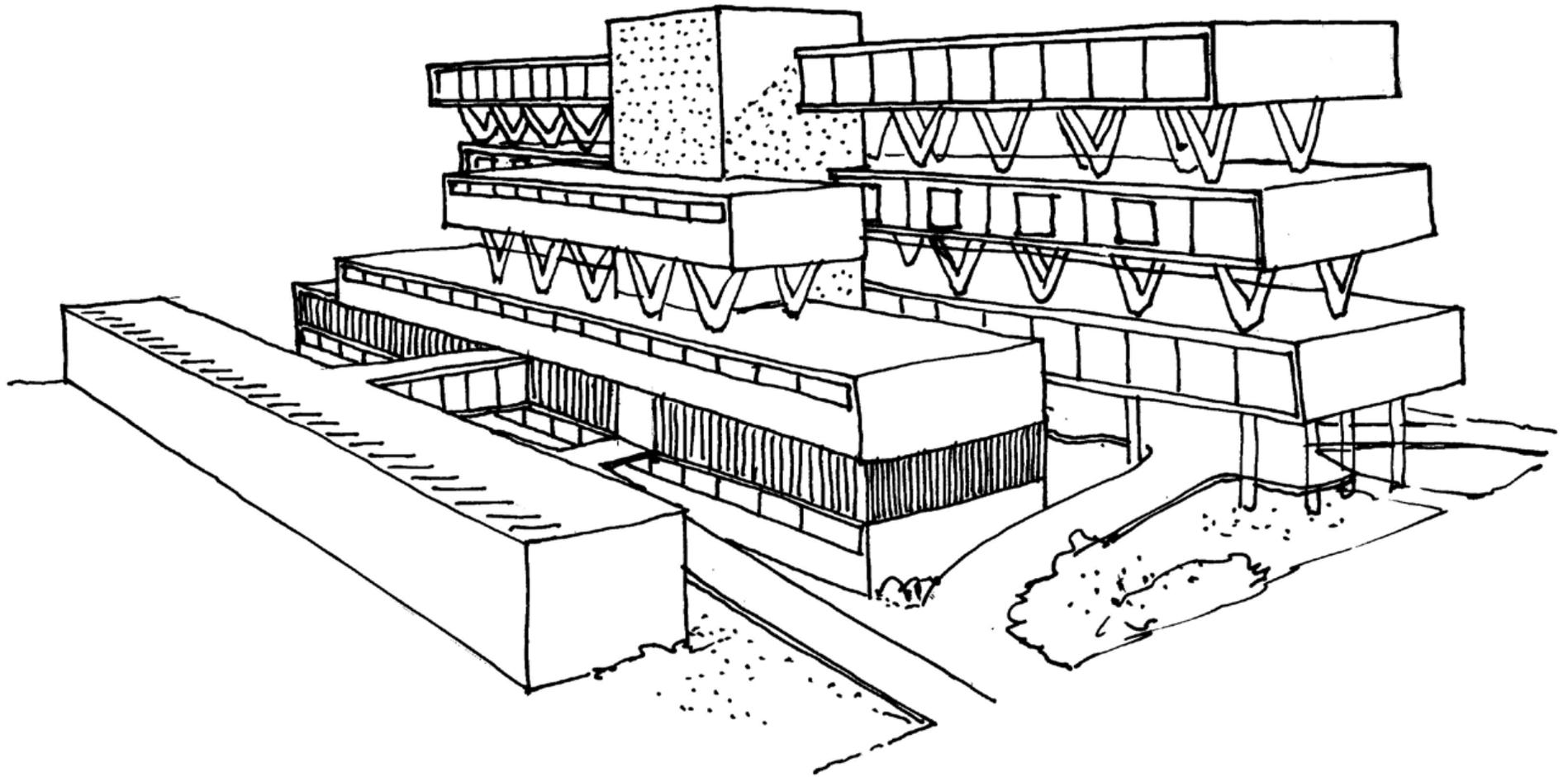
Architects: Jarbas Karman and Alfred Willer

Pelotas - RS - Brazil

1956

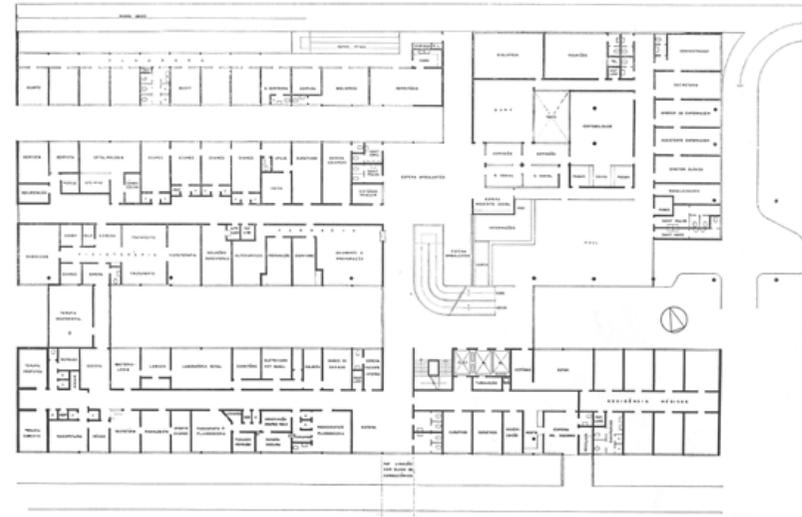
This is one of Jarbas Karman's first projects after coming back to Brazil, following his studies in Hospital Architecture in Yale, USA. The project was innovative at the time, proposing spaces between the floors that would have two purposes: to provide natural lighting and ventilation for the infirmaries and to facilitate the maintenance of installations that would not be built-in, remaining visible in these spaces. The building has been partially built and the hospital is still open to this day.







1st floor



2nd floor



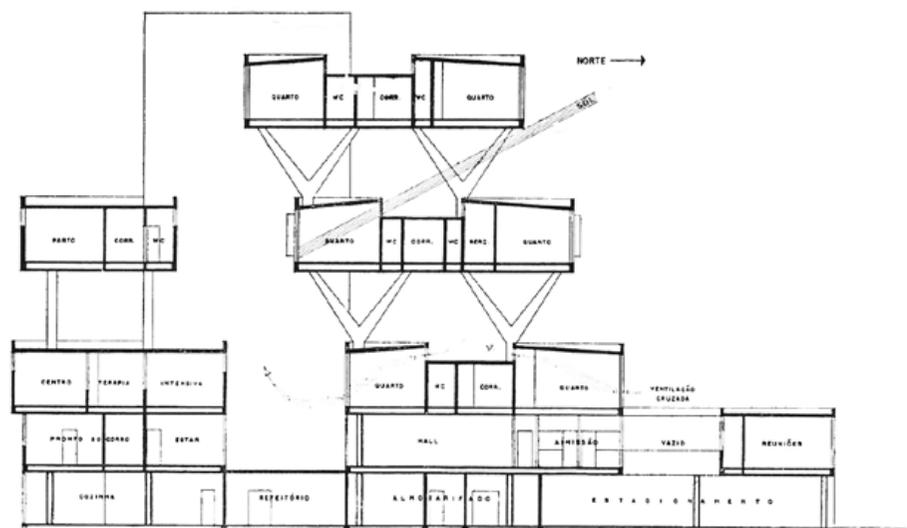
3th floor



4th floor



5th floor



Section



Hospital Santa Mônica

Competition

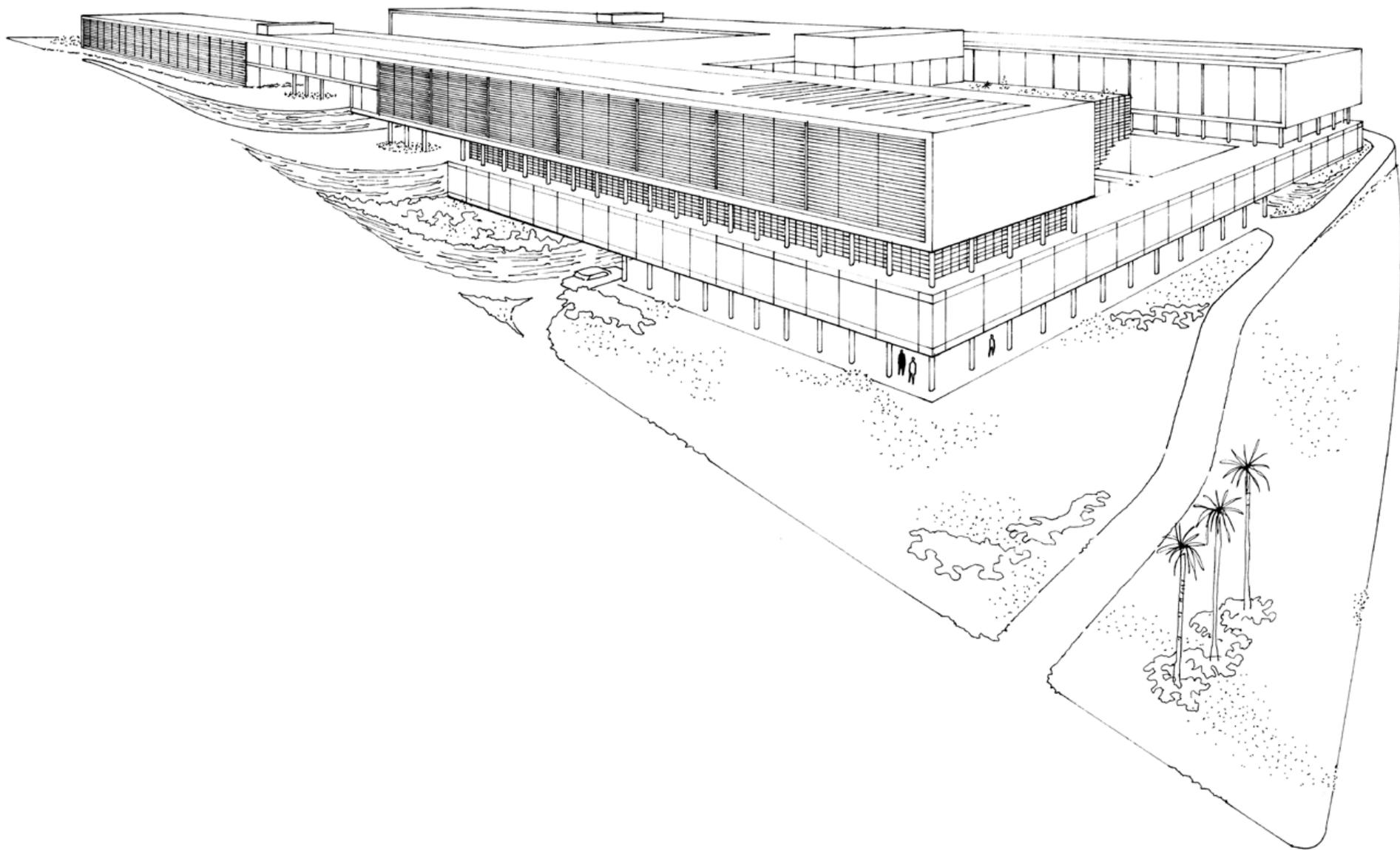
Architects: Jarbas Karman and Alfred Willer

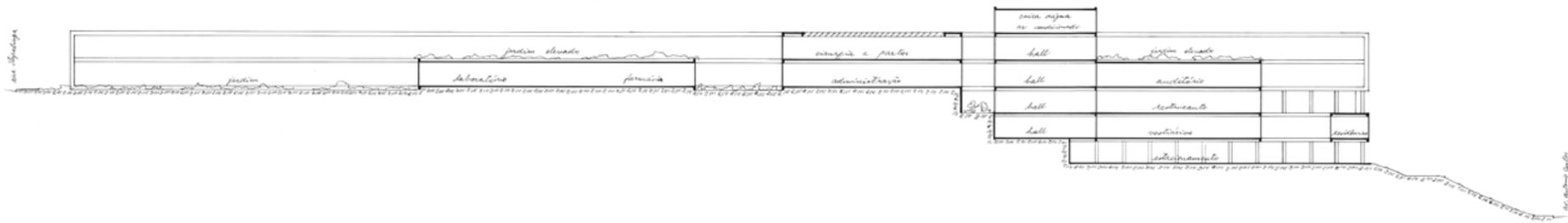
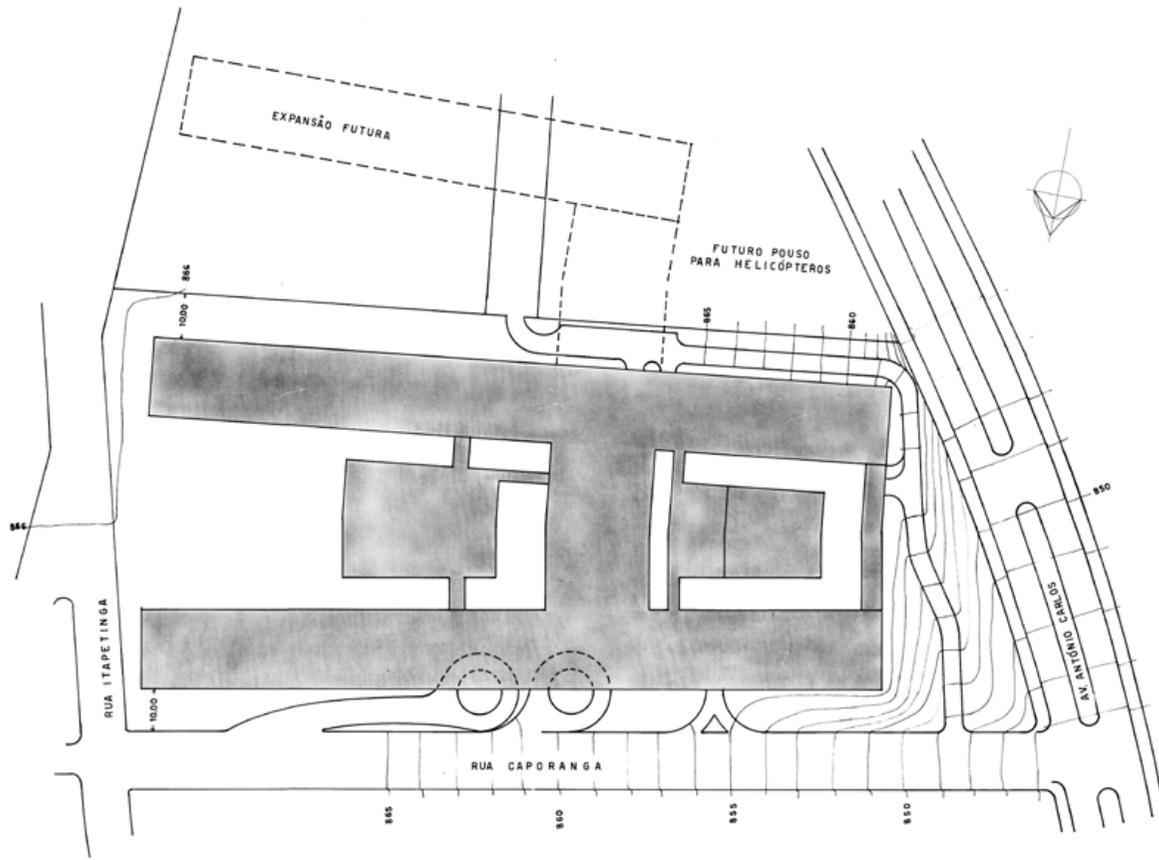
Belo Horizonte - MG - Brazil

1957

According to Irineu Breitman during his lecture “Apology to the Horizontal Hospital”, the project developed by Jarbas Karman and Alfred Willer for the competition of Hospital Santa Mônica was one of the first proposals to make the hospital building horizontal after the transition from the model of hospitals built in pavilions to the ones that mixed vertical single castings. The study presented a thorough research that proved that the horizontal approach would be operationally more efficient, besides providing more pleasant spaces (with greater abundance of light, ventilation, and accessible gardens) to patients, physicians, and hospital staff.







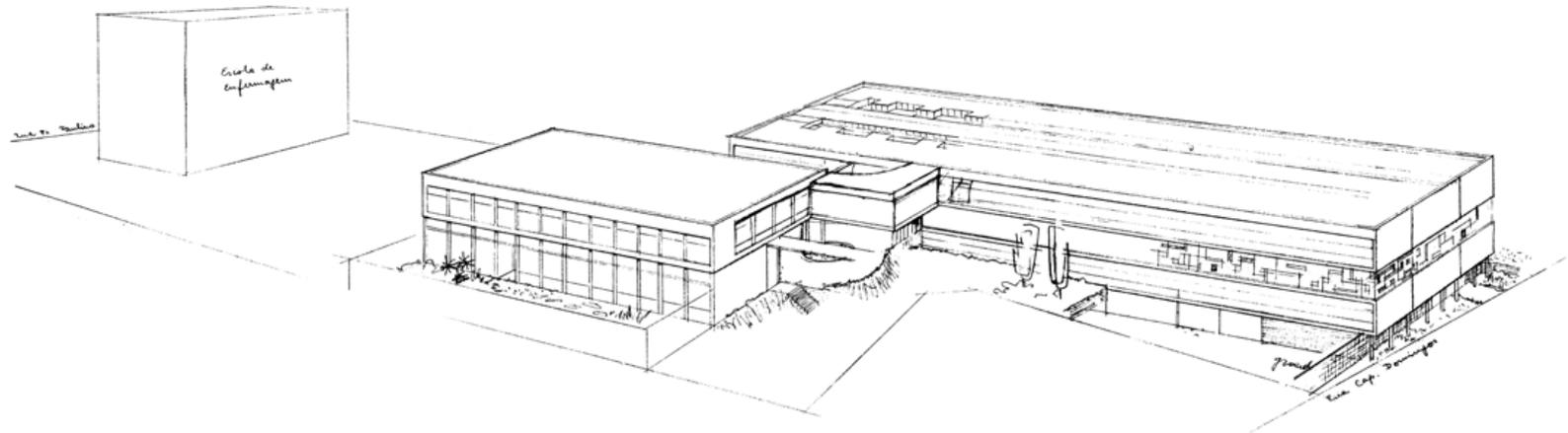
Hospital São Domingos

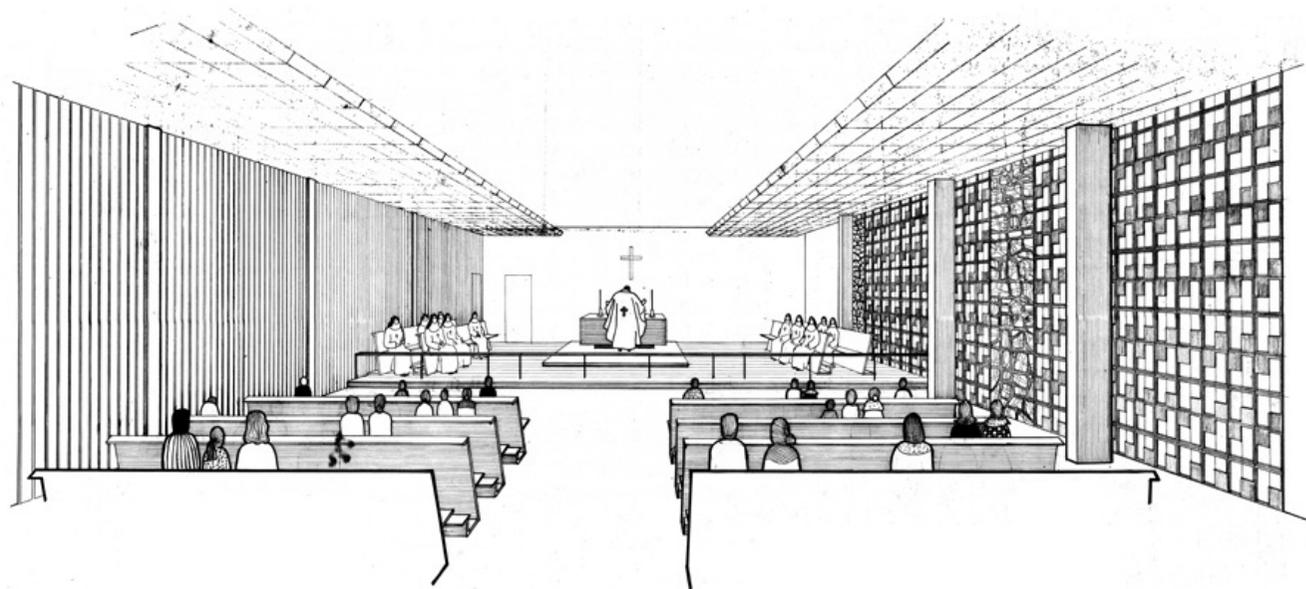
Architects: Jarbas Karman and Alfred Willer
Uberaba - MG - Brazil
1958

Hospital São Domingos was one of the first experiences of the architects in conducting the building of a horizontal hospital. The hospital presents 4 floors: two below the ground, the ground floor and an upper floor. Underground, there were the services, the maintenance, the logistical support, the morgue, the medical comfort and part of the obstetric hospitalization. On the ground floor, there were the main hall, the emergency room, the ambulatory, the laboratory, the unit for imaging examination, the administration, the chapel and the residence of the Dominican Sisters. On the upper floor, there were the surgical center, the Sterilized Material Center, a small ICU, an obstetric unit and the surgical admission unit.









Hospital Israelita Albert Einstein

Competition

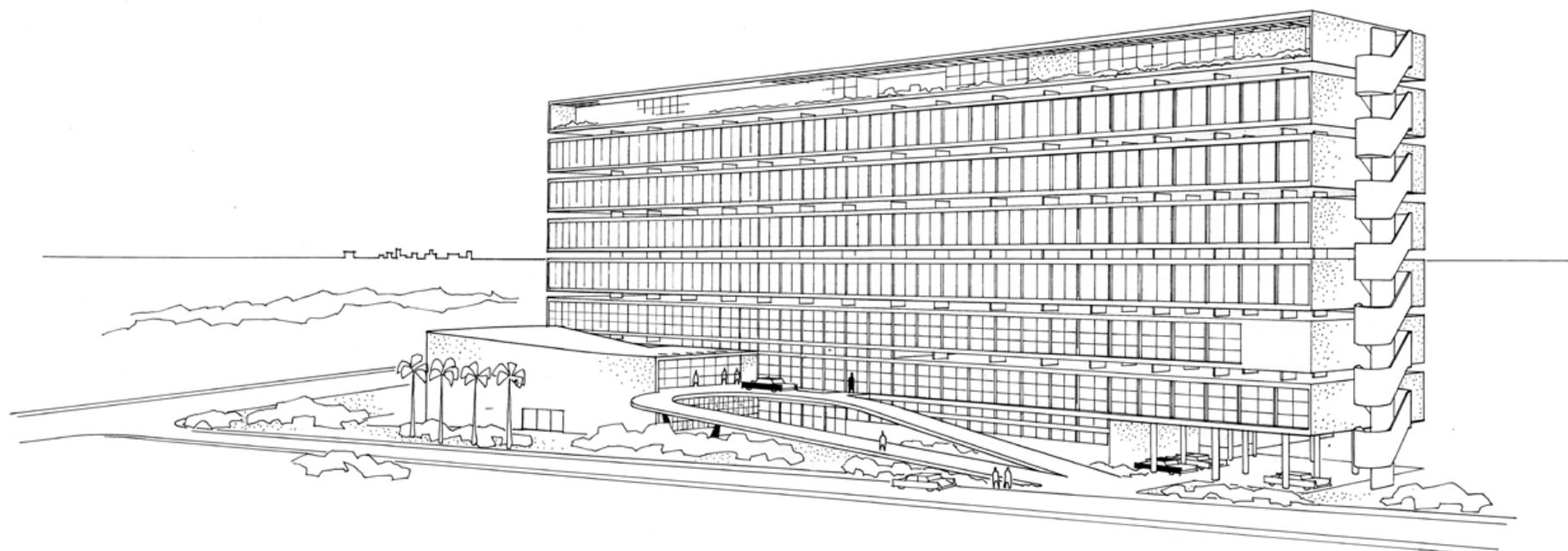
Architects: Jarbas Karman and Alfred Willer

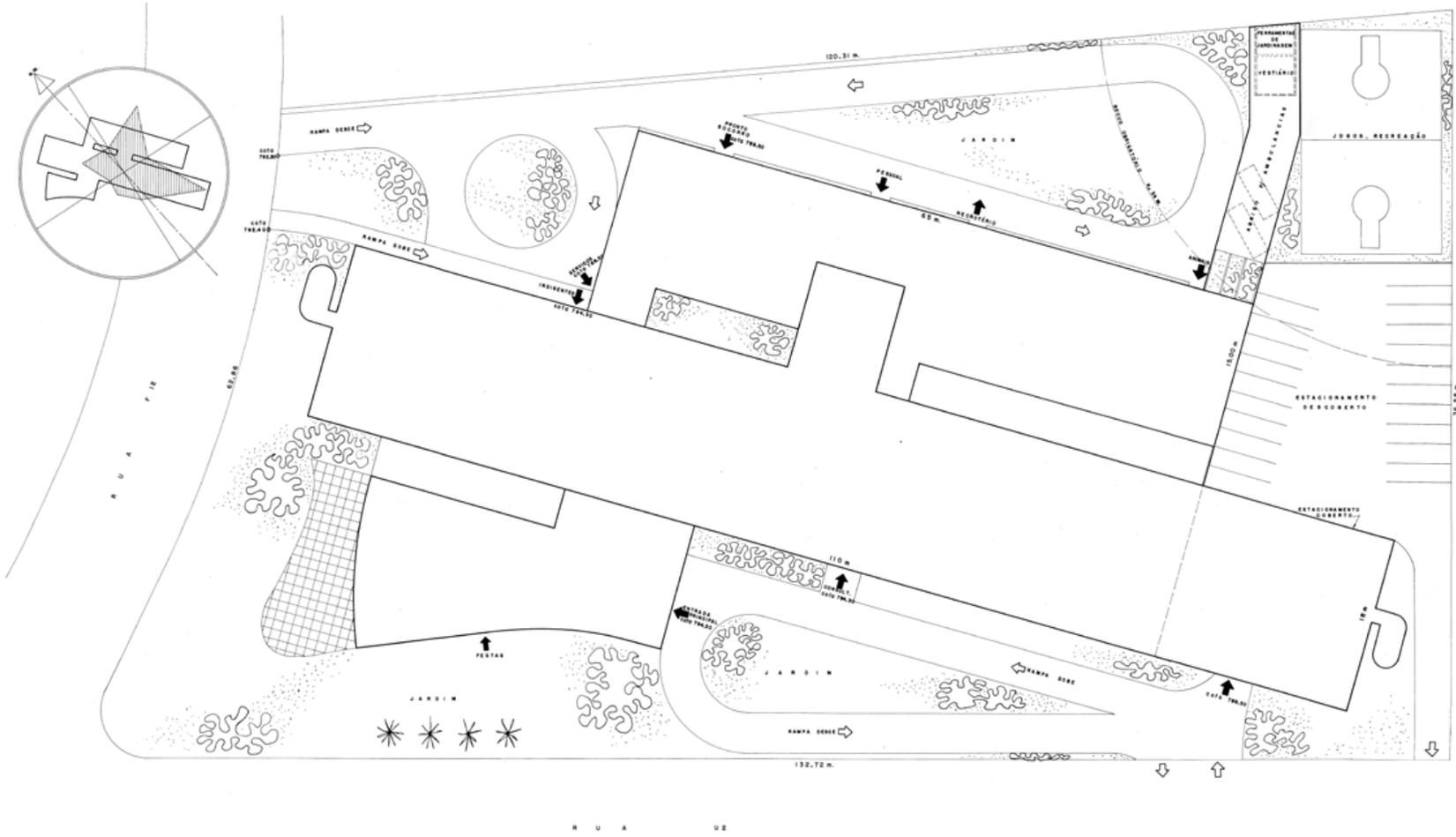
São Paulo - SP - Brazil

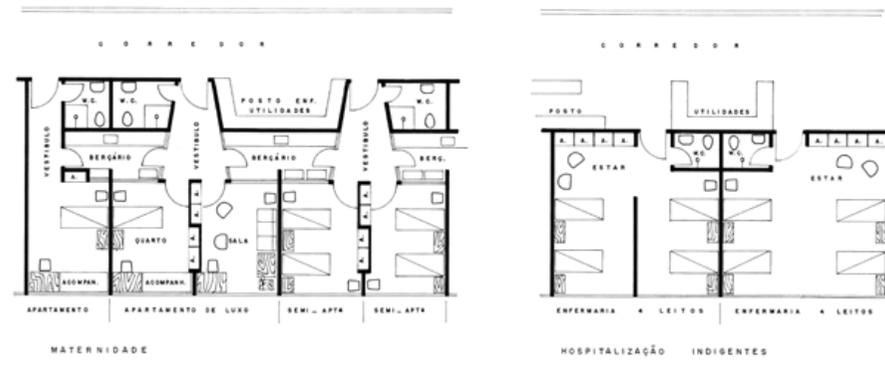
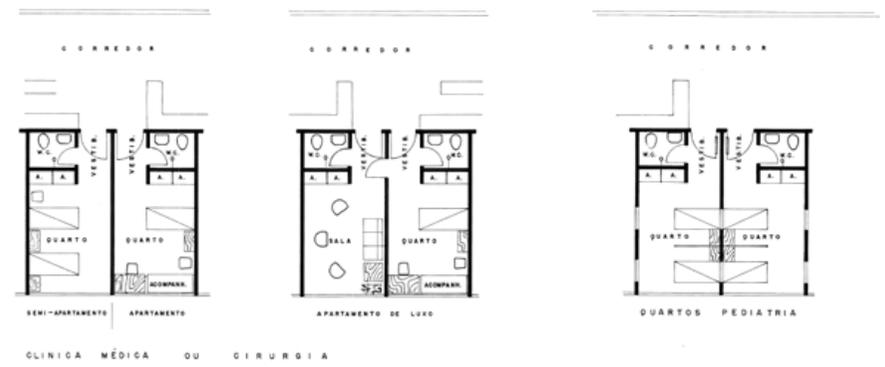
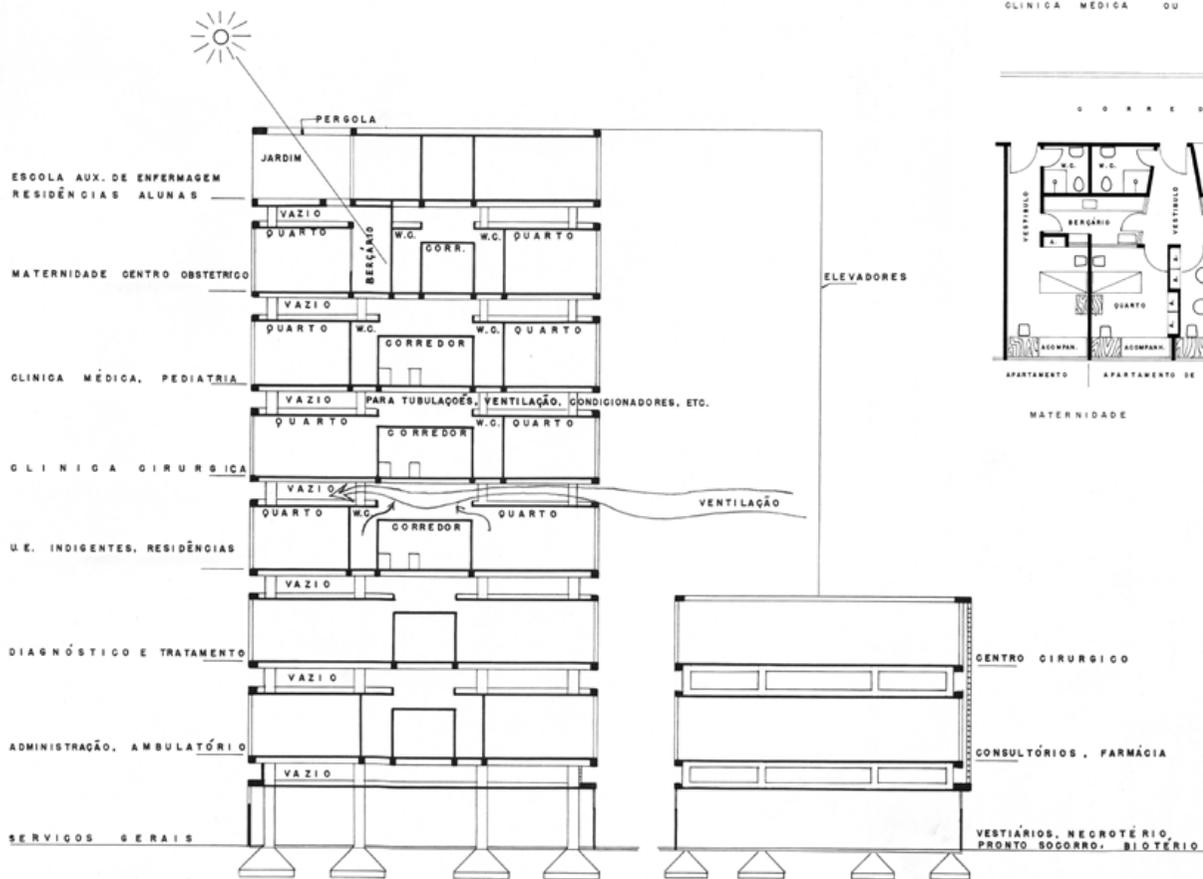
1958

The project sent to compete had three volumes, resulting in a different composition of the typology “base-tower”. The proposal envisioned technical areas between every floor and admission units with rooms on both sides of the corridor. They planned other strategies, such as nurseries with full connection to the moms’ rooms and decentralized nursing stations, which Karman used to call *postinhos*.







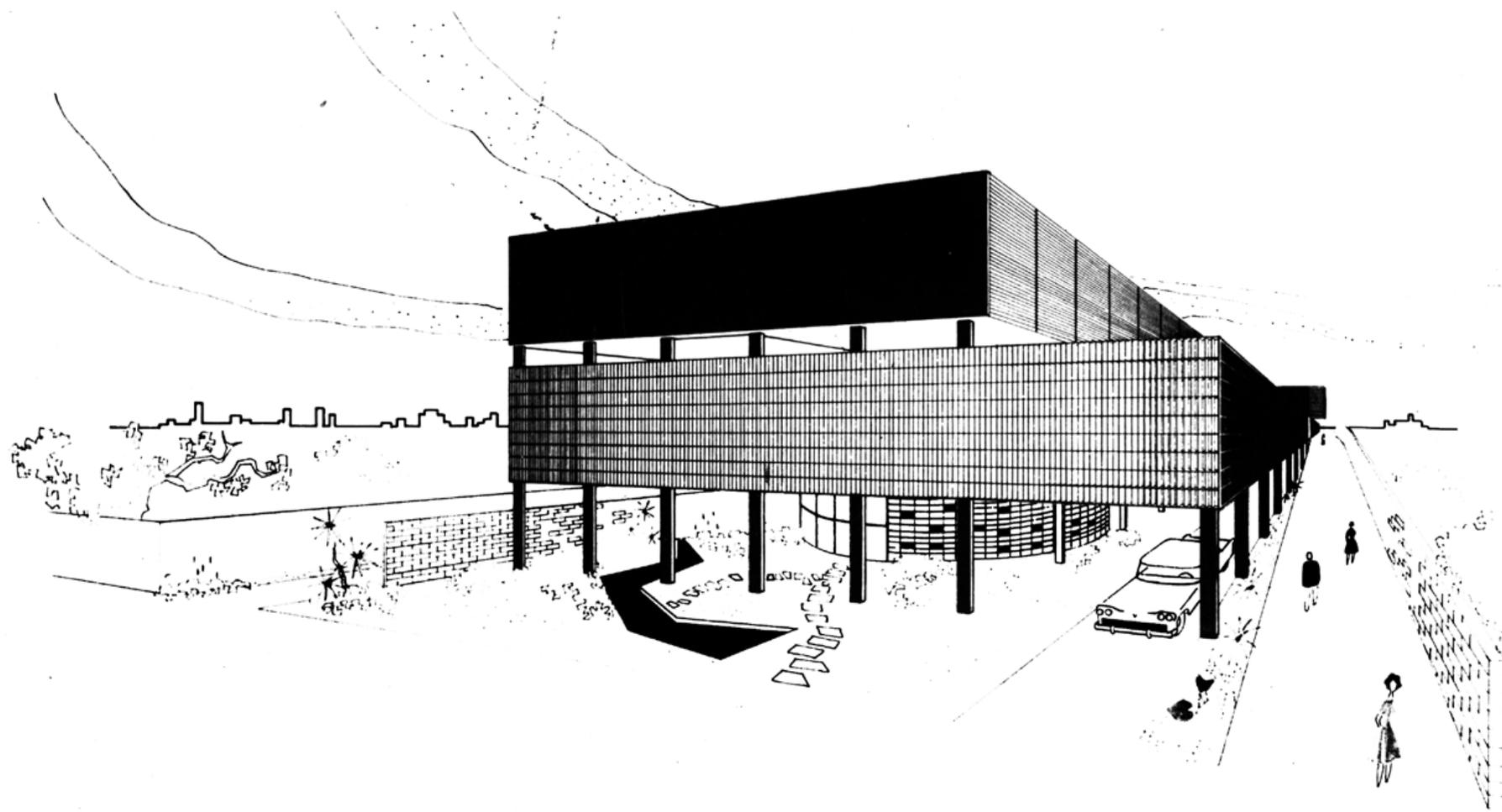


Hospital São Luiz

Architects: Jarbas Karman and Alfred Willer
Santos - SP - Brazil
1961

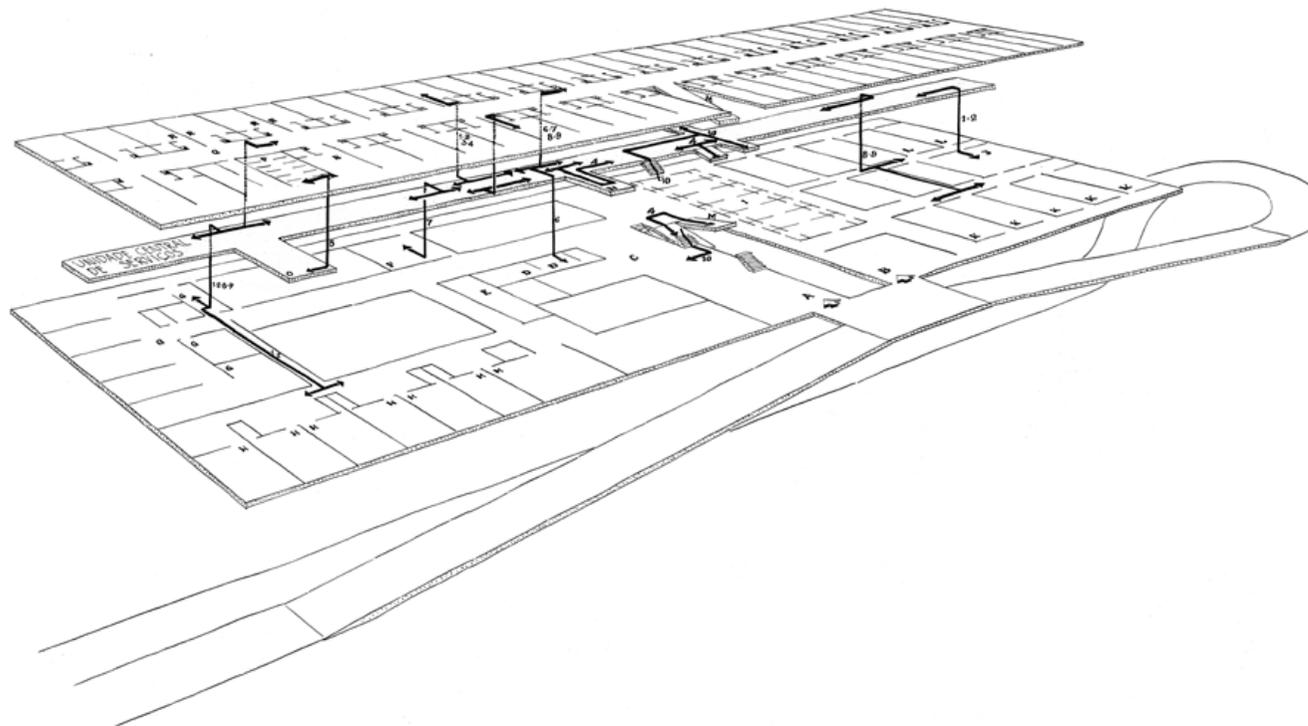
This was one of the first hospitals to present a space between floors in Brazil, i.e., an intermediate floor that, for this project, had two functions: to hold machines, visible installations and a corridor for services. This solution prepared the way for “technical floors”, a strategy that is highly undertaken today when designing hospitals. The hospital was built and, in 1967, it was remodeled to serve as a medical school. Karman was also responsible for remodeling the building.





HOSPITAL SÃO LUIZ S.A. - SANTOS

JARBAS KARMAN - ARQUITETO CONSULTOR HOSPITALAR



LEGENDA

- A PÚBLICO
ENTRÉE
MAIN ENTRANCE
- B PRONTO SOCORRO
ENTRÉE D'URGENCE
EMERGENCY
- C HALL PÚBLICO
ATTENTE
MAIN LOBBY
- D ADMISSÃO E SERVIÇO SOCIAL
ADMISSION ET SERVICE SOCIAL
ADMISSION & SOCIAL SERVICE
- E ARQUIVO MÉDICO E ESTATÍSTICA
ARCHIVE MEDICAL ET STATISTIQUES
RECORDS
- F FARMÁCIA
PHARMACIE
PHARMACY
- H CONSULTÓRIOS
CONSULTATIONS
CONSULTINGS
- I TERAPIA INTENSIVA
OBSERVATION
OBSERVATION
- J ESTERILIZAÇÃO
STERILIZATION
STERILIZATION
- K OPERAÇÕES
OPERATIONS
OPERATIONS
- L PARTOS
ACCOUPEMENT
DELIVERY
- M RAMPA MECANIZADA
RAMP INCLINÉ MECANISÉ
MECHANIZED RAMP
- N CORR. OFICINA
SERVING PANTRY
- O LACTÁRIO
NOURITURE POUR LES NOUVEAUX-NÉS
NURSERY SERVING PITCHER
- P BERÇÁRIO
BERCEAUX
NURSERY
- Q CORRIDOR DE ENFERMEIROS
CORRIDOR
NURSING CORRIDOR
- R QUARTOS
CHAMBRES
BED ROOMS
- G LABORATÓRIOS
LABORATOIRES
LABORATORIES

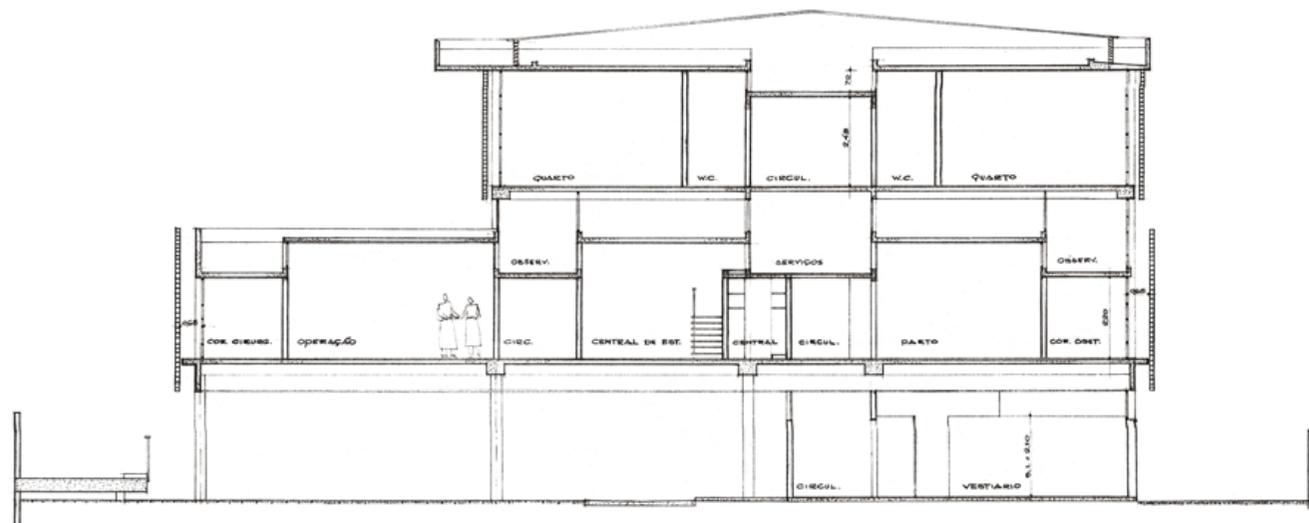
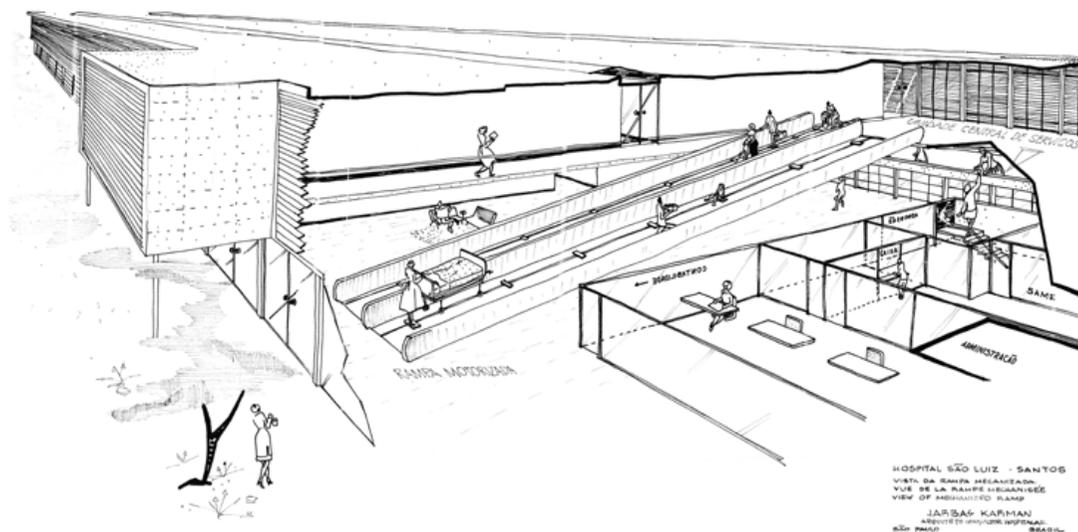
CIRCULAÇÕES

- 1 MATERIAL A ESTERILIZAR
MATERIAL À STÉRILISER
MATERIAL TO THE STERILIZATION UNIT
- 2 MATERIAL ESTERILIZADO
MATERIAL STÉRILISÉ
STERILIZED MATERIAL
- 3 ÁGUA
LINDE
LINEN
- 4 ALIMENTOS
NOURITURE
MEALS
- 5 MAMADEIRAS
NOURITURE POUR LES NOUVEAUX-NÉS
BABY FORMULA
- 6 PRONTUÁRIOS
DOCUMENTS DU MALADE
RECORDS
- 7 MEDICAMENTOS
MÉDICAMENTS
MEDICINE
- 8 MATERIAL PARA EXAMES DE LABORATÓRIO
MATERIAL POUR LE LABORATOIRE
SPECIMENS
- 9 EXAMES DE LABORATÓRIO
EXAMENS VENUS DU LABORATOIRE
EXAMINATIONS FROM THE LABORATORIES
- 10 PARA OBSERVAÇÃO DE OPERAÇÕES
VUE D'OBSERVATION DES OPERATIONS
TO THE OPERATION GALLERY

HOSPITAL SÃO LUIZ - SANTOS

ALGUMAS CIRCULAÇÕES PELA UNIDADE DE INTEGRAÇÃO
SOME CIRCULATIONS THROUGH THE INTEGRATION UNIT

JAROS KAHNAN
ARQUITETO CONSULTOR HOSPITALAR
SÃO PAULO BRASILEIRO



Laboratório Central de Pesquisas

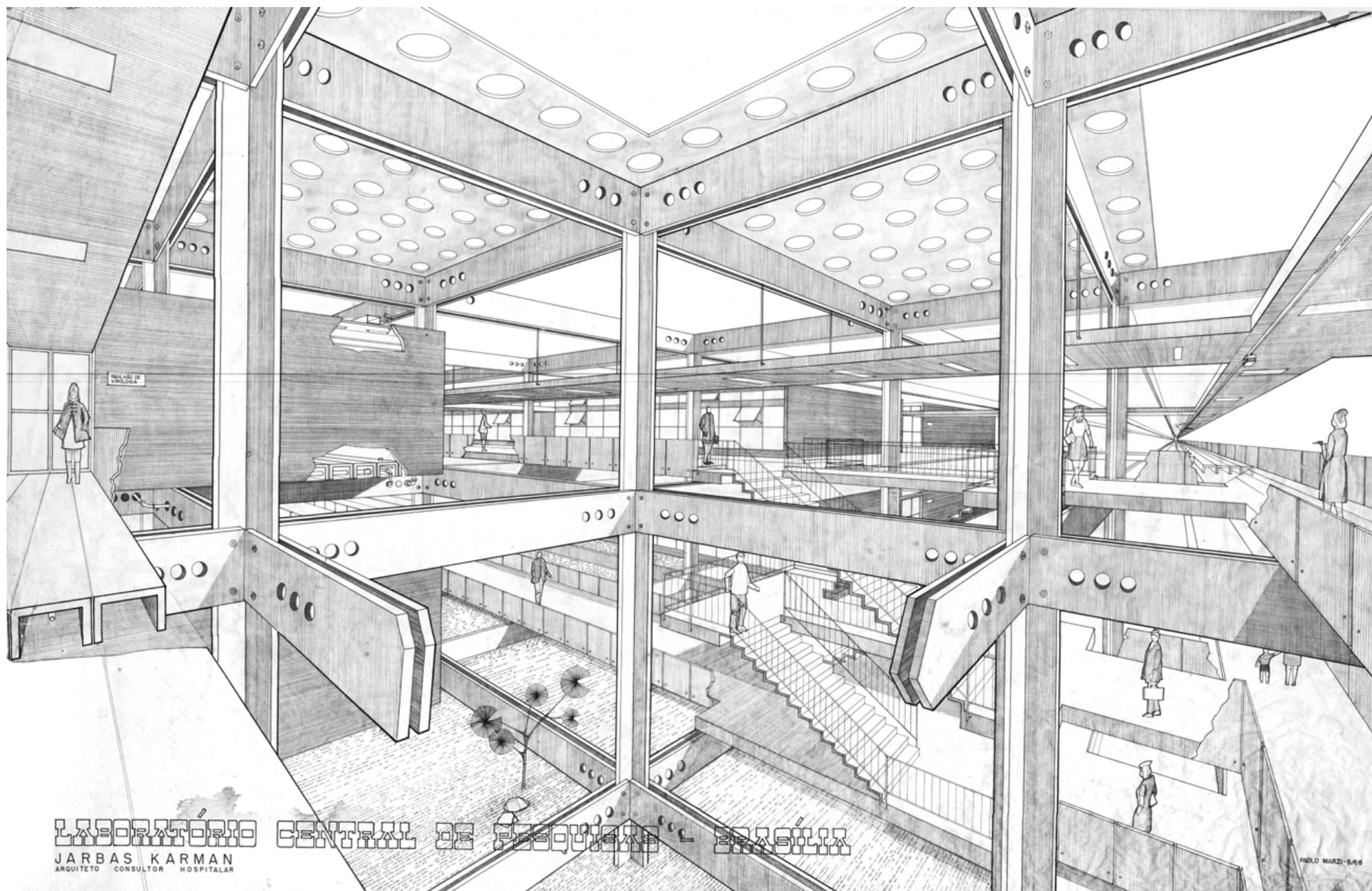
Architect: Jarbas Karman

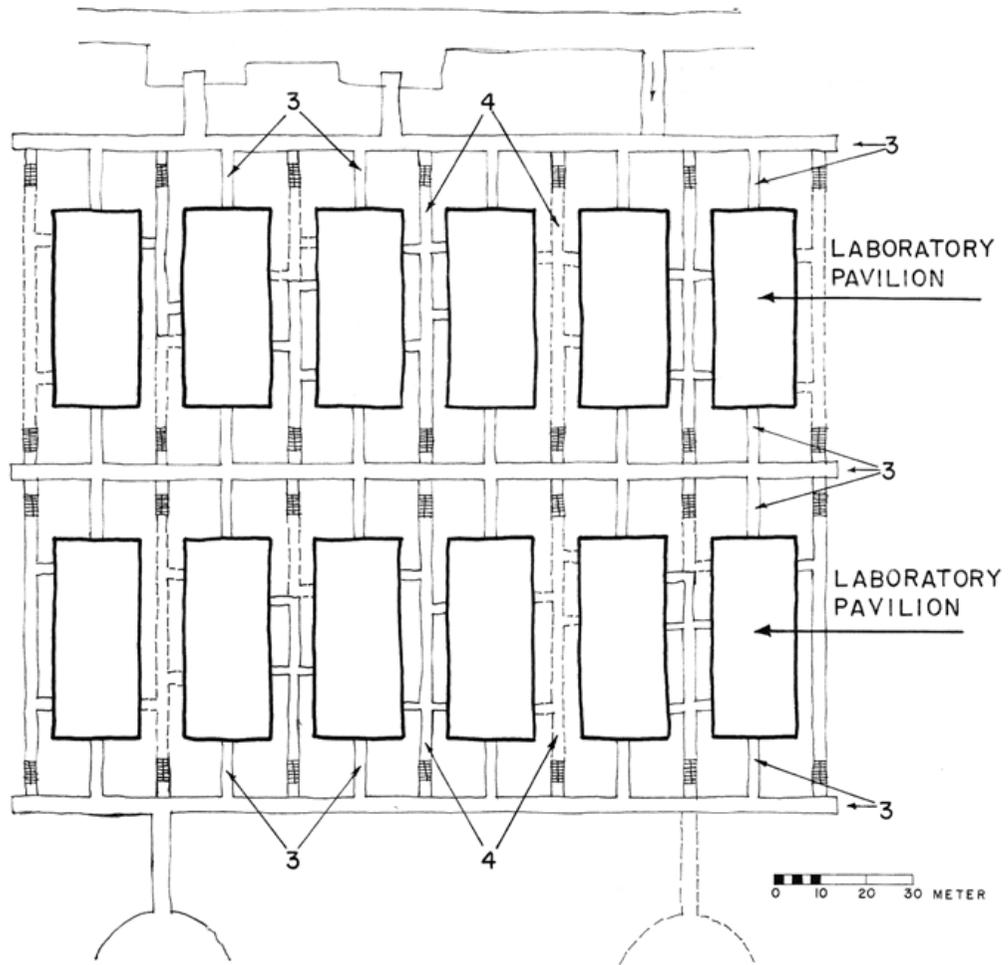
Brasília - DF - Brazil

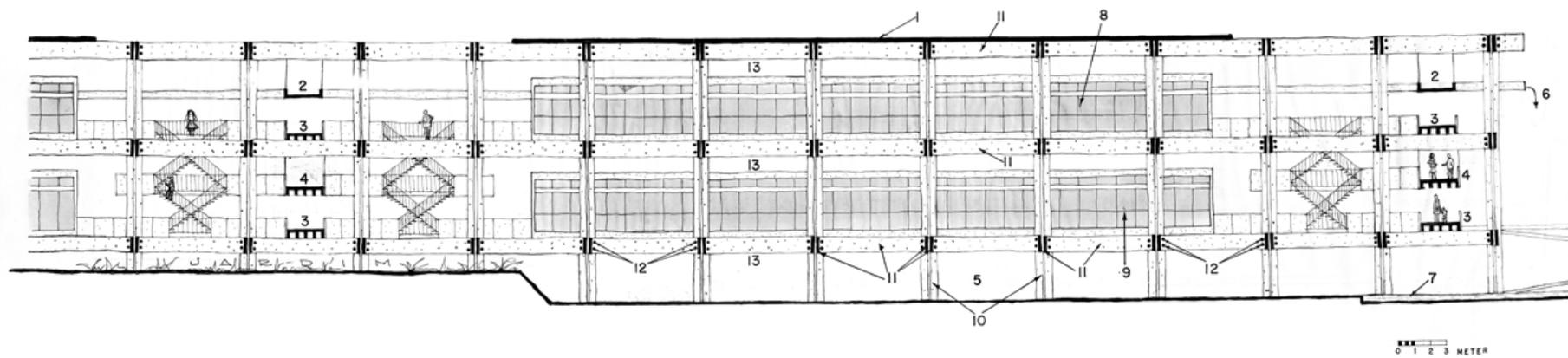
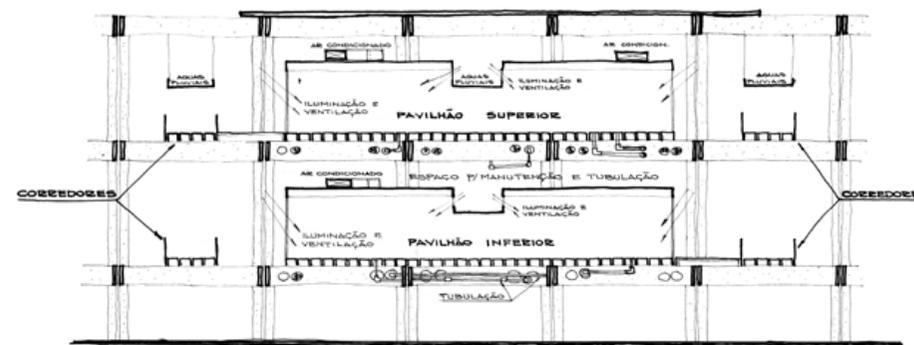
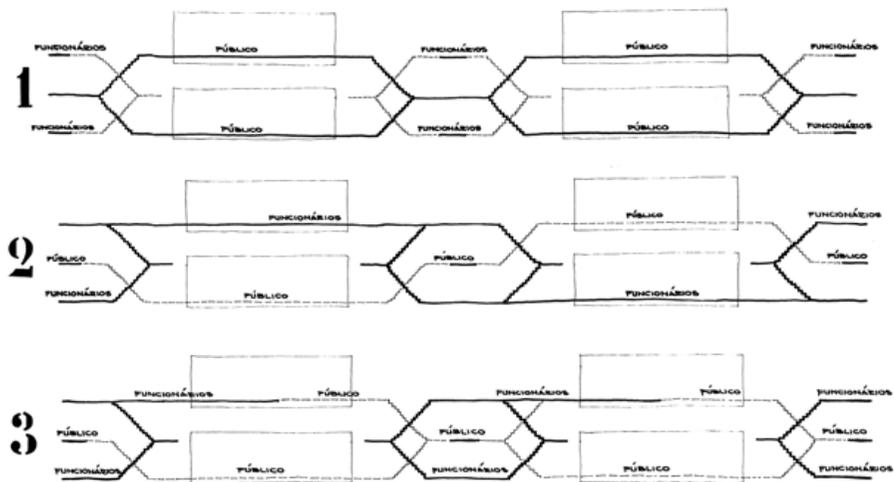
1968

The project for the Laboratório Central de Pesquisas proposed isolated blocks surrounded by gardens and connected by two types of segregated flow of people (public and internal). The building has orthogonal structure with similar freestanding spaces both longitudinally and transversely that support the pavilions, the flow of people and the secondary coverage in different and independent manners. This solution has created internal free areas for natural and cross lighting and ventilation, besides enabling highly flexible block occupancy.







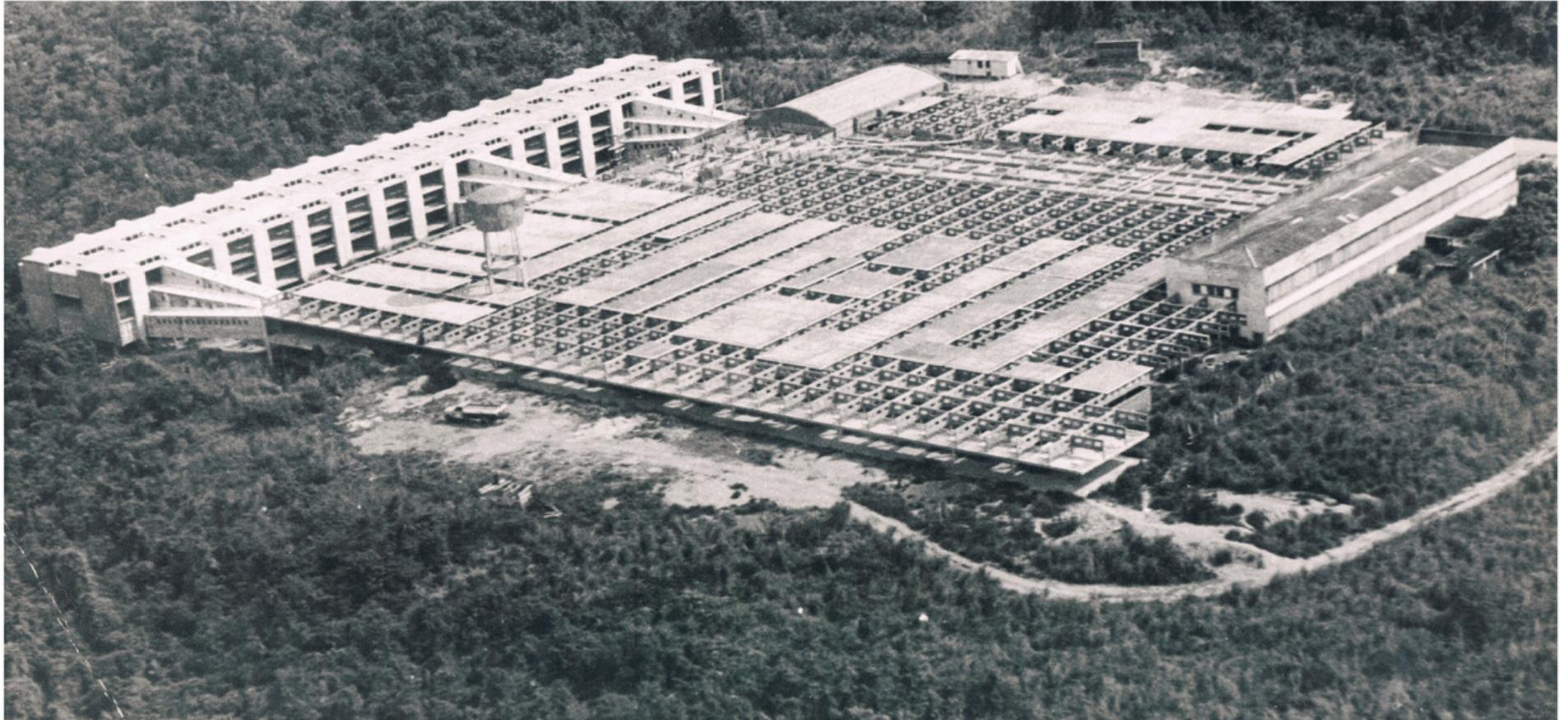


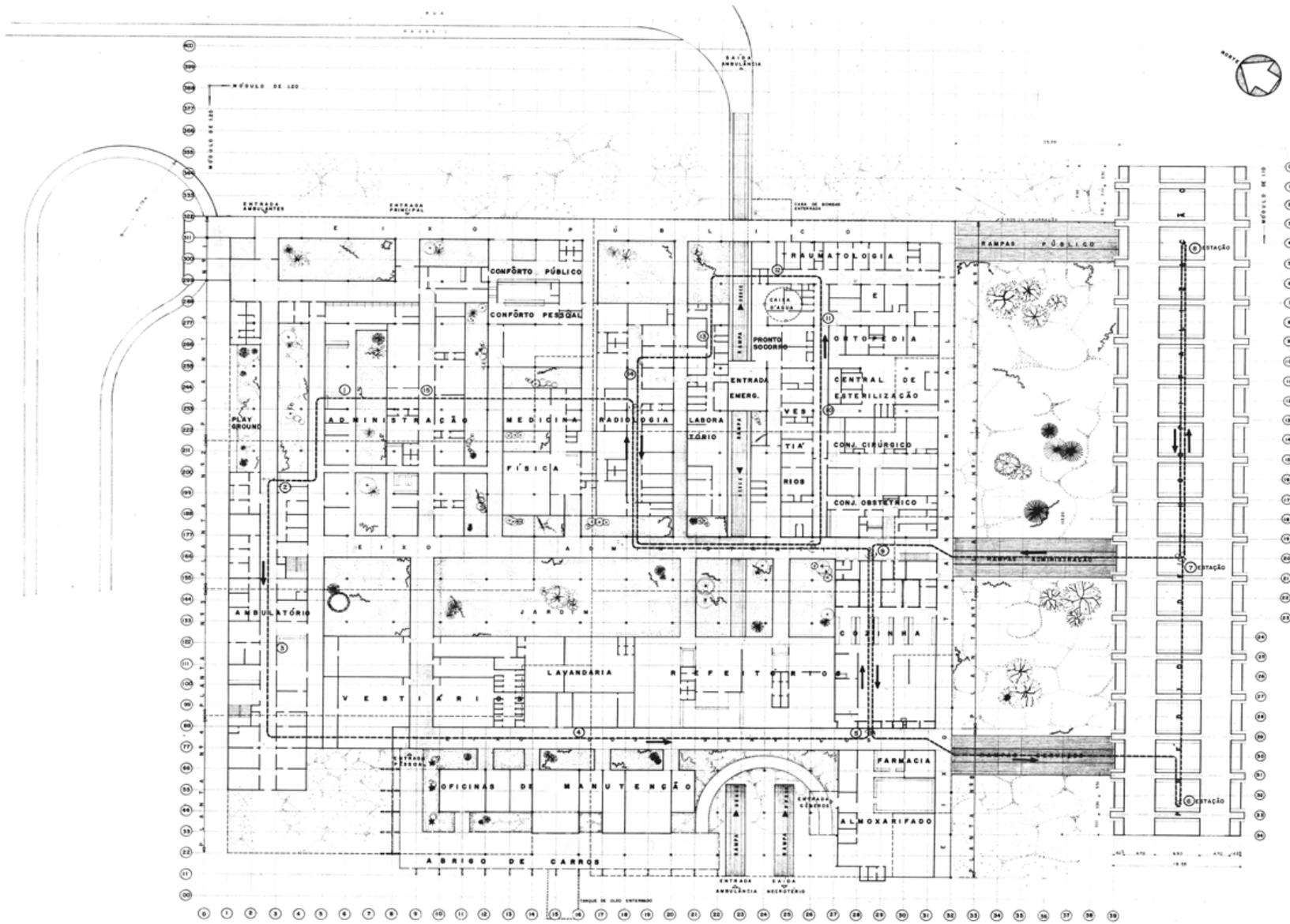
Hospital de Força Aérea do Galeão

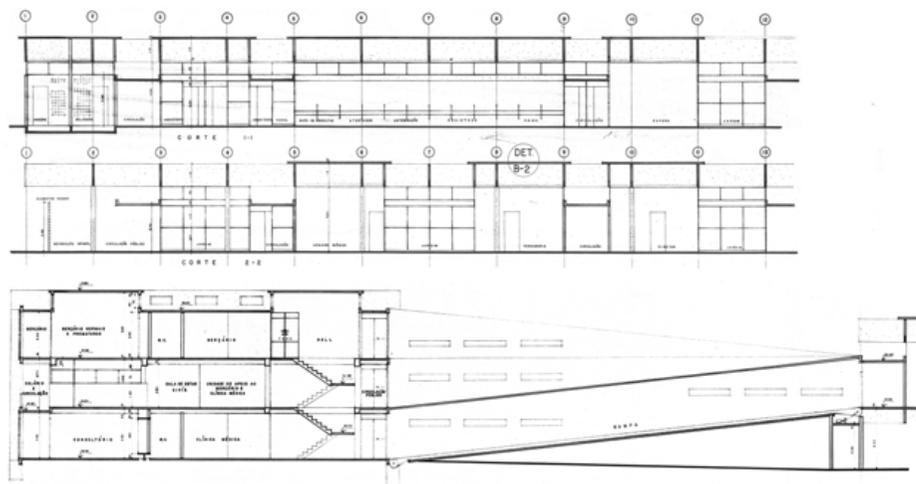
Architect: Jarbas Karman
Rio de Janeiro - RJ - Brazil
1967 - 1976

Jarbas Karman developed a unique strategy for this project: he conceived a structure that made it possible to create alternations of height between the roof slabs, thus accommodating high windows for natural lighting and ventilation of the spaces located in the middle of the blocks, besides providing high flexibility for future expansions of the building.









Hospital Israelita Albert Einstein

Expansion

Architects:

Jarbas Karman, Jorge Wilhelm and Domingos Fiorentini

First expansion - Diagnostic Centre - 1984 (opening)

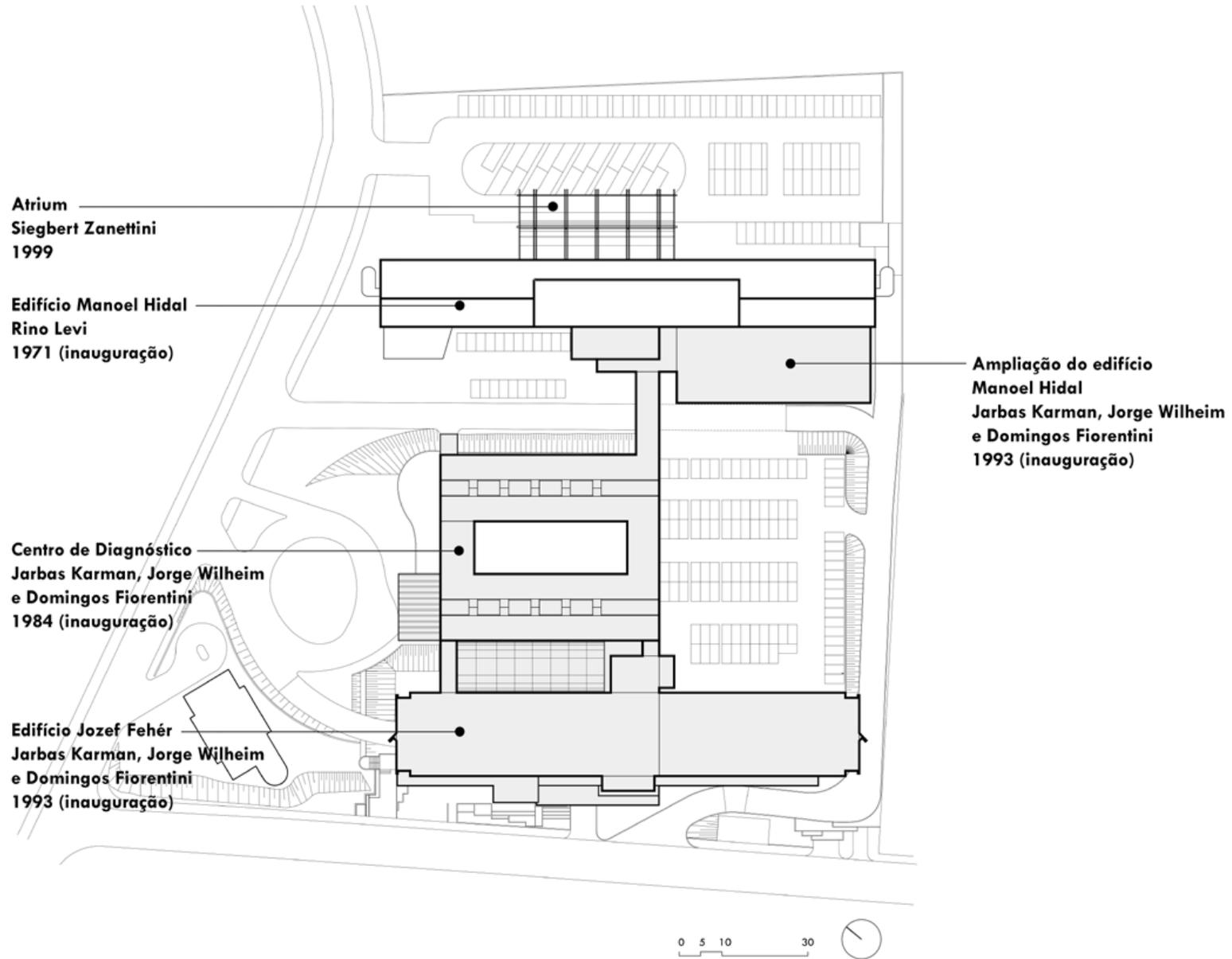
Second expansion - Jozef Fehér Building - 1993 (opening)

São Paulo - SP - Brazil

The first two expansions of the Hospital Israelita Albert Einstein began in 1979 with architects Jarbas Karman and Jorge Wilhelm, who, at first, had proposed to build six blocks with up to four floors each. The proposal evolved into one single central block with 6 (Diagnostic Centre, opening at 1984) and a 17-storey tower (Jozef Fehér Building, opening at 1993).









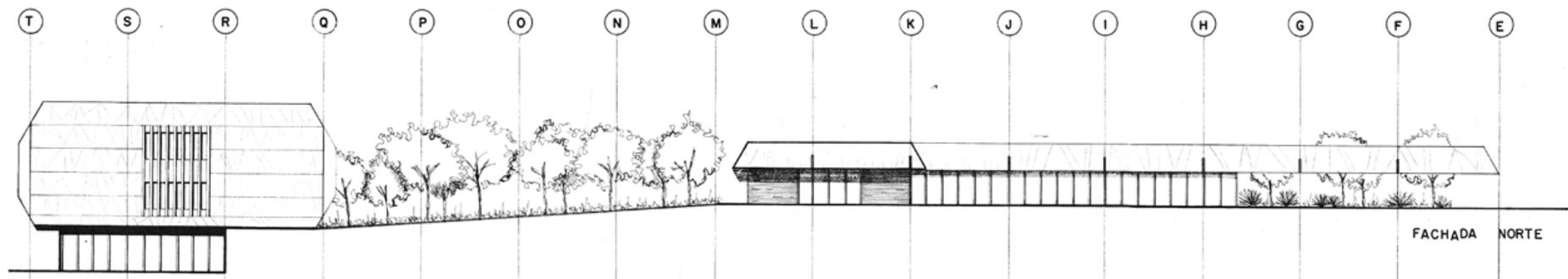
Instituto Nacional de Câncer e Queimados

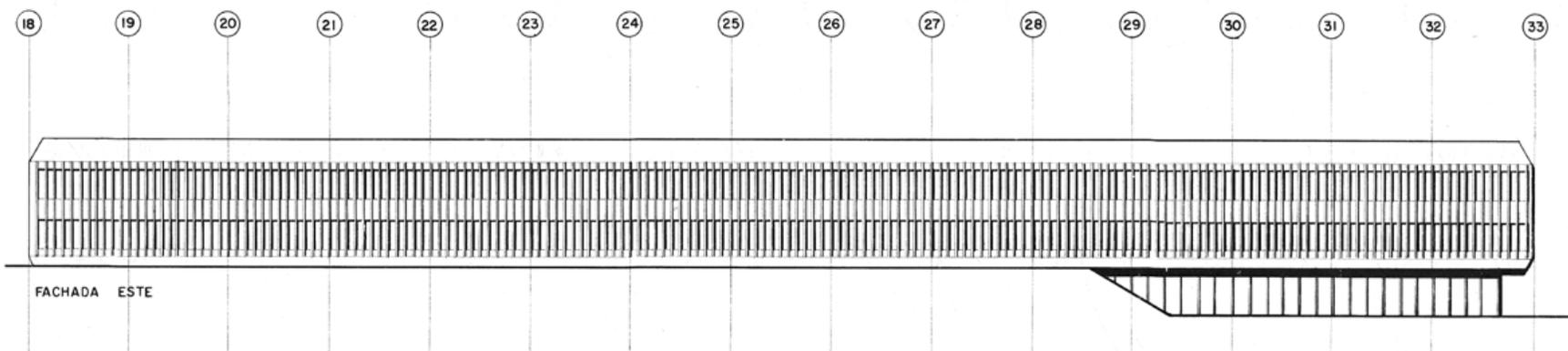
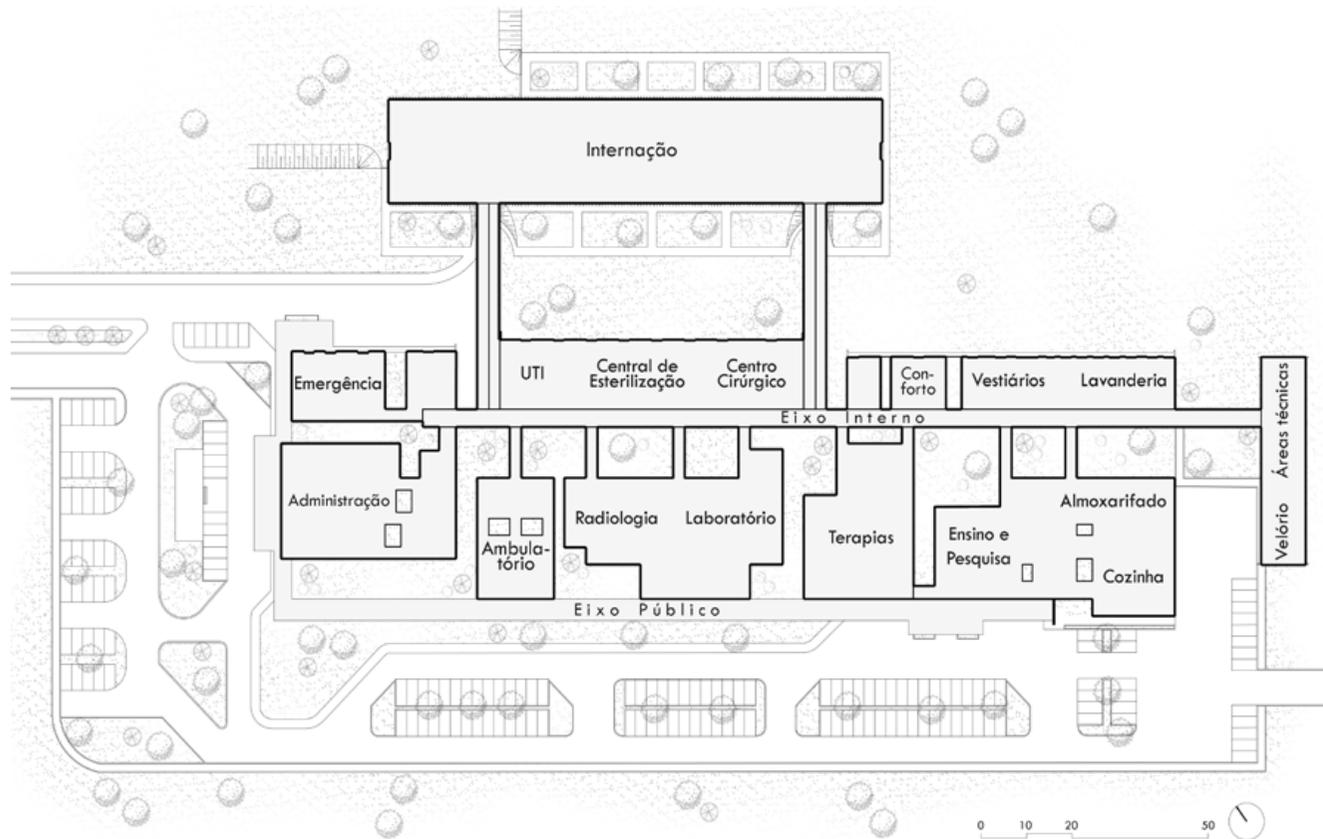
Architects: Jarbas Karman and Domingos Fiorentini
Capiatá - Paraguay
1982

The project for the Instituto Nacional de Câncer e Queimados brought as a suggestion a horizontal building composed of independent blocks that would be connected by segregated flows of people (internal and public). Most of the hospital would work in a single level, only the admission block had two floors. Half ramps would connect the latter with the main hospital body. The gardens designed between the blocks had two purposes: to provide landscaped spaces, natural lighting and ventilation for the internal areas and to serve as “waiting areas” for future localized expansions, without the need to reallocate already consolidated services.









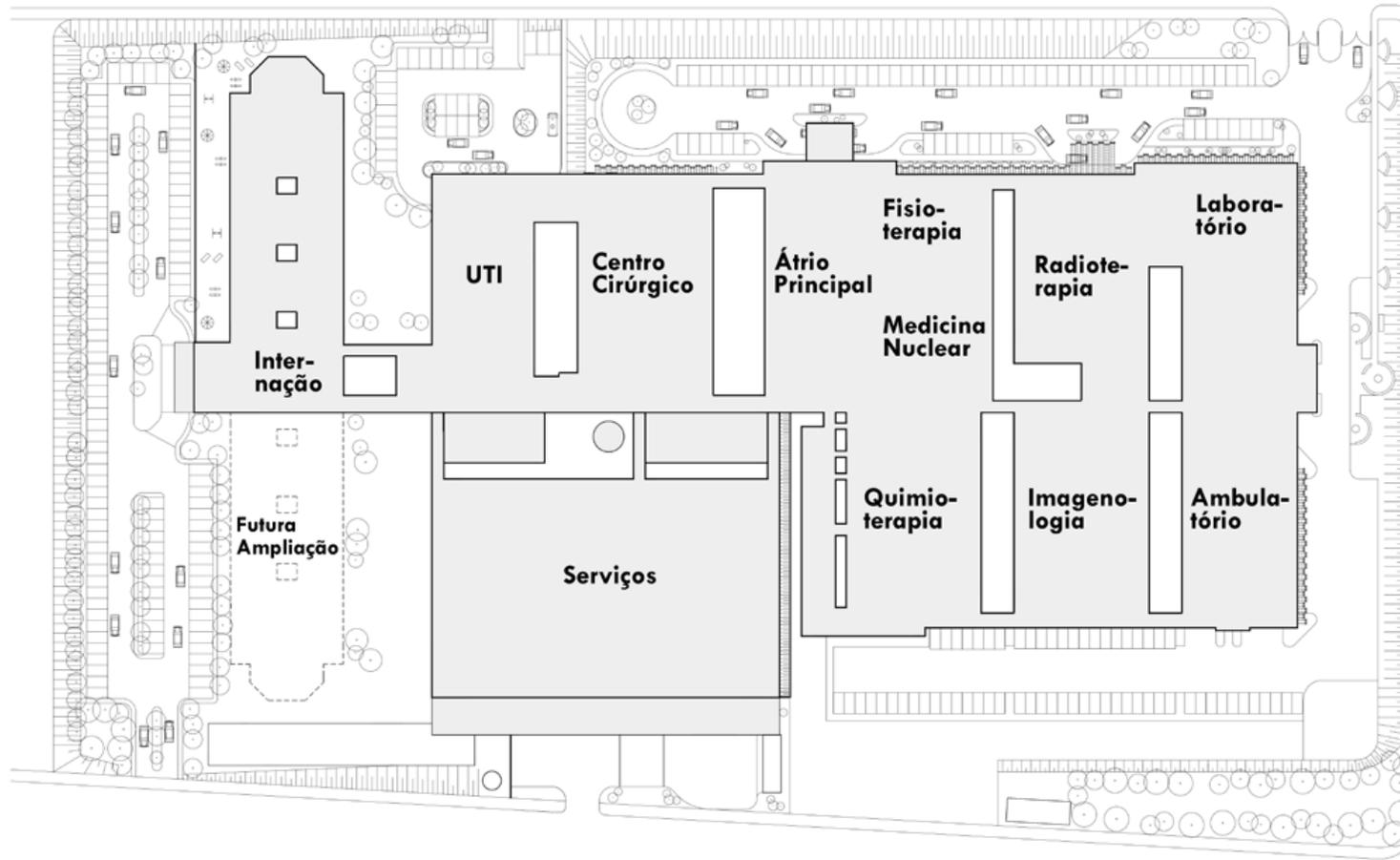
Hospital São Judas Tadeu da Fundação Pio XII

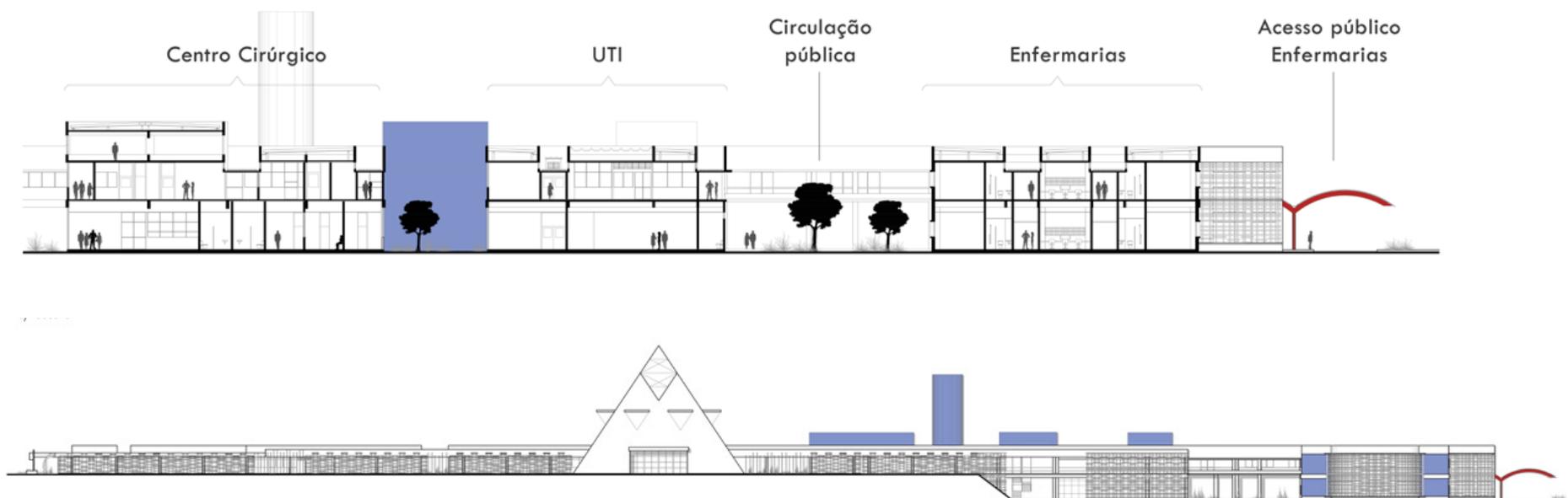
Architects: Jarbas Karman and Domingos Fiorentini
Barretos - SP - Brazil
1993

In 1993, a physical and functional Master Plan was developed to guide the construction of a massive hospital complex, which would use an existing building as the foundation and would be dedicated to the diagnosis and treatment of childhood cancer. Jarbas Karman and Domingos Fiorentini were responsible for developing two phases of this plan, first in 1995 and then in 2003. The hospital continues to grow to this day, maintaining the functional organization firstly suggested.









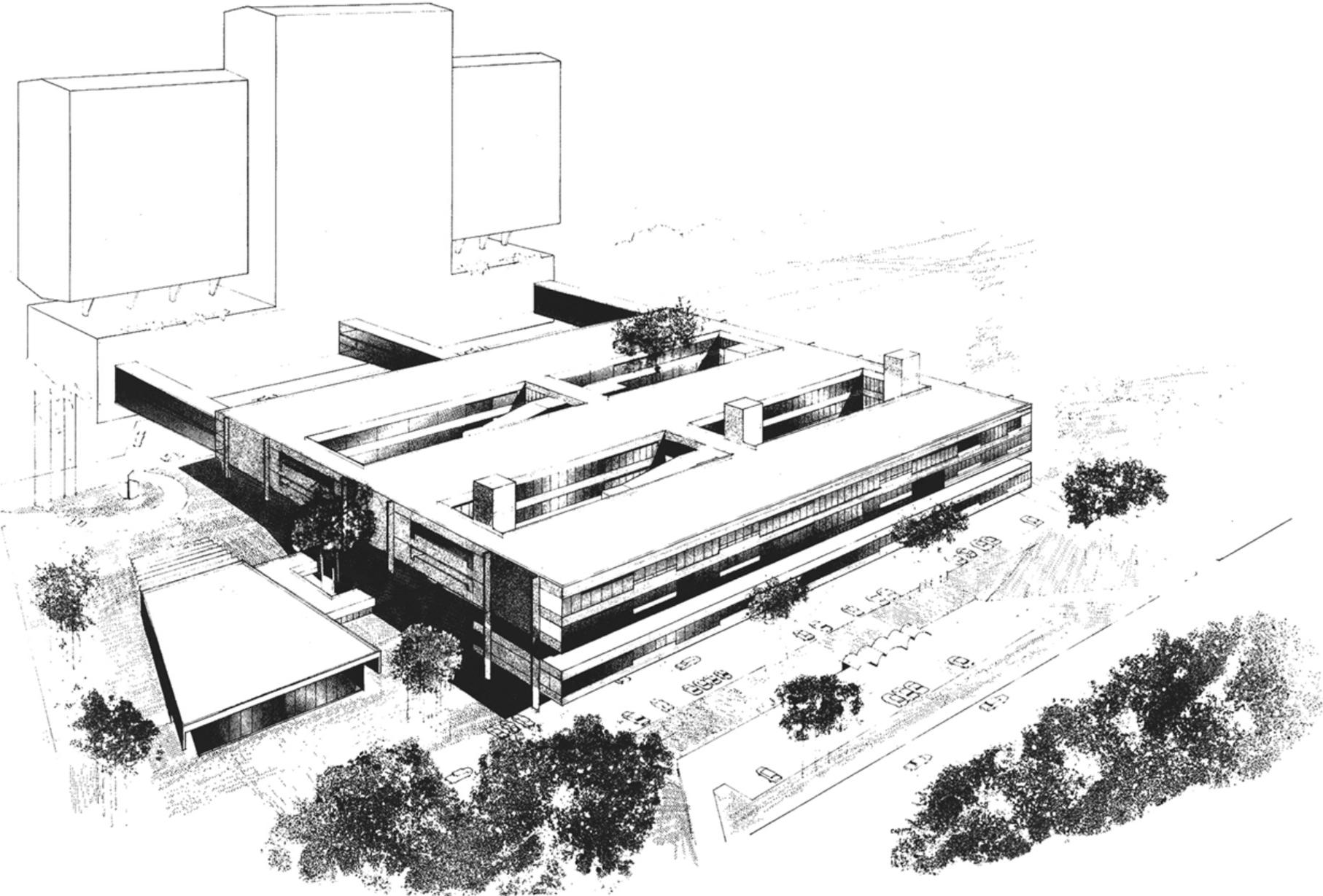
ASPECTS OF THE PROJECTS

Jarbas Karman has introduced a number of strategies to help the physical-functional planning of hospitals.

He was mainly concerned with the search for creative and technically efficient solutions for the hospitals he was designing.

Next, we give emphasis to three important aspects of his projects: verticality x horizontality, flexibility and humanization of space.

One of the first proposals for the expansion of Hospital Israelita Albert Einstein, conceived in 1979 with Jorge Wilhein. Unlike the project that was carried out, their version proposed a horizontal expansion composed by blocks that would fit the requirements of the irregular topography of the lot.

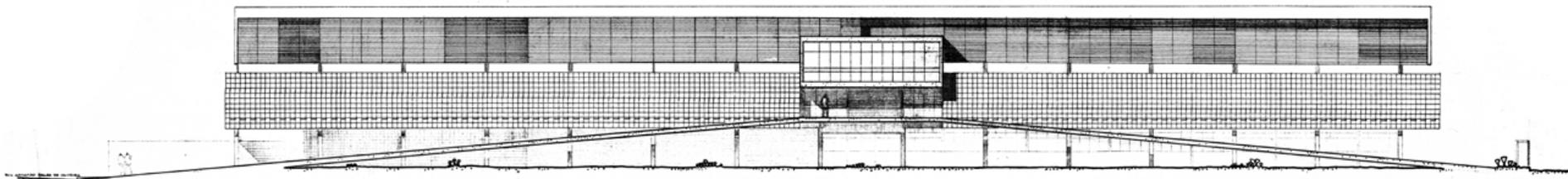


VERTICAL X HORIZONTAL

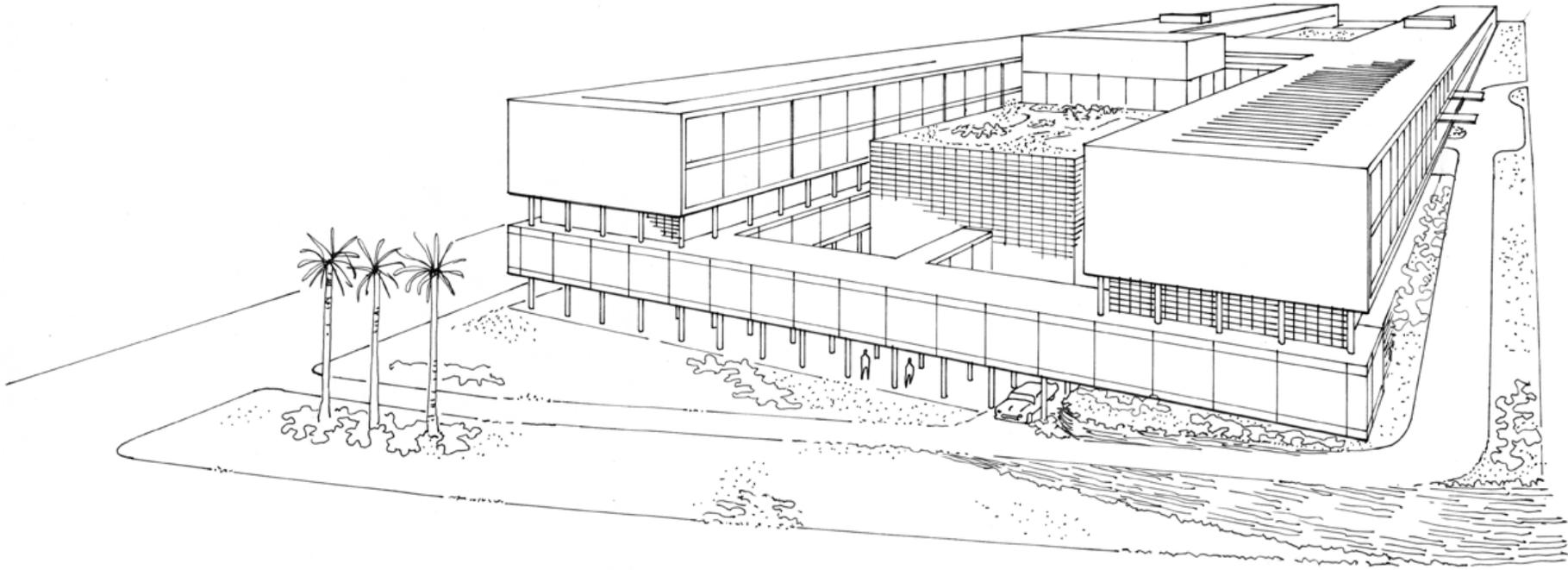
“There was a time when the development of a hospital, regarding horizontal or vertical preferences, was more of a matter of style. Nowadays, hospitals are no longer projected in extension or in floors according to a preference for high buildings or for the pavilion system. The height is a direct consequence of the function that every level holds. There are services, interconnections and departments that require a floor to continue beyond its limits, thus implying a type of horizontal extension of the floors that end up being added one on top of the other, resulting in the final height of the building.”

Jarbas Karman, Hospital de Hoje magazine, # 01, p. 11, 1955.

The slope of the project for Hospital São Luiz, located in the city of Santos, São Paulo, in 1961. Single-block building consisting of 3 floors and an intermediate floor (between the first and second floors). See page 44.



The perspective of a project developed for Hospital Santa Mônica competition in 1957. The project proposed to have the diagnosis and therapy units only on two floors (the ground and first floors), leaving the remaining services on lower floors, which would be in the slope of the west end of the terrain. See page 32.

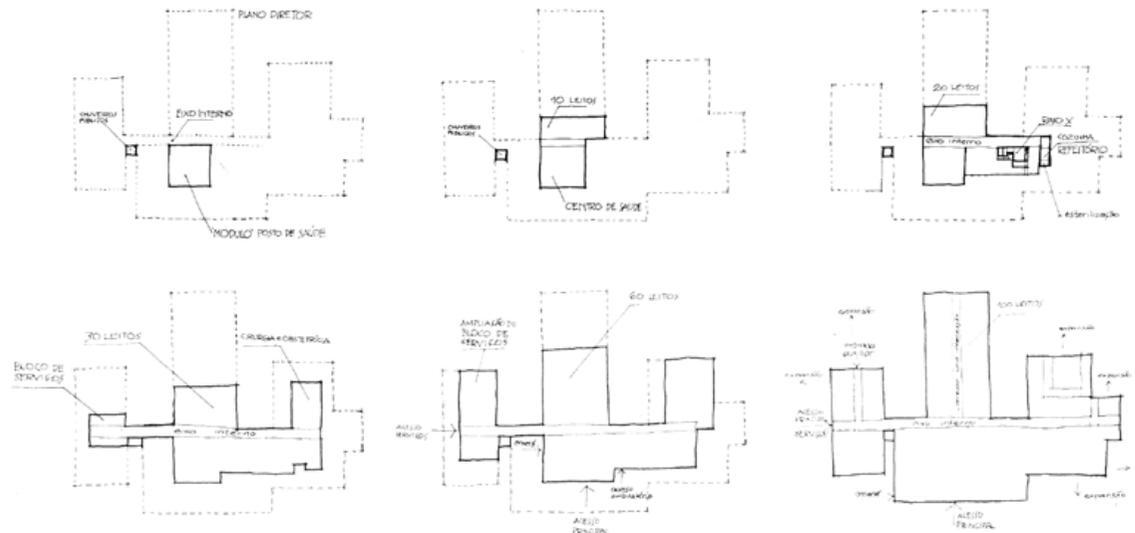


FLEXIBILITY

“When I refer to expandability, I mean more than simply increasing the usable area. It is one thing to increase the size of a building when it had not been foreseen in the original plan; however, it is not the same to preserve, while expanding, the growth, organicity, functionality and harmony, both of parts and of the whole.”.

Excerpt from an interview given by Karman to the medical journal Hospital, p. 6, July 2000.

Health Center and Hospital, “Linha de Frente”, 1980. This was a proposal for the creation of a health unit that would become, over time, a general hospital with 100 beds.



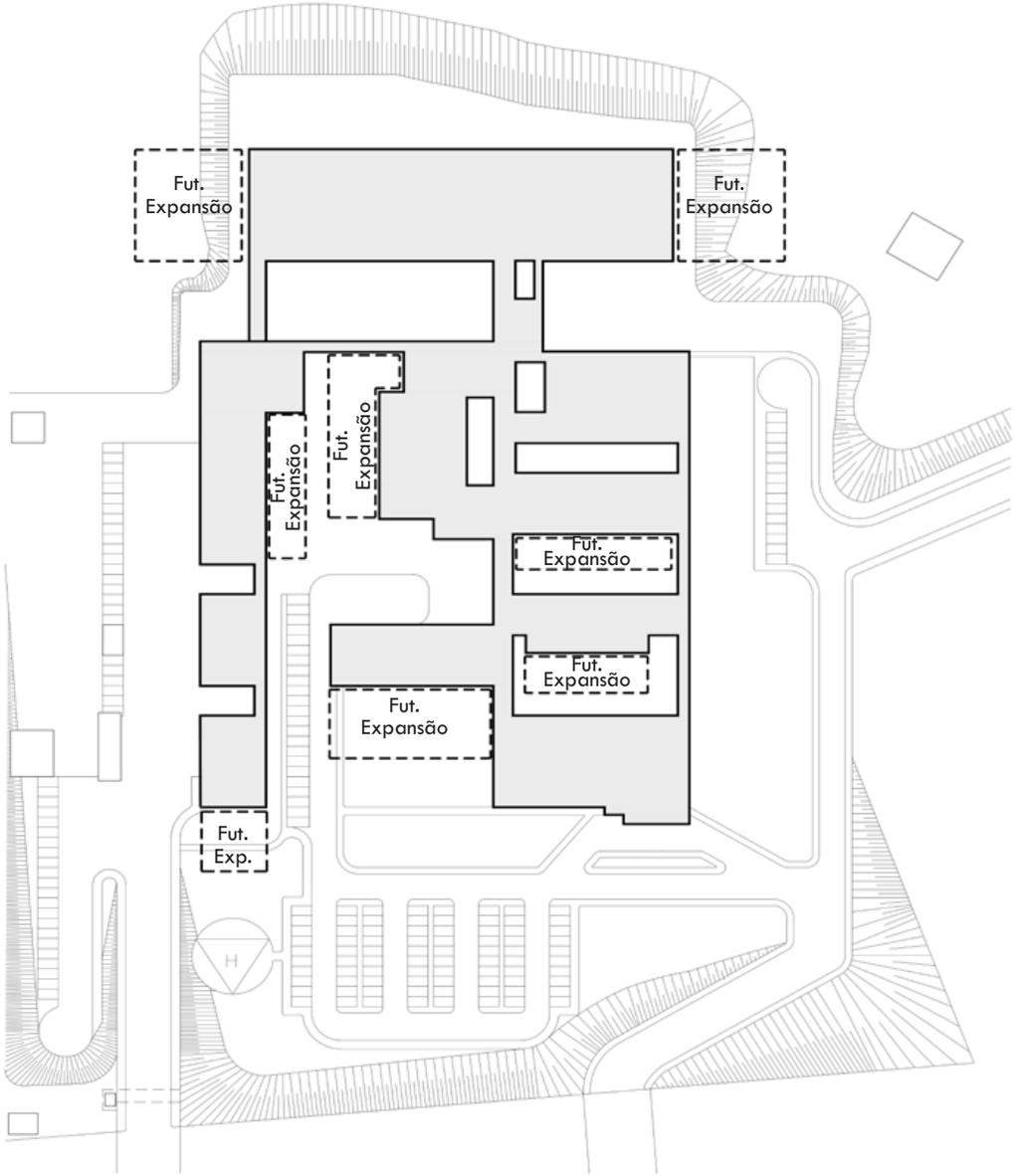
A hospital will be as long-lasting as possible

As more short-lasting components you have

Hospital, unfinished institution

An ongoing construction site

Book: *Manutenção e Segurança Hospitalar Preditivas*, p. 25, 2011.

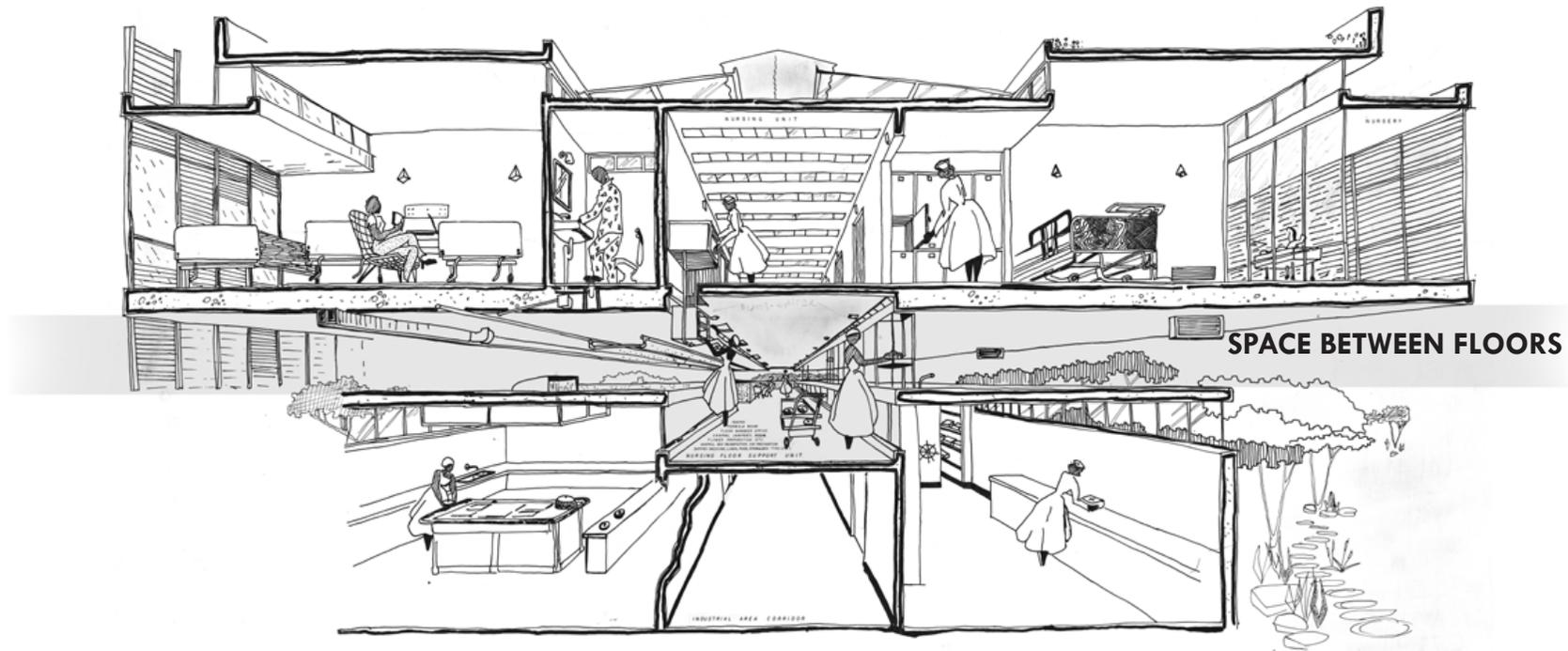


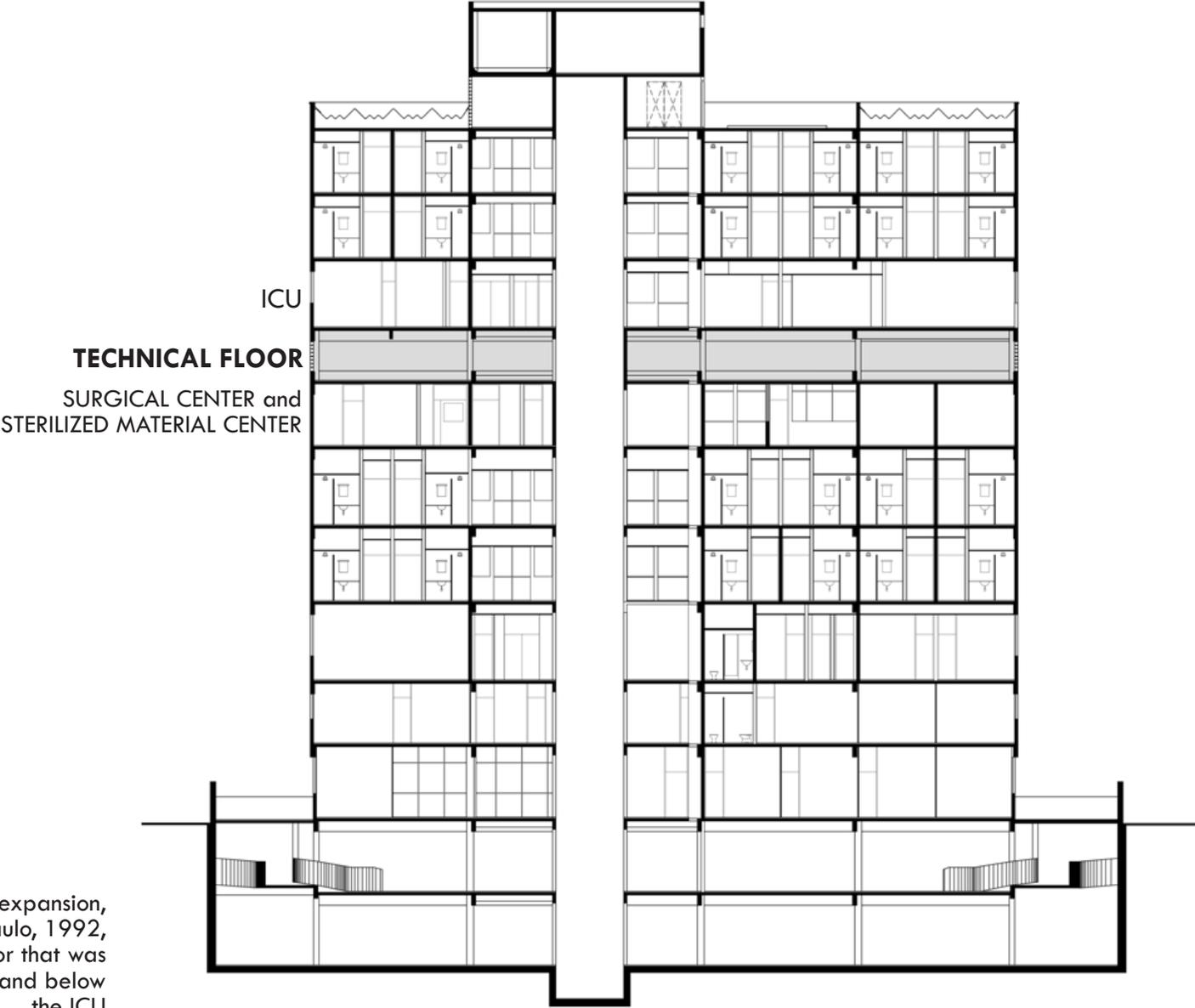
The establishment of Hospital Unimed Sorocaba and the sections set aside for further expansions, 1992.

Hospital São Luiz Hospital was designed in 1961 and unveiled an innovation: the spaces between floors. At the time, it was the cause of many jokes, since it set aside a whole pavement for visible installations, being known as “Karman’s pipe floor”.

At first, Karman would design the spaces between floors with limited height. Later, the height of these spaces became similar to other floors, making it easy to keep the maintenance of installations and equipment, thus requiring less interruption of the work of the clinical staff in the medical units.

Perspective representing the space between floors at Hospital São Luiz. See page 44.





Section of Hospital Vera Cruz expansion, located in Campinas, São Paulo, 1992, highlighting the technical floor that was located above the Surgical Center and below the ICU

HUMANIZATION

“Humanization implies the mobilization of means capable of providing the well-being of patients, families, visitors and employees. There are a number of items that we may focus attention on: properly identified accesses, wide canopies for effective protection, non-slippery floors, handrails for protection and support, gardens, comfortable armchairs, lack of noise and odors, reduced waiting time, music in the background, TV, publications, vistas to relieve the stress.”.

Interview given to SIM! Arquitetura – Estilo – Comportamento magazine, April, year 1, #5, 2000.



Picture of the inside garden at Hospital Geral da Guarnição do Galeão. See page 52.



PICTURES OF THE EXHIBITION























Exhibition

Jarbas Karman's hospital designs

Curatorship, research and texts

Ana Beatriz Costa

Erick Vicente

Paulo Mauro Mayer de Aquino

Design of the exhibition area

Erick Vicente

Administrative support

Rita de Cássia Moraes

Technical support

Giliard do Nascimento

Pictures

The photos in this publication belong to the IPH Collection, apart from:

Photo from pages 37, 38 e 39 - José Moscardi;

Photo from page 57 - Collection of Historical Center from Sociedade Beneficente Israelita Brasileira Albert Einstein;

Photos from page 59 - Collection of Historical Center from Sociedade Beneficente Israelita Brasileira Albert Einstein, photographer: Andrés

Otero;

Photos from page 65 - edited from the Hospital de Câncer de Barretos Collection;

Photos from page 67 - Hospital de Câncer de Barretos Collection; photographer: Joel Silva.

Some plans have been redesigned from the original ones:

page 58 - Hospital Israelita Albert Einstein expansion;

page 63: diagram of the flow and the physical/functional program of Instituto Nacional de Câncer e Queimados;

page 66: establishment of Hospital São Judas Tadeu da Fundação Pio XII;

page 67: cut of the project for Hospital São Judas Tadeu da Fundação Pio XII;

page 67: slope of Hospital São Judas Tadeu da Fundação Pio XII;

page 73: diagram representing expansion areas for Hospital Unimed

Sorocaba;

page 75: schematic cut showing the technical floor at Hospital Vera Cruz.

Every effort was made to identify the photographers. If you were not credited, please contact IPH so you can make the appropriate corrections.

We would like to thank the following institutions, photographers and their heirs, who have generously conceded the pictures for this work:

Andrés Otero;

Marcelo Moscardi;

Hospital de Câncer de Barretos;

Centro Histórico da Sociedade Beneficente Israelita Brasileira Albert Einstein.

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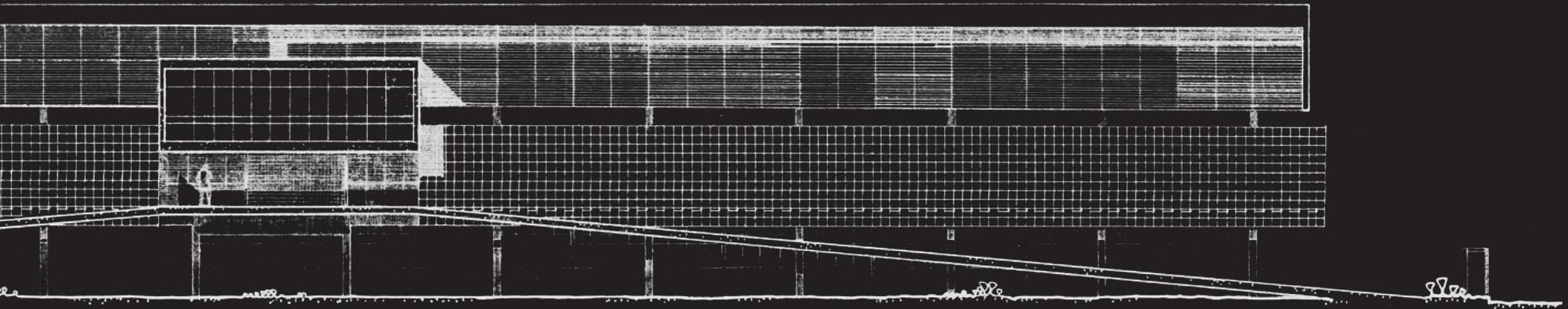


For further information on the projects presented in this book, access:

www.iph.org.br

In our digital collection you may find books, periodics, architectonic projects and illustrations related to Jarbas Karman's work.

To consult the originals, you must schedule a visit by phone or email. The contacts are available on our website.

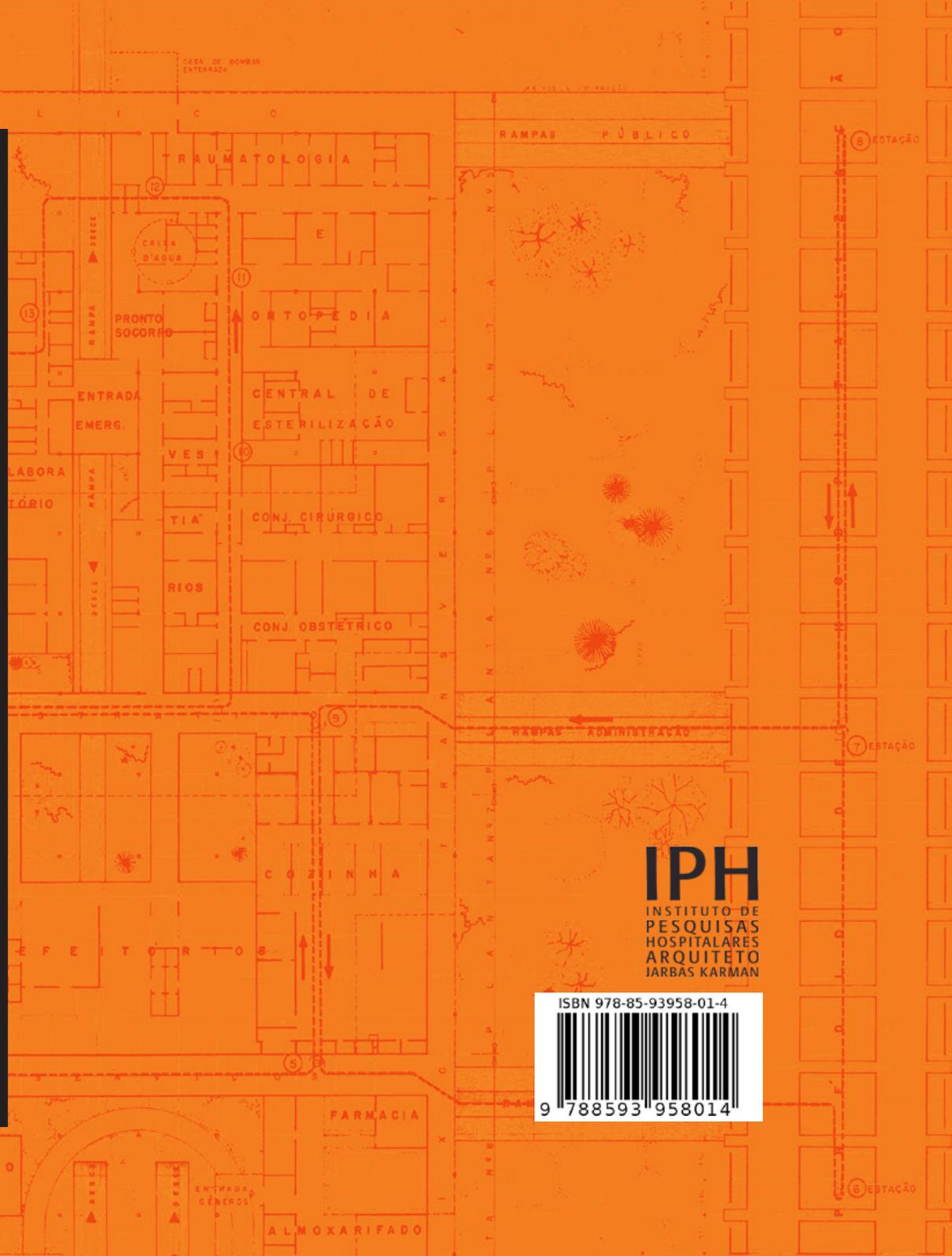


The civil engineer and architect Jarbas Karman (1917-2008) built his career from the meager health situation found in the Brazilian backlands. A reality that he experienced during his years at SESP (Special Public Health Service), which was incompatible with the advanced research he had been conducting during his master's studies at Yale University in the 1950s. In the quarrel between reality and science, he chose to be an architect with a questioning and creative spirit of the problems to be faced.

By employing foreign studies, he designed Brazilian solutions, expanding, modifying and reflecting them in the national reality. He would come up with his own solutions by researching, discussing, fighting, creating and drawing. The lines he drew traced the development of the national industry. A tireless provocateur, he published the *Hospital de Hoje* Magazine, texts and books concerning architecture, maintenance and predictive hospital security.

His projects were visionary as he would think of a hospital building that could be improved, grow and change over the years. Natural lighting, cross ventilation, gardens that promote a resting area and voids that allow future enlargements. His drawing lines were conceived from functionality and ease of maintenance in a country where everything is precarious and awaits the future.

This exhibition is an invitation for everyone to be enlightened on the architectural work of Jarbas Karman through his architectural designs of hospital buildings that comprise more than 50 years of production in this area.



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