

Media Compreensiva/Comprehensive
mediate School

Centro de Educação Média

1. O Problema: Construir um conjunto de edifícios para conter o total de 2 250 alunos de 11 a 18 anos, de maneira adequada ao exercício das atividades programadas:

- I — Centro cultural, teatro e exposições
- II — Biblioteca e museus
- III — Centro de serviços gerais
- IV — Escola média compreensiva, incluindo, ginásio e colégio, escola comercial, técnico-industrial, curso normal ou pedagógico e escola agrícola.
- V — Centro de educação física e esportes em geral.

Terreno disponível, fixado após os estudos preliminares: 400 x 400 metros.

2. Condições óbvias: a) No máximo, 2 pisos elevados; b) Taxa de ocupação baixa para atender ao desfogo necessário num conjunto dessa natureza; c) Grupamento conveniente ao funcionamento das atividades de características semelhantes, tanto para a constituição dos blocos construtivos, como para a do conjunto.

3. Resultante geométrica do conjunto: Condensação acentuada das áreas construídas, consideradas no conjunto — Seis Blocos Construtivos grupados longitudinalmente em torno de uma praça central que dá acesso ao centro. Três de um só piso térreo. Três de altura relativa a 2 pisos.

Grupamento de todas as atividades semelhantes. Continuidade do terreno, por meio do jogo da disposição dos pisos térreos ou elevados. Diversificação de aspectos dentro da unidade geral, por meio do emprego de tipos estruturais diferentes, de conformidade com as características próprias dos vários edifícios e decorrentes das respectivas destinações.

4. Escola média compreensiva: As exigências da técnica pedagógica determinaram a loca-

lização do Ensino Técnico-industrial e do Curso Normal ou Pedagógico em blocos independentes, ainda que próximos do bloco construtivo que reúne os demais cursos constitutivos da Escola Secundária Compreensiva mais acima enumerados. Assim, esses cursos foram localizados em 3 blocos de construção, formando um conjunto dentro do Centro de Educação Média. O principal desses blocos acha-se em fase de conclusão e a sua execução representou o seguinte:

5. Problema: Construir um edifício para conter cerca de setenta unidades de 7 x 9 metros para as salas de classe, salas especiais, laboratórios, salas de trabalhos manuais, etc., bem como sub-divididas em salas de professores, assistentes, gabinetes, etc., além das demais instalações necessárias. Permitir a mais completa maleabilidade de distribuição interna para o grupamento de salas nas mais diversas combinações, com múltiplos e sub-múltiplos da unidade padrão (7x9 ms).

6. Resultante Geométrica: Condensação máxima — retângulo compacto: — Piso superior: esquema reticulado. Economia: 4 galerias de circulação para 8 alas de compartimentos. Piso térreo: recreio coberto — continuidade do terreno entre as construções térreas dos 2 blocos contíguos (Ensino Técnico-industrial e Curso Normal ou Pedagógico)

7. Iluminação natural: Zenital — uniforme, por meio de sheds espaçados de 3,50 metros (2 em cada unidade de 7,00 x 9,00 metros)

8. Disposição geral: Aproveitamento quase total do retângulo: só 2 escadas e 2 blocos de instalações sanitárias concentradas, localizados dentro do perímetro — Localização externa dos acessos principais (rampas). 2 pátios de repouso no piso principal (4 unidades de 7,00 x 9,00 metros, cada um). Possibilidade de novas aberturas (até 7,00 x 9,00 ms.) que interessem ao funcionamento das atividades escolares, no bloco compacto.

Centre of Intermediate Education

1. The problem: Construct a group of buildings to house a total of 2,500 students from 11 to 18 years of age, suitably designed for the scheduled activities to be pursued, viz:

I. Cultural centre, theatre and exhibitions.

II. Library and museums.

III. General services centre.

IV. Comprehensive intermediate school, including junior and senior high school, business school, technical and industrial education, teachers' course (normal or pedagogic), and school of agriculture.

V. Physical training and general sports centre.

2. Ruling conditions: a. At most, 2 upper stories. b. Low built-up ratio to avoid overcrowding as is necessary in a project of this kind; c. Suitably functional grouping according to activities with similar characteristics, as much in the layout of the constructional blocks as in the project as a whole.

3. Geometrical resultant of the project as a whole: Marked condensation of the built-up areas relative to the project as a whole. Six constructional blocks grouped lengthwise around a central plaza giving access to the centre. Three, ground floor only. Three, with a height corresponding to two stories. Grouping of all similar activities. Continuity of site, through interplay of layout of upper and ground floors. Diversification of aspects within the overall design by adopting different structural types in accordance with the characteristics peculiar to the various buildings and arising out of the uses to which they are to be put.

4. Comprehensive intermediate school: The requirements of teaching technique determined the location of the Technical and

Industrial Instruction and the Teachers' Course in independent blocks, in proximity, however, to the constructional block that groups the other courses mentioned above and comprising the Comprehensive Secondary School. Thus these courses have all been situated in 3 constructional blocks, forming a group within the Centre of Intermediate Education. Of the three, the main block is now in the final stage of construction and the working data may be broken down as follows:

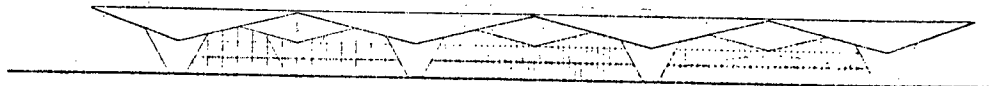
5. Problem: Construct a building to contain seventy $23 \times 26 \frac{1}{4}$ ft. units for classrooms, special rooms, laboratories, handicraft work-rooms, etc., some of them sub-divided into rooms for professors and assistants, studies, etc., including all other necessary installations. Allow for full malleability of indoor distribution so as to be able to group the rooms in a wide variety of combinations, involving multiples and sub-multiples of one pattern only ($23 \times 26 \frac{1}{4}$ ft.).

6. Geometrical resultant: Maximum condensation in compact rectangle: Upper floor: reticulated layout! Space-saving: 4 circulation galleries for eight wings of compartments. Ground floor: covered recreation—continuity of site between ground floor structures of the 2 neighbouring blocks (Technical and Industrial Instruction and Teachers' Course).

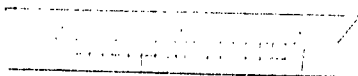
7. Natural lighting: Overhead: uniform by means of sheds every $11 \frac{1}{2}$ feet (2 to each $23 \times 26 \frac{1}{4}$ ft. unit).

8. General plan: Practically full use made of the rectangle: only two staircases and two blocks of lavatories, concentrated and situated within the perimeter. Main accesses outside the building (ramps). Two rest courts on the main floor (4 units, each $23 \times 26 \frac{1}{4}$ ft.). Possibility of new openings (up to $23 \times 26 \frac{1}{4}$ ft.) in the compact block, when required for the pursuit of school activities.

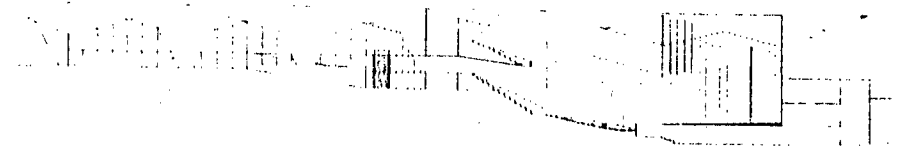
Centro cultural, corte longitudinal/Cultural centre, longitudinal section



Centro cultural, fachada lateral/Cultural centre, side elevation

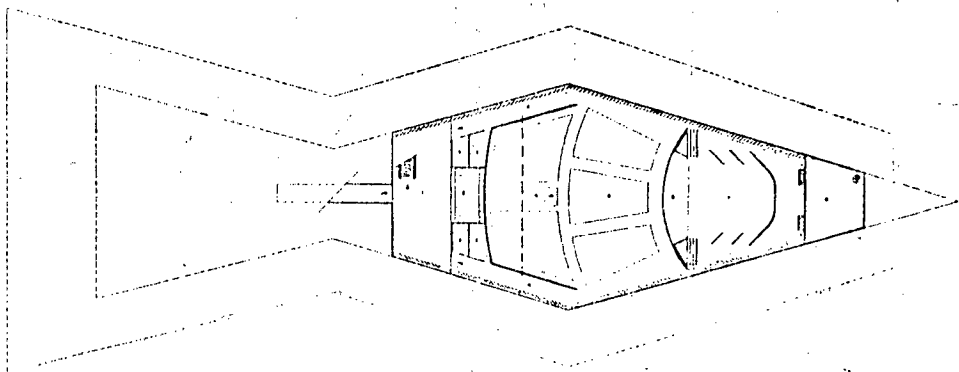


Centro cultural, fachada principal/Cultural centre, front elevation



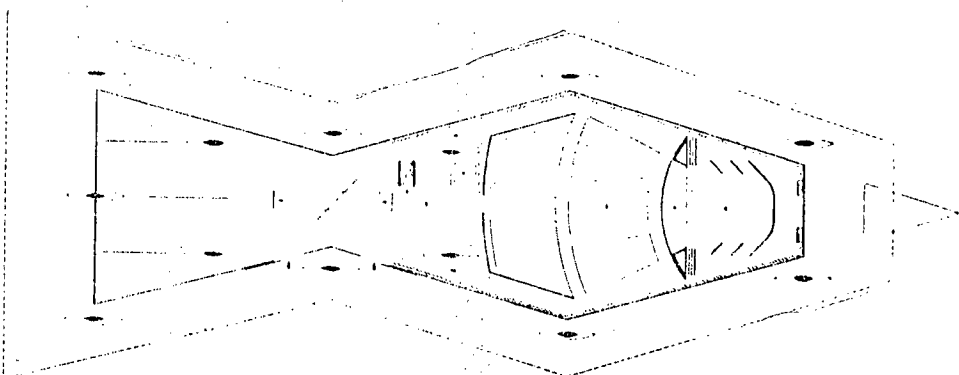
Centro cultural, nível da platéia/Cultural centre at orchestra stalls level

- 1 Hall/Hall
- 2 Chapelaria/Cloaks
- 3 Sanitários/Livatories
- 4 Acessos/Accesses
- 5 Platéia/Orchestra stalls
- 6 Orquestra/Orchestra pit
- 7 Palco Stage
- 8 Serviços/Services



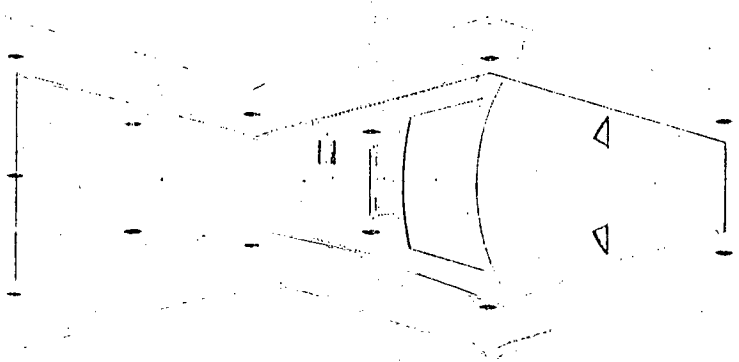
Centro cultural, pavimento térreo/Cultural centre, ground floor

- 1 Salão de exposições/Exhibitions
- 2 Hall/Hall
- 3 Platéia/Orchestra stalls
- 4 Orquestra/Orchestra pit
- 5 Palco/Stage
- 6 Chapelaria/Cloaks



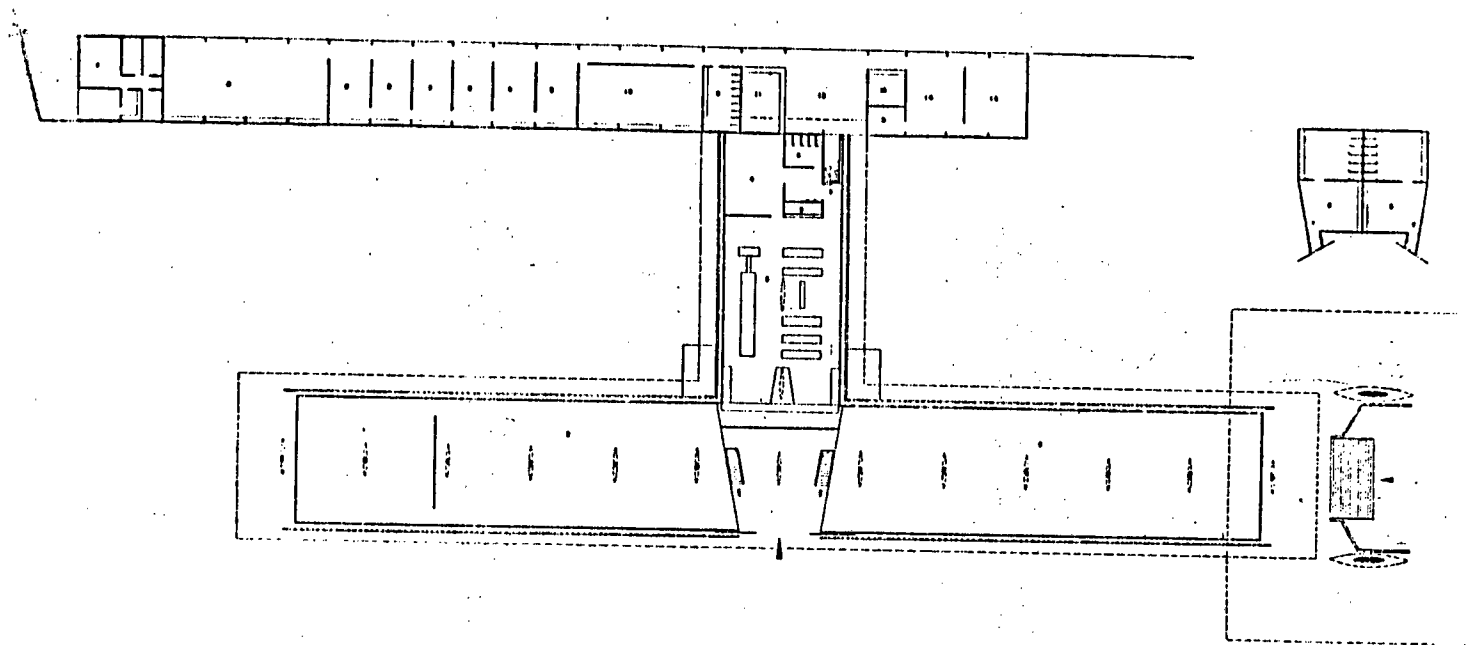
Centro cultural, nível do balcão Cultural centre at balcony level

- 1 Library
- 2 Hall/Hall
- 3 Casa de máquinas/Machinery
- 4 Balcão/Balcony
- 5 Vazio da platéia/Void over orchestra stalls
- 6 Vazio do palco/Void over stage



serviços gerais, fachada/General services,
elevation

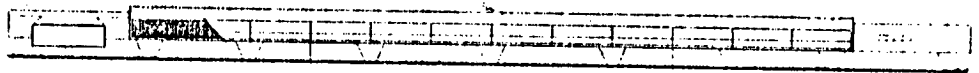
serviços gerais, corte transversal/General ser-
vices, transverse section



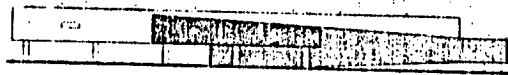
serviços gerais/General services

- Refeitório professores/Staff refectory
- Refeitório alunos/Students' refectory
- Cozinha/Kitchen
- Despensa/Food storage
- Sanitários/Lavatories
- Frigorífico/Cold storage
- Zelador/Janitor
- Garage/Garage
- Oficinas/Workshops
- Alojamentos/Living quarters
- Portaria/Porter's office
- Hall/Hall
- Administração/Administration
- Lavanderia/Laundry

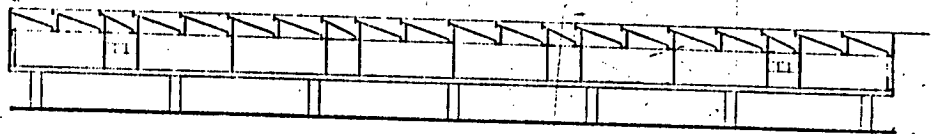
Fachada principal/Front elevation



Fachada lateral/Side elevation

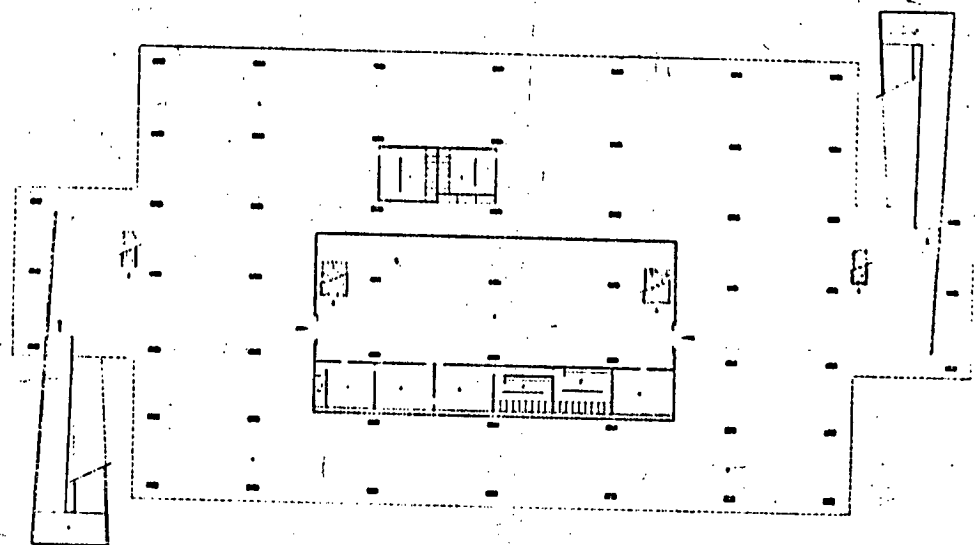


Corte transversal/Transverse section



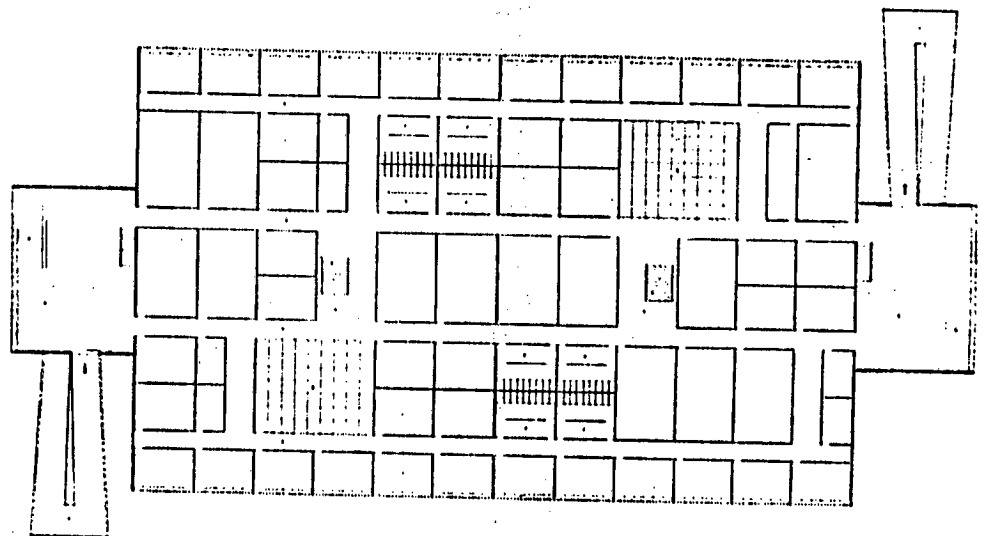
Pavimento térreo/Ground floor

- 1 Diretoria/Management
- 2 Secretaria/Secretariat
- 3 Hall/Hall
- 4 Rampas/Ramps
- 5 Professores/Teaching staff
- 6 Depósito/Storage
- 7 Sanitários/Laboratories
- 8 Recreio coberto/Recreation under cover

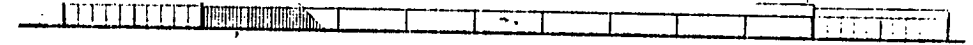


Pavimento superior/Upper story

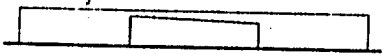
- 1 Unidade padrão (7 x 9 m.) que pode ser: sala de classe, laboratório, sala de trabalhos manuais, etc./Standard unit (23 x 26 1/4 ft.) that may be used as a classroom, laboratory, handicraft workshop, etc
- 2 Pátio/Courtyard
- 3 Hall/Hall
- 4 Rampa/Ramp
- 5 Portaria/Porter's office
- 6 Galeria/Gallery
- 7 Sanitários/Lavatories



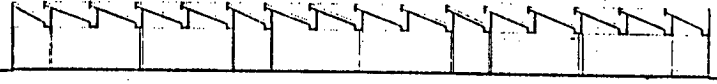
erial education, front elevation



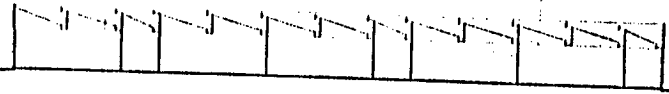
Ensino industrial, fachada lateral/Industrial education, side elevation



Ensino industrial, corte transversal/Industrial education, transverse section

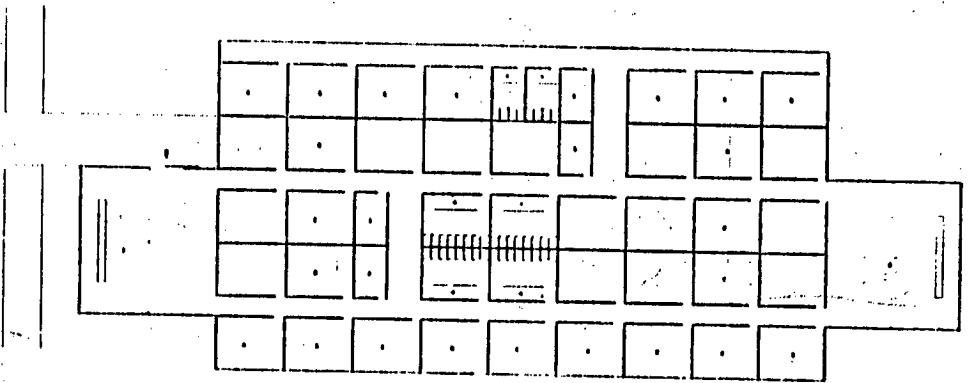


Escola normal, corte transversal/Normal school, transverse section



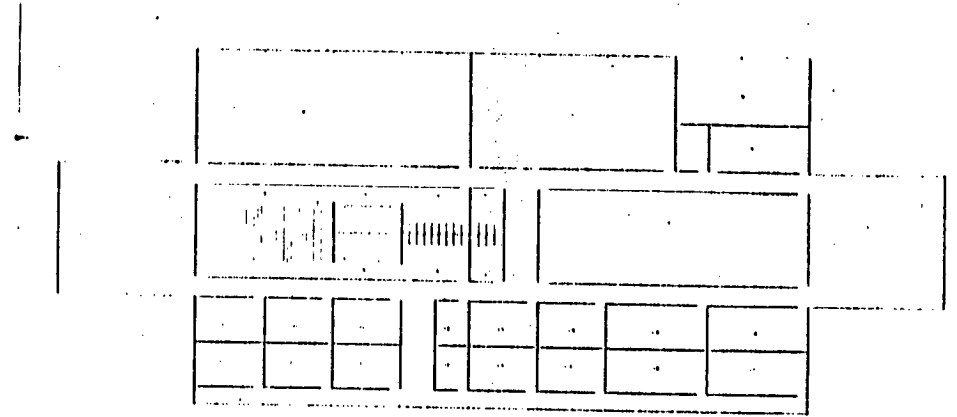
Escola normal/Normal school

- Portaria/Porter's office
- Sala de classe/Classroom
- Professores/Teaching staff
- Sanitários/Lavatories
- Administração/Administration



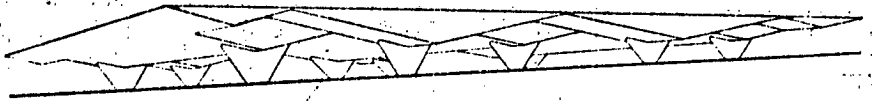
Ensino industrial/Industrial education

- Portaria/Porter's office
- Vestiário/Changing-room
- Chuveiros/Showers
- Sanitários/Lavatories
- Artes gráficas/Printing
- Marcenaria/Joinery
- Carpintaria/Carpentry
- Garage/Garage
- Almoxarifado/Stores
- Administração/Administration
- Desenho técnico/Technical drawing
- Professores/Teaching staff
- Tecnologia/Technology
- Hidráulica/Hydraulics
- Alfaiataria/Tailoring
- Electricidade/Electricity
- Artes do couro/Art leatherwork





Centro esportivo/Sports centre



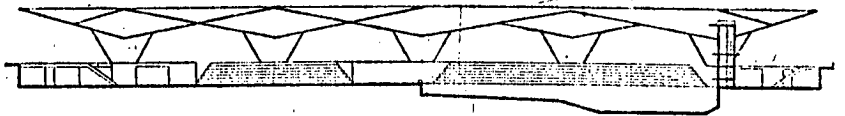
Centro esportivo, fachada/Sports centre, elevation



Centro esportivo, corte transversal/Sports centre, transverse section

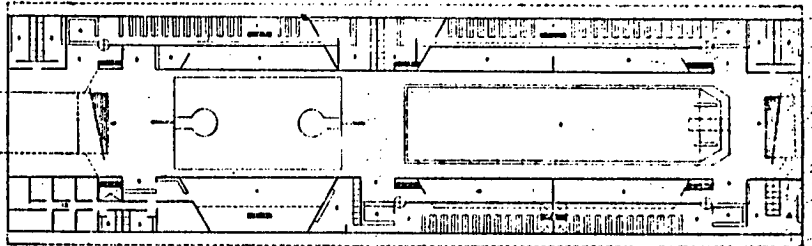


Centro esportivo, corte longitudinal/Sports centre, longitudinal section



Centro esportivo, semi-interrado/Sports centre, below ground level

- 1 Basquetebol/Basket-ball
- 2 Piscina/Swimming-pool
- 3 Sanitários/Lavatories
- 4 Controle/Checker
- 5 Hall/Hall
- 6 Administração/Administration
- 7 Vestiário/Changing-room
- 8 Depósito/Storage
- 9 Máquinas/Machinery
- 10 Medidores/Metering apparatus
- 11 Caixa d'água/Water cistern
- 12 Biometria/Physical check-up



Centro esportivo, térreo/Sports centre, at ground level

- 1 Basquetebol/Basket-ball
- 2 Piscina/Swimming-pool
- 3 Arquibancadas/Grandstand

